



# Mantissa Corporation

Operations Productivity System™  
OPS/Master® System Reference Manual  
Version 5.20.1

Mantissa ASO™  
Automated Systems Operation  
OPS/MASTER®



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# TABLE OF CONTENTS

## Preface

<b>Overview of Documentation</b>	<b>19</b>
Volume I .....	19
JOB/Master® Reference .....	19
User Tutorials .....	19
Volume II .....	19
CONSOLE/Master® Reference .....	19
RUN/Master® Reference .....	20
System Administration .....	20
Installation Guide .....	20
Messages and Codes .....	20

## JOB/Master®

## Chapter 1

<b>Introduction to JOB/Master®</b>	<b>23</b>
JOB/Master® Features .....	23
Machine and Software Environment .....	23
JOB/Master® Operational Features .....	24
JOB/Master® Scheduling Features .....	25
JOB/Master® Job Control Features .....	26
JOB/Master® Benefits .....	27
Job Schedule Confirmation .....	27
Library Management Facility .....	28
Dynamic Job Submission .....	28
Dynamic Job Release .....	28
Dynamic Repair .....	28
MODEL / COUNT OF TAPES: .....	29
Remote Job Tracking Support .....	29
Automatic Logging of Data Base Updates .....	29
Job Triggering .....	29
Job Triggering Concepts .....	30

Controlling Execution Through JCL .....	30
Steplevel Dependencies .....	31
Dependency Based on Multiple Jobs .....	31
Externally Submitted Jobs .....	32
Dataset Contention Resolution .....	33
Activating the Dataset Contention Monitor .....	33
Scheduling Flow .....	34
Selection .....	35
Scheduling Event Analysis/Reporting .....	35
Submit, Tracking, Event Recording .....	35
Security Function .....	35
Signing On .....	36
JOB/Master® Primary Menu .....	38
Logging Into JOB/Master® For The First Time .....	39
Interactive Help .....	40
Screen Navigation .....	40

## Chapter 2

<b>Job Scheduling Concepts</b> .....	<b>41</b>
Introduction .....	41
Job Level and Step Level Concepts .....	42
Design and Methodology .....	42
Sample System Worksheets .....	45
Interactive Data Base Creation .....	47
Identifying Jobs Under JOB/Master® Control .....	47
Run Mode Option .....	51
Select Mode On The List Queue .....	52
Adding Systems and Jobs .....	53
Job Dependencies .....	54
Alternate Job Definition .....	54
Validating Systems .....	55
LOOPDRV .....	55
LOOPDRV Examples .....	56
How and When To Use LOOPDRV .....	56
Procedure .....	56
Schedule Events from Outside JOB/Master® .....	57

## Chapter 3

<b>Job Database Creation</b> .....	<b>59</b>
Before You Begin .....	59
Job Fail and Condition Code Testing .....	60
Command Scheduling .....	61
Job Definition Screens .....	61
Data Base Index .....	63
Job Definition Screen 1 .....	64
MODEL / COUNT OF TAPES: .....	68

Trigger and Condition Code Information .....	71
Job Definition Screen 2 .....	72
Job Definition Screen 3 .....	73
Job Definition Screen 4 .....	77
Job Definition Screen 5 .....	79
Job Step Definition Screen .....	81
Trigger and Condition Code Information .....	83
Calendar Definition Screen .....	84
Calendar Display/Update .....	87
Year End Calendar Propagation .....	89
Overview .....	89
Relative Calendars .....	89
Actual Calendars .....	89
Data Base Definition Name Change .....	90
Calendar Change Timing .....	90
What You Need To Do: .....	90
Process Keyword Definition Screen .....	91
Process Keyword Table .....	93
Negative Co-Requisite Dependency Screen .....	96
Message Group .....	98
System Definition .....	100
Manual Task Message Definition .....	104

## Chapter 4

<b>Dataset Dependency</b> .....	<b>107</b>
Overview .....	107
Dataset Definition Panel .....	108
Defining Dataset Triggers .....	108
Definition Data .....	110
Process Trigger Definitions .....	110
Verifying Data .....	111
Trigger Definitions .....	112
Testing the Datasets .....	112
Technical Considerations .....	112
DSN Index Table Display Panel .....	113

## Chapter 5

<b>Generating a Schedule</b> .....	<b>115</b>
Scheduling Criteria .....	115
Schedule Generation Parameters .....	116
Relationship of Calendars to Process Keywords .....	117
Batch Mode .....	117
Include/Exclude Jobs .....	119
Online Mode .....	120
Scheduling Jobs .....	120
Scheduling Individual Jobs or Systems .....	120

Automatic Schedule Creation .....	121
AD HOC - Dynamically Added Jobs .....	121
Job Schedule Confirmation .....	121
Using "Cycle" Processing .....	122
Special "JMSCHED" Processing .....	123
Scheduling Reports .....	124

## Chapter 6

<b>Job Submission</b>	<b>131</b>
Submit Facility .....	131
Starting and Stopping the Submit Facility .....	131
External Submits .....	132
Library Management Facility .....	132
USER Submit PDS .....	133
Submit PDS .....	133
STAGING PDS .....	133
Placing Members Into The STAGING PDS .....	133
Dynamically Added Jobs .....	136
Browsing the JMSTGPDS .....	137
Submit Member .....	138
Force Submitting a Job .....	139
User Submit Exit .....	139
Resource Routing .....	139
Dynamic Job Submission .....	140
Dynamic Repair .....	140

## Chapter 7

<b>Job Tracking</b>	<b>141</b>
Introduction .....	141
Job Tracking Screens .....	141
Job Run Documentation .....	141
Job Statistics .....	142
Operations Reports .....	142
On-line Job Tracking Facilities .....	142
Entering JOB/Master® .....	143

## Chapter 8

<b>Symbolic Substitution</b>	<b>201</b>
Introduction .....	201
Symbolic Substitution Flow .....	201
Symbolic Substitution Menu .....	204
Selecting Symbolic Substitution .....	204
Option 1 - Resolve .....	206
Option 2 - Reset .....	208

Option 3 - Display .....	209
Option 4 - Recovery .....	210
Option 5 - Library .....	212
Option O - OPINS .....	213
Option E - E / OPINS .....	214
Option J - JCL SCAN .....	215
Option X - Exit .....	216
Utilizing Substitution .....	216
JCL or Data Replacement .....	216
JCL Setup Flag .....	218
Default Control Records .....	219
Global Substitution Variables .....	220
Symbol Name Specification .....	221
Overflow of Card Images .....	221
User ISPF Panels .....	223
ISPF File Tailoring .....	224
Automatic Variable Substitution (AVS) .....	225
Batch Substitution Processing .....	225
AVS Audit Log .....	226
JCL Override/Date Substitution .....	227
Substitution Control .....	227
Optional Parameters .....	227
Substitution Error Processing .....	230

## Chapter 9

<b>Profile</b> .....	<b>231</b>
PROFILE Option .....	231
Setting PFKS and Job Card JCL Parameters .....	232
Display Global Option Settings .....	233
Update Global Option Settings .....	233

## Chapter 10

<b>Data Base Detail Reports</b> .....	<b>239</b>
Introduction .....	239
Definitions .....	242
Job/Step Definitions (10) .....	242
Calendar Definitions (11) .....	243
Process Keyword Definitions (12) .....	243
Negative/Corequisite Dependencies (13) .....	243
Message Definitions (14) .....	243
Group Definitions (15) .....	243
Data Base XREF Reports .....	244
Calendar to Job/Process Keyword (20) .....	244
Process Keyword to Job (21) .....	244
Negative/Corequisite Dependencies to Job (22) .....	244
Message to Job/System (23) .....	245

Groups to Job/System (24)	245
Job Flow (25)	245
History Recap Reports	246
Job Run/Audit Trail (30)	246
Data Base Reporting by Selection	247
Making the Database Selection	247
Setting options	249
Sample Job Definition Report	250
Job Definition Fields	250
Sample Dataset Definition Report	254
Dataset Definition Fields	254
Sample Reports	256
Sample Report(10): JM2020	257
Sample Report(11): JM3010	258
Sample Report(12): JM3020	259
Sample Report(13): JM3030	260
Sample Report(14): JM3040	261
Sample Report(15): JM3050	262
Sample Report(20): JM4010	263
Sample Report(21): JM4020	264
Sample Report(22): JM4030	265
Sample Report(23): JM4040	266
Sample Report(24): JM4050	267
Sample Report(25): Job Flow (Part 1)	268
Sample Report(25): Job Flow (Part 2)	268
Sample Report(30): JM5010	270
Sample Report(30-1): JM5020	271
Sample Report(30-2): JM5020F	272
Sample Report(30-3): JM5020S	273
Sample Report(30-4): JM5020R	274
Sample Report(30-5/6): JM5030	275
JMJOB RPT	276
JMDSNRPT	277

## Chapter 11

<b>Batch Functions</b>	<b>279</b>
Batch Programs	279
Introduction	279
JMBACKUP	280
JMSHUT	280
JMSSCPSC	281
JMTRACE	281
JMSTATUS	282
JMBPOST	282
JMPURGE	283
JMRESORC	284
JMRESTOR	285
JMCLEAN	285
JMDBCOPY	286



## Chapter 12

<b>Tutorial</b>	<b>287</b>
Introduction .....	287
Sample Company Work Days and Holidays .....	287
Creating a Sample Inventory Job Schedule .....	288
Schedule Requirements .....	288
Creating the Job Definition For INVNTRL1 .....	289
Creating the Workday Calendar .....	295
Viewing/Updating the Workday Calendar .....	297
Creating The HOLIDAY Calendar .....	298
Creating the Job Definition for INVNTRY2 .....	299
Creating the LASTWKD Keyword Definition .....	302
Creating the Job Definition for INVNTRY3 .....	303
Defining a Sample Sales Job Schedule .....	306
Schedule Requirements .....	306
Calendar Requirements .....	306
Creating the System Definition for SALES .....	306
Creating the SALESMSG Message Definition .....	310
Creating the SALESGRP Group Message Def. ....	312
Creating the Job Definition for REGSALES .....	314
Creating the MON-SAT Calendar .....	315
Creating the Job Definition for TOTSALES .....	317
Defining A Sample Commissions Job Schedule .....	319
Schedule Requirements .....	319
Calendar Requirements .....	319
Creating the Job Definition for COMM1 .....	319
Defining the Process Keyword 1AND16 .....	321
Creating the Job Definition for TOTCOMM .....	322
Running a Job Schedule Simulation .....	323
Monitoring the Queue .....	325
Posting Manual Task Complete .....	327

## Preface

<b>Overview of Documentation</b>	<b>329</b>
Volume I .....	329
JOB/Master® Reference .....	329
User Tutorials .....	329
Volume II .....	329
CONSOLE/Master® Reference .....	329
RUN/Master® Reference .....	329
System Administration .....	330
Implementation Checklist .....	330
Installation Guide .....	330
Messages and Codes .....	330

## CONSOLE/Master®

### Chapter 13

<b>Introduction to CONSOLE/Master®</b>	<b>333</b>
Overview .....	333
Benefits .....	334
CONSOLE/Master® Components .....	335
Starting the Control Region .....	335
Stopping the Control Region .....	335
Starting CONSOLE/Master® On-line Sessions .....	336

### Chapter 14

<b>Automated Operator</b>	<b>339</b>
Overview .....	339
Automated Operator Components .....	339
Automated Operator Data Base Session .....	340
Menu Options .....	340
Console Message Table .....	341
Functional Fields .....	341
ADD - Console Message Definition .....	343
Multi-line Messages .....	348
Persistent Store Processing .....	349
Extended Console Message Definition .....	350
UPDATE / BROWSE Console Message Definition .....	352
DELETE Request .....	352

### Chapter 15

<b>MVS Console Facility</b>	<b>353</b>
Overview .....	353
Invoking the MVS Console .....	354
Entering JES Commands .....	355
Entering MVS Commands .....	356
Ending the Console Facility .....	356

### Chapter 16

<b>Profiles</b>	<b>357</b>
Profile Function Keys .....	359
Profile Parameters .....	360

## Chapter 17

<b>Report Facility</b>	<b>361</b>
Initiating the Report Facility .....	361
Sample Report .....	363

## Chapter 18

<b>Technical Specifications</b>	<b>367</b>
Architecture .....	367
Machine and Software Environment .....	368

## Chapter 19

<b>File Backup and Recovery</b>	<b>369</b>
Backing Up Files .....	369
Restoring Files .....	369

## Chapter 20

<b>Advanced Functions</b>	<b>371</b>
Fast Path Message Processing .....	371
REFRESH Function .....	371
JOB/Master® Interface .....	372
Initial Command Stream Processing .....	372
Global Status Change And Display .....	372

## RUN/Master®

## Chapter 21

<b>Introduction to RUN/Master®</b>	<b>377</b>
Overview .....	377
Features .....	377
Benefits .....	378
Components .....	378
Job Indicator Flag .....	378
Starting the Control Region .....	379
Stopping the Control Region .....	379
Starting On-Line Sessions .....	379

## Chapter 22

<b>On-line Assist Functions</b>	<b>381</b>
Starting the On-line Assist Functions .....	381
Table of Restart Jobnames .....	384
Table of Stepnames .....	385
Online Assist JCL Processing .....	387
Table of Replacement JCL .....	387
Table of Restart Actions .....	388
Table of Original JCL .....	389
Table of Actions - Postconfirmation .....	390
Submit JCL Screen .....	391
Ending the On-line Assist Functions .....	391
RUN/Master® Audit Trail .....	392

## Chapter 23

<b>Profiles</b>	<b>393</b>
Profile Function Keys .....	395
Profile Parameters .....	396
Update Rerun Reason Codes .....	397

## Chapter 24

<b>Report Facility</b>	<b>399</b>
Initiating the Report Facility .....	399

## Chapter 25

<b>Technical Specifications</b>	<b>401</b>
Architecture .....	401
Machine and Software Environment .....	401

## Chapter 26

<b>File Backup and Recovery</b>	<b>403</b>
Backing Up Files .....	403
Restoring Files .....	403

## SECURITY ADMINISTRATION

### Chapter 27

<b>Interactive Security Facility (ISF)</b>	<b>407</b>
Introduction .....	407
Benefits .....	407
Data Base Components .....	408
Global Security Attributes .....	408
Accessing ISF .....	409
JOB/Master® Security .....	412
Symbolic Substitution Security .....	415
RUN/Master® Security .....	416
CONSOLE/Master® Security .....	418

### Chapter 28

<b>Interactive Help</b>	<b>421</b>
-------------------------	------------

## INSTALLATION

### Chapter 29

<b>OPS/Master Installation</b>	<b>425</b>
Introduction .....	425
STEP 1: Preliminary Setup .....	425
OPS/Master Installation .....	430
Overview .....	430
STEP 2: Product Installation .....	431
JMVINIT .....	433
Considerations for JMVINIT: .....	433
JOB/Master® .....	436
RUN/Master® .....	437
CONSOLE/Master® .....	437

### Chapter 30

<b>JOB/Master® Advanced Functions</b>	<b>439</b>
Operating Multiple Control Regions .....	439
Job Submit User Exit Facility .....	440
Logon and Command Intercept Facility .....	442

Remote Job Tracking Support .....	443
Overview .....	443
Installation .....	443
Startup Procedure .....	445
Shutdown Procedures .....	446
NJE support .....	447
JOB/Master® History File .....	448
General Information .....	448
History File Calculation .....	448
Increasing History File .....	449

## QUICK START

<b>Introduction to QuickStart</b>	<b>453</b>
-----------------------------------	------------

## Chapter 31

<b>Procs</b>	<b>455</b>
--------------	------------

OPS/MASTER .....	455
OPS/Master Procedure Parameters .....	455
JOB/MASTR .....	455
JOB/MASTR Procedure Parameters .....	456
Cycle Processing .....	457
JMSCHED .....	457
Schedule Generation Parameters .....	457
Batch Mode .....	458
Include/Exclude ParmS .....	460
JCL date override in JMSCHED .....	461
JMBACKUP .....	462
JMRESTOR .....	462
JMJCLMB .....	463
CONSMATR .....	466
CMBACKUP .....	466
CMRESTOR .....	466
RUNMASTR .....	466
RMBACKUP .....	467
RMRESTOR .....	467

## Chapter 32

<b>Set Profile</b>	<b>469</b>
--------------------	------------

JOB/Master® Primary Menu .....	469
JOB/Master® Profile Update/Display Functions .....	470

Global Profile .....	471
RUN/Master® Profile .....	474
CONSOLE/Master® Profile .....	474

## Chapter 33

<b>Interactive Security Facility (ISF)</b>	<b>475</b>
Setting up security .....	475
ISF Opening Screen .....	475
Security Database Maintenance Screen .....	476
JOB/Master® Security Panel #1 .....	478
<b>JOB/Master® Security Panel #2</b> .....	<b>479</b>
JCL /Substitution Security Screen .....	480
RUN/Master® Security Screen .....	481
CONSOLE/Master® Security Screen .....	482

## Chapter 34

<b>JOB/Master® Database set up</b>	<b>483</b>
Creating WORKDYnn/HOLIDYnn .....	483

## Chapter 35

<b>Job Tracking</b>	<b>487</b>
---------------------	------------

## Chapter 36

<b>Additional Information</b>	<b>489</b>
LOOPDRV .....	489
Examples .....	489
Multiple Step LOOPDRV .....	490
When to use LOOPDRV: .....	490
Run Mode Option .....	490
PRODUCTION (P) .....	490
CHECK (C) .....	491
SELECT (S) .....	491
Select Mode On The List Queue .....	492

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## MESSAGES & CODES

### Chapter 37

<b>JOB/Master® Region Messages</b>	<b>497</b>
------------------------------------	------------

### Chapter 38

<b>JOB/Master® Online Messages</b>	<b>509</b>
------------------------------------	------------

### Chapter 39

<b>JOB/Master® Remote Tracking Support Messages</b>	<b>521</b>
---	------------

### Chapter 40

<b>RUN/Master® Messages</b>	<b>525</b>
-----------------------------	------------

### Chapter 41

<b>OPS/MASTER Messages</b>	<b>527</b>
----------------------------	------------

### Chapter 42

<b>CONSOLE/Master® Messages</b>	<b>535</b>
---------------------------------	------------

### Chapter 43

<b>ISPF Short Messages</b>	<b>539</b>
----------------------------	------------

### Chapter 44

<b>Security Messages</b>	<b>541</b>
--------------------------	------------

## APPENDICES



## Appendix A

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### Glossary

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545

## INDEXED REFERENCES



# Preface

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## Overview of Documentation

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This manual provides complete system information for current users of JOB/Master®, which is one of the Operations Productivity Systems offered by Mantissa Corporation.

JOB/Master® is a completely interactive operations scheduling system. It allows scheduling personnel to automate the production process in an efficient way, through a series of simple, self-prompting screens.

The intended audience of this manual is management, production control personnel, and systems personnel (*for installation verification*).

The OPS/Master® Reference Guide contains the following sections:

### ***JOB/Master® Reference***

JOB/Master® is used to create all definitions required for schedule generation. This section contains illustrations of all JOB/Master® screens and detailed descriptions of the contents of these screens.

### ***User Tutorials***

This section contains step-by-step instructions for creating several job definitions and other important tasks performed by OPS/Master® users. These tutorials also include detailed instructions for creating calendar and process keyword definitions.

### ***CONSOLE/Master® Reference***

This module simplifies MVS functions and automates console operations. It also illustrates all CONSOLE/Master® screens and provides detailed descriptions of all fields on these screens.

### ***RUN/Master® Reference***

This module is a rerun management system that automates the restarting or rerunning of a batch job. All screens involved in the restart process are described in this section.

***System Administration***

This section of the reference guide contains information on setting up OPS/Master® security (*for all modules*), specifying global parameters, establishing user exits, and OPS/Master® system customization.

***Installation Guide***

This section provides all the necessary information for the successful installation of all OPS/Master® modules. Instructions are also provided for verifying the successful installation of OPS/Master® modules.

***Messages and Codes***

This section contains a list of all messages and codes in the OPS system.



**JOB/Master®**

Release 5.20.1

**Mantissa Corporation®**  
1012 Edenton Street  
Birmingham, Alabama 35242

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# Chapter 1

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## Introduction to JOB/Master®

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Operationally, it is impossible to remove all human control from job scheduling and have an efficiently run operations department. JOB/Master® supplements the scheduling effort, reduces the time it takes to train new staff members, and does not impose a scheduling system that takes more time to understand and use than the actual scheduling process itself.

Production control is the part of the data processing organization which is responsible for the daily processing of business tasks. Administration and control of these tasks is vital to the effectiveness of the organization. The Production Control Manager is responsible for maximizing the workload of the organization and insuring the quality of the output.

A successful production control operation requires a system that provides standards for the organization of workload, monitoring for quality control, documentation for audit control, and flexibility for change.

The process of completing the organization's work involves the execution of jobs or job-streams organized in a sequential manner. The management tool required to provide for these standards is an automated scheduling system.

When the business task is scheduled, production control must know whether each job or job step is dependent upon successful completion of a predecessor job or the end of a specific job step or series of job steps. The control of the task is defined at either the job level, or the job step level.

## JOB/Master® Features

### *Machine and Software Environment*

- MVS release 3.8 through MVS/ESA, with time sharing option (*TSO*)
- Access methods, BPAM, BSAM, QSAM and VSAM
- IBM or IBM compatible display terminals (*any terminal supported by ISPF can be used by JOB/Master®*)
- The IBM utility IEBCOPY that is required for JOB/Master® installation

- JES2/JES3 Support
- No modification to operating system required
- No modifications to JES required
- No special SVC's required
- The processing of SMF record type 30
- Uses dataspace for all buffers
- Approximately 10 cylinders of 3380 space for installation
- Approximately 50 cylinders of 3380 space for data files and production use
- The JOB/Master® control region task must execute from an APF authorized library and execute in a region size of 2048K

### ***JOB/Master® Operational Features***

- JOB/Master® is accessed through any TSO terminal
- TSO/ISPF Editor
- ISPF program product
- On-line definition of jobs, job steps, and calendars
- Control of job dependencies based on programmable or manual conditions
- Step or job level condition code checking
- Condition code scheduling at the step or job level
- Control of predecessor and successor dependencies
- Automatic or manual submit and release of jobs
- Tracks and monitors jobs, real-time
- Produces on-line and hard copy operations run documentation
- Produces on-line and hard copy management statistics and reports
- Performs modeling and simulation functions for testing and production
- Multiple Virtual Storage (MVS) console facility
- Signal completion of events from external sources, such as Customer Information Control System (CICS) or Batch
- Message routing
- On-line job run history data
- Ability to dynamically route jobs based on user defined resources
- On-request jobs with predecessor relationships can be added dynamically
- Real-Time forecasting
- No JCL changes required
- Job workload can be shifted from one CPU to another



- One schedule for multiple CPU's
- Submission of jobs via NJE and track movement of submitted jobs
- User notification across CPU's of job activity
- Allows for workload balancing in multi-CPU environment
- Automatic resolution for jobs waiting on datasets

### ***JOB/Master® Scheduling Features***

- On-line implementation of schedules
- No JCL changes are required for schedule implementation
- Existing PDS JCL libraries can be used
- On-line tutorial and help facility for schedule implementation
- Schedule definition is provided on user-friendly screens
- Track and schedule batch jobs
- Unlimited calendar support, with shared calendar option
- Scheduling flexibility by providing schedule based on calendar date, day of month and/or day of week
- Time definition to provide that a job will not run if it has not started by it's scheduled time
- Schedule recurring events on the same day
- Schedule jobs based on Data Set Functions
- Schedule based on activity of CICS, IDMS, etc.
- Schedule of jobs determined by jobs in JES reader queue
- Manual events can be controlled by schedule
- Schedule of Jobs on NJE sites running MVS
- Unlimited number of predecessor and successor jobs
- Schedule control of resource availability
- Provides control of job file contention
- Scheduling may be defined after midnight without having to define a 48 hour day
- Provide for scheduling delays automatically without time restrictions
- Signaling of JCL errors
- Provides for non-scheduled jobs
- Scheduling can be determined on basis of step level condition codes
- Scheduled jobs can be based on completion of non-scheduled jobs
- Schedule allows for intervention when system crash occurs
- Jobs are prevented from automatic submission when a resource is unavailable

- The schedule may be altered based on a job or step condition code
- Simulation of current schedule
- Simulation of future schedule
- Simulation of effects of adding and deleting jobs from the schedule

### ***JOB/Master® Job Control Features***

- Notification by USERID
- Immediate notification to operator and user of job failure
- Immediate notification to operator and user of job delay
- Immediate notification to operator and user of manual tasks
- Abend and restart procedures for job failure
- Simulation schedule
- Interface to ACF2, RACF security systems
- Continues schedule when a restarted job completes successfully
- Provides for restarting a job when initial job fails
- Job run statistics, both current and historical
- Job trigger/predecessor requirements
- Schedule status of a job
- Jobs waiting on dependency criteria requirements
- ABEND/rerun tracking
- Posting and on-line update of job scheduling criteria
- Ability to submit a job from user defined PDS
- On-line submit from the JOB/Master® PDS
- On-line hold and release of scheduled jobs
- Status of JOB/Master® jobs executing
- Tracking and posting of non-CPU tasks
- Dynamic access to full MVS console facilities through JOB/Master®
- Tracking of manual output processing
- On-line log review
- Tracking of any modifications to schedule or jobs
- Tracking of used resources
- Daily Schedule report
- Flat file generation for downloading to other reporting systems. Use of all job control features at remote NJE facilities

## JOB/Master® Benefits

- **Maximized Productivity** by eliminating manual intervention.
- **Cost-Effective** by removing costs related to job delays and reruns.
- **Ease of Use** by operating on ISPF screens that are clear, concise and user friendly.
- **Quick Installation** by requiring no operating system modifications and reducing Job and Schedule implementation tenfold. JOB/Master® can be installed in less than four hours.
- **Increased Efficiency** by offering functions on the step or data set level. This enables the user to proceed to a successor job as soon as the required job steps or data sets from the predecessor job are processed without waiting for all steps in the predecessor job to be completed.
- **One-Time Data Entry** by alleviating redundant and time-consuming data entry. This enables the user to compile and store a wide variety of job-related data in the JOB/Master® data base that can be applied throughout the system.
- **Minimizes Initiation Delays** by allowing an entire group of jobs to reach the top of the job queue in parallel.
- **Automatic Scheduling** by time and date. The system is designed to understand all standard scheduling terms, i.e., weekdays, workdays, weekends. Since one company's production cycle may differ from another, the system allows a schedule to be designed according to the user's particular production cycle. The system takes into consideration holidays and other special days designated on a calendar. Provides as many separate calendars as required, i.e., for each remote data center with its own holiday calendar.
- **Resource Management** by preventing a job from being started if vital resources are not available. Schedules both abstract and real resources in a data center, locally and globally.
- **Job History Management** by providing a job history data set to record job run statistics.
- **Remote Job Tracking Support** provides for the submission, tracking, and events monitoring of remote NJE facilities attached to the central processing facility. A Master processor can now submit, schedule, track and control secondary site(s). No hooks to your operating systems are required.

## Job Schedule Confirmation

At the beginning of the day or shift, users can request an on-line display of the jobs to be submitted to the system that day. The sequence of jobs that JOB/Master® has assembled can be changed interactively by adding a job dynamically to the scheduling queue, canceling a job, changing the setup requirements, changing job streams, etc. The job requirements can be changed at any time prior to a jobs' submission to the JES input queue.

More than one day's schedule can be viewed on-line, which is useful when planning for the week in advance.

## Library Management Facility

JOB/Master® allows users to manage and synchronize JCL setup activities for any seven day period, for jobs that require JCL or control card changes from one day to the next. The JOB/Master® Library Management Facility can be utilized for this purpose.

The Library Management feature allows each day's run JCL to be placed in the PDS that corresponds to the day of the week on which it is scheduled to run. JOB/Master® also contains a DEFAULT SUBMIT PDS, for jobs not requiring control card or day-to-day JCL changes.

During schedule processing, when JOB/Master® is ready to submit a job to the Job Entry Subsystem (JES) input queue, the day of the week corresponding to the schedule date will determine which PDS is used for retrieving the submission JCL. If daily PDS's are defined, they will be used. If a staging PDS is defined, it will be used. If JOB/Master® finds the job in the STAGING PDS, it will submit the job. If the job is not found in the STAGING PDS, the DEFAULT SUBMIT PDS will be searched. If the job is found here, it will be submitted from this PDS. If neither of the two libraries contain the job, a "SUBMIT FAILED" message will be issued to the user. JOB/Master® will periodically retry the submit process until either the job is added to one of the submit libraries, or the job is cancelled from the JOB/Master® schedule.

## Dynamic Job Submission

JOB/Master® dynamically checks predecessor requirements, time criteria and input setup flags. The job is submitted to the JES input queue when all criteria are satisfied.

JOB/Master®'s dynamic job submission eliminates delays between dependent jobs and removes the need for operator decisions.

## Dynamic Tape Support

JOB/Master® can dynamically ensure that the job will have the specified number of tape drives available before job submission. The optional model numbers and required number of concurrent drives required to run the job are specified at the job level and up to two different models per job are supported.

For example, 3490 => 02 3480 => 00 specifies that two 3490 drives and no 3480 drives are required. Setting the count to zeros indicates no tapes of that model are required. The model numbers can be any tape model defined in your system up to a maximum of five. Currently Mantissa's master tape group table has 5 models. They are 3420, 3423, 3480, 3490 and 3590.

## Dynamic Job Release

A job defined to run automatically, with no special conditions involved, is submitted dynamically by JOB/Master® to the input queue, determining the need for operator intervention. When a job is dependent on a specific manual task or event, JOB/Master® waits until the appropriate action is taken (*the job control operator enters data, checks totals, feeds card input, etc.*). As soon as these events are completed, the job is released automatically by JOB/Master®.

## Dynamic Repair

When a job ABENDS, typically a recovery process must occur. The repair job could be held up while operators analyze the problem to decide how to proceed.

JOB/Master® can recognize the ABEND, as defined in the JOB/Master® data base, and invoke a set of recovery procedures, **without manual intervention**. Repair jobs can be run automatically, eliminating costly delays and potential human error.

## Remote Job Tracking Support

JOB/Master® provides support for running jobs on any processor utilized within an organization. Jobs can be started or tracked on any processor connected to an NJE network. It is not necessary for JOB/Master® to submit the various jobs. Jobs can be tracked at the main processing site in a *Real Time* environment. **Jobs not submitted by JOB/Master® must, of course, contain the proper job card identifier in col. 71.**

Job status is available on the JOBQ Display “LQ”, (*Tracking Menu*), at the host site as the job(s) are processed in exactly the same manner as if they were executing locally.

## Automatic Logging of Data Base Updates

There is now auto logging of most fields used during the definition for a Job to the JOB/Master® data base.

Changes to fields and/or deletions of records from the JOB/Master® data base are now logged into the HISTORY AUDIT file as they occur. They can be displayed by viewing the Message Audit Log from the TRACKING FACILITY. (*Refer to the “DH” command in the “Job Tracking” section of this manual*).

## Job Triggering

Before starting to use the JOB/Master® Job Trigger feature, it must be insured that a logically defined system or a group of jobs is defined in the JOB/Master® data base. The JOB/Master® Job Trigger feature allows a series of jobs to be dynamically submitted after the first triggering job in the stream has been successfully completed. The successful completion of a step may submit up to eight trigger jobs.

A “triggered” job is one which is automatically submitted at the successful completion of a previous job or jobstep. A job is defined as being triggered by entering a “Y” in the appropriate field “TRIG JOB (Y/N)” on the Job Definition screen. A trigger job will observe any predecessor relationship that is specified.

Job triggering is designed to provide a simplified means of scheduling and submitting jobs, the execution of which is based upon the completion of another job or job step.

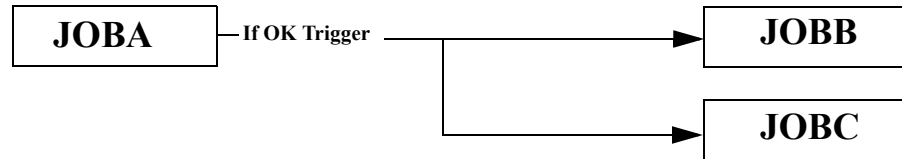
If a job being triggered has a calendar or process keyword, it will only be triggered if it is in the schedule queue at trigger time.

### Job Triggering Concepts

Although most systems are more complex, the triggering concept shown below can apply to any system:



Alternatively, Jobs B and C can be submitted simultaneously if Job A runs successfully, as illustrated below:

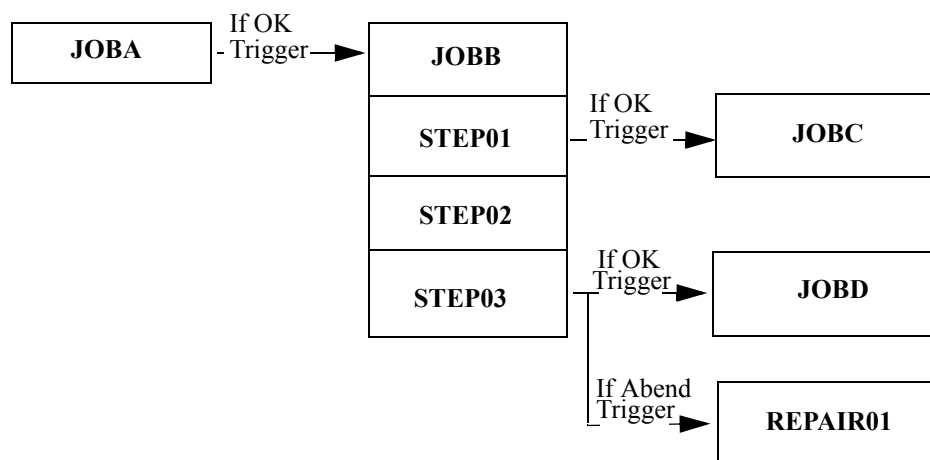


The JOB/Master® job triggering feature will perform the following basic scheduling functions:

1. Submit a job or jobs based on the satisfactory completion of a job or job step, or a standard dataset type function (*open, close, etc*).
2. Check the condition code specified by the user in the JOB/Master® data base.
3. Submit a repair job, if a job terminates abnormally as specified in the JOB/Master® data base.
4. Notify the operator via the MVS system console if a job fails to process successfully or contrary to the data base criteria.

### Steplevel Dependencies

JOB/Master® also provides the ability of triggering a job or repair job at the completion of a jobstep. Each step within a job can have trigger jobs defined for each of its steps, which can reduce total system processing time. It is also possible to trigger from the triggered jobs, thus providing an unlimited number of jobs to be triggered. Following this paragraph is an example of multiple trigger jobs submitted at the step level. The repair job is an alternate job which will be triggered only if the trigger job fails. The repair job should also be defined as a triggered job. This function can be used to dynamically schedule backout processing for a failed job and save restart scheduling time.



### ***Dependency Based on Multiple Jobs***

The dependency criteria for a job is sometimes set based on the successful completion of a combination of jobs. For example, JOBE is to be submitted only if JOBB, JOBC and JOBD run successfully. This relationship is specified in the job definition for JOBE.



***JOB/Master® is very methodical in its operation and does exactly what users have specified in the data base. The following specifications would result in THREE submissions of JOBE (Multiple job triggers).***

---

JOBE	AFTER	JOBB
JOBE	AFTER	JOBC
JOBE	AFTER	JOBD

---

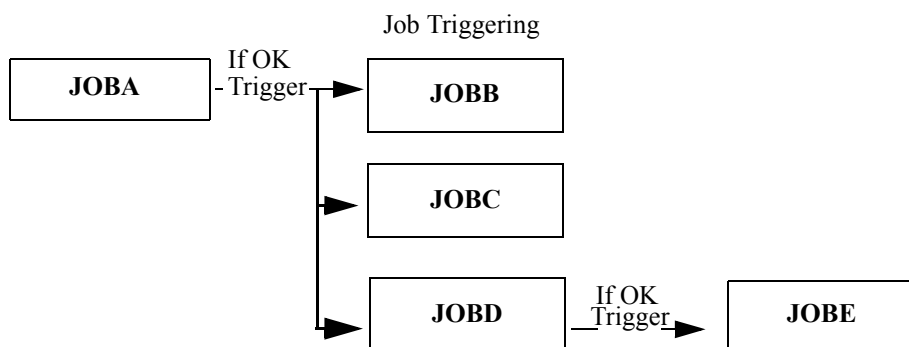
When using Job Triggering, select only one of these jobs to submit JOBE. Then, regardless of the status of the other jobs, JOBE will be the next job to be submitted. Its dependency will be linked only to the job which triggered it.

Users may code predecessor dependencies to handle multiple job dependencies.

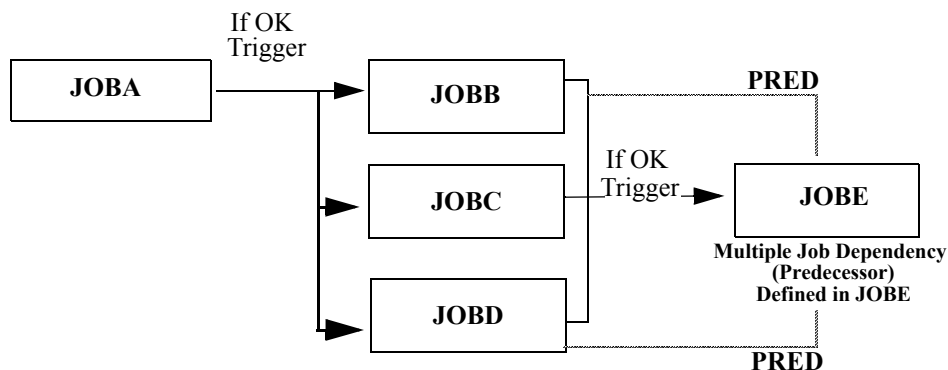


***Coding a predecessor will cause the job to wait until the predecessor(s) has completed.***

With predecessor checking, the JOB/Master® scheduler insures that all predecessor dependencies have completed before allowing JOBE to run. In the following example, JOBE without predecessors will be submitted when JOBD completes regardless of whether JOBB and JOBC complete. In the second example, JOBE will wait on submission until all three jobs have completed.



### Job Triggering with Predecessor Checking



Predecessor coding requires that Jobs B, C, and D complete successfully in order for JOBE to start. Jobs B and D are predecessors to JOBE. If JOBC triggers JOBE, JOBE will submit only after JOBB and JOBD have ended. Since JOBC is the trigger job, it is an implied predecessor.

## Externally Submitted Jobs

JOB/Master® allows for the start of a jobstream through TSO, or any other submission function, provided the job submitted contains a designated character in column 71 or that NOTIFY=JOBMAST is coded on the job card. These jobs, if submitted on hold, can have all the same dependency conditions assigned to them as any JOB/Master® submitted job. After all dependencies are satisfied, JOB/Master® will release the job from the JES queue.

## Dataset Contention Resolution

With the CONSOLE/Master® option of OPS/Master® installed, jobs which are held in an initiator because of dataset enqueues are automatically resolved by JOB/Master®. The Dataset Contention Monitor, which is activated by CONSOLE/Master®, will evaluate all jobs which are in contention for the dataset being requested by the waiting job, and will notify JOB/Master® of the conflict.



JOB/Master® will, if the option has been selected in the Profile, update the waiting jobs negative dependency list for all jobs which would cause this job to lock out the initiator. Once the contention list has been processed, the jobs causing the contention will be treated as negative dependencies, therefore eliminating the contention condition.

A message of the conflict and the jobs in contention is logged to the JOB/Master® audit log. If automatic update of the resolution is not selected, you may review the audit log and make any manual adjustments to the workload.

Additionally, a user exit, JMDSEXIT, is supplied in the INSTLIB dataset. This exit is given control for each job which is found in contention for a waiting job. The sample exit will write a message of each conflict to the operator console and will allow filtering of any jobs which you may not want processed as part of the contention list. For instance, if a test job is found to be holding a production job, you may want to eliminate that job from the list, issue a message to the user, and cancel the test job. TSO users are not processed as part of the contention list; they are, however, sent a message notifying them that they are holding a dataset which is required for processing. The message sent indicates the job and the dataset which is held.

The message format is:

**OPSDSCM JOB JJJJJJJJ HELD, YOU HAVE DSN=DDDDDDDD...**

where JJJJJJJJ is the jobname of the job waiting, and DDDDDDDDD is the dataset name being held.

## Activating the Dataset Contention Monitor

To activate the monitor, place a rule into the CONSOLE/Master® database. The rule has the following options:

The console message text is:

**IEF863I**

Offset from beginning of console line is 000.

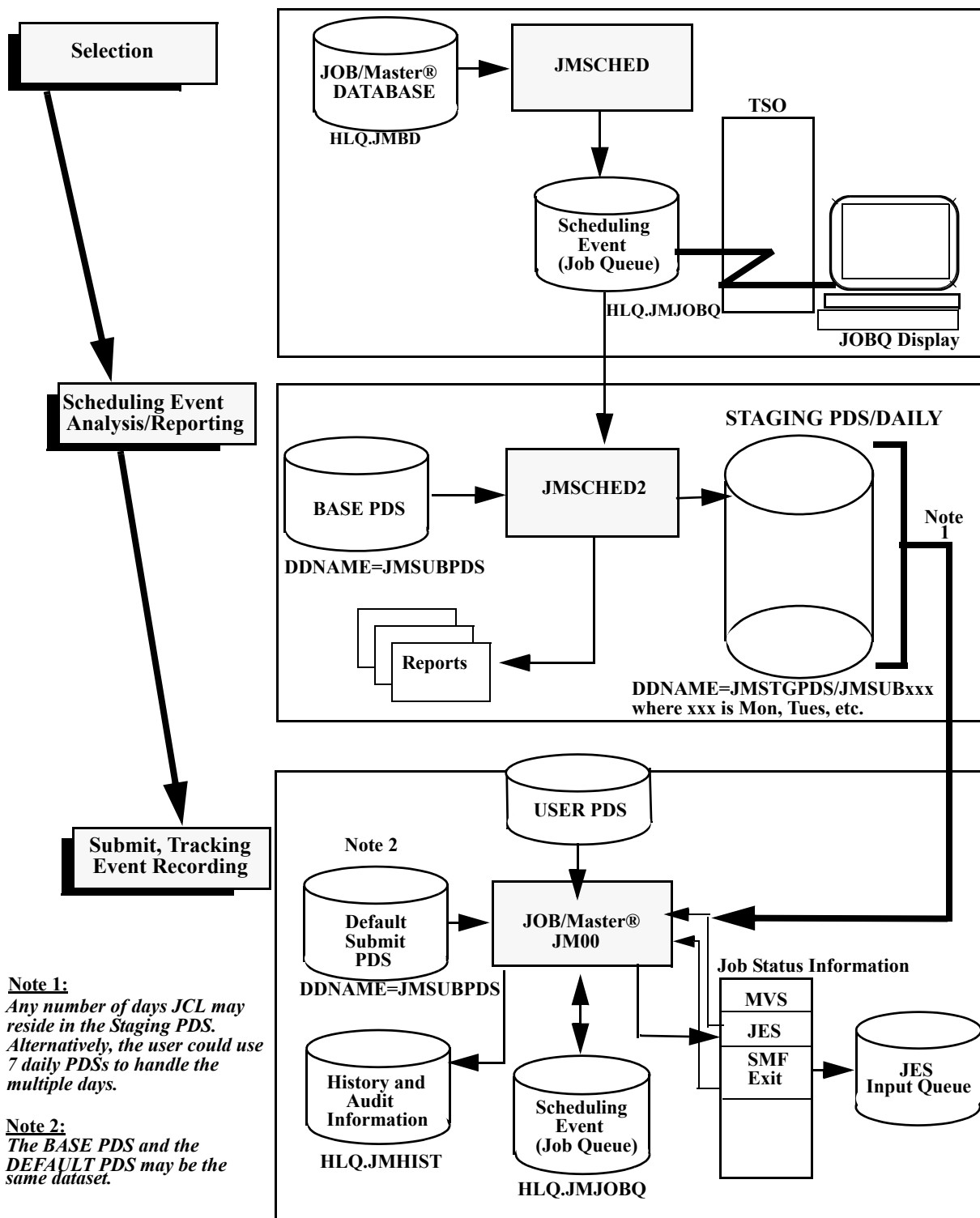
Command to be issued when rule is activated is:

**C="S JMDSCM,STRING='&JOBNAME,&4'"**

Whenever a “waiting for dataset condition” is detected, the contention monitor will be activated for the job being held, and will be passed the jobname and the dataset in contention. The monitor will determine the contention list, call the user exit, and communicate the information to JOB/Master®. The procedure, JMDSCM, is in the INSTLIB dataset.

## Scheduling Flow

The following illustrates the JOB/Master® processing flow.



### ***Selection***

In this part of the scheduling process, you tell the system the date and time frame for which a schedule is to be created. Optionally, the schedule for a given system or even jobs within a system can be created.

### ***Scheduling Event Analysis/Reporting***

This step is an automatic follow-up to the SELECTION process. The schedule events selected are subjected to an analysis process that considers predecessor/successor relationships and JOB TRIGGER relationships. In this step the BASE PDS is used to create a STAGING PDS or up to 7 daily PDS's. Reports detailing the scheduling activity are also produced.

### ***Submit, Tracking, Event Recording***

Unlike the first two parts of the scheduling flow, this stage of the scheduling flow is an ongoing process. The scheduler checks the scheduling event file (*the JOB QUEUE*) on an interval basis to determine if any jobs can be submitted. Based on information the scheduler received from SMF EXITS and from JES status inquiries, it determines how and when to submit these JOBS. During this iterative scheduling process, the RERUN PDS (*optional*) will have the JCL member updated/added and job history and audit information will be logged.

## **Security Function**

The use of each individual function and command in JOB/Master® is protected by the Interactive Security Facility (ISF).

Security protection is available at three levels:

#### **Highest level**

Generally given to senior management, this access is for those who can override any security assignment and globally prevent the use of a specific command.

#### **Varied usage**

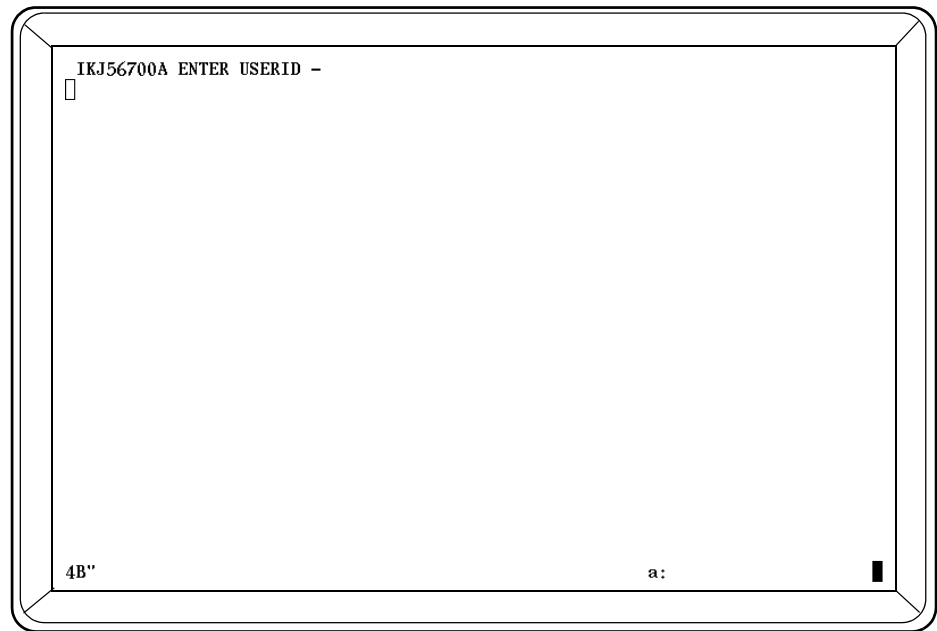
Each TSO userid has a record which describes the range of authority (which functions and commands are allowable or denied). Authority can vary widely, based on the job function of the user.

#### **General usage**

Anyone not specifically defined to the security system has limited access to functions and commands. Typically they receive display only, NO UPDATING, which is the basic default level.

## Signing On

JOB/Master® on-line Tracking uses TSO as a monitor to drive its interactive sessions (*a TSO userid is needed*). Illustrated below is a typical sign-on to JOB/Master® Job Tracking.



The ISPF Main Menu (*ISP@PRIM*) and sign-on procedures vary according to installation standards and options. Consult the installation staff for more information.



**CAUTION:** *JOB/Master® provides security via the Interactive Security Facility (ISF). JOB/Master® commands and functions are secured only if ISF is installed.*

After logging on to ISPF, the OPS/Master® Main Menu is displayed. To enter JOB/Mas-  
ter®, type J at the OPTION prompt (*and press <ENTER>*), as shown below:

[illegible]

Type “J” or “J#” at the OPTION==> prompt (*where # is the JOB/Master® Region Desired*). If multiple regions are defined at your installation, enter J1 through J4 to select JOB/Master® regions associated with the subsystem IDs’ JM01 through JM04, respectively. The use of “J” is the same as “J1”.



*To exit OPS/Master®, simply enter X in the OPTION field or press <PF3>.*

When you first enter into JOB/Master®, the Primary Menu is displayed as shown below:

[illegible]

Enter **P** in the **OPTION ==>** field to enter the **PROFILE** option. This option is used to set function key assignments, set job card JCL parameters, and display and update global option settings.



*All users are required to go through the PF key setup the first time they log on to the JOB/Master® System.*

Enter **J** in the **OPTION==>** field for **JCL SUBSTITUTION**. This option is used to enter variable information to production job control.

Enter **R** in the OPTION==> field for Report Selection options.

## Logging Into JOB/Master® For The First Time

Use the PROFILE option to confirm the default function key assignments (*or modify them*).

This must be done before any of the other job scheduling options can be accessed. Any other option entered will force a profile to be established before the other function will be processed. The following screen is an illustration of the Profile Screen:

```

----- JOB/Master® Profile Update/Display Options -----
-
Command ==>
-----

Option      Functional Description      User= P390K
-----
1           Set PFKS and Job Card JCL Parameters  Date= 98/09/01
2           Display Global Option Settings      98.244
3           Update Global Option Settings   Time= 10:30
End          Exit

The first time you enter JOB/Master®, Option 1 must be selected and "CONFIRMed"

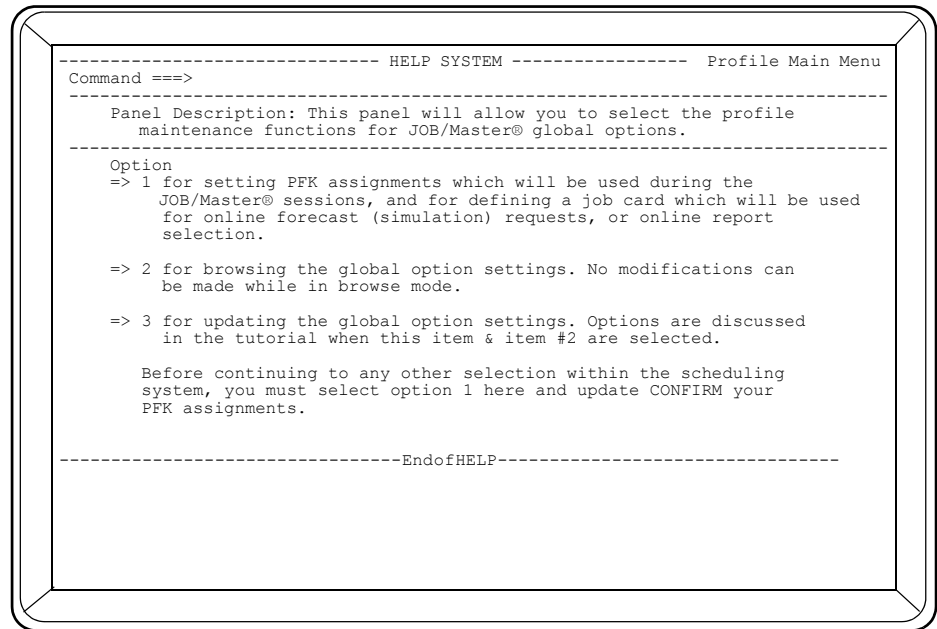
```

You can simply confirm the default assignments by entering CONFIRM on the command line or you can alter the default assignments by typing over the existing assignments. Remember, if you specify an invalid assignment, the key will not function. If desired, you can go back and modify the function key assignments at a later time. (*A Suggestion: Use PF keys 1-12 for the JOB/Master® functions. Use 13-24 for ISPF standard functions. There are several ISPF browse sessions utilized within the JOB/Master® system*).

## Interactive Help

OPS/Master® offers an interactive HELP facility that can be accessed by pressing <PF1> or the ISPF HELP command key from any screen.

Help screens will be similar to the illustration below:



If an error or system message is displayed in the upper, right corner of the screen, pressing <PF1> will display a brief explanation of the message. If you press <PF1> again, a help screen will be displayed.

If a message is not displayed, pressing <PF1> will cause a help screen to be displayed directly.

### Screen Navigation

Interactive Help Screens are designed in a circular repeating manner. There may be several screens of information relating to the various fields on the screen. By pressing the <ENTER> key, the user is moved through the various screens. When all fields have been described, the last screen will return to the first screen presented in this help session.



# Chapter 3

---

## Job Database Creation

---

The scheduling capabilities of JOB/Master® allow the user to easily manage and report job scheduling. JOB/Master® offers flexible and easy-to-use customization features for all scheduling needs.

We strongly suggest that you complete the tutorials in this manual before reviewing this section.

### Before You Begin

Be sure you are familiar with the following terms before proceeding:

#### System

A system is a logical group of jobs to accomplish a specific goal. Examples include accounts payable, accounts receivable and inventory. For Job/Master's purposes, a system "value" is only used to group related jobs. If a system record is defined (it is optional), its fields become default values for any jobs within that system and is a quick way to specify some general values applicable to each job in that system.

#### Job

A job is a set of Job Control Language (*JCL*) statements containing one JOB statement and one or more EXEC statements. The jobname defined to the JOB/Master® data base should match the jobname on the job card used at submission time. Each job step record, as defined to JOB/Master®, must be identical to the job's step name on the EXEC statement in the job or procedure.

A JOB/Master® data base job definition is made up of one job record and as many step record definitions as desired. The steps of a job need to be defined only if you want to collect step statistics or use step level controls. The term "job level" refers to the time from the start of a job to its end. The term "step level" refers to the period of time from the start of a step to its end.

#### Repair Job

A repair job is used to describe a job that is submitted if a failure occurs on the job or job step. A repair job can be submitted after a job or job step and is considered to be a triggered job. A repair job is defined to JOB/Master® in the same way as any other job. The job which abended can be specified as the job to be resubmitted, if the repair job successfully completes. This allows automatic recovery and restart of a job stream.

### Triggered Job

A triggered job is one which is submitted based on the completion of another job step, or some dataset function.

### Non-Triggered Job

A non-triggered job is one which is submitted from the scheduling queue based on time or event criteria.

### Predecessor

A predecessor refers to a job that must successfully complete before the next job can be submitted. All predecessor jobs can be defined on the job level for each job stream that is submitted. For example, suppose JOBA is defined as a predecessor to JOBB. This means that JOBA must successfully complete before JOBB can run. If this dependency relationship does not exist, JOBA should not be defined as a predecessor to JOBB.

### Calendar

A calendar definition tells JOB/Master® which are valid run days for the job being defined. A specific calendar only needs to be defined once. Any number of jobs can reference the same calendar definition.

### Keyword

A keyword is a relative term used to define a set of conditions which pertain to the scheduling of a job. Some of these terms can be MON(*Monday*) TUE(*Tuesday*), etc. through out the days of the week. There are many other standard keywords provided with you system. Additional Keywords can also be defined as may be required. If you have a need to process a series of Accounts Payable jobs on the 1st, 10th, 20th, and 30th of a month a Keyword can be defined as APPROC. The keywords can be used in place or in addition to calendars.

### Exception Calendar

An exception calendar definition tells JOB/Master® which are not valid run days for the job being defined. An exception calendar(s) is typically used to specify holidays. A specific exception calendar only needs to be defined once. Any number of jobs can reference the same exception calendar(s). These are two (2) exception Calendar possibilities for each Job.

### Submission Dependencies

Submission dependencies are criteria that must be satisfied before the job being defined can be submitted. Submission dependencies include, for example, the presence of an existing task in the CPU, the completion of a job or job step, and/or availability of a resource (*tape drive*).

## Job Fail and Condition Code Testing

If a job ABENDS, at any point, it will be assigned a Job Fail status. In addition, a job can be assigned a Job Fail status if condition code test(s) are not satisfied. Up to four condition

code tests can be specified for each job step. All dependent jobs are not submitted, since the job did not successfully complete. Optionally, it can be specified that any steps not defined to the data base must complete with a condition code of zero to be considered successful.

JOB/Master® allows a global condition code test to be specified. However, a job level condition code test overrides the global test. In addition, a step level condition code test overrides both job level and global tests. It is not necessary to define a 0000 condition code at either the job or step levels if within the Global Profile for Require Zero C.C.=“Y” is present. JOB/Master® will recognize the zeros as being a successful completion.

JOBA is successful if either of the following is true:

OP CODE	COND CODE
E	0000
E	0004

## Command Scheduling

To initiate a command stream, the CONSOLE/Master® portion of the OPS/Master® system must be installed. A command definition is designated by specifying a submit type of “C” on the job or trigger job definition. The command definition can be scheduled or triggered, and may have all the dependencies assigned to it as any other job definition. When the command definition is initiated, after all dependencies are satisfied, or the definition is triggered, a message is sent to the console. The generated message is in the following format:

### JMCN JOBNAME

where; JMCN-is a constant message identifier,  
JOBNAME-is the command definition name,

The message rule for “JMCN JOBNAME” is defined to the CONSOLE/Master® knowledge base and is used to drive the command stream.



**Command scheduling requires CONSOLE/Master® or another console product to be not only installed but it must be running when the command job issues the commands. If this is not the case, the command stream is ignored for processing. If another product is utilized, the product must have the ability to recognize the “JMCN” as described above.**

## Job Definition Screens

Up to 5 screens can be used to enter a job definition. However, many job definitions can be completed by completing only the first screen. The job definition’s most vital parameters can be found on the first screen. All of the job definition screens are described on the following pages. The number of the screen can be found in the upper left corner of each screen. (i.e. AJ = Add Job).

To access the Data Base definition screens, first select “J” (JOB/Master®) from the OPS/Master® Main Menu. Then select “D” (Data Base Creation) from the JOB/Master® Primary Menu. The JOB/Master® Data Base Functions Screen is displayed:

```

----- JOB/Master® Data Base Functions -----
-
Command ==>

      ID: JM01      User = P390K      Date = 98/09/01 - 98.244   Time = 11:12
-----

Option ==> _   A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> _   J ob          / S ystem          / P rocess Keyword
          C alendar        / N eg and Coreq    / G roup Message
                               / D ataset       / M essage

Name          ==> _____
Stepname      ==> _____ (Stepname (PROC) if jobstep definition)
Proc Stepname ==> _____ (Stepname (PGM=) if jobstep definition)

Data Set Name ==> _____ (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                   line when processing Data Base options

```

At this point, you can Add, Update, Delete, Browse or Inquire. Enter the letter associated with the desired option in the OPTION ==> field. Next, you must select the item you want to Add, Update, Delete, Browse, or Inquire. For job definitions, enter J in the TYPE ==> field. Then enter the name of the job definition in the first NAME ==> field. (*The second NAME field is used to specify the name of a job step.*) The following chart describes the information that must be provided to select each option (*applies to Add, Update, Delete, and Browse - inquiries are discussed next*):

OPTION	NAME	STEPNAME		DATA SET NAME
		NAME	PROC	
C = Calendar	Y	N/A	N/A	N/A
D = Dataset Definition	N/A	N/A	N/A	Y
G = Group Message Definition	Y	N/A	N/A	N/A
J = Job	Y	N/A	N/A	N/A
J = Job Step	Y	Y		N/A
M = Message Definition	Y	N/A	N/A	N/A
N = Neg/Coreq Definition	Y	N/A	N/A	N/A
P = Process Keyword Definition	Y	N/A	N/A	N/A
S = System Definition	Y	N/A	N/A	N/A

## Data Base Index

----- JOB/Master® Data Base Index-----						Row 1 from 346
Command ==>						Scroll => PAGE
Display Select==> Job= _____ Cal= _____ Sys= _____ Pky= _____						>>SHIFT>>
-----						
S	Type/Entry Name	T E Sub	Process	Calendar	Exceptn	Execptn
		R S Time	Keyword	Name	Call	Cal2
-----						
P/	TESTTABL		*PKYWORD			
C/	CALTEST1		*CAL/REL			
C/	CALTEST2		*CAL/REL			
C/	EXCEPTN1		*CAL/ACT			
C/	HOLIDY00		*CAL/ACT			
C/	HOLIDY98		*CAL/ACT			
C/	HOLIDY99		*CAL/ACT			
C/	WORKDY00		*CAL/REL			
C/	WORKDY98		*CAL/REL			
C/	WORKDY99		*CAL/REL			
N/	CONSMSTR		*NEGCOR*			
G/	SUPPORT		*MSGGRP*			
G/	SUPPORT1		*MSGGRP*			
M/	GROUPEDEF		*MSGDEF*			
S/	CHEKMODE					
S/	CONSTEST					

This screen comes from issuing the 'I'nquiry function from the JOB/Master® DATA-BASE FUNCTIONS screen. You may Inquire on the entire database or only the element you wish to use. If you INQUIRE on the entire database it could take some time to build the Inquiry ==> display. Generic Masking is possible on all elements (*i.e. All jobs starting with ABC should be called for by ABC\**).

At this point, specifying a U(update), D(delete), or B(browse) in the S(select) column will bring up the appropriate function. Like ISPF, multiple selects will be handled one at a time in order. Also, all commands from the Data Base Function screen can be entered on the command line of this screen. For example:

AJ JOBNAME = Add a JOB to the database.  
AC CALENDAR = Add a JOB to the calendar.

.  
.  
etc.

## Job Definition Screen 1

In many cases, this first screen will be the only screen necessary to create an entire job definition. The most important definition parameters can be found on this screen:

```

AJ ----- JOB/Master@ Job Definition --- Row 1 to 3 of 72
Command ==>                                     Scroll ==> PAGE
-----Definition Last Updated by _____ on _____ at _____

Jobname ==> _____ Alt Name For => _____ System Name ==> *****
PDS Mem ==> _____ PDS ==> _____
Trig Job ==> N (Y/N) Triggered By==> _____ Submit Type ==> A (ACMRST)
Res Name1 ==> _____ Res Name2 ==> _____ Schedule/Net==> *****
Calendar ==> _____ Excep Call ==> _____ Excep Cal2 ==> _____
Keywd Def ==> _____ Priority ==> _____ Lib Type ==> _____
Neg/C Def ==> _____
Model / Count of Tapes: 3420 => 00 3480 => 00 Update Drive Usage=> Y
----- Submit Options -----
Enter submit time (HHMM) & optionally "number of runs"/"minutes between runs"
Submit=> 0000 End=> 0000 Number Of Runs=> 00 Minutes Between Runs=> 0000

----- Dependency Options -----
Pred | Negative | Coreq | Process | N-Proc | Trig | Sub: OP Cond Trig
Jobs | Typ | Dep | Keyword | Keyword | Job | Typ: CD Code Type
-----|-----|-----|-----|-----|-----|-----|-----|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |

```

The process of creating a job definition can be completed more rapidly by using the COPY command. The command allows you to copy an existing job definition into the one being created. Once the definition is copied, modifications can be made, as needed.

The command has two (2) options:

1. COPY: Copies only the descriptive information from existing definition.
2. COPYALL: Copies all fields of existing job definition, except those few which must pertain only to this job being created.

Options are keyed at the COMMAND ==> line as follows:

COMMAND ==> COPY Jobname

COMMAND==> COPYALL Jobname

You may scroll this panel to view additional dependency options. (PF8)

### GENERAL PARAMETERS

#### DEFINITION LAST UPDATED BY

This line will indicate when the job definition was last modified. In addition, the user ID and time of the change will be shown. If you are creating a new job definition, this area will be blank.

#### JOBNAME

The name used to identify this job. The system will automatically display the job-name specified on the opening menu.

**ALT NAME FOR**

This field is used when a job already defined to the JOB/Master® data base needs to additionally execute with different scheduling criteria. By adding another job definition and filling the ALT NAME field with the Jobname from an existing job definition, JOB/Master® will execute the ALT NAME JCL using the new JOBNAM and scheduling criteria.

**SYSTEM NAME**

This field is used to enter an application system name of which the job is a part.

**PDS MEM**

The PDS MEM field is used to specify the Partitioned Data Set Member name. Only specify a member name if it is different from the jobname. The member name will be utilized by the system when storing resolved JCL. If multiple jobs are required for the same processing day, utilizing the same member, the jobs **MUST** vary by at least 1 minute in their scheduled time.

**PDS**

This field specifies the dataset where the JCL resides if it is not in the master submit PDS.

**TRIG. JOB (Y/N)**

If the job being defined is triggered by another, enter Y in this field. This means that another job must successfully complete before the job being defined can run. If this is changed from a “Y” to “N” the field TRIGGERED BY will be cleared when updated.

**TRIGGERED BY**

This field is updated at the time a job is triggered and can not be manually updated, except for spacing out the entire field by the system if a job is no longer triggered. This reflects the LAST job which triggered this job. Jobs may have more than one job trigger them.

**SUBMIT TYPE**

**Type of submission required for the job being defined.** Specify one of the following types of submission in this field:

- A     Automatic (default).**  
Submitted by JOB/Master® from the submit PDS.
- M     Manual.**  
Requires manual intervention. Submitted from the submit PDS, using JOB/Master® submit commands. (*Refer to Job Definition Screen 3*).
- S     Started Task.**  
Started task initiated by JOB/Master®.  
(*Refer to the section on Started Tasks - Job Scheduling Concepts.*)
- R     Repeating.**  
The task will continue to be rescheduled and submitted, based on user command until the last run is signaled complete by the user. This type of submit is useful when the number of iterations for a job is variable. Any job defined as a *repeating* job will now be treated as a Manual Submit

from the First Schedule Time. The first submission will no longer occur automatically.

**T Timed Trigger.**

The job is triggered, but will wait for its submit time, as coded on the data base. If the submit time of the job is 0000 and the job isn't on the scheduling queue, when the job is triggered it will be placed on the scheduling queue with the current system date and time. If the job already exists on the scheduling queue with a 0000 time (*having been scheduled*), then no other job with the same name is allowed on the scheduling queue during the same day until the job with the 0000 time is complete. These same conditions apply to jobs which may be triggered and are not defined to the data base. If a manual task message is applicable for the triggered job, the message will not begin being sent until the job is actually triggered.

**C Command Stream.**

Console commands may be scheduled, triggered, etc. (*Refer to Command Scheduling.*)

**RES NAME1**

This field is used to assign a resource name to a particular CPU. The resource name can be up to 8 characters in length. If no name is specified, the function will be eligible on any processor. The system will attempt to execute the function on the resource name specified in the RES NAME1 field. If that condition cannot be satisfied, it will attempt to execute the function on the name specified in the RES NAME2 field.

The Resource name(s) can be both a Real Resource or a Virtual Resource (*not physically there*). These resources can be attached or detached from a system as may be required. Attaching a resource will allow the scheduling system to release the job(s) waiting for that resource to execute. (*Refer to ATTACHING and DETACHING commands in the JOB TRACKING Section.*)

**RES NAME2**

This field is used to assign a second resource name to a particular CPU. Refer to the description of RES NAME1 for more information.

**SCHEDULE/NETWORK**

This field provides a customer with the ability to group a schedule or network of jobs into an identifiable entity. Security can be established on this group which now limits any and all access to the various criteria specified as belonging to this group.

The field is eight (8) characters in length and must be previously set up using ISF (*Security Feature*). If 8 asterisks are specified, the job being defined has no security and anyone may perform the various functions for which they have security.

**CALENDAR**

A calendar name is specified in this field. The calendar tells the system which days of the year are valid days to run the job being defined. The calendar must be defined to the system for the job to be scheduled. You can, however, specify a calendar name in the job definition and actually define the calendar at a later



time. Calendars are not always required for a job. Use of Process Keywords serve a similar function as calendars.

#### EXC CAL1

This stands for exception calendar. This calendar tells the system which days are not valid for the job to run. The exception calendar(s) is typically used to specify holidays.

#### EXC CAL2

This field can be used to specify a second exception calendar. For more information refer to the description of EXC. CAL1.

#### KEYWD DEF

Enter the name of a keyword definition in this field. Keywords are used to represent a set of conditions under which the job should be run. It may not be necessary, however, to use keywords to satisfy the requirements of the schedule. Some keywords require references to calendars. Others represent conditions that the system can interpret without a calendar. Refer to the description of the Keyword Definition Screen in this section for more information.

The name keyed in this field refers to a list of keywords entered as a Keyword Definition from the JOB/Master® main menu. This allows multiple jobs to use the same set of keywords without entering the entire list on each job definition. The set of keywords referenced here is merged with or combined with the keywords in the Dependency Options on the lower half of the screen. This allows for flexibility of exceptions by job.

#### PRIORITY

The priority refers to the Submission Priority that will be assigned to the job in the event other jobs are scheduled to be submitted at the same time and all Scheduling Criteria have been met. The following values are acceptable:

##### **A (Highest) through Z (Lowest)**

Priority can be activated, changed, or stopped. If priority is desired, the submission sequencing is activated, changed, or stopped using the "SP" (*Modify Priority Selection List*) command in the Tracking Facility. (*Refer to the Tracking section of this manual - SP Command*). The feature allows for better control during job submission to the JES initiators.

#### LIB. TYPE

This is a reserved field to be used later.

#### NEG/C DEF (NEGATIVE/CO-REQUISITE)

Enter the name of a definition that includes the desired negative and co-requisite dependencies for the job being defined. You can, however, specify additional dependency information at the bottom of the screen.

*NEGATIVE Dependencies:* The job being defined will not be submitted if the named definition is either executing in MVS or in the JES input queue.

*CO-REQUISITE Dependencies:* The job being defined will only be submitted if the specified co-requisites are executing.

These dependencies can be defined under a user-specified name. Enter that name in this field. Refer to the description of the Negative/Co-Requisite Dependency Screen in this section for more information.

#### MODEL / COUNT OF TAPES:

These fields define the model numbers and required number of concurrent drives required to run the job. For example, 3490 => 02 3480 => 00 specifies that two 3490 drives and no 3480 drives are required. Setting the count to zeros indicates no tapes of that model are required. The model numbers and counts are required if the drives are to be checked for availability before job submission. The model numbers can be any tape model defined in your system. If the model is not found, a JM44 message will be displayed when the job is on the JOBQ. The default models (if blanks are in the record) are 3420 and 3480 which were the only models supported before version 5.2.1. If the job requires more than two types of tapes, specify the two that have the most contention.

#### UPDATE DRIVE USAGE

You may enter a Y (yes) or N (no) in this field.

Y (Yes) = Update the number of drives used by this job after each run.

N (No) = Do not update the number of drives used.

*(If you have responded "Y" to this field, the number of tape drives needed is updated automatically by JOB/Master®).*

#### SUBMIT OPTIONS

##### SUBMIT

This field is used to specify a time for the job to be submitted. Submit Time is critical within the JOB/Master® system. Submission for execution is based on the submit time. Any notification for delayed jobs is also based on the submit time.

##### END

This optional field is used to specify a time for the job to end. Be sure you have also specified a submit time. Additional submit/end times can be specified on the Job Definition Screen 2.

##### NUMBER OF RUNS

This field is supplied for jobs needing to be executed multiple times during a "Schedule Day." A Submit time for the first execution is necessary. Enter the number of required executions in this field.

##### MIN. BETWEEN RUNS

The number of minutes between each run is necessary for these multiple execution jobs. The minimum number of minutes that can be specified is '5'.

Example: If a job is to be run six (6) times beginning at 8:00 am and then every 20 minutes thereafter, the submit options would be as follows:

**SUBMIT 0800 END \_\_ Number of Runs 06 Min. Between Runs 20**



*Using this feature, specifying the SUBMIT time and END times at 20 minute intervals is not necessary. (Submit 0800 end 0820, submit 0820 end 0840, etc.) If a previous execution does not complete successfully, the next execution will not begin. The executions must complete normally, be purged, or be kept.*

## DEPENDENCY OPTIONS

This area of the screen allows you to enter a variety of dependency options. Many options are independent of others. The options that are independent are separated by a vertical line in the column header area.

The fields PRED JOBS (*predecessor jobs*) and TYP are associated. In addition, the Dependencies are grouped together, as are the Keywords.

The last 5 columns are also grouped together. You can specify a condition code test. If the condition code test is passed, you can specify a job to be triggered. If a trigger job(s) is specified, be sure to enter an associated submit type(s). You can also enter a trigger type.

This area of the screen is scrollable. There is no practical limit to the number of dependency options you can specify. To view more dependency options at one time, go to Job Definition Screen 2. All of these fields are described below:

### PRED JOBS

This stands for Predecessor Jobs. A predecessor job is any job that must run before the job being defined can run. You can specify any job name, including one that is not in the system currently being defined. Pred jobs have logical rules which must become part of the scheduling process.

- Pred jobs should have a logical flow with times. If jobs follow each other, the times for the jobs should reflect the logical flow sequence of the jobs. Even if they are scheduled just one minute apart the flow will retain its processing integrity.
- Pred jobs can be both regular defined jobs or alternate definitions. If alternate definition jobs are to be used as Pred's then be sure they are defined as the Pred. Do not use the regular defined job name. This is the purpose of alternate definitions.

Generic names can also be entered as a Pred. (i.e. *AP1000-AP1001, etc., can be entered as AP1\*.*) In this situation, the job being defined will not execute until all jobs having "AP1" as their first 3 characters have completed successfully.

### TYPE

The type of predecessor is entered here. Values are:

BLANK	Simple Predecessor. If the job specified is not on the scheduling queue ( <i>JOBQ</i> ), then the job is considered complete.
R	Required Predecessor. A Required Predecessor must have been run for this job's scheduled day and will be checked even if the job is not on the <i>JOBQ</i> . This function requires additional checking and should not be

used indiscriminately. Additionally, if “R” is coded then the predecessor cannot be bypassed on certain days.

S

System Predecessor. Jobs in that system must be complete, not on the JOBQ, for the dependency to be satisfied.



***If you select a job having a System Pred which belongs to the same system, you may only have one of these jobs per schedule day.***

N

Where N is a number from 1-9 indicating that the job must have completed within N days to be considered complete.

#### NEGATIVE DEP.

This column is used to specify any jobs that cannot be in the JES input queue or be executing for the system to run the job being defined.

#### COREQ DEP.

This column is used to specify any jobs that must be running for the job being defined to run.

#### PROCESS KEYWORD

A process keyword represents a set of conditions that, when true, causes the job to be scheduled. If process keyword specified *is not* one of the standard keywords provided with the system, be sure to define the keyword with the Keyword Definition Screen before the job is run. Refer to the description of the Process Keyword Definition Screen in this section for more information.

#### N-PROC KEYWORD

A non-process keyword represents a set of conditions that, when true, cause the job not to be scheduled. If a non-process Keyword is used in conjunction with a calendar, then a process Keyword must also be used. (*The process keyword WORKDAY will activate the calendar*). Refer to the description of the Process Keyword Definition Screen for more information.

#### TRIG. JOB

Enter the name(s) of the trigger job(s) in this column which are to be triggered from the execution of this job. You can also make the trigger dependent on whether a condition code criteria is satisfied. If condition code criteria is desired, enter the appropriate information in the OPCD and COND CODE columns on the same row. If you specify a jobname, be sure to enter a submit type.

#### SUB TYP

Enter a submit type for each trigger job specified. (*See previous reference in this section.*)

#### OP CD

This field is used if you want to run a condition code test, and to specify the operator for the test. One of the following operators can be specified:

- L Less Than. (excluding user and system abends)
- G Greater Than. (excluding user and system abends)
- E Equal To.
- N Not Equal To.
- S The value in the condition code field is a system abend code. Will compare as an Equal To.
- U The value in the COND code field is a user abend code. Will compare as an Equal To.

**COND CODE**

Enter the value of the condition code for which you are testing.

**TRIG TYPE**

This field specifies what happens to a job (if TRIGGER JOB is blank) or a TRIGGER JOB (if a JOBNAME is present).

- I Include this job if the COND code value is met (default).
- E Exclude this job if the COND code value is met.
- F Treats COND code value as a Failure condition.
- O This trigger job overrides all other trigger jobs.
- (blank) If Jobname is blank then treat this job as successful if the condition code value is met. If Jobname is not blank then process like (I) code.

***Trigger and Condition Code Information***

The following table will indicate the possible options and outcomes when specifying the Trigger and Condition Code information. The following information about whether a job completes successfully or fails is dependent on the global option “REQ ZERO C.C.”. If the option is equal to “Y”, then a zero condition code is the default successful completion code but you may add other codes in this section which are to be considered successful also. If the option is equal to “N”, then you must tell JOB/Master® in this section what condition codes are to be considered successful. Remember if a Trigger jobname is present, then the comparison and actions apply to that trigger job only. If a Trigger jobname is blank, then the comparisons and actions apply to the job itself AND the system will set the successful/fail status based only on the comparisons found in the jobs definition. Also, the last code comparison found to match will be the one whose TRIGTYPE value will apply.

TRIGJOB	SUB-TYPE	OPCD	COND CODE	TRIGTYPE	RESULT
Jobname	any				Triggers jobname if job completed successfully.
Jobname	any			F	Triggers jobname if job failed.
Jobname	any	any	any	not equal F	If OPCD & CONDCODE match, process this job based on trigger type if job completes successfully.

TRIGJOB	SUB-TYPE	OPCD	COND CODE	TRIGTYPE	RESULT
Jobname	any	any	any	F	Trigger job if OPCD and CONDCODE match and job failed.
Blank	n/a	any	any	not equal F	If OPCD & CONDCODE match, indicates this job completed successfully.
Blank	n/a	any	any	F	If OPCD & CONDCODE match, indicates this job Failed.

## Job Definition Screen 2

[illegible]

If you require additional submit/end times and dependency options, use this screen. Remember, however, that the Dependency Options area of Screen 1 is scrollable. Any submit options and dependency options specified on screen 1 will be displayed on screen 2.

Refer to the field descriptions of Job Definition screen 1 for more information on the individual fields.



*Multiple submit times should not be specified for trigger jobs.*

## Job Definition Screen 3

```

----- JOB/Master® Job Definition For TESTJOB1 -----
Command ==>

Run Mode           ==> P      (P=Production, C=Check, S=Select)
Do Not Schedule Before ==> 00000 (YYDDD)
Do Not Schedule After  ==> 00000 (YYDDD)
External Submit      ==> N      (Y=Not Submitted By JOB/Master®)
Deadline Cancel      ==> N      (Y=Cancel From JOBQ) Wait ==> 000 Minutes
Job Fail Userid       ==> _____ Send Fail Msg - (JM39) ==> N (Y,N)
-----
Message Definition   ==> _____ Message Group ==> _____
Repair Job           ==> _____ Submit Type ==> _ (A,C,M,R,S,T)
-----
*** Hold Job For *** | *** Output Processing Information ***
DATA ENTRY           ==> N (Y,N) | Burst ==> N (Y,N)
CARD INPUT           ==> N (Y,N) | Fiche ==> N (Y,N)
TAPE INPUT           ==> N (Y,N) | Decollate ==> N (Y,N)
CONSOLE ROUTED       ==> N (Y,N) | Photocopy ==> N (Y,N)
JCL SETUP            ==> N (Y,N) | Other ==> N (Y,N)
-----
Hold Job on Schedule Queue for Output Posting ==> N
(Y=Requires manual posting after job completion, through Job Tracking
Manual Task Display)

```

### RUN MODE

The Run Mode option allows the user to schedule jobs according to the readiness of the application. Jobs can be scheduled to actually execute or only simulate execution. There are three possible Run Mode options:

#### PRODUCTION (P)

Global Record(Profile): Can be overridden at the System and Job level.

System Record: Can be overridden at the Job level.

Job Record: Will place job onto LQ and actually run JCL.

#### When To Use PRODUCTION:

Once JOB/Master® has been installed and system testing completed, the Global Record in the Profile should be changed to production mode so jobs may begin executing. From that point forward (*taking into consideration site standards and change control procedures*) the majority of the jobs in the system will be executed.

#### CHECK (C)

Global Record(Profile): Cannot be overridden at the System and Job level.

System Record: Cannot be overridden at the Job level.

Job Record: Will place job onto LQ but will simulate execution.

#### When To Use CHECK:

Check mode is most often used to test a job or system and its interaction with JOB/Master® functions. Scheduling criteria can be defined to the JOB/Master® Data Base before the programs are ready when the system or job is put in check



mode. Check mode only simulates the job execution, as none of the execution JCL actually gets moved to the JMSTGPDS or is called at submit time. This JMSTGPDS technique gives an opportunity to make certain everything is working properly, jobs are scheduling, predecessor relationships are met, triggers are working etc. BEFORE all jobs are moved into production.

### SELECT (S)

Global Record(Profile): N/A

System Record: Will default to check mode unless overridden at the Job level.

Job Record: Will default to check mode unless included on LQ prior to submit.

### When To Use SELECT:

During the last phase of testing, some jobs in a new or modified application stream may not be ready to execute regularly in production. Also, User Departments may have a series of jobs that may or may not need to be executed that night and they do not know before the schedule is run. Jobs with select mode, will be placed on the JOBQ, but will default to executing in check mode, unless the job is included from the LQ prior to submission.



***Select mode should NOT be used indiscriminantly because of overhead and storage issues in processing the JOBQ.***

### DO NOT SCHEDULE BEFORE

If you enter a date in this field, the system will not submit the job before the specified date (*overriding keyword and calendar definitions*). The date must be entered in the form YYDDD.

### DO NOT SCHEDULE AFTER

If you enter a date in this field, the system will not submit the job after the specified date (*overriding keyword and calendar definitions*). The date must be in the form YYDDD.

\*The above 2 fields are very useful in pre-defining jobs and systems before they are actually necessary to be in full production.

### EXTERNAL SUBMIT

Enter Y in this field if the job is to be submitted from outside of JOB/Master®. If you enter Y, the system will treat the job as if it were submitted from within a JOB/Master® schedule. Jobs will be triggered, act as Predecessor jobs, etc.

### DEADLINE CANCEL

This field is used only if a submit time(s) was specified on the first job definition screen (*or optionally on the second job definition screen*). If you specify Y in this field, the system will not run the job if it is submitted after the specified start time(s). The job will be cancelled from the JOBQ after the required time has elapsed. If you enter N (*this is the default*) in this field, the system will run the job even if it is submitted past the specified start time(s).

WAIT

This field accompanies the Deadline Cancel ==> field. If you specify Y in the Deadline Cancel, you can also specify a number of minutes from the time the system discovers it should cancel the job until the job is actually cancelled. If 000 is used, the system will wait 1 schedule scan cycle and 1 minute before cancelling. (*Refer to tracking section*).

## JOB FAIL USER ID

Specify the user ID of the person who should receive the Job Fail (*JM02*) message, if it is issued.

(SEND FAIL MSG) / USE JM39 MSG

“Y” would send JM39 error message to console if job failed. See ISF discussion of the special handling of the JM39 message.

## MESSAGE DEFINITION

This stands for Manual Task Message Group. The 8-character name specified in this field refers to a pre-defined set of messages that will be displayed when Manual Tasks must be completed for the job to run successfully. The messages are defined within the Add Manual Task Message Definition..

## MESSAGE GROUP

The 8-character name specified in this field represents the group of people who will receive all manual task messages generated from this job. The notify group is defined within the Add Message Group.

## REPAIR JOB

Enter the name of a job to be run in the event that the scheduled job abends. The repair job should be defined to the Database as a triggered job, no other fields are required.

## SUBMIT TYPE (A/M/S)

This submit type refers to the repair job. There are three submit types available for the repair job:

- |   |  |
|---|--|
| A | JOB/Master® will automatically submit the job from the<br>JOB/Master® PDS. |
| M | JOB/Master® will not submit the job without operator intervention.         |
| S | JOB/Master® will issue an MVS start command for the jobname.               |

## HOLD JOB FOR

There are five manual tasks for which the system can hold a job on the queue until the tasks are complete and manually signed off. The default task names are shown:

DATA ENTRY  
CARD INPUT  
TAPE INPUT  
CONSOLE ROUTED  
JCL SETUP

Specify Y next to the desired manual tasks and the system will not consider the job eligible for submission until these tasks are manually signed off.

The names of these tasks can be changed in the Profile option of JOB/Master® (*described in this manual*). You can also display messages on the console prompting the operator to perform these tasks. The messages are entered on Job Definition screen 4. If you specify Y to any manual task field, the message screen will be presented for entry. An N in all manual task fields will by-pass the message screen.

If you plan to use symbolic substitution on JCL setup you must leave the 5th manual task to specify JCL setup. Refer to the section on “Job Tracking” and the tutorial “Signing Off On Manual Tasks” for more information.

#### OUTPUT PROCESSING REQUIREMENTS

Specify Y next to the desired output medias that will be used for the job. If you want to tell the system to hold the job until the desired output media(s) are prepared and the task signed off, specify Y in the HOLD JOB ON SCHEDULE QUEUE FOR OUTPUT POSTING ==> field. You cannot modify the names of the output medias shown on the screen.

#### HOLD JOB ON SCHEDULE QUEUE FOR OUTPUT POSTING

Specify Y in this field if you want the system to hold the job on the queue until the specified output processing requirement(s) is manually signed off. Jobs held for output processing will be marked successfully completed if they are successful, allowing for the triggering and predecessor functions to continue normally. Refer to the section “Posting Manual Task Complete” in the tutorial “Signing Off On Manual Tasks” for more information.

## Job Definition Screen 4

```

----- JOB/Master® Manual Task Message Definition TESTJOB1 -----
Command ==>

Desc: _____

Send 000 minutes before submit time or, after dependencies => N (Y,N)
      At a frequency interval of => 005 Minutes

1 DATA ENTRY      Message to Userid/Console => _____
Msg= _____

2 CARD INPUT       Message to Userid/Console => _____
Msg= _____

3 TAPE INPUT       Message to Userid/Console => _____
Msg= _____

4 CONSOLE ROUTED   Message to Userid/Console => _____
Msg= _____

5 JCL SETUP        Message to Userid/Console => _____
Msg= _____

```

### DESC

Brief description to help understand the manual tasks required. The information on this panel can be overridden by the Message Definition (to specify a standard set of messages) and/or Message Group (to specify a large group of users). These fields are specified on Job Definition Screen 3.

### SEND 0000 MIN. BEFORE SUBMIT TIME

If a manual task message(s) is to be sent, you can specify that the message(s) be issued a specific number of minutes before the scheduled submit time. Enter the desired number of minutes in this field. The default is 0000 (zero).

### OR, AFTER DEPENDENCIES => \_ (Y,N)

If you want to issue the manual task message(s) after all the dependency jobs have successfully completed, enter Y in this field. Only specify Y if you did not enter a value in the SEND 0000 MIN. BEFORE SUBMIT TIME ==> field.

### AT A FREQUENCY INTERVAL OF=> 005 MINUTES

You can specify how often you want to issue the manual task message(s). You can enter a value in this field, regardless of whether you specified a value in the SEND 0000 MIN. BEFORE SUBMIT TIME or AFTER DEPENDENCIES ==> field. The default for this field is 005 minutes. That means, unless specified otherwise, the message(s) will be issued every 5 minutes until the task is manually signed off. Refer to the tutorial "Signing Off On Manual Tasks" in this manual.

### DATA ENTRY

Enter the desired message for the first manual task.

### CARD INPUT

Enter the desired message for the second manual task.

#### TAPE INPUT

Enter the desired message for the third manual task.

#### CONSOLE ROUTED

Enter the desired message for the fourth manual task.

#### JCL SETUP

Enter the desired message for the fifth manual task.



---

***Each of these five manual tasks will have their respective messages sent to the userid in the task specified in MSG to USERID/CONS==> field.***

---

#### USERID/CONS

Enter the desired ID which is to receive the message. JM05 in the product default record or user record must be set (See the Interactive Security Facility manual) in order for these messages to be delivered.

- USERID = Any valid TSO userid.
- CONS = Any valid console address authorized to receive message information or "0" for the Master Console.

## Job Definition Screen 5

```

----- JOB/Master® Job Definition For TESTJOB1 -----
Command ==>

-----
Job Description      ==> _____
Pprocedure Name     ==> _____
Programmer Name      ==> _____
Submitting Dept      ==> _____
User Department      ==> _____
Output Destination   ==> _____
Delivery Method      ==> _____

----- Abending Contact Information -----
Contact Name ==> _____ Phone ==> ( ____ ) ____ Ext ==> ____
Beeper ==> ( ____ ) ____

-----
Run-Exit Ins= _____

```

This is a job documentation screen. If the SYSTEM DEFINITION screen is used it will provide the information which could be presented here. If the JOB DEFINITION DOCUMENTATION screen is used, the information will override the SYSTEM DEFINITION screen.

### JOB DESCRIPTION

This free-form field is used to enter a brief description of the job being defined.

### PROCEDURE NAME

This field is used to enter the PROC name.

### PROGRAMMER NAME

This free-form field is used to enter the name of the programmer who created the job definition.

### SUBMITTING DEPT

This free-form field is used to enter the name of the department which will be submitting the job.

### USER DEPARTMENT

This free-form field is used to enter the name of the department that will use the output from the job.

### OUTPUT DESTINATION

This free-form field is used to enter a description of the destination of the output from the job.

**DELIVERY METHOD**

This free-form field can be used to specify how the output will be delivered to the user department.

**CONTACT NAME**

This free-form field can be used to enter the name of the person that the operator should contact in the event of a job abend.

**PHONE**

This field can be used to enter the phone number of the abend contact.

**EXT**

This field can be used to enter the phone extension of the abend contact.

**BEEPER**

This field is used to enter the beeper number of the person who should be notified in the event of a job abend.

**RUN-EXIT INS**

This free-form field can be used to specify instructions to be performed when the job has completed.

If the job being defined is a started task then the first data present in this field should be the JMACT=&JID parameter. A space should separate this parm from any other free-form description required for the Run-Exit Instructions.

## Job Step Definition Screen

```

----- JOB/Master® Jobstep Definition Screen - Row 1 to 8 of 8
Command ==>
                                Scroll ==> PAGE

For Job => TESTJOB1      Stepname => STEP010      Procstep => STEP010

Pgm Desc => _____  Programmer Name => _____
Run Instructions = _____
Repair Job=> _____ Subtype=> _      Program Name => _____

----- Dependency Definitions -----

              Triggered  Sub  OP  Cond  Trig
              Jobs      Typ  CD  Code  Type
              -----
              _____
              _____
              _____
              _____
              _____
              _____
              _____
              _____
              _____
              _____

***** Bottom of data *****

```

The Job Step Definition need only be defined to the database for the following:

- (1) trigger criteria will be necessary at the job step level,
- (2) history tracking and statistics are required for the job step(s). Adherence to all MVS naming conventions is required!

Defining of job steps begin at the JOB/Master® DATA BASE FUNCTIONS screen.

From there, enter OPTION==> A. Type J and the NAME==> Jobname for the name of the job that a step is to be defined for. Then fill out the following:

STEPNAME                      The name of a procedure where the proc stepname is.

PROC STEPNAME                The name of the step to be processed. (*It is the statement with the pgm=*).

The above screen will then be displayed.



***To add a job step for a job, the job must be defined first. (An illogical add message will appear if this is attempted).***

This screen is used to define any desired job steps. The process of creating a job step definition can be completed more rapidly by using the COPY command. The COPY command allows you to copy an existing job step definition into the one being created. Once the definition is copied, modifications can be made, as needed. The COPY command will copy only descriptive information about the job step. The COPYALL command will copy all fields of the existing job definition. Certain fields specific to the “copy from” job step will not be copied. Simply enter the desired command in the COMMAND ==> field and press <ENTER>. (*Refer to COPY - COPYALL in Job Definition this section.*)



**FOR JOB**

The system automatically displays the name of the job, as specified on the JOB/Master® DATA BASE FUNCTIONS screen.

**STEPNAME**

Refers to the step within the JCL which calls program or proc. The system automatically displays the name of the step, as specified on the JOB/Master® DATA BASE FUNCTIONS screen.

**PROC STEP**

Refers to the step within the proc which calls the program.

**PGM DESC.**

This free-form field can be used to enter a brief description of the program run by the job step.

**PRGRMR NAME**

This free-form field can be used to enter the name of the programmer who created the job step definition.

**RUN INSTRUCTIONS**

This free-form field can be used to enter instructions that are to be performed at the end of the job step.

**REPAIR JOB**

This field is used to specify the name of a job to run in the event that the job step abends.

Repair jobs should be defined as triggered jobs to the database. No other fields are required.

**ST**

This field is used to specify the submit type of the repair job. The following submit types can be specified:

- A JOB/Master® will automatically submit the job from the JOB/Master® PDS.
- M JOB/Master® will not submit the job without operator intervention.
- S JOB/Master® will issue an MVS start command for the jobname.

**PROGRAM NAME**

This field is used to specify the name of the program that is to be run with this job step.

**DEPENDENCY DEFINITIONS****TRIGGERED JOBS**

Enter the name(s) of the trigger job(s) in this column which are to be triggered from the execution of this Job Step. You can also make the trigger dependent on whether a condition code criteria is satisfied. If condition code criteria is desired, enter the appropriate information in the OPCODE and COND CODE columns on the same row. If you specify a jobname, be sure to enter a submit type.

**SUB TYP**

Each trigger job specified must have an associated submit type. You can specify one of the following submit types:

- A Automatic. Submitted by JOB/Master® from the submit PDS (default).
- C Command Stream.
- M Manual. Requires manual intervention. Submitted from the submit PDS, using JOB/Master® submit commands
- R Repeating. The task will continue to be rescheduled and submitted, based on user command until the last run is signaled complete by the user. This type of submit is useful when the number of iterations for a job is variable. Refer to Job Tracking section (*Submit or Restart*).
- S Started Task. Started task initiated by JOB/Master®.
- T Wait for time.

**OP CD**

This field is used if you want to run a condition code test. This field is used to specify the operator for the test. One of the following operators can be specified:

- L Less Than (excluding User and System Abends)
- G Greater Than (excluding User and System Abends)
- E Equal To
- N Not Equal To
- S The value in the condition code field is a system abend code. All "S" COND codes are considered failed codes. Will compare as an Equal To.
- U The value in the COND code field is a user abend code. Will compare as an Equal To.

**COND CODE**

Enter the value of the condition code for which you are testing.

**TRIGGER TYPE**

This field specifies what happens to a job (if TRIGGER JOB is blank) or a TRIGGER JOB (if a JOBNAME is present).

- I Include this job if the COND code value is met.
- E Exclude this job if the COND code value is met.
- F Treats COND code value as a Failure condition.
- O This trigger job Overrides all other trigger jobs.
- (blank) If Jobname is blank, then treat this job as successful if the condition code value is met. If Jobname is not blank then process like (I) code.

***Trigger and Condition Code Information***

The following table will indicate the possible options and outcomes when specifying the Trigger and Condition Code information. The following information about whether a job completes successfully or fails is dependent on the global option "REQ ZERO C.C.". If

the option is equal to “Y”, then a zero condition code is the default successful completion code but you may add other codes in this section which are to be considered successful also. If the option is equal to “N”, then you must tell JOB/Master® in this section what condition codes are to be considered successful. Remember if a Trigger jobname is present, then the comparison and actions apply to that trigger job only. If a Trigger jobname is blank, then the comparisons and actions apply to the job itself AND the system will set the successful/fail status based only on the comparisons found in the JOBSTEP definition. Also, the last code comparison found to match will be the one whose TRIG-TYPE value will apply.

TRIGJOB	SUB-TYPE	OPCD	COND CODE	TRIGTYPE	RESULT
Jobname	any				Triggers jobname if step completed successfully.
Jobname	any			F	Triggers jobname if step failed.
Jobname	any	any	any	not equal F	Process this job based on trigger type if OPCD & CONDCODE match and completes successfully.
Jobname	any	any	any	F	Trigger job if OPCD and CONDCODE match and step failed.
Blank	n/a	any	any	not equal F	If OPCD & CONDCODE match, indicates this step completed successfully.
Blank	n/a	any	any	F	If OPCD & CONDCODE match, indicates this step failed.

## Calendar Definition Screen

The CALENDAR DEFINITION screen is used to establish a calendar or exception calendar for jobs in the database. For JOB/Master® to properly schedule, two calendars must be created (*WORKDYnn* and *HOLIDYnn*, where; *nn* = the current year). Even if no dates are marked in the calendar, they must be created for each calendar year. (*Refer to Calendar Propagation which describes the way JOB/Master® sets up a new calendar at the beginning of a new year.*) The WORKDYnn calendar is the calendar which tells JOB/Master® the valid work days in the year. The HOLIDYnn calendar is the calendar which tells JOB/Master® the holidays in the year. JOB/Master® will read the default HOLIDYnn and WORKDYnn Calendars without them being present in a job's Data Base Definition.

If the WORKDYnn calendar is not appropriate for a job, you can create a uniquely named calendar which will meet its needs. If the HOLIDYnn calendar is not appropriate for a job, you can create uniquely named *exception* calendars which will meet its needs. However, if you do so, they must be referenced in the job's database definition as a calendar and/or an exception calendar. Uniquely named calendars that do not end with a year suffix must be manually updated from year to year.

Defining Calendars begins at the JOB/Master® DATA BASE FUNCTIONS screen..

```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/01 - 98.244      Time = 11:56
-----

Option ==> A      A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> C      J ob / S ystem / P rocess Keyword
      C alendar / N eg and Coreq / G roup Message
      / D ataset / M essage

Name          ==> CALTEST_
Stepname      ==>          (Stepname (PROC) if jobstep definition)
Proc Stepname ==>          (Stepname (PGM=) if jobstep definition)

Data Set Name ==>          (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                  line when processing Data Base options

```

A = Add  
 C = Calendar  
 CALTEST = Name (*Calendar being defined*)

This same screen can be used to define base and exception calendars. The screen is shown in the following illustration:

```

----- JOB/Master® Calendar Definition Screen -----
Command ==>
-----
Calendar Name => CALTEST      Year => 98  Schedule/Net => *****
Description  => _____
Month       => _ _ _ _ _
Week        => _ _ _ _ _
Reiday      => _ _ _ _ _
Actdate     => _ _ _ _ _
-----
Period Start and End Dates (MMDD) -----
1. 0000 0000  2. 0000 0000  3. 0000 0000  4. 0000 0000  5. 0000 0000
6. 0000 0000  7. 0000 0000  8. 0000 0000  9. 0000 0000 10. 0000 0000
11. 0000 0000 12. 0000 0000 13. 0000 0000

```

All the days of the calendar generated by the entries on this screen can be viewed or modified on the JOB/Master® CALENDAR DISPLAY/UPDATE screen. (*Refer to JOB/Master® DATABASE FUNCTION screen.*)

#### CALENDAR NAME

This field is used to specify the name of the calendar being created. This name can be up to 8 alphanumeric characters.

#### SCHEDULE/NET

This field provides a customer with the ability to group a schedule or network of jobs into an identifiable entity. Security can be established on this group which now limits any and all access to the various criteria specified as belonging to this group.

The field is eight (8) characters in length and must be previously set up using ISF (*Security feature*).

#### DESCRIPTION

This free-form field can be used to enter a description of the calendar application.

#### MONTH

This area is used to specify the months (01 through 12) that you want included in this calendar. If you specify A in the first field, the system will assume that you want to include all 12 months in the calendar.

If individual months are to be entered with variable weeks, days, etc., define the first month, only fields necessary, and press enter. A second screen will be presented. Continue as may be required. The month's number must be entered in its positional slot (i.e., month 03 in slot 03, etc.).

**WEEK**

This area is used to specify the weeks (*1 thru 6*) that you want included in each month. The extra weeks accommodate months that have partial weeks at the beginning and end. If you specify A in the first field, the system will assume that you want to include all weeks for each month in the calendar. This week's number must be entered in its positional slot (i.e., week 2 in slot 2, etc.).

**RELDAY**

This area is used to specify the relative days (*Monday thru Sunday*) you want included in each week on the calendar. Enter the following day codes:

MO	Monday
TU	Tuesday
WE	Wednesday
TH	Thursday
FR	Friday
SA	Saturday
SU	Sunday

If you specify A in the first field, the system will assume that you want to include all days of each week. Specifying relative days will create a relative calendar. Calendar Rotation from year to year now becomes a Relative Day Rotation. Refer to "Calendar Propagation" in this section.

**ACTDATE**

This area of the screen can be used to enter specific days (*01 thru 31*) you want included in each month on the calendar. You do not need to place the Actual Date in the appropriate blank field. (*05 does not have to be in the fifth blank field if 1-2-3-4 are not used.*)

**PERIOD START END DATES**

This area of the screen is used to alter the start and end dates of each month (*plus January of the following year*).

For example, suppose you want the first period (*January*) to begin on the 5th and end on the 20th, you would enter 5 and 20 in the first period fields. The first period corresponds to January, the second period corresponds to February, etc. The thirteenth period corresponds to January of the following year. Format for these fields:

MMDD MMDD - 0105 0120

If nothing is entered in these fields, the default is the first and last day of the month.

To aid in the creation of Calendars requiring period date, the COPYPER (*Copy Period*) command allows for the Period Dates to be copied from one calendar to the next.

COPYPER xxxxxxxx (*where x's are another calendar having the desired periods*).

### Calendar Display/Update

The CALENDAR DISPLAY/UPDATE screen can be used to view an entire calendar year on one screen. The contents of this screen can be generated from the specifications on the JOB/Master® CALENDAR DEFINITION screen. The changes can be made from the DISPLAY/UPDATE screen. The literal characters show which days have been selected as valid run days (*or non-valid days if the calendar is an exception calendar*). This screen looks like the illustration below:

```

MON-FRI ----- JOB/Master@ Calendar Display/Update -----
Command ==>
----- Period Start and End Dates -----
1. 0000 0000 2. 0000 0000 3. 0000 0000 4. 0000 0000 5. 0000 0000
6. 0000 0000 7. 0000 0000 8. 0000 0000 9. 0000 0000 10. 0000 0000
11. 0000 0000 12. 0000 0000 13. 0000 0000
Description ==>
Last Updated by P390K on 98244 at 1201 =====Schedule/Net=> *****
|Year: 98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|*CAL/REL | 1|2|3|4|5|6|7|8|9|0|1|2|3|4|5|6|7|8|9|0|1|2|3|4|5|6|7|8|9|0|1|
|-----|-----|-----|-----|-----|-----|-----|-----|-----|
|Jan ( THU ) | H F - - M T W H F - - M T W H F - - M T W H F - - M T W H F -
|Feb ( SUN ) | - M T W H F - - M T W H F - - M T W H F - - M T W H F -
|Mar ( SUN ) | - M T W H F - - M T W H F - - M T W H F - - M T W H F - - M T
|Apr ( WED ) | W H F - - M T W H F - - M T W H F - - M T W H F - - M T W H
|May ( FRI ) | F - - M T W H F - - M T W H F - - M T W H F - - M T W H F -
|Jun ( MON ) | M T W H F - - M T W H F - - M T W H F - - M T W H F - - M T
|Jul ( WED ) | W H F - - M T W H F - - M T W H F - - M T W H F - - M T W H F
|Aug ( SAT ) | - M T W H F - - M T W H F - - M T W H F - - M T W H F - - M
|Sep ( TUE ) | T W H F - - M T W H F - - M T W H F - - M T W H F - - M T W
|Oct ( THU ) | H F - - M T W H F - - M T W H F - - M T W H F - - M T W H F
|Nov ( SUN ) | - M T W H F - - M T W H F - - M T W H F - - M T W H F - - M
|Dec ( TUE ) | T W H F - - M T W H F - - M T W H F - - M T W H F - - M T W H
|-----|-----|-----|-----|-----|-----|-----|-----|-----|

```

## DESCRIPTION

If a description was entered on the JOB/Master® CALENDAR DEFINITION SCREEN, this description will be automatically displayed. If it was not already specified, enter a description of the calendar application in this free-form field.

## YEAR

If you specified a year on the JOB/Master® CALENDAR DEFINITION SCREEN, the year will automatically be displayed. If it was not already specified, enter the last two digits of the year in this field.

## CALENDAR DISPLAY

This area shows the days that were specified for the calendar based on the entries on the JOB/Master® CALENDAR DEFINITION SCREEN. If the Calendar Definition screen was not used to specify all desired days, simply place an X on the days you want to include in this calendar. It is not necessary to use the literal day of week. The X will be converted to the appropriate literal.

## PERIOD START AND END DATES

This area of the screen is used to alter the start and end dates of each month (*plus January of the following year*).

For example, suppose you want the first period (*January*) to begin on the 5th and end on the 20th, you would enter 5 and 20 in the first period fields. The first period corresponds to January, the second period corresponds to February, etc. The thirteenth period corresponds to January of the following year.

Format = MMDD MMDD

To aid in the creation of Calendars requiring period date, the COPYPER (*Copy Period*) command allows for the Period Dates to be copied from one calendar to the next.

COPYPER xxxxxxxx (where x's are another calendar having the desired periods).

## Year End Calendar Propagation

### Overview

JOB/Master® calendars do not have to be redefined each time a new year begins. The calendars will be automatically adjusted according to the calendar type, as defined to the database. Those calendars which have been defined as CALNAMnn, where nn is the year suffix, such as 92, 93, etc., will cause some special processing and will be discussed below. Calendars will be changed based on the type of calendar. The type attribute of a calendar can be determined by displaying the calendar or by looking on the table display which results from the INQ function in database display. Refer to the section "What You Need To Do" later in this section. A description of the types of calendars and the method used to propagate calendars will be described below.

### Relative Calendars

These are calendars ("CAL/REL") which have been defined using relative terms such as MO, WE, etc., and will be changed according to the following manner:

All days of the week, MO, WE, etc. will retain their relative meaning.

E.G.

If Monday is the 2nd for 1992, then the calendar will retain Monday as the day selected even though Monday will now be the 1st for 1993. This will be true for all days of the week. For example, if a job is to be run on Mondays, the bold dates show when they will run before and after propagation.

JAN 1992						
SUN	MON	TUE	WED	THU	FRI	SAT
1	<b>2</b>	3	4	5	6	7
8	<b>9</b>	10	11	12	13	14
15	<b>16</b>	17	18	19	20	21
22	<b>23</b>	24	25	26	27	28
29	<b>30</b>	31				

JAN 1993						
SUN	MON	TUE	WED	THU	FRI	SAT
	<b>1</b>	2	3	4	5	6
7	<b>8</b>	9	10	11	12	13
14	<b>15</b>	16	17	18	19	20
21	<b>22</b>	23	24	25	26	27
28	<b>29</b>	30	31			



### *Actual Calendars*

These are calendars ( "CAL/ACT") which have been created with specific dates, such as a holiday calendar, or relative calendars which have been updated will be changed in the following manner:

The date on the calendar will remain the actual date even though the relative day, such as Monday, will change for that date.

E.G.

If the 2nd is a Monday for 1992, then the calendar will be changed so that the 2nd is still a date which is selected on the calendar. In this case the 2nd will remain selected even though the day of the week for the 2nd will become Tuesday for 1993.

For example, if a job is to be run on the 2nd, 9th, 16th, 23rd, and 30th of January, the bold dates show when they will run before and after propagation.

JAN 1992							JAN 1993						
SUN	MON	TUE	WED	THU	FRI	SAT	SUN	MON	TUE	WED	THU	FRI	SAT
1	<b>2</b>	3	4	5	6	7		1	<b>2</b>	3	4	5	6
8	<b>9</b>	10	11	12	13	14	7	8	<b>9</b>	10	11	12	13
15	<b>16</b>	17	18	19	20	21	14	15	<b>16</b>	17	18	19	20
22	<b>23</b>	24	25	26	27	28	21	22	<b>23</b>	24	25	26	27
29	<b>30</b>	31					28	29	<b>30</b>	31			

### *Data Base Definition Name Change*

Job and Process Keyword definitions which have a calendar name of the form CAL-NAMnn, for the year, such as 92, 93, etc. will be propagated at the first schedule day of the new year. Both the CALENDAR and the EXCEPTION CALENDARS are changed to the appropriate suffix which is the new year.

### *Calendar Change Timing*

Calendar propagation will take place on the first day a schedule is run in the new year. Calendars will properly adjust to various years for simulation or future schedule creation, however, that actual change to the calendars will not occur until the creation of a schedule in the new year. The new year is determined by the system date.

### *What You Need To Do:*

If it is necessary to create a very specific Date, Day, etc., Calendar from year to year then the following is necessary. Job definition, JOBA, has a calendar name of WORKCL92 as a calendar name. In 1993 the name on the definition will be changed to WORKCL93. There will be no calendar, WORKCL93, created by the system. It is the users responsibility to have a calendar, WORKCL93 created on the database for the new year. It can be created at any time throughout the year, and is dynamic and ready for use after the <ENTER> key is pressed. The old WORKCL92 calendar will also be propagated to the year 1993, but it will still have the WORKCL92 name in the database. It shouldn't be referenced anymore and could be deleted.

## Process Keyword Definition Screen

Defining Process Keyword Definition begins at the JOB/Master® DATA BASE FUNCTIONS screen.

```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/01 - 98.244      Time = 12:05
-----

Option ==> A      A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> P      J ob          / S ystem          / P rocess Keyword
      C alendar        / N eg and Coreq        / G roup Message
                        / D ataset            / M essage

Name          ==> MONTHLY_
Stepname      ==>          (Stepname (PROC) if jobstep definition)
Proc Stepname ==>          (Stepname (PGM=) if jobstep definition)

Data Set Name ==>          (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                  line when processing Data Base options

```

A = Add  
P = Process Keyword Def.  
DIANE01 = Name (*Process keyword being defined*).

The PROCESS KEYWORD DEFINITION screen is used to create user-defined keywords. The keywords can specify conditions under which the system should run the job (*PROCESS KEYWORDS*) and conditions under which the system should not run the job (*NON-PROCESS KEYWORDS*). All user-defined keyword definitions consist of one or more system-defined keywords (*as illustrated in the tutorial section of this manual*). This screen looks like the following illustration screen.



***Both at the Keyword definition level and the process and non-processed keywords on the dependency options (job definition panel), if a non-process keyword is used in connection with a calendar, then a process keyword is also required (WORKDAY).***

```

----- JOB/Master® Process Keyword Definition Screen -----
Command ==>
Definition Last Updated by      on      at

Name      ==> MONTHLY      Schedule/Net ==>
Calendar  ==>      Exceptn Cal1 ==>      Excp Cal2 ==>
Description ==>

Process Keywords: (Make Entries left to right from line 1)
      _____
      _____
      _____
      _____
      _____
      _____

Non-process Keywords: (Make Entries left to right from line 1)
      _____
      _____
      _____
      _____
      _____
      _____

```

**NAME**

This field is used to enter the user-specified name for the keyword being defined. The name can be up to 8 alphanumeric characters.

**SCHEDULE/NET**

This field provides a customer with the ability to group a schedule or network of jobs into an identifiable entity. Security can be established on this group which now limits any and all access to the various criteria specified as belonging to this group.

The field is eight (8) characters in length and must be previously set up using ISF (*Security feature*).

**CALENDAR**

Some keywords require references to a calendar. For example, the keyword LWKD (*last workday of each month*) will need a calendar to know when the last workday of each month occurs. Calendars are typically used to specify all valid work days. All holidays (*exceptions*) are typically specified on a holiday calendar. If a calendar is required for any system keywords being used, enter the calendar name in this field. The name can be up to 8 alphanumeric characters.

**EXC.CAL1**

This field provides for the entry of an exception calendar to be entered. All conditions for the exceptions (*holidays, etc.*), are brought forward and included with the process keyword being defined. These conditions are not required to be entered individually. There are two (2) exception fields provided for flexibility.

**EXC. CAL2**

Refer to EXE. CAL1.

**DESCRIPTION**

This free-form field is used to enter a brief description of the function of the keyword being defined. The description can be up to 30 alphanumeric characters.

**PROCESS KEYWORDS**

This area is used to specify system-defined keywords that create the conditions under which the job should be run.

**NON-PROCESS KEYWORDS**

This area is used to specify system-defined keywords that create the conditions under which the job should not be run.

**AND/OR LOGIC**

And/Or Logic can be used to clarify the relationships between process and non-process keywords. “(“ left paren and “)” right paren are used to implement this function. The parens signify an “or” function. Within the left and right paren pair an “and” function is processed. From the sample;

MON or 01WKD or 02WKDJAN or ( LDAY and SAT) or (LDAY and SUN) or  
HOLIDY+1

The parens must be the only value occupying the field. Interpretation occurs left to right and top to bottom.

***Process Keyword Table***

The following is a list of system supplied keywords that can be specified on this screen.




---

*All nn values must be two digits, zero filled if necessary.*

---

**BASE CALENDAR REQUIRED**

	If no calendars are specified, JOB/Master will use the default calendars WORKDY## and HOLIDY##.
FWKD	The first workday for the month.
FWKD+nn	WORKDAY + nn from the first workday of the month, where nn is the numeric value, zero filled, from the first workday for the month. If the first workday is 03, then FWKD+05 will be the 8th for that month.
HLYDAY-W	The first workday before the holiday. If a job was scheduled to process on Monday, and Monday is a holiday, the job will run on the first workday prior to the holiday. A workday is any day designated as such by the workday calendar which it references. The job would process on Friday, based on a Monday-Friday workday calendar.
HLYDAY+W	The first workday after the holiday. If a job was scheduled to process on Friday, and Friday is a holiday, the job would run on the first workday after the holiday which would be Monday. This is based on a Monday-Friday workday calendar.

HLYDAY-1	The day before the holiday. If a job was scheduled to process on Friday, and Friday is a holiday, the job will process on the previous day, which would be Thursday.
HLYDAY+1	The day after the holiday. If a job was scheduled to process on Monday, and Monday is a holiday, the job will process the next day, which would be Tuesday.
HOLIDAY	Any day on the holiday calendar.
HOLIDY-W	The first workday before the holiday. If a job was scheduled to process on Monday, and Monday is a holiday, the job will run on the first workday prior to the holiday. A workday is any day designated as such by the workday calendar which it references. The job would process on Friday, based on a Monday-Friday workday calendar.
HOLIDY+W	The first workday after the holiday. If a job was scheduled to process on Friday, and Friday is a holiday, the job would run on the first workday after the holiday which would be Monday. This is based on a Monday-Friday workday calendar.
HOLIDY-1	The day before the holiday. If a job was scheduled to process on Friday, and Friday is a holiday, the job will process on the previous day, which would be Thursday.
HOLIDY+1	The day after the holiday. If a job was scheduled to process on Monday, and Monday is a holiday, the job will process the next day, which would be Tuesday.
LWKD	The last workday for the month.
LWKD-nn	Workday - nn from the last workday of the month, where nn is the numeric value, zero filled, from the last workday for the month. If the last workday is 28, then LWKD-05 will be the 23rd for that month.
mmmWKD	Any workday in the workday calendar in the month mmm, i.e., JANWKD.
NHOLIDAY	Any day not on the holiday calendar.
nnWKD	The nth day of the month starting with the first (1st) workday, and only counting workdays. If the first workday is the 3rd of the month, and the next workday is the 6th of the month, then the 6th is 02WKD.
nQTRB	First workday in the quarter (i.e., 1QTRB=Jan, 2QTRB=Apr, etc.).
nQTRBLD	Last workday in first month of the quarter. (i.e., 1QTRBLD, 2QTRBLD, etc.).
nQTRE	Last workday of the quarter. (i.e., 1QTRE=Mar, 2QTRE=Jun, etc.).
nxxxWKD	The nth xxx workday (MON, TUES,...etc.) in the month (i.e., 2MONWKD is the 2nd Monday).

PERnnWKD	Any workday in the period, where nn is the period number 1 - 13, on the associated calendar.
PERWKD	Any workday. The workday is determined based on the associated calendar, and only if the period start and end dates are used.
QTRB	First workday in Jan, Apr, Jul, and Oct.
QTRBLD	Last workday in the first month of the quarter ( <i>i.e., Jan, Apr, Jul and Oct</i> ).
QTRE	Last workday in Mar, Jun, Sep and Dec.
WORKDAY	Any day on the workday calendar.
xxxxWKD	Where xxx is the day of the week ( <i>i.e., SAT, SUN, MON, TUE, WED, THU, FRI</i> ) and is also a workday.

**BASE CALENDAR NOT REQUIRED**

ALL	Any days MON-SUN except those dates marked on the HOLI-DYnn Calendar. No other PKWDS may be used in conjunction with ALL.
CYCLEnnn	nnn is the number of days being represented by the cycle. CYCLE007 will schedule the job every seven days. Used together, the CYCLS135 and CYCLE007 will begin scheduling a job on the 135th day of the year and every seven days thereafter.
CYCLSnnn	nnn is the Julian date on which a cycle will begin processing. It is no longer necessary to define a unique calendar in order to control these types of jobs.
Dnn	The day of the month ( <i>i.e., MON, TUE, ... etc.</i> ) D03, the 3rd of every month.
EVERY	EVERY DAY including days marked on Holiday/Exception Calendars. EVERY can be used with non-process keywords.
LDAY	The last physical day ( <i>i.e., MON, TUE, ... etc.</i> ) of the month.
LDAY-nn	Last day of the month ( <i>i.e., MON, TUE, ... etc.</i> ) minus nn days where nn is two numeric digits, zero filled if necessary.
Lxxx	The last day of the week in the month ( <i>i.e., LMON is the last MON, LFRI is the last FRI, etc.</i> ).
Lxxxmmm	The last MON, TUE, etc. in a specified month LMONJUN is the last Monday in June.
M-F	Any Monday thru Friday.
mmdd	The specified month and day of the month.
mmm	The month Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, or Dec.
mmddy	The specific date, <i>i.e., 110688</i> .

nxxx	The nth MON, TUES, ... etc. in the month ( <i>i.e.</i> , 2MON is the 2nd MON, 4FRI is the 4th FRI, etc.).
nxxxmmm	The nth MON, TUES, ... etc. in the specified month ( <i>i.e.</i> 2MONFEB is the 2nd Monday and MMM is the month, JAN, FEB, etc.).
T-S	Any Tuesday thru Saturday.
WKEND	SAT and SUN.
xxx	Where xxx is the day of the week, <i>i.e.</i> , SAT, SUN, MON, TUE, WED, THU, FRI.
xxxmmm	Where xxx is the day of the week ( <i>i.e.</i> , SAT, SUN, MON, TUE, WED, THU, or FRI) and mmm is the month JAN, FEB, etc. MONFEB is any Monday in February.

## Negative Co-Requisite Dependency Screen

Defining Negative/Corequisite Dependencies begins at the JOB/Master® DATA BASE FUNCTIONS screen.

```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/01 - 98.244      Time = 12:05
-----

Option ==> A  A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> N  J ob      / S ystem      / P rocess Keyword
      C alendar      / N eg and Coreq  / G roup Message
      / D ataset      / M essage

Name      ==> NEGTEST_
Stepname  ==> _____ (Stepname (PROC) if jobstep definition)
Proc Stepname ==> _____ (Stepname (PGM=) if jobstep definition)

Data Set Name ==> _____ (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                  line when processing Data Base options

```

A        =    Add  
 N        =    Neg/COREQ Def.  
 NEGTEST =    Name (*Negative Corequisite being defined*).

The NEGATIVE/CO-REQUISITE DEPENDENCY screen is used to specify a definition for a group of negative and co-requisite dependencies. The screen is shown below:

```

----- JOB/Master® Negative/Corequisite Dependency For: NEGTEST -----
Command ==>
Definition Last Updated by      on      at
Description =>
Schedule/Net=> _____ Failed Negative Dependencies are Preds => N (Y,N)

Will not be submitted if these tasks are in the MVS input Q, or executing
Jobname Jobname Jobname Jobname Jobname Jobname Jobname Jobname
-----
____
____
____
____
____
____
____
____

-----
Will only be submitted if the following tasks are executing:
Jobname Jobname Jobname Jobname Jobname Jobname Jobname Jobname
-----
____
____
____
____
____
____
____
____

```

#### DESCRIPTION

Free-form field to be used as desired.

#### SCHEDULE/NET

This field provides a customer with the ability to group a schedule or network of jobs into an identifiable entity. Security can be established on this group which now limits any and all access to the various criteria specified as belonging to this group.

The field is eight (8) characters in length and must be previously set up using ISF (*Security feature*).

#### FAILED NEGATIVE DEPENDENCIES ARE PREDs. (Y,N)

This field enables the user to select in what manner the Negative Dependencies are to effect the submission of jobs.

“Y” (*yes*) indicates if a negative dependent job does not complete successfully, (*abends*) the waiting jobs are not to be submitted for processing.

“N” (*no*) indicates if a negative dependent job abnormally terminates the waiting jobs can be released for processing.

#### NEGATIVE DEPENDENCIES:

This area of the screen is used to specify the names of the jobs that must not be in the MVS input queue or executing for the system to submit the job being defined.

#### CO-REQUISITE DEPENDENCIES:

This area of the screen is used to specify the names of job that must be executing for the system to submit the job being defined.



## Message Group

**Defining Group Message Definition** begins at the JOB/Master® DATA BASE FUNCTIONS screen.

[illegible]
$$A = \text{Add}$$

G = Group message def.

GRPTEST = Name (*Group Message being defined*).

The MESSAGE GROUP DEFINITION screen is used to specify a group of users that will receive manual task messages. This screen allows you to indicate which type of messages the system should display for these users and is shown below.

[illegible]

#### SCHEDULE/NET

This field provides a customer with the ability to group a schedule or network of jobs into an identifiable entity. Security can be established on this group which now limits any and all access to the various criteria specified as belonging to this group.

The field is eight (8) characters in length and must be previously set up using ISF (*Security feature*).

#### DESCRIPTION

This is a free-form field used to describe the Message Group being defined.

#### MSG CLASS/ KP=1 CI=2 TI=3 DI=4 JS=5

These are information only fields used to describe the different types of Manual Tasks used for the installation. The two (2) character indicators may be different from this document based on the characters used by each installation. These are alterable via the Profile on the main JOB/Master® DATA BASE FUNCTIONS SCREEN.

#### USER ID

The USER ID column is used to specify the IDs of the users you want to receive the messages specified in the Message Class column. USER ID of "0" will send message to console.

#### USER TYPE

The following user types must be specified:

M      Manual Task Station. Receives only manual task messages.

#### MSG CLASS

One of the following message classes must be specified:

1,2,3,4,5      Each number corresponds to one of the five manual task messages.

If a user is to receive more than one of the manual task messages, the User ID must be entered once for each class of message user is to receive.

#### SEND TYPE

The following send types can be specified:

F      Send only to the first user if the user is logged on.

L      Send if the user is active.

M      Send unconditionally.

#### ON SHIFT START/END

These columns allow you to specify a time period during which this user can receive messages.

#### DO NOT SEND BEFORE/AFTER

These columns allow you to specify a date period, between which this user can receive messages.

## System Definition

Defining a System Definition begins at the JOB/Master® DATA BASE FUNCTIONS screen.

```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/01 - 98.244      Time = 13:31
-----

Option ==> A      A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> S      J ob / S ystem / P rocess Keyword
      C alendar / N eg and Coreq / G roup Message
      / D ataset / M essage

Name      ==> SYSTEST
Stepname  ==> _____ (Stepname (PROC) if jobstep definition)
Proc Stepname ==> _____ (Stepname (PGM=) if jobstep definition)

Data Set Name ==> _____ (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                  line when processing Data Base options

```

A = Add

S = System

SYSTEST = Name (*System being defined*).

The SYSTEM DEFINITION screen allows you to specify parameters for all jobs that are defined to this system. Utilization of the System Definition will decrease the amount of time and effort required to implement a given system of related jobs. The first job definition screen allows you to specify a system for that job. All entries on this screen can be overridden at the job level by specifying the desired value on the job definition screens. A sample screen is shown on the following page:

```

----- JOB/Master® System Definition For SYSTEST -----
Command ==>
Definition Last Updated by      on      at

-----
Run Mode      ==> P (P=PROD/C=CHECK/S=SEL)  Message Def ==>
System Description==> TEST SYSTEM           Message Group==>
Programmer Name ==> DIANE KNIGHT            Do Not Schedule
Submitting Dept ==> TECHNICAL SUPPORT       Before ==> 98244 (YYDDD)
User Department ==> ACCOUNTING              After ==> 00000 (YYDDD)
Output Destination==> ADMINISTRATION        Priority ==>
Delivery Method ==> SHANKS PONY             Schedule/Net ==> *****

Submit PDS    ==>
Lib Type      ==>

----- Abending Contact Information -----
Contact Name ==> Phone ==>(  )  Ext ==>
Beeper ==>(  )

```

### RUN MODE

Specify:

- P if jobs in this system should run in Production Mode.
- C if jobs in this system should run in Check (*simulation*) Mode.
- S if jobs in this system should run in Select Mode. (*See Run Mode Options in Job Definition Screen 3*).



***The run mode, defined at this level, may be overridden at the job level unless the Global Profile Run Mode has been set to check mode. If so, the mode of the system and jobs cannot be overridden. If the Global Profile has been set in the production mode, the jobs' mode can be overridden.***

### MESSAGE DEF.

This field contains the Message Definition name for the message screen defined for this job. These messages are the Manual Tasks required of this system. This feature allows a user to enter on a single screen those Manual Task messages instead of entering each message at the job level.

The field is an eight (8) character field and the name must match the Message Definition entered from the JOB/Master® DATA BASE FUNCTIONS screen.

### SYSTEM DESCRIPTION

This is a free-form area used to describe the system being defined.

### MESSAGE GROUP

This field can be used to specify the name of a message group which has been set up to indicate which users receive the various types of messages. The Message

Group can be defined from within JOB/Master® from the JOB/Master® DATA BASE FUNCTIONS screen option = G.

#### PROGRAMMER NAME

This free-form field can be used to specify the name of a programmer for jobs in this system.

#### SUBMITTING DEPT

This free-form field can be used to specify the name of the department submitting jobs in this system.

#### USER DEPARTMENT

This free-form field can be used to specify the name of the department that will be using the output (*results*) from jobs in this system.

#### OUTPUT DESTINATION

This free-form field can be used to specify the destination of all output from jobs in this system.

#### DELIVERY METHOD

This free-form field can be used to specify how the output will be delivered to the output destination for jobs in this system.

\*To be used for future enhancements.

#### DO NOT SCHEDULE BEFORE

If you enter a date in this field, the system will not submit the job before the specified date (*overriding keyword and calendar definitions*). The date must be entered in the form YYDDD.

#### DO NOT SCHEDULE AFTER

If you enter a date in this field, the system will not submit the job after the specified date (*overriding keyword and calendar definitions*). The date must be in the form YYDDD.

The above 2 fields are very useful in pre-defining jobs and systems before they are actually necessary to be in full production.

#### PRIORITY

The priority refers to the Submission Priority that will be assigned to the job in the event other jobs are scheduled to be submitted at the same time and all Scheduling Criteria have been met.

The following values are acceptable:

##### **A (Highest) through Z (Lowest)**

Priority can be activated, changed, or stopped.

If priority is desired, the submission sequencing is activated, changed, or stopped using the "SP" (*Modify Priority Selection List*) command in the Tracking Facility. (*Refer to the Tracking section of this manual - SP Command*). The feature allows for better control during job submission to the JES initiators.

**SCHEDULE/NET**

This field is used to limit access to the jobs in this system to a specific user or group of users. The SCHEDULE/NET is specified on the ISF (*Interactive Security Facility*) JOB/Master® Security Definition Screen.

**SUBMIT PDS**

This field can be used to specify the Submit PDS Dataset Name if different from datasets used in the JMSUBPDS of JOB/Master® Control Region.

**LIB TYPE**

Reserved for a future release.

**CONTACT NAME**

Free-form field for the contact responsible for this system.

**PHONE**

This field is provided for the phone number of this contact.

**EXT**

The extension number if necessary.

**BEEPER**

The beeper number of the contact if necessary.

## Manual Task Message Definition

Defining a Message Definition begins at the JOB/Master® DATA BASE FUNCTIONS screen.

```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/01 - 98.244      Time = 13:38
-----

Option ==> A      A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> M      J ob      / S ystem      / P rocess Keyword
      C alendar      / N eg and Coreq      / G roup Message
      / D ataset      / M essage

Name      ==> MSGTEST_
Stepname  ==>          (Stepname (PROC) if jobstep definition)
Proc Stepname ==>          (Stepname (PGM=) if jobstep definition)

Data Set Name ==>          (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                   line when processing Data Base options

```

A = Add

M = Message Definition

MSGTEST = Name (*Message being defined*).

The MANUAL TASK DEFINITION screen is used to define a group of messages which will be sent to users if the job's definition states that a particular manual task(s) must be completed. The users who receive this message(s) depends on the Group Message Definition. It is possible for jobs requiring the same type of manual task messages to relate to the same message definition. A sample screen is shown below:

```

----- JOB/Master® Manual Task Message Definition MSGTEST -----
Command ==>

Desc: MSGTEST_____

Send 000 minutes before submit time or, after dependencies => N (Y,N)
      At a frequency interval of => 005 Minutes

1 DATA ENTRY      Message to Userid/Console => _____
Msg= _____

2 CARD INPUT       Message to Userid/Console => _____
Msg= _____

3 TAPE INPUT        Message to Userid/Console => _____
Msg= _____

4 CONSOLE ROUTED    Message to Userid/Console => _____
Msg= _____

5 JCL SETUP         Message to Userid/Console => _____
Msg= _____

```

**DESC**

This free-form area can be used to enter a description of the group of manual task messages.

**SEND 00000 MIN. BEFORE SUBMIT TIME OR, AFTER DEPENDENCIES**

This area can be used to specify the desired number of minutes before submit time that the manual task message(s) should be displayed. If you do not want to specify the number of minutes, you can tell the system to display the message(s) after the all dependencies have successfully completed by entering Y in the AFTER DEPENDENCIES ==> field. Only one of these fields can be used.

**AT FREQUENCY INTERVAL OF**

This field can be used to continue displaying the manual task message(s) at the specified frequency. The default is every 5 minutes.

**MSG TO USERID/CONS**

This area of each manual task message can be used to specify an ID for a particular user or for the console to which the message should be sent.

**MSG =**

This area of each manual task message is used to enter the text of the message.



***The default names for the manual tasks are shown on the screen above. These names can be customized in the Global Settings.***



# Chapter 4

## Dataset Dependency

### Overview

Dataset dependency options are the function by which jobs can be triggered based on the creation, deletion, or various other conditions associated with a dataset. This facility is most often used where an event, such as the creation of a dataset, occurs independently or without the start and end of a job, such as the creation of a dataset from an on-line transaction.

The identification of the dataset dependency, referred to as a DSN event, is identified to JOB/Master® by making a database definition for the dsname. The dsname can be fully qualified or it can be any generic portion of a dsname. Generic definition allows for a simplified implementation where the creation of a group or set of files causes a job or set of jobs to be processed.

The definition, deletion or update of the database DSN definition is all that is required for the DSN event to be processed. There is no secondary tasks such as table assemblies, or system library updates which need to be processed in order to have dataset dependencies processed. Additionally, in a multi-CPU environment, the addition, deletion, or update of the DSN definition is broadcast to each CPU, eliminating the need to again perform a secondary task for these functions.

The dataset is defined as a DSN event by adding it to the JOB/Master® database. This is accomplished by the selection of the appropriate function from the Database options panel. The dataset dependency is made available realtime once the addition or update is processed.

## Dataset Definition Panel

### Defining Dataset Triggers

Dataset events can be processed from JOB/Master® Data Base Function panel.

```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/01 - 98.244 Time = 13:41
-----

Option ==> A  A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> D  J ob           / S ystem           / P rocess Keyword
      C alendar           / N eg and Coreq       / G roup Message
                        / D ataset              / M essage

Name      ==> _____
Stepname   ==> _____ (Stepname (PROC) if jobstep definition)
Proc Stepname ==> _____ (Stepname (PGM=) if jobstep definition)

Data Set Name ==> TRSJ.TESTFILE.TRAIN_____ (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                   line when processing Data Base options
  
```

A = Add

D = Dataset

TRSJ.TESTFILE.TRAIN = Dataset Name (*Dataset being defined*)

The Data Set Definition will define, update, or display a dataset event for a dataset beginning with the above name. The dataset name can be any valid dataset name used in your installation and can include GDG's. Placing a trailing \* in the dataset name specifies a

```

----- JOB/Master® Data Set Definition Screen -----
Command ==>

      Definition last updated by _____ on _____ at _____
For DSN   => TRSJ.TESTFILE.TRAIN*
Type      => S ( V =VSAM )   Not Before => 00000 After => 00000 (YYDDD)
Description => _____

Run Mode => P (C, P)   Job Name = _____ Job/Network => *****

Process Trigger Definitions if this dataset is: (Specify Y to set)
Open for Output => _   Open for Output and contains data => _
VSAM Define     => _   VSAM Delete => _   VSAM Update   => _
Open for Input  => _   Renamed     => _   Scratched     => _

Verify Control Information in record 1 of this dataset as follows:
If Pos => 0000 Is=> E ( E,G,N,L ) Value=> _____ Type=> C ( H,C )

----- Trigger Definitions -----

      Jobname ST   Jobname ST   Jobname ST   Jobname ST
1 _____ - 2 _____ - 3 _____ - 4 _____ -
5 _____ - 6 _____ - 7 _____ - 8 _____ -
  
```

Generic dataset. If a generic name is specified, this entry will affect any dataset with the specified suffix. After pressing enter, the Dataset Definition panel will be presented.

```
----- JOB/Master® Data Base DSN Index ----- Row 1 from 5
Command ==> Scroll => PAGE

-----
S      Dataset Name      | From | Run |      Not
      | Job   | Mode | Befor|After
-----|-----|-----|-----|-----
OPS.DSN.TRIG.TEST1      | DSNJOB1 | P   | 00000 00000
OPS.DSN.TRIG.TEST2      | DSNJOB1 | P   | 00000 00000
OPS.DSN.TRIG.TEST3      | DSNJOB2 | P   | 00000 00000
OPS.DSN.TRIG.TEST4      | EXTSUB04 | P   | 00000 00000
OPS.VSAM.TRIG.TEST1     | DSNJOB2 | P   | 00000 00000
***** Bottom of data *****
```

## DATASET TYPE

DSN events can be defined for two types of datasets:

1. Physical sequential files.  
Sequential files are identified by type S.
2. VSAM clusters.  
VSAM clusters are identified by specifying type V.

## LIMIT RANGE OF PROCESSING DAYS

Processing based on DSN events can be limited in the following ways:

1. The event can be limited so that it does not process before a specific date.  
NOT BEFORE = 00000 (YYDDD)
2. It can be limited so that it does not process after a specific date.  
AFTER = 00000 (YYDDD)
3. It can be limited so that it only processes between a start and end date.  
NOT BEFORE = 00000    AFTER = 00000  
(93010)                      (93246)

This facility will aid in the pre-definition and testing of DSN events.

***Definition Data*****DESCRIPTION**

Free-form documentation.

**RUN MODE**

Valid entries:

P = Production

C = Check mode

If C is entered, the event will be processed. However, triggered jobs will not be submitted and a message will be displayed acknowledging the event with a checkmode designation.

**JOB NAME**

This field can be used to limit the processing of the specified event to a specific task. If a job name is entered here then this dataset will only be processed if it was generated from the specified job. Job name can be any task name, Batch, STC, etc.

**JOB/NETWORK**

This field can be used to denote ownership. It has the same meaning as on the job definition entries (*SCHED/NET*).

***Process Trigger Definitions***

Valid entries for the following attributes are Y and N:

Y indicates the option, or type of event which should be processed for this dataset.

N indicates the option is not being processed.

***NOTE:*** At least one of these options must be specified.

**SEQUENTIAL FILE PROCESSING ATTRIBUTES**

The following event options are available for sequential datasets:

**OPEN FOR OUTPUT**

This event is processed if the dataset is opened for output. Creation of the dataset through allocation, such as IEFBR14, is not sufficient for this event to be processed. The dataset must actually be opened and closed. The event is processed when the file is closed.

**OPEN FOR OUTPUT AND CONTAINS DATA**

This event is processed in the same manner as open for output, however, the dataset will be checked to insure that there is at least one record in the file. The feature will allow for some level of integrity when triggering jobs based on the creation of a dataset.

### OPEN FOR INPUT

This event will be processed if the dataset is opened for input.



---

***Care should be taken when using this option. An input event will be processed when the file is closed and if defined for a file which is heavily used will cause more trigger events to be processed than might be desired.***

---

### SCRATCHED

This event will be processed whenever the named dataset is scratched. The scratch event can be any mechanism which removes the dataset from the DASD device.

### RENAMED

This event will be processed whenever the named dataset is renamed. The dataset being defined, 'the old name', will produce the rename event. The new name, the DSN to which it was renamed, will additionally produce an “*open for output*” event, if desired.

## VSAM FILE PROCESSING ATTRIBUTES

### VSAM DEFINE

This event will be processed whenever a VSAM cluster is defined. The dsn event name is the name of the VSAM cluster.

### VSAM DELETE

This event is processed whenever a VSAM cluster is deleted. This function can be used to insure that the deletion of a critical file does not go unnoticed. (*Send a Message to the Operator if this should occur*)

### VSAM UPDATE

This event is processed if the named data component is updated. (*This will not function at the cluster level*). An update is defined as any *add, delete, or modification* to a record in the data component. This feature can be particularly useful in limiting the generation of reports for files which have not changed or had activity against them.

## Verifying Data

### VERIFY CONTROL INFORMATION

These fields are optional and should only be used if data validation is required for the file. Data Verification is performed on the first record of file. JOB/Master® only supports QSAM verification.

### IF POS. =>

Enter the starting position of the data to be verified, relative to 1, in the first record of the dataset. This value is 4 positions in length and must be numeric. If a value is entered which is beyond the logical size of the record an error message will be displayed in the history file at trigger time and the entry will not be processed.

IS =>

Specifies the comparison operator equal to one of the following options:

- E - Equal to
- G - Greater than
- L - Less than
- N - Not equal to

VALUE =>

The data string or symbolic date value to be verified. The value entered will determine the type of compare which will be used when validating the data.

Date values can be represented in symbolic form. The current, event date, can be coded as YYDDD, YYYYDDD, MM/DD/YY or MM/DD/YYYY formats. Date values are represented by the following symbolic strings:

- @YDDD for julian dates
- @YYYYDDD for julian dates
- @M @D @Y for gregorian.
- @M @D @YYY for gregorian.

The symbolic representations can be placed in any order.

e.g. @M@D@Y, or @D@M@Y, or @Y/@D/@M, etc.

TYPE =>

This field defines the type of data which is entered in the value field. Select one of the following options:

- C Character (*up to 20 characters can be entered for verification*).
- H Hexadecimal (*20 characters of hexadecimal data, representing 10 hexadecimal bytes*).

### ***Trigger Definitions***

These fields are used to define the jobs which will be triggered when the dataset event is processed. These jobs are standard JOB/Master® triggers and may take on all the characteristics of any job definition.

### ***Testing the Datasets***

Conditional, or filtering options for the dataset are Runmode and Jobname.

Specifying a Runmode value will allow testing of the event without actual triggering of the dependent jobs. When this option is in effect, the DSN event will be processed by JOB/Master®, however, only a message identified as a checkmode function will be produced. The trigger jobs will not be submitted.

The DSN event can also be defined as only to be processed if the dataset event is produced from a specific jobname. For example, only process the trigger definitions if the dataset is created by job ABC1.

## **Technical Considerations**

The following SMF records are required for the different event options to be processed:

Open for Input Functions	Record type 14
Open for Output Function	Record type 15
Scratched Sequential	Record type 17
Renamed Sequential	Record type 18
ICF Define	Record type 61
VSAM Define	Record type 63
VSAM Update	Record type 64
ICF Delete	Record type 65
VSAM Delete	Record type 67



***If Data verification is requested, the file being processed must be freed at close of the dataset. If FREE=CLOSE is used on the DD statement, then the file must not be used later in any other steps of the job or the FREE function is not honored. If the file was dynamically allocated, then the FREE on close option should be specified.***

## DSN Index Table Display Panel

Datasets can also be processed by using the Dataset Name Index:

----- JOB/Master® Data Base DSN Index -----					Row 1 from 5	
Command ==>					Scroll => PAGE	
S	Dataset Name	From Job	Run Mode	Not Before	After	
	OPS.DSN.TRIG.TEST1	DSNJOB1	P	00000	00000	
	OPS.DSN.TRIG.TEST2	DSNJOB1	P	00000	00000	
	OPS.DSN.TRIG.TEST3	DSNJOB2	P	00000	00000	
	OPS.DSN.TRIG.TEST4	EXTSUB04	P	00000	00000	
	OPS.VSAM.TRIG.TEST1	DSNJOB2	P	00000	00000	
***** Bottom of data *****						

At this point, specifying a U(update), D(delete), or B(browse) in the S(select) column will bring up the appropriate function. Like ISPF, multiple selects will be handled one at a time in order. Also, all commands from the Data Base Function screen can be entered on the command line of this screen. For example:

AD DSNAME = Add a JOB to the database.

All Data Set Names are stored in the sequence listed by an Inquiry function. Data Sets will be checked for triggering in the sequence displayed by the Inquiry.

For example:   TEST.ABC\*  
                  TEST.ABCDEF

TEST.ABC\* will have priority for triggering.



---

***Be aware of the Data Set Sequencing.***

---

A binary search routine has been coded and is part of the dataset scan routine. It could be helpful if your installation has a large (in excess of 2000 entries) number of datasets in this table. It has to be enabled by Mantissa Technical Support because of the following restriction.

In the previous example, the generic entry was always found first for a DSN. In the binary search routine, this is not always the case since it is not a top down scan. For example:

TEST.ABC\*  
TEST.ABCABC  
TEST.ABCDEF  
TEST.ABCGHI  
TEST.ABCJKL

If your dataset was named TEST.ABCGGG, it may not trigger via the generic entry. So, if the binary routine is enabled, there should not be any entries that would have the same suffix as the generic entry.



# Chapter 5

## Generating a Schedule

### Scheduling Criteria

A job is selected for scheduling by one of two methods:

1. Calendar Definition (*Refer to Creating Calendars Section*)
2. Process Keywords (*Refer to Creating and using Process Keywords*)

Either method becomes the scheduling criteria for this job. If either method's scheduling criteria is met, the job is placed into the scheduling queue.

A scheduled job will have its triggered jobs scheduled (*placed onto the Scheduling Queue*), if they have calendar process keyword criteria and the criteria is met. If a triggered job has no calendar or process keyword, it has no scheduling criteria and will not be placed onto the Scheduling Queue. When a job is triggered and is not on the scheduling queue, it will be added automatically. Whether it was already on the queue or dynamically added, it will be submitted when triggered and its other dependencies are satisfied. There is less system overhead to let the trigger jobs get dynamically added to the scheduling queue as needed. To do this do not specify a calendar or process keywords.

EXAMPLE 1:

EXAMP1 is scheduled for day 2, EXAMP1 has EXAMP2 as a triggered job, the job does not have day 2 selected on its calendar definition.

EXAMP1 (*Calendar has day 2*)

Triggers

EXAMP2 (*Has Calendar but Day 2 is not present*)

Because EXAMP2 has no scheduling criteria for day 2 it was never placed onto the Scheduling Queue. Since the calendar was specified, EXAMP2 will receive a "DAY XXX not scheduled" error.

EXAMPLE 2:

EXAMP1 is scheduled for day 2, EXAMP2 triggered by EXAMP1 and has no calendar or process keywords.

EXAMP1 (*Calendar has Day 2*)

Triggers

EXAMP2 (*Has no calendar or process keywords*).

EXAMP1 is the only JOB scheduled onto Scheduling Queue. When EXAMP1 is successfully completed, EXAMP2 will be triggered and added to the Scheduling Queue for execution.

EXAMPLE 3:

EXAMP1 is scheduled to run on day 2 and triggers EXAMP2 which also has calendar criteria for day 2. EXAMP2 triggers EXAMP3. EXAMP3 has no calendar criteria.

EXAMP1 (*Has Calendar & day 2 is present*)

Triggers

EXAMP2 (*Has Calendar & day 2*)

Triggers

EXAMP3 (*Has no Calendar*).

EXAMP1 and EXAMP2 are placed on the Scheduling Queue at schedule time. When EXAMP2 successfully completes EXAMP3 will be triggered and added to the JOBQ.

## Schedule Generation Parameters

The schedule is accomplished via a scheduled operation job. The JOB/Master® control region must be active when this job is run. The scheduling process creates the daily schedule and the scheduling reports. All backlogged jobs are carried over to the new schedule. The batch scheduling job can, itself, be scheduled thus making the daily schedule creation totally automated.

There are two (2) types of scheduling runs.

### 1. SIMULATION Schedule

This schedule is used to project what is going to be scheduled on a given day or time. These simulation runs can schedule any number of consecutive days desired. The jobs are not actually placed onto the scheduling queue, but are shown in a report from the job execution. Use of the “GSS” commands in the JOB/Master® tracking panel will provide the necessary selection criteria for these runs.



***If you attempt to create a simulation schedule for the current schedule day and the regular jobs have already been scheduled, the jobs will not show on the scheduling reports. They will appear on the Backlog Report.***

### 2. ACTUAL Schedule

The actual scheduling runs are completed for a 24 hour period only. They also generate multiple reports showing different sequences of the scheduling process. All jobs having the scheduling criteria for that day(s) will be placed on to the scheduling queue (JOBQ). Only one 24 hour period may be scheduled at a time, but you may execute as many 24 hour periods as desired. This is accomplished by allowing JOB/Master® to place the next scheduled date and time into the parameter or by a specific job (JMSCHED) being executed and changing the

Scheduling dates within the execution JCL of the batch job or altering the selected dates on the ONLINE “GS” commands from the tracking system of JOB/Master®.

## Relationship of Calendars to Process Keywords

During the schedule generation function those criteria defined to jobs within the data base are evaluated for scheduling. Any process keyword or combination of process keywords are verified for scheduling.

Process keywords requiring a calendar (*refer to Process Keywords Generation*), are verified against the calendar. If the calendar has the day scheduled as a processing day, then the process keywords which are “WORKDAY” related are analyzed to determine if they are acceptable for processing on this day. Only workday related keywords are checked against the calendars. All other keywords ignore calendars.

Process keywords not requiring calendars (*relative keywords*) are verified for acceptance based on the schedule creation date, i.e. MON, TUE, 2MON, 3FRI,...etc. The process also takes into consideration whether your facility is using either Logical or Physical day processing.

JOB/Master® provides two methods of generating a schedule.

## Batch Mode

Batch mode schedule generation consists of the following process:

Verify that the procedures have been installed into your PROCLIB during installation, then execute the following job:

```
//SCHED      JOB      (JOB CARD PARAMETERS)
//STEP1      EXEC     JMSCHED,
//           STRTTME=0000,  SCHD FROM TIME
//           STRTDTE=00000, SCHD FROM DATE
//           ENDTME=0000,   SCHD TO TIME
//           ENDDTE=00000,  SCHD TO DATE
//           TYPE=' ',      TYPE OF SCHD RUN
//           SUBID=JM01,    J/M SUBSYSTEM ID
//           REPTS='YYNNNN' SCHD REPORTS
```

Substitution variables are defined below.

STRTTME=HHMM

STRTTME is the beginning time which will be used in determining which jobs fall into the period being scheduled. HH = Hour, MM = Minute

STRTDTE=YYDDD

STRTDTE is the beginning date used to determine the starting period being scheduled. YY = Year, DDD = Day (Julian Date)

ENDTME=HHMM

ENDTME is the ending time which will be used in determining which job falls into the period being scheduled. HH = Hour, MM = Minute

ENDDTE=YYDDD

ENDDTE is the ending date which will be used in determining which jobs fall into the period being scheduled. YY = Year, DDD = Day (Julian Date)

For Example:

```

STRTTME=0700
STRTDTE=93100
ENDTME=0000
ENDDTE=00000

```

will schedule all jobs whose calendar or process keyword criteria fall on 93100 or 93101 with a submit time between 0700 on 93100 and 0659 on 93101. Zero end specifications default 24 hours.

```

STRTTME=0700
STRTDTE=93100
ENDTME=1600
ENDDTE=93100

```

will schedule all jobs whose calendar or process keyword criteria fall on 93100 with a submit time between 0700 and 1600.

```

STRTTME=0700
STRTDTE=93100
ENDTME=0000
ENDATE=93102

```

will schedule all jobs whose calendar or process keyword criteria fall between 0700 on 93100 and 0659 on 93102. (*This multiple day scheduling can be used in simulation scheduling only.*)




---

***A submit time of zero will always schedule the job on the STRTDTE cycle. To request a STRTTME of 0000, you must specify 0001, since zero will default to the same time as the last cycle.***

---

TYPE=

BLANK	Run a schedule scanning the entire data base, and also input cards for include/exclude processing.
I	Do not scan the data base. Use only input cards for include/exclude processing.
C	Same as option BLANK, however, only a simulated paper schedule will be produced.
M	Same as option I, however only a simulated paper schedule will be produced.
B	Produce backlog report only, that is, only jobs retained on the schedule.

SUBID=

XXXX	is the subsystem ID, the default is JM01, of the JOB/Master® control region with which this schedule creation will be associated. This ID can be JM01, JM02, JM03 or JM04.
------	--

REPTS=

YYYN

123456

Scheduling reports selected for print out during the scheduling phase. The reports are indicated by the position of the Y or N in the series. Values of these fields within the distribution procedure are “YYYN”. These are changeable.

“Y”=Report wanted.

“N”=Report not wanted.

1. Job Schedule by Date and Time (*cannot be turned off*).
2. Jobs which are triggered by this scheduled job (*cannot be turned off*).
3. Jobs which require the scheduled job as a Predecessor (*cannot be turned off*).
4. Job schedule by System and Job.
5. Job Schedule by Jobname.
6. Jobs backlogged by Date and Time.

The following are considerations for the parameter selection during the scheduling run:

STRTDTE Value = 00000	Will cause a 24 hour period to be scheduled, beginning with the date the last schedule ended. ( <i>which is visible on the PROFILE screen</i> ) or the current date ( <i>whichever is later</i> ).
STRTDTE Value = YYDDD	A schedule will be created for the 24 hour period of the date indicated.
STRTTME Value = 0000	Will cause the time to use the default time for the next schedule creation. If you wish to create a schedule from midnight to midnight you must use the STRTTME = 0001. This will create a schedule from 0001 to midnight the next day.

### ***Include/Exclude Jobs***

JOB/Master® allows the user to both include jobs not normally selected, and/or to exclude jobs normally selected.

The control cards are specified as parameters in the SYSIN DD statement of the scheduling job. The format of the control cards are:

<i>Columns</i>	<i>Value</i>	<i>Description</i>
1-3	JOB SYS	Include a single job Include a system
4	=	Equal sign
5-12	NAME	Eight character name of job or system, padded with blanks
14	I	FORCE include the job or system regardless of scheduling criteria
	E	Exclude the job or system
	S	Select the job or system only if it would have normally been selected based on scheduling criteria
16-20	YYDDD	The date, in Julian Date format, of the schedule to include or exclude. Zero - 00000 will default to the schedule cycle processed.

## Online Mode

A schedule can also be requested on-line through Job Tracking. Refer to the description of Job Tracking Command “GS” in this manual for more information.

This option will present JCL in an edit session which can be edited and submitted when ready. The options presented will be the same as described previously in the Batch Mode section.

## Scheduling Jobs

A schedule that is created without the use of include or exclude parameters only selects jobs from the database which meet the requested time and calendar criteria.

The JCL for those jobs being scheduled is transferred from the BASE JCL (*MASTER*) Library to the Staging PDS. The JCL is not placed into the Job Queue. The JOB/Master® scheduling (*Job*) queue indicates a status of what is occurring or what is to occur.

Modifications to the scheduled jobs JCL can be made to any job up until the time the job is submitted to the JES queue. All modifications are made to the JOB/Master® Staging PDS and not to the Base (*Master*) JCL PDS. Any modifications are accomplished via the JCL substitution facilities (*Option “J”*) on the JOB/Master® Primary Menu.

## Scheduling Individual Jobs or Systems

Individual jobs or systems can be scheduled by the generation of a full schedule. Individual job or system scheduling can be accomplished by running a schedule and specifying the use of user-selected input only.

For instance, if a schedule is being run for a specific day and you want to include a job or series of jobs that are not normally scheduled for that day, you may specify it in this manner.

1. Following the regular schedule go to the Tracking Facility.
2. Issue a “GS” to generate an additional schedule.

3. Specify the same Date and Time as the Regular Schedule.
4. Use a “Y” in the field “USE SELECTIONS ONLY.”
5. Place the jobs by JOBNAME you wish to schedule in the appropriate area.
6. Use the character “I” to include the job(s) on the schedule regardless of what the scheduling criteria indicates for the job(s).

## Automatic Schedule Creation

Schedule creation can be performed automatically by defining the schedule creation job to the JOB/Master® data base and specifying the calendar name and time frequency as with any other job in the system.

For example, defining the job to run each day at 7:00 AM results in JOB/Master® scheduling the run each day and automatically submitting it at the specified time.

## AD HOC - Dynamically Added Jobs

Dynamically adding jobs to an existing schedule can be accomplished through Job Tracking. Dynamically added jobs have all the same scheduling attributes as regularly scheduled jobs, such as manual tasks, predecessors, etc.

1. From the JOB/Master® Main Menu select “T” <ENTER>
2. Select OPTION ==> “AJ”
3. JOB ==> JOBNAME <ENTER>
4. Complete the screen with the information which may be required.
5. CONFIRM (PF4).

The job has now been dynamically added to the schedule. To verify if desired, issue a LQ <ENTER> and then locate the JOBNAME from the JOB Scheduling screen. The job will show on the displayed scheduling screen.

## Job Schedule Confirmation

An on-line display of the jobs to be submitted to the system is always available through the display under Job Tracking, Option = LQ. The sequence of jobs that JOB/Master® has assembled can be changed interactively by adding a job dynamically to the scheduling queue, cancelling a job, changing the setup requirements, changing job streams, etc. The job requirements can be changed at any time prior to a jobs’ submission to the JES input queue. If a job is on the schedule queue its scheduled submit time as defined on the data base cannot be modified.

When the scheduled jobs are being added to the schedule, JOB/Master suspends, if active, the submit facility. The status in the job queue will show that a compress is in progress. Once done, the submit facility will be put back into the same status as when the upload started. If the schedule ends prematurely, the submit facility can be manually restarted using the “SS” command on the tracking screen.

## Using "Cycle" Processing

```

----- JOB/Master® Job Definition ----- Row 1 to 4 of 72
Command ==>
                                           Scroll ==> PAGE
-----Definition Last Updated by          on          at

Jobname ==> JOBCYC28  Alt Name For => _____ System Name ==> CYCLETST
PDS Mem ==> _____ PDS ==> _____
Trig Job ==> N (Y/N)  Triggered By==> _____ Submit Type ==> A (ACMRST)
Res Name1 ==> _____ Res Name2 ==> _____ Schedule/Net==> *****
Calendar ==> CYCLEFRI Excep Cal1 ==> _____ Excep Cal2 ==> _____
Keywd Def ==> _____ Priority ==> - _____ Lib Type ==> _____
Neg/C Def ==> _____
Model / Count of Tapes: 3420 => 00 3480 => 00 Update Drive Usage=> Y
----- Submit Options -----
Enter submit time (HHMM) & optionally "number of runs"/"minutes between runs"
Submit=> 0000 End=> 0000 Number Of Runs=> 00 Minutes Between Runs=> 0000

----- Dependency Options -----
Pred      Negative      Coreq      Process      N-Proc      Trig      Sub:  OP  Cond  Trig
Jobs  Typ|      Dep      Dep      Keyword      Keyword      Job      Typ:  CD  Code  Type
-----|-----|-----|-----|-----|-----|-----|
-      -|      -      -      CYCLE028      -      -      :      -      -      -
-      -|      -      -      -      -      -      :      -      -      -
-      -|      -      -      -      -      -      :      -      -      -

```

The process keyword CYCLEnnn will determine the cycle frequency. In this example the job will run every 28 days starting from the first day on the calendar.

[illegible]

The first day on the calendar will set the start of the cycle. In this case it is March 22.



## Special “JMSCHED” Processing

**For installations which do not run 7 days a week!** The job JMSCHED will run on Mon-Fri, and on Saturday. The job will be placed into the schedule queue on Friday for Saturday morning at 7:45. Since the system is not up on Saturday or Sunday, the job will wait until Monday to run. On Monday morning the Saturday job will start immediately, because it is past its run time. The date to create a schedule will be Monday.

```

----- JOB/Master® Job Definition ----- Row 1 to 4 of 72
Command ==>                               Scroll ==> PAGE
-----Definition Last Updated by          on          at

Jobname ==> JMSCHED   Alt Name For => _____ System Name ==> *****
PDS Mem  ==> _____ PDS ==> _____
Trig Job  ==> N (Y/N)   Triggered By==> _____ Submit Type ==> A (ACMRST)
Res Name1 ==> _____ Res Name2  ==> _____ Schedule/Net==> *****
Calendar ==> _____ Excep Cal1  ==> _____ Excep Cal2  ==> _____
Keywd Def ==> _____ Priority   ==> _____ Lib Type   ==> _____
Neg/C Def ==> _____
Model / Count of Tapes: 3420 => 00 3480 => 00 Update Drive Usage=> Y
----- Submit Options -----
Enter submit time (HHMM) & optionally "number of runs"/"minutes between runs"
Submit=> 0745 End=> 0000 Number Of Runs=> 00 Minutes Between Runs=> 0000

----- Dependency Options -----
Pred   Negative   Coreq   Process   N-Proc   Trig   Sub: OP Cond Trig
Jobs   Typ        Dep      Keyword  Keyword   Job    Typ: CD Code Type
-----
      -      -      -      M-F      -      -      :   -   -   -
      -      -      -      SAT      -      -      :   -   -   -

```

The JCL for the job JMSCHED defined above is shown below. Note the Symbolic Replacement for current system date (@YDDD). This value will be set to the current date and will become the new schedule date. See the discussion about Date Substitution in the chapter on Symbolic Substitution later in this manual.

```

BROWSE -- TLCR.ALL.CNTL(JMSCDTE) - 01.00 ----- LINE 00000000 COL 001 080
Command ==>
***** TOP OF DATA *****
//SCHED JOB (JOB CARD PARAMETERS)
//STEP1 EXEC JMSCHEM,
//          STRTME=0000, SCHD FROM TIME
//          <----- START DATE SUBSTITUTION
//          STRTDTE='@YDDD', SCHD FROM DATE
//          <----- END DATE SUBSTITUTION
//          ENDTME=0000, SCHD TO TIME
//          ENDDTE=00000, SCHD TO DATE
//          TYPE=' ', TYPE OF SCHD RUN
//          SUBID=JM01, J/M SUBSYSTEM ID
//          REPTS='YYNNNN' SCHD REPORTS
//STEP1.SYSIN DD *
/*
***** BOTTOM OF DATA *****

```

The JCL for the schedule job contains symbolic substitution variable in it for using the current system date, as the value to be replaced. The date will be replaced in the STRTDTE parameter with the system date at submit time. So, on Monday it will have Mondays date even if the job is left over from Saturday. This will work for normal weeks. On those weeks where there are holidays, the job will still be scheduled on the holiday and because the system is not up it will not run. However, when they start the system, the day after the holiday, the job will again start to run and the current date will be substituted, generating the schedule for that date.

## Scheduling Reports

Schedule generation creates reports indicating the results of the scheduling cycle. There are six (6) reports which can be requested.

1. Job schedule by Date and Time
2. Jobs which require the scheduled job as a predecessor
3. Jobs which are triggered by this scheduled job
4. Job Schedule by System and Job
5. Job Schedule by Jobname
6. Jobs backlogged by Date and Time.

Reports 1 through 3 are created every time a schedule is run.

Reports 4 through 6 are optional and can be requested or suppressed by using the REPTS parameter discussed in the Batch Mode section of schedule creation.

Sample JMSCHEM reports follow:

## Generating a Schedule

## Scheduling Reports

J O B   S C H E D U L E   B Y   D A T E   A N D   T I M E												
DATE	JOBNAME	TRG	SYSTEM	SCHED	SCHED	SCHED	SETUP	PREDECESSOR	ALTERNATE	CALENDAR	EXCEP.	PKWRD.
	JOB	NAME	START	END	STAT		JOBS	DEF. NAME	NAME	CALENDAR		NAME
93267	DSNTRIG2	Y	TRIGTEST	00:00	00:01	P	-----					
93267	TRIG05	Y		00:00	00:00		-----					
93267	TRIG07	Y		00:00	00:00		-----					
93267	TRIG08	Y		00:00	00:00		-----					
93267	TRIG09	Y		00:00	00:00		-----					
93267	TRIG10	Y		00:00	00:00		-----					
93267	TRIG11	Y		00:00	00:00		-----					
93267	TRIG12	Y		00:00	00:00		-----					
93267	TRIG13	Y		00:00	00:00		-----					
93267	TRIG14	Y		00:00	00:00		-----					
93267	TRIG15	Y		00:00	00:00		-----					
93267	TRIG16	Y		00:00	00:00		-----					
93267	TRIG17	Y		00:00	00:00		-----					
93267	TRIG18	Y		00:00	00:00		-----					
93267	TRIG19	Y		00:00	00:00		-----					
93267	TRIG20	Y		00:00	00:00		-----					
93267	TRIG21	Y		00:00	00:00		-----					
93267	TRIG22	Y		00:00	00:00		-----					
93267	TRIG23	Y		00:00	00:00		-----					
93267	TRIG24	Y		00:00	00:00		-----					
93267	TRIG25	Y		00:00	00:00		-----					
93267	TRIG26	Y		00:00	00:00		-----					
93267	TRIG27	Y		00:00	00:00		-----					
93267	TRIG28	Y		00:00	00:00		-----					
93267	TRIG29	Y		00:00	00:00		-----					
93267	TRIG30	Y		00:00	00:00		-----					
93267	TRIG31	Y		00:00	00:00		-----					
93267	TRIG32	Y		00:00	00:00		-----					
93267	TRIG33	Y		00:00	00:00		-----					
93267	TRIG34	Y		00:00	00:00		-----					
93267	TRIG35	Y		00:00	00:00		-----					
93267	TRIG36	Y		00:00	00:00		-----					
93267	TRIG37	Y		00:00	00:00		-----					
93267	TRIG38	Y		00:00	00:00		-----					
93267	TRIG39	Y		00:00	00:00		-----					
93267	TRIG40	Y		00:00	00:00		-----					
93267	TRIG41	Y		00:00	00:00		-----					
93267	TRIG42	Y		00:00	00:00		-----					
93267	TRIG43	Y		00:00	00:00		-----					
93267	TRIG44	Y		00:00	00:00		-----					
93267	TRIG45	Y		00:00	00:00		-----					
93267	TRIG46	Y		00:00	00:00		-----					
93267	TRIG47	Y		00:00	00:00		-----					
93267	TRIG48	Y		00:00	00:00		-----					
93267	TRIG49	Y		00:00	00:00		-----					
93267	TRIG01	N	TRIGTEST	07:45	00:00	P	-----	PRED01				ALL
93267	TRIG06	Y	TRIGTEST	07:45	07:46	P	-----					
93267	DSNTRIG1	N	TRIGTEST	09:06	00:00	P	-----					M-F
93268	TRIG03	Y	TRIGTEST	00:01	00:02	P	-----					

TOTAL JOBS SCHEDULED = 49

## Scheduling Reports

## Generating a Schedule

09/24/93      J O B M A S T E R      J O B      S C H E D U L I N G      A N D      C O N T R O L      S Y S T E M      P A G E      1

```

SCHEDULED
DATE      JOB      ----- JOBS WHICH REQUIRE THE SCHEDULED JOB AS A PREDECESSOR -----
92267     RMSF1100*  R1128003
92267     R1124006  R1124011
92267     R1124007  R1124011
92267     R1124008  R1124011
92267     R1124009  R1124011
92267     R1124010  R1124011
93266     PREDTEST*  TRIG02
93266     PRED01   *  TRIG01
93266     TRIG06    TRIGPURG
93267     PREDTEST*  TRIG02
93267     PRED01   *  PRED04
93267     TRIG06    TRIGPURG

```

09/24/93      J O B M A S T E R      J O B      S C H E D U L I N G      A N D      C O N T R O L      S Y S T E M      P A G E      1

```

SCHEDULED
DATE  TIME  JOB      ----- JOBS WHICH ARE TRIGGERED BY THIS SCHEDULED JOB -----
92267 0000  OPSDUMY0  CLSPR88
92267 0000  OPSDUMY1  OPSPR88
92267 0000  R112DUMY  R1120G00 R1120G01 R1120G02 R1120G03 R1120G04 R1120G05 R1120X00 R1120X01 R1120X02 R1120X03
                                     R1120X04 R1120X05 R1120003 R1120004
92267 0000  R1120X05  R1124001 R1120001 R1120004
92267 0000  R1120001  R1124002
92267 0000  R1120003  R1124006
92267 0000  R1120004  R1124012
92267 0000  R1121001  R1127001
92267 0000  R1121005  R1121007 R1121008 R1121009 R1121010 R1121011 R1121012
92267 0000  R1121007  R1121001
92267 0000  R1124001  R1121005 R112XREF R1121002
92267 0000  R1124002  R1121003
92267 0000  R1124006  R1124007
92267 0000  R1124007  R1124008
92267 0000  R1124008  R1124009
92267 0000  R1124009  R1124010
92267 0000  R1124010  R1124011
92267 0000  R1127001  R1128001 OPSDUMY0
92267 0000  R1128002  OPSDUMY1 R1128003
92267 0000  R1128003  R112DUMY 001102RF
93266 1123  R1128001  R1128002
93266 1500  TRIGJOBA  TRIGJOBC TRIGJOBH TRIGJOBG TRIGJOBH TRIGJOBI TRIGJOBG TRIGJOBH TRIGJOBK TRIGJOBL TRIGJOBM
93266 0000  TRIGJOBK  TRIGJOBN TRIGJOBO
93266 0000  TRIGJOBN  TRIGJOBP TRIGJOBR
93266 0745  TRIG01    TRIG02   TRIG35   TRIG36   TRIG37   TRIG38   TRIG39   TRIG40   TRIG41   TRIG42   TRIG43   TRIG44   TRIG45
                                     TRIG46   TRIG47   TRIG48   TRIG49   TRIG50   TRIG51   TRIG52   TRIG53   TRIG54   TRIG55   TRIG56   TRIG57
                                     TRIG58   TRIG59   TRIG03   TRIG04   TRIG05   TRIG06   TRIG07   TRIG08   TRIG09   TRIG10   TRIG11   TRIG12
                                     TRIG13   TRIG14   TRIG15   TRIG16   TRIG17   TRIG18   TRIG19   TRIG20   TRIG21   TRIG22   TRIG23   TRIG24
                                     TRIG25   TRIG26   TRIG27   TRIG28   TRIG29   TRIG30   TRIG31   TRIG32   TRIG33   TRIG34
93266 1001  TRIG02    TRIG03   TRIG06
93266 0745  TRIG06    TRIG25   TRIG26   TRIG27   TRIG28   TRIG29   TRIG30   TRIG31   TRIG32   TRIG33   TRIG34   TRIG35   TRIG36
                                     TRIG37   TRIG38   TRIG39   TRIG40   TRIG41   TRIG42   TRIG43   TRIG44   TRIG45   TRIG46   TRIG47   TRIG48
                                     TRIG49   TRIG50   TRIG51   TRIG52   TRIG53   TRIG54   TRIG55   TRIG56   TRIG57   TRIG58   TRIG59   TRIG60
                                     TRIG61   TRIG62   TRIG63   TRIG64   TRIG07   TRIG08   TRIG09   TRIG10   TRIG11   TRIG12   TRIG13   TRIG14
                                     TRIG15   TRIG16   TRIG17   TRIG18   TRIG19
93267 1401  JCLSUB03  JCLSUB04
93267 1405  JCLSUB04  JCLSUB05
93267 0000  OPSDUMY0  CLSPR88
93267 1500  TRIGJOBA  TRIGJOBC TRIGJOBH TRIGJOBG TRIGJOBH TRIGJOBI TRIGJOBG TRIGJOBH TRIGJOBK TRIGJOBL TRIGJOBM
93267 0000  TRIGJOBK  TRIGJOBN TRIGJOBO
93267 0000  TRIGJOBN  TRIGJOBP TRIGJOBR
93267 1001  TRIG02    TRIG03   TRIG06
93267 0001  TRIG03    TRIG04
93267 0745  TRIG06    TRIG07   TRIG34   TRIG35   TRIG36   TRIG37   TRIG38   TRIG39   TRIG40   TRIG41   TRIG42   TRIG43   TRIG44
                                     TRIG45   TRIG46   TRIG47   TRIG48   TRIG49   TRIG50   TRIG51   TRIG52   TRIG53   TRIG54   TRIG55   TRIG56
                                     TRIG57   TRIG58   TRIG59   TRIG60   TRIG61   TRIG62   TRIG63   TRIG64   TRIG08   TRIG09   TRIG10   TRIG11
                                     TRIG12   TRIG13   TRIG14   TRIG15   TRIG16   TRIG17   TRIG18   TRIG19   TRIG20   TRIG21   TRIG22   TRIG23
                                     TRIG24   TRIG25   TRIG26   TRIG27   TRIG28   TRIG29   TRIG30   TRIG31   TRIG32   TRIG33
93268 0200  OBTRSYTO  GC10C100
93268 0645  SCHEDULE  OPSDUMY0

```

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## Generating a Schedule

## Scheduling Reports

```

09/24/93      J O B M A S T E R      J O B      S C H E D U L I N G      A N D      C O N T R O L      S Y S T E M      P A G E      1
                J O B      S C H E D U L E      B Y      S Y S T E M      A N D      J O B

DATE  JOBNAME  TRG  SYSTEM  SCHED  SCHED  SCHED  SETUP  PREDECESSOR  ALTERNATE  CALENDAR  EXCEP.  PKWRD.
                JOB   NAME   START  END    STAT   JOBS      DEF. NAME  NAME    CALENDAR  NAME

93267 COKE001   N   COKERES  16:00  00:00   B   -----      WORKDY93
93267 COKE002   N   COKERES  16:00  00:00   B   -----      WORKDY93
93267 COKE003   N   COKERES  16:00  00:00   B   -----      WORKDY93
93267 COKE004   N   COKERES  16:00  00:00   B   -----      WORKDY93
93267 COKE005   N   COKERES  16:00  00:00   B   -----      WORKDY93
93267 COKE006   N   COKERES  16:00  00:00   B   -----      WORKDY93
93267 COKE007   N   COKERES  16:00  00:00   B   -----      WORKDY93

93267 R88PC11   N   CYCLE1   20:00  00:00   B   -----      MON-FRI  HOLIDY93
93267 R88PC12   N   CYCLE1   20:00  00:00   B   -----      MON-FRI  HOLIDY93

93267 DRPPR001  N   DRPPRES  16:00  00:00   B   -----      WORKDY93
93267 DRPPR002  N   DRPPRES  16:00  00:00   B   -----      WORKDY93
93267 DRPPR003  N   DRPPRES  16:00  00:00   B   -----      WORKDY93
93267 DRPPR004  N   DRPPRES  16:00  00:00   B   -----      WORKDY93
93267 DRPPR005  N   DRPPRES  16:00  00:00   B   -----      WORKDY93
93267 DRPPR006  N   DRPPRES  16:00  00:00   B   -----      WORKDY93

93267 GC10C100  Y   GBANK    00:00  00:01   B   -----
93268 OBTRSYTO   Y   GBANK    02:00  00:00   B   -----      EVERY
93268 STS00297   N   GBANK    00:01  00:00   B   -----      EVERY

```

## Scheduling Reports

## Generating a Schedule

```

09/24/93      J O B M A S T E R      J O B      S C H E D U L I N G      A N D      C O N T R O L      S Y S T E M      P A G E      1

                J O B      S C H E D U L E      B Y      J O B N A M E

DATE  JOBNAME  TRG  SYSTEM  SCHED  SCHED  SCHED  SETUP  PREDECESSOR  ALTERNATE  CALENDAR  EXCEP.  PKWRD.
      JOB      JOB   NAME    START  END    STAT   -----  JOBS        DEF. NAME   NAME    CALENDAR  NAME

93267 DSNTRIG1  N   TRIGTEST  09:06  00:00  P   -----
93267 TRIG01   N   TRIGTEST  07:45  00:00  P   -----      PRED01
93268 TRIG03   Y   TRIGTEST  00:01  00:02  P   -----
93267 TRIG05   Y                   00:00  00:00  -----
93267 TRIG06   Y   TRIGTEST  07:45  07:46  P   -----
93267 TRIG07   Y                   00:00  00:00  -----
93267 TRIG08   Y                   00:00  00:00  -----
93267 TRIG09   Y                   00:00  00:00  -----
93267 TRIG10   Y                   00:00  00:00  -----
93267 TRIG11   Y                   00:00  00:00  -----
93267 TRIG12   Y                   00:00  00:00  -----
93267 TRIG13   Y                   00:00  00:00  -----
93267 TRIG14   Y                   00:00  00:00  -----
93267 TRIG15   Y                   00:00  00:00  -----
93267 TRIG16   Y                   00:00  00:00  -----
93267 TRIG17   Y                   00:00  00:00  -----
93267 TRIG18   Y                   00:00  00:00  -----
93267 TRIG19   Y                   00:00  00:00  -----
93267 TRIG20   Y                   00:00  00:00  -----
93267 TRIG21   Y                   00:00  00:00  -----
93267 TRIG22   Y                   00:00  00:00  -----
93267 TRIG23   Y                   00:00  00:00  -----
93267 TRIG24   Y                   00:00  00:00  -----
93267 TRIG25   Y                   00:00  00:00  -----
93267 TRIG26   Y                   00:00  00:00  -----
93267 TRIG27   Y                   00:00  00:00  -----
93267 TRIG28   Y                   00:00  00:00  -----
93267 TRIG29   Y                   00:00  00:00  -----
93267 TRIG30   Y                   00:00  00:00  -----
93267 TRIG31   Y                   00:00  00:00  -----
93267 TRIG32   Y                   00:00  00:00  -----
93267 TRIG33   Y                   00:00  00:00  -----
93267 TRIG34   Y                   00:00  00:00  -----
93267 TRIG35   Y                   00:00  00:00  -----
93267 TRIG36   Y                   00:00  00:00  -----
93267 TRIG37   Y                   00:00  00:00  -----
93267 TRIG38   Y                   00:00  00:00  -----
93267 TRIG39   Y                   00:00  00:00  -----
93267 TRIG40   Y                   00:00  00:00  -----
93267 TRIG41   Y                   00:00  00:00  -----
93267 TRIG42   Y                   00:00  00:00  -----
93267 TRIG43   Y                   00:00  00:00  -----
93267 TRIG44   Y                   00:00  00:00  -----
93267 TRIG45   Y                   00:00  00:00  -----
93267 TRIG46   Y                   00:00  00:00  -----
93267 TRIG47   Y                   00:00  00:00  -----
93267 TRIG48   Y                   00:00  00:00  -----
93267 TRIG49   Y                   00:00  00:00  -----
93267 TRIG50   Y                   00:00  00:00  -----
93267 TRIG60   Y                   00:00  00:00  -----
93267 TRIG61   Y                   00:00  00:00  -----
93267 TRIG62   Y                   00:00  00:00  -----
93267 TRIG63   Y                   00:00  00:00  -----
93267 TRIG64   Y                   00:00  00:00  -----

TOTAL JOBS SCHEDULED =      63

```

## Scheduling Reports

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# Chapter 6

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## Job Submission

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### Submit Facility

The submit facility is the function which submits the JCL to the JES input queue. The submit facility can be set to be active or inactive at JOB/Master® initialization.

#### *Starting and Stopping the Submit Facility*

The following are examples of how to set the submission facility to either an active or inactive status:

JOB/Master® PROC PARMS (*Check the INSTLIB for member JOBMASSTR*)

STRT=N                      Default to bring JOB/Master® up with the submit facility turned off.

STRT=Y                      Default to bring JOB/Master® up with the submit facility turned on.

By turning the submit facility on if there are jobs waiting to be submitted due to time and/or dependencies being satisfied, JOB/Master® will attempt to submit them to the JES input queue as soon as the control region is active.

The submit facility can also be manually activated or deactivated by using the two commands “PS” or “SS” from the tracking menu.

**PS** = Stop the submit facility (*All submission to JES is halted*).

**SS** = Start the submit facility (*All submission to JES resumes*).

All JOB/Master® functions are in effect, even if the submit facility is inactive. A job which is defined to be automatically submitted by JOB/Master® will remain in “Submit Waiting” Status, with a message of “Submit Facility Inactive” on the current status line of the Tracking Menu (*LQ*). These two commands are selective in that they can be issued to stop and start the submit facility on all processors or an individual processor.

The JOB/Master® JOBQ (*JMJOBQ*) retains the status of all scheduled jobs and can be viewed by using the “LQ” command in the Tracking Menu. (*Refer to JOB Tracking - List Queue (LQ) Select Options*).

The status of the submit facility can be reviewed by using the ST command on the Tracking Menu. It will indicate the System ID and whether it is started or stopped, plus the time of the last function requested.

## External Submits

JOB/Master® can track and control jobs that were not submitted by JOB/Master®. To achieve this, a “¢” (*cent sign*), or the designated tracking character for the JOB/Master® region desired, must be placed in column 71 of the job card.

The following considerations apply to all externally submitted jobs:

1. If the job is not on the scheduling queue, it is considered scheduled and uses the current system date as the assigned scheduled date.
2. If the job is on the scheduling queue and in a failed or ABENDED status, it is regarded as a rerun. If it is not in an ABENDED status, it is considered an ancillary job independent of the schedule. If the External Submit indicator is “N” on the Job Definition Screen, the job will not be related to the job on the schedule. If the indicator is “Y” it will be considered the scheduled job and processed accordingly.
3. If the external submit flag for the job is set to “Y” on the job definition screen, the job will not be submitted by JOB/Master®. If the job is submitted to the system, and TYPRUN=HOLD is used on the job card, then all scheduling dependencies can be applied to the job if it is scheduled.

After all predecessors and other dependencies are satisfied, JOB/Master® will release the job in the JES Input Queue for execution. Using this method, jobs submitted from remote locations can be automatically controlled by JOB/Master®.

## Library Management Facility

JOB/Master® Library Management Facility allows for the management and synchronization of JCL SETUP activity for jobs that require JCL or control record changes from one day to the next.

The Library Management feature allows each day’s JCL to be placed in a STAGING PDS. The STAGING PDS may contain any number of days work. The number of retention days to be kept is specified in the Global System Profile.

During the scheduling processing, when JOB/Master® is ready to submit a job to the Job Entry Subsystem (*JES*) input queue, either the Daily PDSs are used *or* the STAGING PDS is used for retrieving the JCL. If JOB/Master® cannot locate the JCL in the STAGING PDS, it will then search the DEFAULT (*JMSUBPDS*) SUBMIT PDS and if the job is found in the library, it will be submitted. If neither of the two libraries contain the job, a “*SUBMIT FAILED*” message will be issued to the user. JOB/Master® will periodically retry the submit process until either the job is added to one of the submit libraries, or the job is cancelled from the JOB/Master® schedule.

### ***USER Submit PDS***

The USER submit PDS is optionally defined on the Job Definition Screen and, if used, will override all other JCL search sequences. This PDS will be dynamically allocated at job submit time and does not need to be defined in the JOB/Master® control task region by use of a DD statement.

### ***Submit PDS***

JCL submit data sets are organized in an hierarchical manner. For example, if the STAGING PDS is used it will be searched first and then the DEFAULT SUBMIT PDS. These data sets may be concatenated. The only exception to this rule is user specified data sets. These PDS data sets are assigned to a specific job when the job is defined to the database. If this option is used (*done on a job by job basis or using the system record*) then only the user specified PDS will be searched.

The only required SUBMIT PDS is the DEFAULT PDS, which is defined by the DD name “JMSUBPDS”.

### ***STAGING PDS***

The STAGING PDS is a powerful option to using standard Submit PDS's during the scheduling and execution phase of JOB/Master®. The Staging PDS is defined by the DD name “JMSTGPDS” in the JOB/Master® Execution Region.

Using the STAGING PDS allows for the following functions to be supported:

- STAGE JCL for more than 7 days in advance
- Keep more than 1 member for the same job for a schedule
- Have a user specified retention period for JCL members which have been executed and may need to be rerun at a later date, using the same parms as the original run.



---

*Activation of the Staging PDS is determined by the presence of the JMSTGPDS DD statement in the JOB/Master® control region startup proc JOBMASSTR. If the DD statement is not commented out, activation of the Staging PDS is automatic. If the Daily PDS's are present and not commented out, they will be used instead. Either the Staging PDS or the Daily PDS's must be specified.*

---

### ***Placing Members Into The STAGING PDS***

During execution, JMSCHED (*the scheduling program*) interrogates the JOB/Master® database to locate all jobs which are to be scheduled with the criteria for this particular scheduling run.

The following describes the scheduling process:

1. JMSCHED contains the scheduling dates/systems/jobs etc. which are to be processed.
2. JMSCHED begins execution and starts to scan the database to extract those jobs/systems/etc., which meet the criteria for this run.

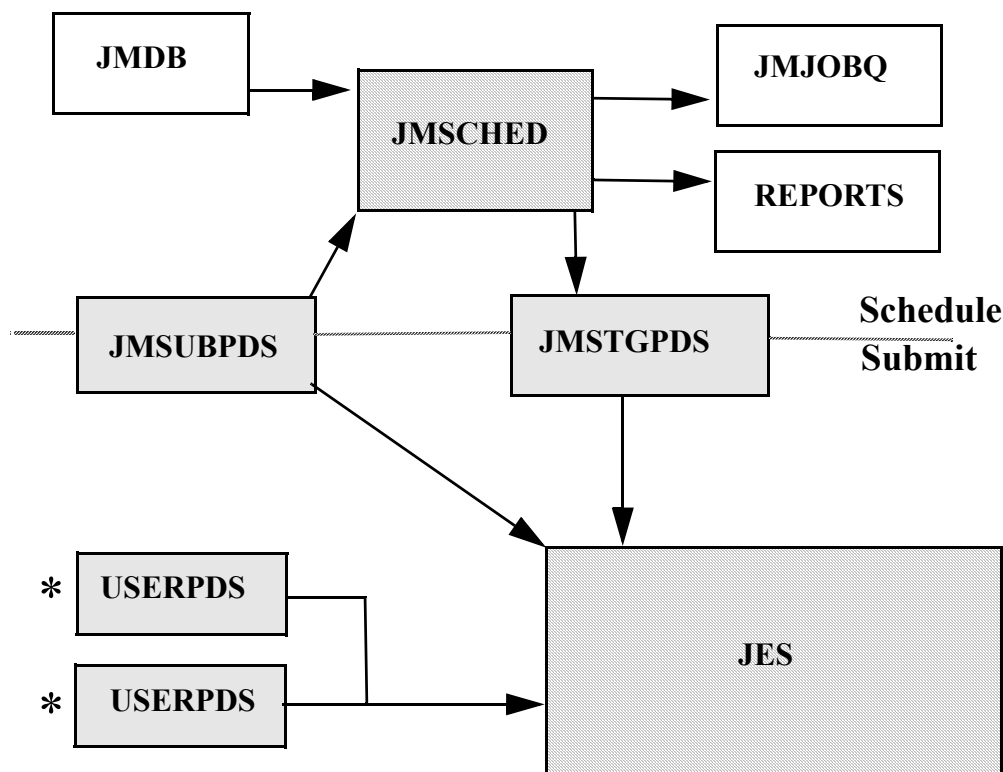
3. When a JOB is located having the criteria for processing, a job event is placed onto the JOBQ to await processing. *(This is not the JCL).*
4. JMSCHED will now go to the “JMSUBPDS” DD and extract the execution JCL for each job using the DEFAULT SUBMIT PDS. *(No JCL for jobs residing on a User PDS will be extracted).*
5. The execution JCL is moved to the STAGING PDS. During the transfer to the Staging PDS, the JCL member name is altered using the Staging Algorithm. *(This allows for the multiple existence of the same job on a schedule).*



**JCL is placed on the Staging PDS ONLY during the scheduling activity or during the RESOLVE function of JCL substitution (Described below).**

6. Once the JCL has been transferred to the Staging PDS, all functions for execution or Symbolic substitution can now be completed.

### ***SCHEDULING USING STAGING PDS***



\*If specified in Job Definition

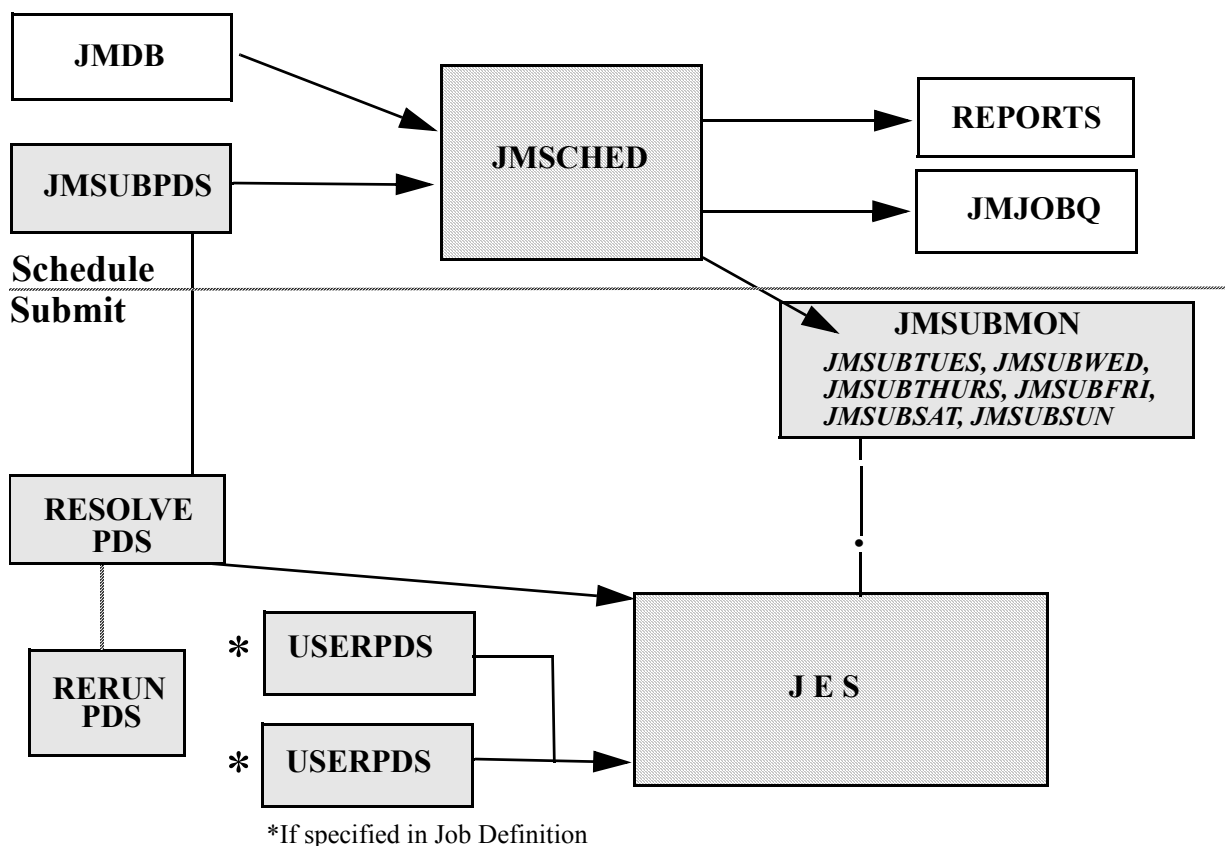
If the JOB/Master® profile option “COMPRESS JMSUBPDS SCHD” is specified as “Y”, then the DD JMSUBPDS will be compressed.

The DD specified by JMSTGPDS, which must be the JOB/Master® Staging PDS, will have all members which are older than N days scratched based on the JOB/Master® profile parameter “RUN JCL = NN”. The NN is the number of days to hold JCL.

JMSTGPDS will then be compressed. During compression of JMSTGPDS, the submit facility will be turned off to protect file integrity. The message “WAITING - JMSCHED COMPRESS IN PROGRESS” will appear on the LQ. When the compress is complete, the submit facility will be turned on.

The JMSUBMON, ..., JMSUBSUN, and JMRERUN are not used if the staging PDS is used. The staging PDS replaces the 7 Daily/Rerun PDS's.

### *SCHEDULING WITH DAILY PDS'S*



The JCL for all scheduled jobs is copied from the PDS specified by the JMSUBPDS DD, to the PDS specified by the JMSTGPDS DD or the Daily PDSs. This JCL can then be modified for that schedule run, if needed, without having to modify the base or master copy.

All scheduled events are placed into the JOBQ at this time.



---

***The JMSTGPDS or the Daily PDSs must have a SIZE (LRECL) equal to or greater than the largest PDS that will be feeding it. (This is an IBM limitation).***

---

### ***Dynamically Added Jobs***

Frequently during the process of JOB scheduling you may need to add a job to the existing JOBQ. You may do this by running another schedule run, or by dynamically adding the job(s) to the JOBQ using the “AJ” function within the tracking facility.

Jobs added to the JOBQ using the “AJ” function do not (*within this release*) automatically having their execution JCL transferred to the staging PDS. In order to move the execution JCL from the Submit/User PDS’s to the staging PDS it is necessary to utilize the “RESOLVE” function within JCL/MASTER (*Symbolic Substitution*).

The following procedure will facilitate the JCL transfer:

1. Add the JOB to the JOBQ...“AJ JOBNAME” (*Be certain to set the 5th Manual task flag (JCL SETUP) during the add process to a “Y”*).
2. Any time after the job has been successfully added to the JOBQ go to the JCL/MASTER (*JCL Substitution*) function from either the command line (“=J”), or from the main menu.
3. Select number “1” Resolve. (*Do not use the JOBNAME FIELD*). A table of all JOBQ entries containing a “Y” in the JCL SETUP flag will be presented.
4. Select the JOB you wish to Resolve by placing an “S” adjacent to the JOB.
5. The job will be selected for resolution and the JCL will be transferred to the Staging PDS.



---

***It is absolutely essential for the Staging PDS and the Resolve PDS to be the same dataset as defined within the “ISF” facility. The resolved JCL will be stored in this dataset and will be submitted for processing from this dataset.***

---

## Browsing the JMSTGPDS

[illegible]

The ISPF directory display of the STAGING PDS will now show the Scheduled job and the Scheduled Date and Time.

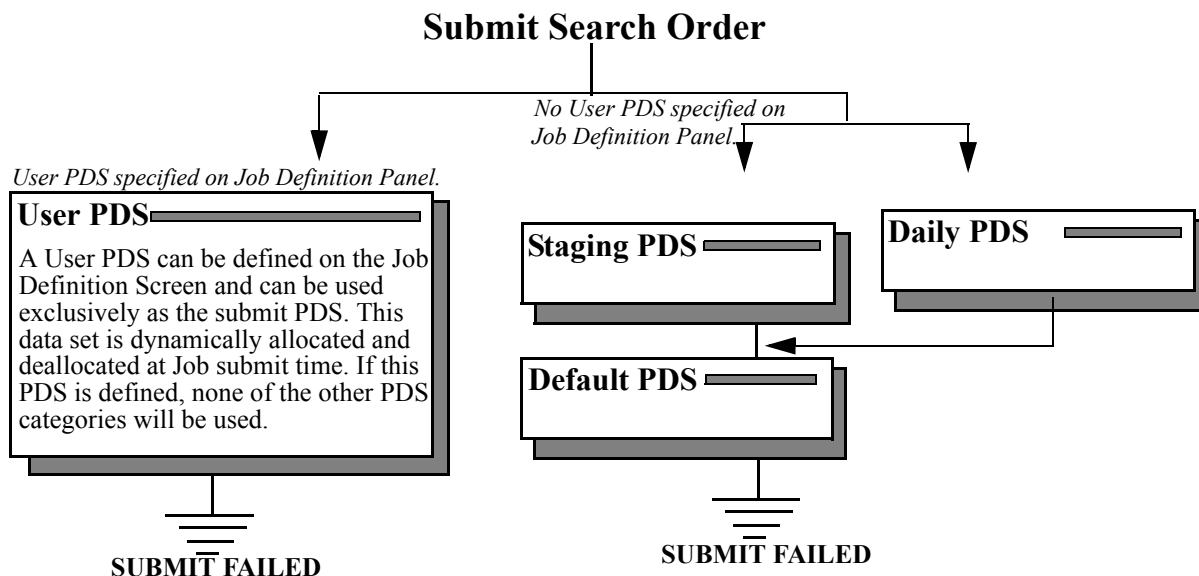
Some fields were changed from the usual defaults of an ISPF Display. The changed fields are as follows:

NAME	A hashed value which contains the JOBNAME, date and time. The hashing enables JOB/Master® to allow the same Job to be scheduled multiple times on the queue.
------	--

CREATED The scheduled date and time for the job to begin as indicated on the JOBQ.

CHANGED                      The Scheduled date and time for the job to begin as indicated on the JOBQ.

ID	The first seven characters of the scheduled job name. ISPF will not allow more than seven characters to be displayed for this field.
----	--



Any members which have exceeded their retention period specified on the global profile screen, RUN JCL Field, will be removed from this library at schedule creation time and the PDS will be compressed. This means that the library is automatically maintained, and the only obligation the user has is to insure that the data set is large enough to accommodate user processing.

In summary, the submit PDS processing occurs as follows:

1. If a USER PDS is defined, only that PDS will be used.
2. At the time JOB/Master® is ready to submit a job to the JES input queue, the DAILY PDS or STAGING PDS is used to select the appropriate job. The job is then submitted to the JES queue by JOB/Master®.
3. If JOB/Master® does not find the job in the STAGING PDS or the DAILY PDS it will search and submit the job from DEFAULT SUBMIT PDS.
4. If a job is not found in the DAILY PDS, STAGING PDS or the DEFAULT SUBMIT PDS, JOB/Master® will issue a "SUBMIT FAILED" message. JOB/Master® will retry the submit on a periodic basis, until either the job is added to one of the submit data sets or the job is cancelled from the JOB/Master® scheduling queue.

### **Submit Member**

The jobname, which is coded at the time the job is defined to the JOB/Master® data base, is used as the member name for selecting the job from the submit PDS. An alternate member name can be defined on the job definition screen, and can be overridden by the "S"(Submit), "F"(Force Submit) or "R"(Restart) commands. (Refer to Job Tracking - "LQ" commands.)

Remember, the jobname on the job card should match the jobname as it is defined to the JOB/Master® data base. If the Jobname on the jobcard is different than the JOB/Master®



database, the History File will indicate the difference when the job is submitted. All job names must conform to all existing MVS job naming conventions.

## Force Submitting a Job

A job that is on the schedule queue can be forced into execution through the use of the “F” command, under JOB/Master® Job Tracking. The command can be used to manually initiate a job that is waiting on dependency criteria, i.e., time, predecessor, etc.

The “F” command is used to manually submit a job which you want to run a job before all the dependency criteria defined have been satisfied. The “S” command is similar to the “F” command in that it also, manually submits a job. The “S” command will not override the dependency criteria except for schedule submit time.

## User Submit Exit

A user submit exit is available at the time of job submission, where user code can control and modify the JCL being submitted. Various options are available, and are described in the JOB/Master® Installation Manual.

## Resource Routing

Resource routing is a unique JOB/Master® function allowing any resource to be assigned to a particular CPU. Resources may be “REAL” or “VIRTUAL” in nature and can be defined with any mnemonic desired.

Example 1:

SYSA = CPU Identification - Real
3480 = Real devices
CICSA = Real CICS started task
NODE4 = Real Device Name
BACKUP = Virtual Task

Resources are defined to the Jobs when they are defined to the database. Each job may have up to two (2) resources. (*RES1 and RES 2 - See JOB Database Creation*)

Resources are attached or detached from a particular processor by using the “RT” Command within the tracking Menu. It brings up the Workload Control Definition Screen where resources are displayed. It is also possible to assign a concurrency variable for a particular resource. The concurrency variable allows for a specific number of jobs requiring that resource to be processed concurrently. (*This can be used effectively to control the take over of all initiators by report jobs following a master file update*). See Tracking Menu “RT” command.

Example 2:

Job “BKUPJOB1” uses a string of 3480 tape drives which must be varied offline from SYSTEMA and varied online for SYSTEMB. To do this, the resource “3480” must be changed. Change the SMFID from “SYSA” to “SYSB” and CONFIRM (PF4) the update. The processing of all jobs requiring RES 3480 will begin on SYSB with a maximum of 8 jobs running concurrently.

Example 3:

CICS is defined on the JOB/Master® data base as a started task. The RES.NAME field is coded as CICSP to designate CICS production. Using the “RT” command, the resource is assigned to SYSA. When the job CICS is ready to be initiated,

JOB/Master® will issue a start command for CICS, but will issue it on the system whose SMFID is SYSA.



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*The system designation can be moved from one processor to another by using the RT command. The effect of the change is immediate. Utilizing this feature, the schedules for different systems can be altered dynamically and immediately.*

---

## Dynamic Job Submission

Dynamic job submission is the submission of jobs without manual intervention. It eliminates delays between dependent jobs and removes the need for operator decisions. JOB/Master® checks predecessor requirements, time criteria and input setup flags. The job is submitted to the JES input queue when all criteria are satisfied. A job defined to run automatically, with no special conditions involved, is submitted dynamically by JOB/Master® to the input queue.

When a job is dependent on a specific manual task or event, JOB/Master® waits until the appropriate action is taken (*the job control operator enters data, checks totals, feeds card input, etc.*). As soon as these events complete, the job is submitted automatically by JOB/Master®, which prevents delays after the manual requirements have been satisfied.

## Dynamic Repair

When a job ABENDS, typically a recovery process must occur. The repair job could be held up while operators analyze the problem to decide how to proceed.

JOB/Master® can recognize the ABEND, as defined in the JOB/Master® data base, and invoke a set of recovery procedures, *without manual intervention*. Repair jobs are run automatically, which eliminates costly delays and potential human error.

A failed or abended job can be restarted or resubmitted to the JES input queue by means of the “E” command on the LQ display. The “E” command contains an option that will place the job in single mode, stopping submission of any of its triggered jobs.

# Chapter 7

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## Job Tracking

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### Introduction

JOB/Master® automatically controls and tracks a job's execution, which provides for maximum efficiency in production control.

With JOB/Master®, authorized users in various departments, such as scheduling, can use any TSO terminal to monitor occurrences in the system. Using simple commands, similar to MVS commands, an operator can access the real-time status of the production workload.

Personnel in the distribution area can use JOB/Master® to track the status of output. They can respond to questions from other departments that are awaiting output. Informed answers can be provided to queries made on the completion of a job, whether a job is behind schedule, or whether a job has been postponed or cancelled.

JOB/Master® helps the supporting functions of production control. For example, operators in the print room can use any TSO terminal to inquire about output processing requirements, or the method of output delivery. The information is stored in the JOB/Master® data base.

### ***Job Tracking Screens***

To monitor and control the system, operators can issue JOB/Master® commands to:

- Display up-to-the-minute information on the status of each job
- Issue commands to manipulate the workload (*e.g., stop a job, add a job*).

### ***Job Run Documentation***

The job tracking facility provides access to the following job data base information:

- Name and telephone number of the person to call in the event of abnormal processing
- The purpose of the job

- Setup requirements for the job
- Output processing requirements
- Output destination
- Programmer's name

The documentation is available on-line or in hard copy report format. Much of the job run documentation is optional. However, complete documentation can be entered during job creation, if desired. The on-line documentation system eliminates the need to search for job procedures, standardizes run instructions, and improves data center personnel productivity.

### ***Job Statistics***

Job statistical reporting can be accessed from on-line inquiries. Operator and production support personnel can monitor and control the progress of all jobs, diagnose problem situations, and make scheduling adjustments based on real-time information.

### ***Operations Reports***

JOB/Master® retains a history file of job statistics that provide an audit trail for DP managers and production control personnel. Displays and reports provide job information at the job and job step level.

Among other information, the history includes:

- Maximum CPU time used
- Minimum CPU time used
- Maximum elapsed time used
- Minimum elapsed time used
- Total number of jobs run
- Total number of jobs abended

The information in the history file of job statistics allows operations management to track which phases of the schedule worked as planned and which phases went wrong. This, in turn, allows management to track imbalances in shift workload.

### ***On-line Job Tracking Facilities***

JOB/Master®'s on-line job tracking facilities provide the following information:

- Job run statistics, both current and historical
- Job trigger/predecessor requirements
- Schedule status of a job
- Jobs waiting on dependency criteria requirements
- ABEND/rerun tracking
- Posting and on-line update of job scheduling criteria
- On-line submit from the JOB/Master® PDS
- On-line hold and release of scheduled jobs and systems

- Status of JOB/Master® jobs executing
- Tracking and posting of non-CPU tasks
- Dynamic access to full MVS console facilities through JOB/Master®
- Tracking of manual output processing



***Jobs cancelled with the MVS FORCE command will not be tracked correctly. The SMF records needed are not produced by MVS. The user/operator must manually "P"urge the job from the JOBQ display to clear it before rerunning the job.***

## Entering JOB/Master®

After selecting option J (*JOB/Master®*) from the main OPS/*Master®* Menu, the following screen is displayed. (See *Introduction to JOB/Master®, Chapter 1, “Logging Onto JOB/Master® For The First Time.”*)

To enter Job Tracking, type T in the OPTION ==> field and press <ENTER>.

[illegible]

***The first time each user signs on to JOB/Master® they must first enter the Profile function and “CONFIRM” their PFK settings. Until the profile has been set, the profile option will be forced, regardless of the option selected.***

The next screen to appear is shown below:

```

----- JOB/Master® Tracking Functions ----- Row 1 to 14 of 24
Command ==>
                                     Scroll ==> PAGE

      ID: JM01      User = P390K      Date = 98/09/01 - 98.244   Time = 16:58
-----
Option ==> _____
Job      ==> _____ (If applicable)

Options      Function      (Scroll list for options)
-----
LQ <== - List jobs on the Schedule Queue
AJ <== - Add a job to the Schedule Queue
GS <== - Generate schedule creation JCL
GSS <== - Generate simulation schedule JCL
PQ <== - Purge entire Schedule Queue
PS <== - Inactivate Auto Job submission
SS <== - Activate Auto Job submission
SP <== - Modify Priority Selection list
TE <== - Update Tape Unit Exclusion list
RT <== - Initiate Resource Table processing
ST <== - Display Control Region settings

DH <== - Display job run data/log messages from History File
CO <== - Invoke MVS Console Facility

```

This screen will display a partial list of options at one time. Use the scroll keys (*PF7* & *PF8*) to scroll through the list of options. Pressing *PF8* will display the following screen:

```

----- JOB/Master® Tracking Functions ----- Row 15 to 24 of 24
Command ==>
                                     Scroll ==> PAGE

      ID: JM01      User = P390K      Date = 98/09/01 - 98.244   Time = 16:58
-----
Option ==> _____
Job      ==> _____ (If applicable)

Options      Function      (Scroll list for options)
-----
DP <== - Display predecessor(s)
DT <== - Display trigger(s) and condition code(s)
DF <== - Display job failure contact
DM <== - Display manual task message definitions
DA <== - Display active JOB/Master® jobs in this CPU
DL <== - Display run data from the last 9 executions
DD <== - Display detail statistics from the last run
DO <== - Display output processing information
DR <== - Display run instruction data
DS <== - Display job status and schedule information
***** Bottom of data *****

```

Select the desired option by entering the associated 2-letter code in the OPTION ==> field. If a job name is necessary, enter the name in the JOBNAME ==> field.

All of these options are described on the following pages.

## LQ - List Jobs on the Schedule Queue

This command displays all jobs which are currently under JOB/Master® scheduling control. Jobs waiting to process are only submitted when they are ready to run, and the JCL is submitted from the PDS as described in the Job Submission section. When you select this option, the following screen is displayed:

```

----- JOB/Master® Scheduling Queue ----- Row 1 from 15
Command ==>                               Scroll = PAGE
Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/18  98.261  Time= 14:53 -----
S | Job |T|Date|Time| C u r r e n t   S t a t u s |M St|Alt Def
-----
-- CC4TRIG2 Y 98261 0000 WAITING TO BE TRIGGERED BY -> CC4JOB P P
-- U999TRG2 Y 98261 0000 WAITING TO BE TRIGGERED BY -> P P
-- DSNJOB1 Y 98261 1010 J00180 ** FAILED ** -> STEP02 N CATLG2 P A
-- DSNTRIG1 Y 98261 1445 WAITING ON PRIOR SCHED RUN --> 1010 P P
-- JMPOSTB2 98262 0010 JCL STAGED, MANUAL TASKS COMPLETE P P
-- JMPOSTC2 98262 0015 JCL STAGED, MANUAL TASKS COMPLETE P P
-- CC4TRIG3 Y 98262 0025 TRIGGERED W/TIME WAIT BY --> CC4JOB P P
-- U999TRG3 Y 98262 0025 TRIGGERED W/TIME WAIT BY --> U999JOB P P
-- U999TRG4 Y 98262 0027 WAITING TO BE TRIGGERED BY -> P P
-- CC8TRIG2 Y 98262 0030 TRIGGERED W/TIME WAIT BY --> CC8JOB P P
-- S0C1TRG2 Y 98262 0030 TRIGGERED W/TIME WAIT BY --> S0C1JOB P P
-- S0C1TRG3 Y 98262 0032 WAITING TO BE TRIGGERED BY -> P P
-- TRIG000A Y 98262 0035 TRIGGERED W/TIME WAIT BY --> TRIG0002 P P
-- TRIG000B Y 98262 0035 TRIGGERED W/TIME WAIT BY --> TRIG0002 P P
-- DSNTRIG2 Y 98262 0040 TRIGGERED W/TIME WAIT BY --> *DSNREQ* P P
***** Bottom of data *****

```

The SET command line can be used to limit the display to the desired subsets. The subsets are categorized as follows:

AB Abended jobs  
MT Jobs awaiting Manual Task  
DC Jobs awaiting Deadline Cancel  
EX Jobs in Execution  
OP Jobs awaiting Output Posting

Simply place an X in the desired display criteria field on the SET command line.

A specific job or group of jobs can be displayed by entering the generic portion of the job-name, followed by an asterisk, in the JOB==> field of the SET command line. For example, to display all jobs beginning with EXA, enter EXA\* in the JOB==> field. To display all occurrences of job BACKUP, enter "BACKUP" in the JOB ==> field.

A specific system can also be displayed by entering the desired system in the SYS==> field. The Generic Mask "\*" can also be used.

By utilizing the DATE field, selection for a specific days schedule can be made. This helps to reduce the number of items shown on a screen.

### S (SELECT-FIELD)

The following options can be specified in the S column:

C Cancels a job from the schedule queue. All dependencies are

	processed and job ends with a Cond Code = 0000.
E	Reruns or restarts a job.
F	Force submits a job to the MVS input queue and overrides all dependencies.
H	Holds a job from being submitted.
I	Include this Select Mode into the production cycle.
K	Keep condition code of zero in the History file and remove job from the JOBQ. Generates a Cond Code = 0000.
P	Purges a job from the JOBQ. Dependencies are not processed and Triggered Jobs will not be triggered. Generates a Cond Code = 0022.
R	Releases a job from HOLD status.
S	Submits a job to the MVS input queue. 'S' only overrides time dependency.
U	Updates a job on the JOBQ.
X	Exclude this Select Mode Job from the production cycle.

**JOB FIELD**

This field displays the name of the job(s).

**T (TRIGGER FIELD)**

Y indicates that the job is waiting to be triggered. A T indicates that the job has been triggered. A blank indicates it is not a trigger job.

**DATE**

The date for submission.

**TIME**

The time for submission.

**CURRENT STATUS FIELD**

The "Real Time" status of a job.

**M (RUN MODE)**

P	In production mode.
C	In check mode.
S	In select Mode

**ST (STATUS)**

Code for the current status for ease of reference.

A	Failed or abended status.
C	In check status.



D	Job will be deleted from the queue.
E	In execution.
H	In Hold status.
N	NJE routed.
O	Waiting for output posting.
P	In production status.
Q	In the MVS input queue.
R	Repeating status. All repeating jobs must be manually submitted.




---

*Any other status' shown are for JOB/Master® internal use.*

---

The following commands can be entered on the command line on the LQ display.

AJ	ADD A JOB TO THE SCHEDULE QUEUE
GS	GENERATE SCHEDULE CREATION JCL
GSS	GENERATE SIMULATION SCHEDULE JCL
PQ	PURGE ENTIRE SCHEDULE QUEUE
PS	INACTIVATE AUTO JOB SUBMISSION
SS	ACTIVATE AUTO JOB SUBMISSION
SP	MODIFY PRIORITY SELECTION LIST
TE	UPDATE TAPE UNIT EXCLUSION LIST
RT	INITIATE RESOURCE TABLE PROCESSING
ST	DISPLAY CONTROL REGION SETTINGS
DH	DISPLAY JOB RUN DATA/LOG MESSAGES FROM HISTORY FILE
CO	INVOKE MVS CONSOLE FACILITY
DA	DISPLAY ACTIVE JOB/Master® JOBS IN THIS CPU
HOLD	HOLD THE ENTIRE SYSTEM
REL	RELEASE THE ENTIRE SYSTEM

The following commands, if entered on the command line, must have the desired jobname entered also. Alternatively, they could be entered in the S column of the LQ display for a specific job.

DP	DISPLAY JOBS PREDECESSOR DEFINITION
DT	DISPLAY JOBS TRIGGERED JOB(S) AND CONDITION CODES
DF	DISPLAY JOB FAILURE CONTACT INFORMATON

DM	DISPLAY JOB MANUAL TASK MESSAGE DEFINITIONS
DL	DISPLAY JOB RUN DATE FROM THE LAST 9 EXECUTIONS
DD	DISPLAY DETAILED STATISTICS FROM THE LAST RUN
DO	DISPLAY OUTPUT PROCESSING INFORMATION
DR	DISPLAY RUN INFORMATION
DS	DISPLAY CURRENT STATUS OF A JOB

## LQ - List Abended/Failed Jobs (AB)

This option displays the jobs on the schedule which have abended. Place an X next to the acronym AB on the SET line. Abends can also be listed for specific jobs or systems, by entering on the SET line, the generic portion of the job or system desired, followed by an asterisk and placing an X in the AB ==> field. The display will look similar to the illustration shown below:

```

----- JOB/Master® Scheduling Queue ----- Row 12 from 15
Command ==>                               Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB X MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/01 98.244 Time= 17:28 -----
S | Job | T | Date | Time | Current Status | M St | Alt Def |
-----
-- R1331018 Y 98244 0947 J00082 ** FAILED ** -> RM80001 CC= 0012 P A
-- JCLSUB1 98244 1030 J00091 JCLERR OR TERMINATED IN INIT. P A
-- RMTST03 98244 1100 J00150 ** FAILED ** -> STEP04 N CATLG2 P A
***** Bottom of data *****

```

The LQ display can be shifted left and right by entering the SHIFT command or pressing the appropriate PFK. Repeated SHIFT commands will toggle you between screens. The system default is PF10 = Shift. The PF keys are alterable within the Profile. Refer to Global Profiles.

## LQ - List Jobs Waiting on Manual Tasks (MT)

On the SET command line, place an X in the MT ==> field and press <ENTER>. Manual task flags can be viewed by pressing PF10 (*SHIFT*) the screen to the right, as shown:

```

----- JOB/Master® Scheduling Queue ----- Row 12 from 16
Command ==>                               Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT X EX - DC - OP -
<<(Shift)----- Date= 98/09/01 98.244 Time= 17:32 -----
S | Job |T|Date|Time| C u r r e n t S t a t u s |M St|Alt Def
-----
-- JMBPOST 98244 0800 J00178 ** FAILED ** -> STEP01 CC= 3000 P A
-- R1331018 Y 98244 0947 J00082 ** FAILED ** -> RM80001 CC= 0012 P A
-- JCLSUB1 98244 1030 J00091 JCLERR OR TERMINATED IN INIT. P A
-- RMTST03 98244 1100 J00150 ** FAILED ** -> STEP04 N CATLG2 P A
***** Bottom of data *****

```

All jobs that contain manual tasks are displayed (*shift the screen to the left to view manual requirements*). Cursor down to the job to be posted, and <TAB> over to the manual tasks. Change the Y to an N for the desired task, indicating that this requirement has been satisfied, and press <ENTER>. The job will be submitted to the input queue for execution if all other dependency criteria has been satisfied. All jobs that have manual setup flags coded as Y, can be marked ready for submission by utilizing the JOBQ “MT” option, and changing the flag to N. Any or all flags can be changed at this time.

Jobs that are waiting for the completion of a manual task can have messages sent to individual users as soon as these jobs pass their start times. The message facility is requested at the time of JOB/Master® Data Base Creation. The MT subset command allows the user to display all jobs waiting on Manual Setup Requirements.



**Tasks can be posted using a batch program (JMBPOST), which is described in the chapter “Batch Functions”. Also, tasks can be posted using CONSOLE/Master®. Refer to Job Definition Screen 4 and Profile for more information on manual task posting.**

## LQ - List Executing Jobs (EX)

This option displays all jobs which are currently in execution. Move the cursor to the EX => field and place an X as shown below::

```

----- JOB/Master® Scheduling Queue ----- Row 1 from 18
Command ==>                               Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX X DC - OP -
<<(Shift)----- Date= 98/09/01 98.244 Time= 17:36 -----
S | Job |T|Date |Time| C u r r e n t S t a t u s |M St|Alt Def
-----
-- TRIG000A 98244 0035 J00185 IN EXECUTION SID -> 0390 P E
***** Bottom of data *****

```

Specific jobs or systems can be viewed by entering the generic portion of the job or system on the SET line, followed by an asterisk, and by placing an X in the EX ==> field.

## LQ - List Jobs Waiting on Output Processing (OP)

During JOB/Master® data base creation, a job can be defined requiring output posting by coding a Y in the Hold job on scheduling queue for output posting ==> field on Job Definition Screen 3. If you enter an X in the OP ==> field of the SET line (*as shown below*), the display will be limited to those jobs having output posting requirements that must be met before getting cleared from the list queue.

```

----- JOB/Master® Scheduling Queue ----- Row 12 from 16
Command ==>                               Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP X
<<(Shift)----- Date= 98/09/01  98.244  Time= 17:32 -----
S | Job |T|Date |Time|      C u r r e n t   S t a t u s      |M St|Alt Def
-----
-- GRAY0011      98246 0810 J00179 JOBS WAITING FOR OUTPUT POSTING ->
-- GRAY0012 Y    98246 0947 J00180 JOBS WAITING FOR OUTPUT POSTING ->
***** Bottom of data *****

```

Output posting can only be done if the OP option is selected first as described above.

Once the OUTPUT posting function has been selected, update the Current Status information on the item being selected.

1. Select the job desired by placing a U next to the job in the S ==> field.
2. Move the cursor to the status area and enter the information desired.  
(Bin Number, Truck number, how sent, etc.)
3. Confirm the entry. The status is updated and posted to the History file as such.

To post a job's output as complete, shift the screen to the left, change the Y to an N in the OP ==> field of the manual task screen.

## LQ - List Jobs Waiting on Deadline Cancel (DC)

Jobs can be defined to the data base or when they are dynamically added to the schedule to have a dead line cancel time. It is possible to display all jobs which are waiting to be deadline canceled by JOB/Master® as soon as the submit facility is made active.

This function is essential during a period where the submit facility has been inactive for a long period. Prior to activating the submit facility go to the LQ and move the cursor to the DC ==> field, and place an X in the field. This will display all jobs which are waiting to be canceled by the scheduling system.

Any jobs you wish not to cancel may be updated (*U on the job line*) and alter the deadline cancel field on the JOBQ entry panel to an N for NO, or alter the cancel time to be longer than the amount of time the submit facility has been inactive. This is very helpful if there have been hardware outages for an extended period. See the update function description later in this chapter for more information on how to do this. The JOBQ Entry panel for the DC job is displayed below:

```

----- JOB/Master® Scheduling Queue ----- Row 1 from 9
Command ==>                               Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC X OP -
<<(Shift)----- Date= 98/09/02 98.245 Time= 07:28 -----
S | Job   |T|Date |Time|   C u r r e n t   S t a t u s   |M St|Alt Def
- - - - -
-- CANCEL01 98245 0000 * WILL DEADLINE CANCEL ON SS          P P
***** Bottom of data *****

```

## LQ - Cancel Specific Job (C)

To select this option, enter a C in the selection field next to the jobname, and press <ENTER>. The job will be placed in cancelled status and it will be removed from the schedule queue.

```

----- JOB/Master® Scheduling Queue ----- Row 9 from 9
Command ==>                               Scroll = PAGE
Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02 98.245 Time= 07:31 -----
S | Job |T|Date |Time| C u r r e n t S t a t u s |M St|Alt Def
-----
C- JOB387 98245 0000 J00000 * CANCEL FROM JOBQ BY > P390K P R
***** Bottom of data *****

```

A job which is in the MVS input queue or executing should not be cancelled from the JOB/Master® queue. The job must be cancelled on an MVS console, and JOB/Master® will record the cancellation.

The job can then be restarted or cancelled from the LQ display. Cancelling a job from the schedule queue, ends the job with a condition code of '0000'. Cancelling the job from the queue, also satisfies the triggering requirement for that job. Successor Jobs will be triggered.



## LQ - Rerun or Restart a Job (E)

This function is only valid for failed jobs and will rerun or restart a job from the schedule queue. Enter an E next to the jobname which is to be restarted or rerun and press <ENTER>.

A submit options screen will then be displayed.

PF4 to (CONFIRM) request.

```

----- JOB/Master@ JOBQ Action -----
Command ==>

Schedule Job=> TRIGJOB1   Date   => 98244   Time       => 0000
Alternate  =>             System  =>         Schedule/Network => *****

Run Instr  => *M SUBMIT FAILED, JCL MEMBER NOT FOUND   Run Mode => P

-----
Single Mode =>      ( If Y then triggers will not be submitted)
Rerun JCL   => N    ( If Y JCL will be taken from RERUN PDS)
Last Repeat =>      ( If Y then job will not be rescheduled at completion )
  
```

### SCHED. JOBNAME

The name of the job you selected to release from the schedule.

### DATE

The date on which the job was scheduled to be submitted.

### TIME

The scheduled time the job is due to submit.

### ALTERNATE

If the job is an alternate job definition, the alternate job name is displayed here.

### SYSTEM

The system to which the job belongs.

### SCHEDULE/NETWORK

The schedule/network defined for this job.

### RUN INSTR.

The current status of the job.

**RUN MODE**

The current run status of the job.

**SINGLE MODE**

Enter Y if trigger jobs are not to be submitted.

**RERUN JCL**

Enter Y if the JCL is to be taken from the rerun PDS. Enter N if the JCL is to be taken from the regular JOB/Master® submit PDS.

**LAST REPEAT**

Enter Y if the job is not to be placed back on the queue for repeat when the current run is complete. This option only applies to jobs that have been defined on the data base as repeating.

## LQ - Force Release a Job from the Schedule (F)

This option submits the job requested to the JES input queue for processing, regardless of dependency waiting factors. To select this option, enter F in the select column next to the job you want to release, as shown below:

```

Page 157  Forcing a Job to Run from the LQ
----- JOB/Master® Scheduling Queue ----- Row 5 from 7
Command ==>                               Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02  98.245  Time= 07:41 -----
S | Job   |T|Date |Time|      C u r r e n t   S t a t u s      |M St|Alt Def
- - - - -
-- R1334010 Y 98244 2315 J00633 EXEC. JMHOLD      ->      0390    P E
-- R1337001 Y 98244 2321 J00634 IN EXECUTION SID ->      0390    P E
F- JPOSTB1  98245 0815 * WAITING FOR MANUAL TASKS      P P
***** Bottom of data *****

```

After typing F in the select column and pressing <ENTER>, the following screen is displayed:

```

F----- JOB/Master® JOBQ Action -----
-
Command ==>

Schedule Job=> JPOSTB1  Date   => 98245  Time           => 0815
Alternate   =>          System  => JPOST  Schedule/Network => *****

Run Instr   => * WAITING FOR MANUAL TASKS      Run Mode => P

-----
Single Mode =>      ( If Y then triggers will not be submitted)
Rerun JCL   => N    ( If Y JCL will be taken from RERUN PDS)
Last Repeat =>      ( If Y then job will not be rescheduled at completion )
-----

```

PF4 (CONFIRM) to submit the job.

**SCHED. JOBNAME**

The name of the job you selected to release from the schedule.

**DATE**

The date on which the job was scheduled to be submitted.

**TIME**

The scheduled time the job is due to submit.

**ALTERNATE**

If the job is an alternate job definition, the alternate job name is displayed here.

**SYSTEM**

The system to which the job belongs.

**SCHEDULE/NETWORK**

The schedule/network defined for this job.

**RUN INSTR.**

The current status of the job.

**RUN MODE**

The current run status of the job.

**SINGLE MODE**

Enter Y if trigger jobs are not to be submitted.

**RERUN JCL**

Enter Y if the JCL is to be taken from the rerun PDS. Enter N if the JCL is to be taken from the regular JOB/Master® submit PDS.

**LAST REPEAT**

Enter Y if the job is not to be placed back on the queue for repeat when the current run is complete. This option only applies to jobs that have been defined on the data base as repeating.

## LQ - Hold a Job from Being Submitted (H)

At times it may become necessary to hold a job from submission. A specific job can be placed in HOLD status by typing an H in the selection field and pressing <ENTER>. A message is then received that the job has been “PLACED ON HOLD BY USERID”.

```

H----- JOB/Master® Scheduling Queue ----- Row 5 from 7
Command ==>                               Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02 98.245 Time= 07:44 -----
S | Job |T|Date |Time| C u r r e n t S t a t u s |M St|Alt Def
- - - - -
-- R1337001 Y 98244 2321 J00634 EXEC. JMHOLD -> 0390 P E
-- R1331028 Y 98245 0743 * PLACED ON HOLD BY -> P390K P P H
-- JMPOSTB1 98245 0815 * WAITING FOR MANUAL TASKS P P
***** Bottom of data *****

```

Any job that is held will remain in that status until the release (R) command is issued. Notice the P following the USERID. This saves the Run Mode of the job placed on hold. The status has been changed to H.

Holding a job will put all jobs triggered by the executing job on hold. These jobs will be held until a release command is issued.

## LQ - Include a Job Into Production Cycle (I)

The M ==> field reflects the mode in which a job has been defined to run: P,S, or C.

```
----- JOB/Master® Scheduling Queue ----- Row 1 from 6
Command ==> Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02 98.245 Time= 07:47 -----
S | Job |T|Date |Time| C u r r e n t S t a t u s |M St|Alt Def
-----
-- TRIGJOB1 98244 0000 * IN EXECUTION P P
-- JMBPOST 98244 0800 * IN EXECUTION P A
-- JCLSUB1 98244 1030 * WAITING ON MANUAL TASK P A
-- RMTEST03 98244 1100 J00186 ** FAILED ** -> STEP05 U= 0999 P A
-- RI331028 Y 98245 0743 * IN EXECUTION P P H
I SELMODE1 98245 0815 * SELECT MODE / ENTER I TO RUN S P
***** Bottom of data *****
```

To alter the status for those jobs defined as Select Mode before the job goes into execution, take the cursor to the line in the S column of the LQ which corresponds with the job to be changed:

I= INCLUDE

Include this job in production cycle.

Note that the CURRENT STATUS ==> field reflects the changes made (GRAY0001, GRAY0002, GRAY0003 and GRAY0004).

- The M(mode) ==> field represents the mode defined for each job.
- Initially, the ST (status) ==> field represents the default for the mode (i.e., the default status for Select mode is Check mode). Now, however, the ST ==> field reflects the current execution status:

GRAY0001      P mode has been flagged to include; to run in **P**roduction; to actually execute the JCL.

GRAY0002      P mode has been changed to now exclude; to run in **S**elect mode; to simulate.

GRAY0003      P mode has now been altered to exclude; to run in **C**heck mode; to simulate.

GRAY0004      P mode has now been altered to exclude; to run in **C**heck mode; to simulate.

At submit time, the LQ will look something like this:

```
(LQ) ----- JOB/Master® SCHEDULING QUEUE ----- Row 1 from 14
COMMAND ==>                                     SCROLL = PAGE

SET=> JOB= ----- SYS= ----- DATE= ----- AB - MT - EX - DC - OP -
<<(SHIFT)----- DATE= 97/09/24 97.267 TIME= 11:52 -----
S | JOB | T | DATE | TIME | C U R R E N T S T A T U S | M ST | ALT. DEF
--
-- JCLSUB02 97266 1401 * WAITING FOR MANUAL TASKS P P
-- JCLSUB03 97266 1402 * WAITING FOR MANUAL TASKS P P
-- JCLSUB04 Y 97266 1405 *WAITING ON TRIGGER AND MANUAL TASK P P
-- JCLSUB05 Y 97266 1407 *WAITING ON TRIGGER AND MANUAL TASK P P
-- JCLSUB06 97266 1408 * WAITING FOR MANUAL TASKS P P
-- JCLSUB07 97266 1409 * WAITING FOR MANUAL TASKS P P
-- JCLSUB08 97266 1410 * WAITING FOR MANUAL TASKS P P
-- JCLSUB09 97266 1411 * WAITING FOR MANUAL TASKS P P
-- JCLSUB10 97266 1412 * WAITING FOR MANUAL TASKS P P
-- JCLSUB11 Y 97266 1413 *WAITING ON TRIGGER AND MANUAL TASK P P
-- GRAY0002 97267 0000 * SELECT MODE /ENTER I TO RUN JOB S C
-- GRAY0010 97267 0000 J02834 IN EXECUTION SID -> OSR1 P E
-- GRAY0013 97267 0000 J02833 IN EXECUTION SID -> OSR1 P E
-- JMJCLMB 97267 1010 WAITING ON COMP. OF SYSTEM -> 97266 P P
***** Bottom of data *****
F1=HELP F2=SPLIT F3=END F4=CONFIRM F5=CANCEL F6=CO
F7=UP F8=DOWN F9=SWAP F10=SHIFT F11=RIGHT F12=RETRIEVE
```

Jobs in Select or Check mode will indicate that the JCL was not submitted and the ST ==> field will change to a status of D to indicate that the LQ record will be deleted.



**Once the job(s) have entered the JES input queue and/or gone into execution; it is TOO LATE to make the change to include or exclude.**

## LQ - Keep a Job which has Failed (K)

This function is only valid for jobs which are in a failed status and is used to remove the failed job from the schedule queue and set a condition code of 0000 in the History file. Select this option by entering a K in the select field and pressing <ENTER>.

```

----- JOB/Master® Scheduling Queue ----- Row 2 from 9
Command ==>                               Scroll = PAGE
Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02 98.245 Time= 07:51 -----
S | Job |T|Date|Time| C u r r e n t S t a t u s |M St|Alt Def
-----
-- TRIGJOB1 98244 0000 *M SUBMIT FAILED, JCL MEMBER NOT FOUND P P
-- RMTEST03 98244 1100 J00000 * KEEP FROM JOBQ BY > P390K P R
-- JCLDATE2 Y 98245 0055 J00637 SUBMITTED TO JES INPUT QUEUE P Q
-- JCLSUBA Y 98245 0055 * WAITING FOR MANUAL TASKS P P
-- R1331028 Y 98245 0743 * TRIG. ON HOLD BY EXEC REQ. P P H
-- CI33DOWN Y 98245 0746 * TRIG. ON HOLD BY EXEC REQ. P P H
-- CT33DOWN Y 98245 0746 * TRIG. ON HOLD BY EXEC REQ. P P H
-- JMPOSTB1 98245 0815 * WAITING FOR MANUAL TASKS P P
***** Bottom of data *****

```

If the failed job does not need to be rerun, it can be kept and removed from the schedule queue, satisfying all predecessor requirements. The KEEP command will trigger any jobs specified in the job's definition.

If the output from the job has been held, the keep will not be executed. If you need to save the output, issue the KEEP first.



## LQ - Purge a Job from the Schedule Queue (P)

The purge command is used to remove a job from the schedule queue without canceling it. Enter a P next to the jobname which is to be purged and press <ENTER>.

```

----- JOB/Master® Scheduling Queue ----- Row 2 from 8
Command ==>                               Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02  98.245  Time= 07:51 -----
S | Job |T|Date|Time|      C u r r e n t   S t a t u s      |M St|Alt Def
-----|-----|-----|-----|-----|-----|-----|-----|
P- TRIGJOB1  98244 0000 *M SUBMIT FAILED, JCL MEMBER NOT FOUND  P P
-- JCLDATE4 Y 98245 0000 TRIGGERED NO/TIME WAIT BY --> JCLDATE2 P P
-- JCLSUBA Y 98245 0055 * WAITING FOR MANUAL TASKS          P P
-- R1331028 Y 98245 0743 * TRIG. ON HOLD BY EXEC REQ.      P P H
-- CI33DOWN Y 98245 0746 * TRIG. ON HOLD BY EXEC REQ.      P P H
-- CT33DOWN Y 98245 0746 * TRIG. ON HOLD BY EXEC REQ.      P P H
-- JMPOSTB1  98245 0815 * WAITING FOR MANUAL TASKS          P P

```

No Job history record is kept, but a record is posted into the “message” section of the History file. The record indicates the purge function with the date, time and who purged the job. The purge function will satisfy predecessor relationships, but will not trigger any defined trigger jobs. Purge will create a condition code = 0022 for the Job(s) purged.

## LQ - Release a Job from Hold Status (R)

The release command is used to remove a job from HOLD status. Select this option by placing an R in the selection field next to the jobname and pressing <ENTER>.

```

----- JOB/Master® Scheduling Queue ----- Row 1 from 7
Command ==>                               Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02 98.245 Time= 07:54 -----
S | Job |T|Date |Time| C u r r e n t S t a t u s |M St|Alt Def
-----
-- JCLSUB2 Y 98244 0000 * WAITING FOR MANUAL TASKS P P
-- TRIGJOB1 98244 0000 *M SUBMIT FAILED, JCL MEMBER NOT FOUND P P
-- JCLSUBA Y 98245 0055 * WAITING FOR MANUAL TASKS P P
R R1331028 Y 98245 0743 * HOLD REMOVED BY -> P390K P P
-- CI33DOWN Y 98245 0746 * TRIG. ON HOLD BY EXEC REQ. P P H
-- CT33DOWN Y 98245 0746 * TRIG. ON HOLD BY EXEC REQ. P P H
-- JMPOSTB1 98245 0815 * WAITING FOR MANUAL TASKS P P
***** Bottom of data *****

```

You will receive a message that indicates that the job has been removed from HOLD status and submitted, if all other criteria have been satisfied.

## LQ - Submit a Job (S)

This option allows the manual submit of a job which is on the schedule queue. Enter an S next to the jobname which is to be submitted and press <ENTER>. A submit options screen will then be displayed, as shown:

```

----- JOB/Master® JOBQ Action -----
Command ==>

Schedule Job=> JCLSUB2      Date   => 98244      Time       => 0000
Alternate  =>              System  => JCLSUB      Schedule/Network => *****
Run Instr  => * WAITING FOR SUBMIT TIME                      Run Mode => P

-----
Single Mode =>          ( If Y then triggers will not be submitted)
Rerun JCL   => N        ( If Y JCL will be taken from RERUN PDS)
Last Repeat =>          ( If Y then job will not be rescheduled at completion )
-----

```

The S command and associated jobname is entered from the primary tracking menu or from the command line of the LQ screen. The job being submitted does not have to be defined to the data base. PF4 (*CONFIRM*) to submit the job.

### SCHED. JOBNAME

The name of the job you selected to release from the schedule.

### DATE

The date on which the job was scheduled to be submitted.

### TIME

The scheduled time the job is due to submit.

### ALTERNATE

If the job is an alternate job definition, the alternate job name is displayed here.

### SYSTEM

The system to which the job belongs.

### SCHEDULE/NETWORK

The schedule/network defined for this job.

### RUN INSTR.

The current status of the job.

## RUN MODE

The current run mode of the job.

## SINGLE MODE

Single Mode processing is a special mode that ignores all dependencies and triggers. It processes only that job. Enter Y if trigger jobs are not to be submitted.

## RERUN JCL

Enter Y if the JCL is to be taken from the rerun PDS. Enter N if the JCL is to be taken from the regular JOB/Master® submit PDS.

## LAST REPEAT

Enter Y if the job is not to be placed back on the queue for repeat when the current run is complete. This option only applies to jobs that have been defined on the data base as repeating.



---

*A manual submit of a job does not negate any other JOB/Master® functions for that job. If a job is to be started ahead of it's scheduled time and is in the waiting queue, an S command must be used to start the job. If the job has already been run for that schedule date, the user will receive a message "JOB ALREADY RUN FOR SCHEDULED DATE". At this point, the user will have the option of pressing the PF4/16 key to continue the submit function, or the PF5/17 key to terminate the request.*

---

## LQ - Update a Job on the JOBQ (U)

Used to update information about a job on the JOBQ. You may add predecessors or change scheduling status by placing U next to the jobname and pressing <ENTER>.

```

U----- JOB/Master® JOBQ Entry -----
-
Command ==>

Schedule Job=> JMPOSTB1   Date   => 98245       Time           => 0815
Alternate  =>              System => JMPOST      Schedule/Network => *****
Run Instr  => * WAITING FOR MANUAL TASKS          Run Mode   => P

-----
Submit Mem =>              Subtype => A           Priority       => _
Use Rerun PDS For Submit JCL   => N
Submit PDS  => _____

-----
Manual Task Criteria -----> DE|CI|TI|CR|JS|
                               N Y N N N

-----
Dead Cancel => N   Dead Cancel Wait=> 000 Min   Single Mode   => _

----- Additional Predecessor Dependency Criteria -----
Jobname=> _____

```

PF4 to (*CONFIRM*) request. The data entered on this screen is only kept for this scheduled run of the job.

The following fields cannot be updated:

Sched. Job	System
Date	Schedule/Network
Time	Run Instr.
Alternate	Run Mode

### SINGLE MODE

Single Mode processing is a special mode that ignores all dependencies and triggers. It processes only that job. Enter Y if trigger jobs are not to be submitted.

All other Fields can be altered and are described in the Job Definition section of JOB/Master®.

## LQ - Exclude a Job from Production (X)

As described earlier in the Job Tracking section, an additional field has been added on the LQ screen. The M ==> field reflects the mode in which a job has been defined to run: P, S, or C.

```

X----- JOB/Master® Scheduling Queue ----- Row 1 from 6
Command ==>                                     Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02 98.245 Time= 07:59 -----
S | Job |T|Date |Time| C u r r e n t   S t a t u s |M St|Alt Def
- - - - -
-- SELECT11 Y 98244 0000 * IN CHECK MODE, NOT RUN C P
-- SELECT12 98244 0000 * IN CHECK MODE, NOT RUN C P
-- SELECT13 98244 0000 * IN CHECK MODE, NOT RUN C P
-- SELECT14 98244 0000 * IN CHECK MODE, NOT RUN C P
-- SELECT15 98244 0000 * IN CHECK MODE, NOT RUN C P
-- SELECT16 98244 0000 * IN CHECK MODE, NOT RUN C P
-- JCLSUBA Y 98245 0055 * WAITING FOR MANUAL TASKS S P
-- CI33DOWN Y 98245 0746 * TRIG. ON HOLD BY EXEC REQ. P P H
-- SELECT01 Y 98245 0746 * SELECT MODE / ENTER I TO RUN JOB P H
-- JMPOSTB1 98245 0815 *EXCLUDED TO SIMULATE BY P390K P C
***** Bottom of data *****

```

To alter the status for those jobs defined as select or production mode before the job goes into execution, take the cursor to the line in the S column of the LQ which corresponds with the job to be changed:

X=EXCLUDE

Exclude this job from running in production; only simulate. May be used for jobs which are flagged as select mode, and having once been changed to include, now must be altered back to exclude. (*This feature can also be utilized to exclude a job on the LQ in Production mode.*)

- Note that the CURRENT STATUS ==> field reflects the changes made (*SELECT03, SELECT04, SELECT11 and SELECT13*).
- The M(mode) ==> field represents the mode defined for each job.
- Initially, the ST (status) ==> field represents the default for the mode (*i.e., the default status for Select mode is Check mode*). Now, however, the ST ==> field reflects the current execution status:

SELECT03	S mode has been flagged to include; to run in <u>P</u> roduction; to actually execute the JCL.
SELECT04	S mode has been changed to now exclude; to run in <u>C</u> heck mode; to simulate.
SELECT11	P mode has now been altered to exclude; to run in <u>C</u> heck mode; to simulate.

SELECT13 P mode has now been altered to exclude; to run in Check mode; to simulate.

At submit time, the LQ will look something like this:

```

----- JOB/Master® Scheduling Queue ----- Row 1 from 6
Command ==> Scroll = PAGE
Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02 98.245 Time= 07:59 -----
S | Job |T|Date|Time| C u r r e n t S t a t u s |M St|Alt Def
-----
-- SELECT11 Y 98244 0000 * IN CHECK MODE, NOT SUBMITTED C P
-- SELECT12 98244 0000 * IN CHECK MODE, NOT SUBMITTED C P
-- SELECT13 Y 98244 0000 * IN CHECK MODE, NOT SUBMITTED C P
-- SELECT14 Y 98244 0000 * IN CHECK MODE, NOT SUBMITTED C P
-- SELECT15 Y 98244 0000 * IN CHECK MODE, NOT SUBMITTED C P
-- SELECT16 Y 98244 0000 * IN CHECK MODE, NOT SUBMITTED C P
-- JCLSUBA Y 98245 0055 * WAITING FOR MANUAL TASKS S P
-- CI33DOWN Y 98245 0746 * TRIG. ON HOLD BY EXEC REQ. P P H
-- SELECT01 Y 98245 0746 * SELECT MODE / ENTER I TO RUN JOB P H
-- JPOSTB1 98245 0815 *EXCLUDED TO SIMULATE BY P390K P C
***** Bottom of data *****

```

Jobs in Select or Check mode will indicate that the JCL was not submitted and the ST ==> field will change to a status of D to indicate that the LQ record will be deleted.



**Once the job(s) have entered the JES input queue and/or gone into execution; it is TOO LATE to make the change to include or exclude.**

## DS - Display Scheduling Criteria of a Job

Display the Scheduling Criteria, and Last Run status of a job, by placing DS in the selection field next to the jobname and pressing <ENTER>. When this option is selected, the following screen is displayed:

```

DS----- JOB/Master® Job Status -----
Command ==>

Jobname      => JCLSUBA      Alternate Definition for =>
Run-Exit Instr => JCL SUBSTITUTION USING MEMBER $GLOBAL$ - RUNS AFTER MIDNIT

System       => JCLSUB      Calendar       =>          Res Name1   =>
Job/Network  => *****    Excep Call    =>          Res Name2   =>
Trigger By   => JCLSUB1     Excep Cal2    =>          Keyword Def =>

Job Level Process Keywords
=>
-----
Last Run Date => 98243      Time => 09 16      Cond Code => CC= 0000
Tape Models and Required Units 3420 => 00      3480 => 00

----- Submit Time Options -----
Submit=> 0055 End=> 0000      Number of Runs=> 00      Minutes Between Runs=> 0000

      Submit  End      Submit  End      Submit  End      Submit  End
      2 0000 0000      3 0000 0000      4 0000 0000      5 0000 0000
      6 0000 0000      7 0000 0000      8 0000 0000      9 0000 0000

```

Shown on this screen is the scheduling criteria as well as the submit times for the job. The last run date, time, and condition code are also shown.



## AJ - Add a Job to the schedule queue

This option allows you to add a job to the scheduling queue, even if it is not defined to the JOB/Master® data base. From the command line of the LQ or from the tracking menu enter the following:

AJ JOBNAME

When you enter this option, the following screen is displayed:

```

AJ----- JOB/Master® JOBQ Entry -----
Command ==>

Schedule Job=> LOOPDRV1   Date   => 98245       Time       => 0000
Alternate  =>              System => PATTY       Schedule/Network => *****
Run Instr  => DYNAMICALLY ADDED TO SCHEDULE           Run Mode => P

-----
Submit Mem =>              Subtype => A           Priority       => _
Use Rerun PDS For Submit JCL   => N
Submit PDS =>

-----
Manual Task Criteria -----> DE|CI|TI|CR|JS|
                             N N N N N
-----
Dead Cancel => _   Dead Cancel Wait=> 000 Min   Single Mode       => _

----- Additional Predecessor Dependency Criteria -----
Jobname=>

```

If the job has been defined to the JOB/Master® database, default values will appear in the fields. Otherwise, complete the fields as necessary referring to the Job Definition section for field values. If you override the default fields, the data entered is only kept for this schedule run of the job. PF4 (*CONFIRM*) will add the job to the schedule.

### SINGLE MODE

Single Mode processing is a special mode that ignores all dependencies and triggers. It processes only that job.

## GS - Generate Schedule creation JCL

The parameters specified for the creation of a schedule can be specified on this screen, as shown:

```

GS ----- JOB/Master® Schedule Run Parameters -----
Command ==>                                     Scroll ==> PAGE
----- Date= 98/09/02  98.245  Time= 08:13  Next Sched Date= 98245 -----
      From Date = 98245  From Time = 0600   To Date = 00000  To Time = 0000
Simulation -----> N (Y,N)  Backlog report only -> N (Y,N)
Include selections only -> Y (Y,N)
-----
      Enter System|Job and I nclude| E xclude| S elect value
              System   Jobname  Inc/Exc
              -----
                      (I,S,E)
-----
***** Bottom of data *****

```



**The JMSCHED member must be installed in the correct Proclib for the scheduling job to be executed properly. The JCL for this run will be generated from the OPS.ISPSLIB.**

### NEXT SCHED DATE

This is the date of the next schedule creation cycle. This date is necessary if the from/to date and time are specified as zero.

### FROM DATE/TIME

The lower bound date and time used to select jobs for the schedule queue. The period for which the schedule is to be created is specified in the from date, from time, to date and to time fields. The From Date default is the current system date.

### TO DATE/TIME

The higher bound date and time used to select jobs for the schedule queue.

### SIMULATION

A simulation schedule is produced if Y is specified. This schedule will place no jobs on the schedule queue, but can be used to review a schedule before it is generated.

#### USE ONLY EXCLUDE/INCLUDE

If Y is specified, only those jobs or systems, entered in the ENTER SYSTEMS AND JOBS TO BE INCLUDED OR EXCLUDED part of the screen will be scheduled.

#### BACKLOG REPORT ONLY

If Y is selected, only a report of jobs still waiting to process will be generated (*at the completion of all jobs on the queue*).

#### ENTER SYSTEMS AND JOBS TO BE INCLUDED OR EXCLUDED

If including jobs or systems, the user may enter the system or jobname in the appropriate field, and enter the appropriate parameter under INC/EXC and press <ENTER>. Repeat this process until all desired entries have been made. When you PF4 (*CONFIRM*) the function, an edit screen is displayed, where any other changes may be made. Use the SUB command to submit the JCL for execution.

The following include/exclude parameters can be specified for each system or job that is specified.

- I Will force include the job or system even if it was not scheduled for that day.
- E Will exclude the job or system from being scheduled for that day.
- S Will select the job or system for that day only if it would be scheduled for that day based on scheduling criteria.

---

## GSS - Generate Simulation Schedule

---

This function is the same as GS; however, it will only allow selection of simulation mode. This command can be given to users who want to generate a forecast run, but should not be authorized for true job scheduling.



---

*If the exclude is used during a multiple day simulation run, the exclude will exclude jobs for all days scheduled. If the jobs trigger other jobs, the triggered jobs will only be excluded for the last day of the schedule generation.*

---

For a more detailed discussion of generating both actual and simulated schedules, refer to “Generating A Schedule,” in the scheduling section located in this manual.

### PQ - Purge the entire schedule Queue

This option is used if you want to purge all jobs or a system from the JOB/Master® scheduling queue. When you select this option, the following screen is displayed:

```
PQ ----- JOB/Master@ Schedule Queue Cancel -----  
-  
Command ==>  
  
----- Date= 98/09/02   98.245   Time= 08:16 -----  
  
Schedule Date = 00000      System Name = _____  
  
*****  
***                               ***  
***       A Schedule Date of 00000 means all days          ***  
***                               ***  
***       This Command will Cancel the entire Schedule Queue ***  
***               for the above Parameters                  ***  
***                               ***  
*****  
*****  
  
                        CANCEL or CONFIRM
```

This screen allows for the cancellation of all jobs or system from the schedule, or the cancellation of jobs scheduled to run on the specified date. Enter the date in Julian form. An entire system can be canceled for a specific date, by entering the system name in the appropriate field, and indicating the date for which it is to be canceled.

Enter PF4 (*CONFIRM*) to invoke the schedule cancel, or PF5 (*CANCEL*) to terminate the function.

## PS - Inactivate Submit Facility

This command deactivates the JOB/Master® Submit Facility. If an SMF-ID is specified at the time this command is issued, then only that CPU will be affected. Otherwise, the Submit Facility will be stopped on all processors in a multi-system environment. When this option is selected, the following screen is displayed:

```

PS ----- JOB/Master® Local Complex Status -----
Command ==>
-----
Option => PS      SMF-ID = 0390  JOB/Master® Control Region ID: JM01
Main   =>          (Submit Facility default processor)
-----
Priority:  A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
(A,I)    =>                                     (BLANK=A)
A ctive will be selected for submit; I nactive will not be selected
-----
CPU      Submit      Last
SMF-ID   Status      JOBQ
-----
0390     STOPPED     09:47

```

The Submit Facility should never be stopped unless it is necessary to globally halt all job submissions. LAST JOBQ SCAN - reflects the last time JOB/Master® scanned the queue and is based on criteria in Startup Procedure.



***This command does not suspend JOB/Master® Tracking or any other function, it only stops the submission of jobs to the JES input queue. When the Submit Facility is started again, any jobs which would have been submitted during the dormant period will be submitted as soon as the SS command is issued.***

If a processor is no longer being used in the facility, or the SMF-ID has been changed, it is possible to remove the SMF-ID from this table. In order to accomplish this, enter QUIT in the OPTION==> field and the SMF-ID of the processor which no longer exists and PF4 (CONFIRM) the command.



---

**CAUTION:** *This should only be done if the processor has been physically removed from the facility, or the SMF-ID has been changed. This command should also be used if a CPU is shown active, but JOB/Master® is not active on that CPU. If this is the case a message JM26 JOB/Master® shutdown or locked out on system xxx will be issued to the console. To notify the active processor that JOB/Master® is not active, use this command for that processor.*

---

## SS - Activate Submit Facility

This command activates the JOB/Master® Submit Facility. When this option is selected, the following screen is displayed:

```

SS----- JOB/Master® Local Complex Status -----
Command ==>

Option => SS      SMF-ID = 0390  JOB/Master® Control Region ID: JM01
Main   => 0390    (Submit Facility default processor)

Priority:  A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
(A,I)    =>                                     (BLANK=A)
A ctive will be selected for submit; I nactive will not be selected

  CPU      Submit      Last JOBQ
  SMF-ID    Status      Scan
  -----
    0390      ACTIVE      09:52

```

If the SMFID field is left blank, the Submit Facility is activated on the CPU on which the SS command is issued. If a valid SMFID is entered, then the JOB/Master® Submit Facility will be started on the CPU requested.

The main submit processor is assigned to the processor where the SS is first issued. In order to reassign the main or default submit processor a PS must first be issued, stopping all processors, and an SS then issued (*first, on the processor where the main tag is to be assigned*).



## SP- Set Priority Update Screen

This panel is used for selecting the priority of submission of JOBS by priority class as defined in the JOB/Master® Data Base or as Updated for the JOB using the Update Command from the Tracking Facility.

```

SP----- JOB/Master® Local Complex Status -----
Command ==>
-----
Option => SP      SMF-ID = 0390  JOB/Master® Control Region ID: JM01
Main   => 0390    (Submit Facility default processor)
-----
Priority:  A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
(A,I)    =>                                     (BLANK=A)
A ctive will be selected for submit; I nactive will not be selected
-----
CPU      Submit      Last JOBQ
SMF-ID   Status      Scan
-----
0390     ACTIVE      09:53

```

The purpose of PRIORITY MODIFICATION is based on the situation that many jobs are ready for submission to JES for execution at the same time and all scheduling criteria have been satisfied. The priority selection allows for different JOB/Master® classes (*which are assigned in the Priority field of the JOB/Master® Data Base record*) to be held from submission or allowing only specific classes of JOBS to be submitted, (*enabling the JES INITIATORS to be freed up for priority work*).

The Priority is selected (*turned on*) by putting an A or a BLANK under the appropriate class.

Priority selection is Inactivated (*turned off*) by placing an I under the appropriate class.

Valid characters are:

“A” and “I”

## TE - Tape Drive Exclusion

To enter this function you must enter the TE command from the Tracking Menu or the command line from the LQ display. (*Refer to Tracking in this manual for more information*).

```

TE----- JOB/Master® Tape Unit Exclusion List -----
-
Command ==>

SYS-ID |----- Tape Unit Address -----|
      | .....|
      | .....|
      | .....|

The units entered here will not be evaluated by JOB/Master®'s dynamic
tape drive availability routines.

If System-id is entered, then those drives will pertain only to the
system specified. (Enter CANCEL or CONFIRM)
  
```

The units entered here will not be evaluated by JOB/Master®'s dynamic tape drive availability routines.



***If System-ID is entered then those drives will pertain only to the system specified. (Enter Cancel or Confirm).***

The ability to exclude certain tape drives from the availability list used by JOB/Master® for tape drive verification (*Tape Resource Pool*), prior to submission of jobs to JES is now part of the system.

Functions:

### SYS-ID

If entered the list of Unit Addresses pertains only to that specific system. If no SYS-ID is entered, then all addresses entered apply globally to all systems.

### TAPE UNIT ADDRESS

The XXX represent the Unit Address of the Units being excluded.

## RT - Initiate Resource Table processing

Resource routing is a unique JOB/Master® function which allows any resource to be assigned to a particular CPU. The resource name used with this command must match the resource name defined on the Job Definition Screen to be effective.

Any JOB/Master® Resource Table entry can be displayed, updated or deleted, by specifying this option. When this option is selected, the following screen is displayed:

```

----- JOB/Master® Workload Control Definitions -----Row 1 to 3 of 3
Command ==>                                         Scroll ==> PAGE

Use ADD line to enter additions to resource table
Over type an entry to change a resource
Place a D next to the entry to delete the resource
To DETACH a resource enter "----" in the SMFid field
To ATTACH a resource enter a valid SMFID in the SMFID field
Enter END (PF3) to exit resource functions

      Name      ID      SMFID      Num      Node
      -----      -      -      -      -
      Description
ADD>
-   INITA      -   0390      000      _____
-   INITR      0390      002      _____
-   RESTEST    0390      002      _____
***** Bottom of data *****

```

Cursor down the RESOURCE TABLE to the selection field and enter D to delete an entry, or U to update an entry.

To ADD a Resource Table entry, enter the name of the resource, the associated system ID, and a description of the resource name on the add line (*labeled with an "Add" in the first column*) and press <ENTER>. The entry will then be added to the table.

To attach a resource, enter the appropriate SMF-ID in the field provided for that resource.

To detach a resource, enter "----" (*dashes*) in the SMF-ID of the resource desired.



**Specifying "\*\*\*\*" for SMFID will allow for submission on any processor without selectivity.**

### NAME

The Resource Name is an assigned mnemonic which can be either a Real or a Virtual Device. It is possible to establish a group of virtual devices to assist in the scheduling and work load balancing functions.

### ID

Reserved for future use.

### SMFID

The SMFID is the system identification of the resource. This field is used to uniquely identify resources which are attached to multiple processors. To move or detach a resource, simply change or blank out this field. To add a resource, simply enter SMFID on the resource to be attached.

### NO. JOBS

The maximum number of Jobs which may run currently using this Resource .

### NODE NAME

The Node Name is used to designate which node is used for the Remote Job Network Support. The node name is linked to the Resource Name, which is defined to the job during the definition process. The nodes can be attached to the various resources as may be required.

### DESCRIPTION

The description in an information field indicating the description of the resource.

#### Example 1:

CICS is defined on the JOB/Master® data base as a scheduled or trigger job. The RES. NAME field is coded as CICSA to designate CICS production. Using the RT command in the Job Tracking Facility, the resource CICS is assigned to SYSA. When the job CICS is ready to be initiated, JOB/Master® will issue a start command for CICS, but will issue it on the system whose SMFID is SYSA.

#### Example 2:

Job "BKUPJOB1" uses a string of 3480 tape drives which must be varied offline from SYSTEMA and varied online for SYSTEMB. The processing of all jobs requiring resource "3480" will begin on SYSB with a maximum of 8 jobs running concurrently. To do this, the resource "3480" must be changed. Change the SMFID from "SYSA" to "SYSB" and CONFIRM (PF4) the update.

## ST - Display control region Settings

This command displays the status of the JOB/Master® Submit Facility. The status screen indicates whether the Submit Facility is active or stopped. When this option is selected, the following screen is displayed:

```

ST----- JOB/Master® Local Complex Status -----
Command ==>

Option => ST      SMF-ID = 0390  JOB/Master® Control Region ID: JM01
Main   => 0390    (Submit Facility default processor)

Priority: A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
(A,I)    =>                                     (BLANK=A)
A ctive will be selected for submit; I nactive will not be selected

CPU      Submit      Last JOBQ
SMF-ID   Status      Scan
-----
0390     ACTIVE      09:53
  
```

### JOB/Master® Subsystem ID

The JOB/Master® control region associated with this online session.

**MAIN = SYSC (SUBMIT FACILITY DEFAULT PROCESSOR)**

The main field identifies the SMFID of the JOB/Master® Submit Facility default processor. Jobs not specifically routed to other CPU's, are submitted on the default processor.

CPU	SUBMIT	LAST JOBQ
SMF-ID	STATUS	SCAN

The information that is displayed under the above headings identifies whether JOB/Master® is active or stopped on the corresponding CPU as captioned by SMFID. The information also contains the last time, in HHMM format, that JOB/Master® issued a time stamp.

## DH - Display job run data / log messages from

This option allows you to inquire about historical data. This screen chronologically lists all the days of history currently on the History File. The Julian date is on the left of the screen, and the corresponding day of the week and date on the right.

```

DH----- JOB/Master® Audit Trail Selection  -- Row 1 to 7 of 7
Command ==>                               Scroll ==> PAGE
-----
Date: WEDNESDAY, SEPTEMBER 2, 1998 - 98.245 09:58
-----
Selection => M (M,J) Enter M for message log, J for job run data
Enter S TART day and E ND day in table to set dates or enter dates directly
Jdate  S => 98244      Jdate  E => 98245      CONFIRM to process END to quit
Jobname =>              Sys Name =>          Used to limit selection for J
-----
(S,E)  Jdate      Day For Jdate Selection
-----
-      98.245      WEDNESDAY, SEPTEMBER 2, 1998
E      98.244      TUESDAY, SEPTEMBER 1, 1998
-      98.243      MONDAY, AUGUST 31, 1998
-      98.242      SUNDAY, AUGUST 30, 1998
-      98.241      SATURDAY, AUGUST 29, 1998
S      98.240      FRIDAY, AUGUST 28, 1998
-      98.239      THURSDAY, AUGUST 27, 1998
***** Bottom of data *****

```

The selection option is M for the audit log (*all messages generated by JOB/Master® and J for job run statistics*).

The select column can be used to select the start and end date for the display data. The default dates are current day for end date and current day-1 for start date. (*Refer to JDATE above*).

### JOBNAME and SYSTEM NAME:

JOBNAME and SYSTEM NAME are now available as selection criteria for the displaying of the History File when using the J for selection of Message Log Run Data. Generic or Wild Card (\*) can be used to LIMIT the selection.

JOBNAME ABC\* will display all jobs beginning with ABC as the first three characters.

SYSTEM ABC\* will display all system beginning with the ABC prefix.

It is no longer necessary to use the PF5 key (*CANCEL*) to end the display panel. The PF3 KEY can now be used to END out of the Display History Panel. In order to select the starting and ending dates, enter 'S' by the date you wish to start on and press ENTER. Then, enter an 'E' by the date you wish to stop on and press ENTER. Alternately, you may enter the dates manually in the S=> and E=> fields. When your selections are complete, enter CONFIRM to process your selection. The resultant screen is an ISPF browse display with full browse capabilities. The ISPF scroll commands; PF7/8 and PF10/11 and PF3 can be used.

The following screen is displayed when M is selected for MESSAGES next to the selection field on the DH screen:

Menu Utilities Compilers Help									
SYS98245.T091146.RA000.P390K.R0100086 Line 00000000 Col 001 080									
Command ==> Scroll ==> PAGE									
***** Top of Data *****									
SID	>---	DATE TIME	---	MSG /SUBID	USERID	----->>>>	MESSAGE TEXT	----	
0390	98244	09/01/98	00.04.32	JM35/JM01		CT33U002	TRIGGERED BY R13380		
0390	98244	09/01/98	00.04.45	JM03/JM01		CT33U002	(J00396) SUBMITTED		
0390	98244	09/01/98	00.04.46	JM03/JM01		CT33U002	(J00396) MVS JOBNAM		
0390	98244	09/01/98	00.05.51	JM35/JM01		LP330002	TRIGGERED BY CT33U0		
0390	98244	09/01/98	00.06.00	JM03/JM01		LP330002	(J00399) SUBMITTED		
0390	98244	09/01/98	00.06.00	JM03/JM01		LP330002	(J00399) MVS JOBNAM		
0390	98244	09/01/98	00.15.14	JM35/JM01		CT33D002	TRIGGERED BY LP3300		
0390	98244	09/01/98	00.15.28	JM03/JM01		CT33D002	(J00402) SUBMITTED		
0390	98244	09/01/98	00.15.28	JM03/JM01		CT33D002	(J00402) MVS JOBNAM		
0390	98244	09/01/98	00.15.44	JM35/JM01		R1337002	TRIGGERED BY CT33D0		
SID	>---	DATE TIME	---	MSG /SUBID	USERID	----->>>>	MESSAGE TEXT	----	
0390	98244	09/01/98	00.15.53	JM44/JM01		WARNING -	JOB R1337002 TAPE		
0390	98244	09/01/98	00.15.56	JM03/JM01		R1337002	(J00404) SUBMITTED		
0390	98244	09/01/98	00.15.57	JM03/JM01		R1337002	(J00404) MVS JOBNAM		

The JOB/Master® log is an audit trail of what occurred on the day in question. This display can be used to answer questions such as, “Why was the Job held up?”, or “Who removed the Job from the scheduling queue?”.

### Auto Logging Facility

JOB/Master® uses an Auto Logging Facility for all updates to the JOB/Master® database. The information is captured with a “before” image of the record. Each field that is altered is then recorded on the History File. Information is displayed with the Field being changed and the data which was in the field prior to the change following the field identifier.

The following screen results when selecting J for JOB DATA next to the selection field on the DH screen:

Menu Utilities Compilers Help									
SYS98245.T091146.RA000.P390K.R0100086 Line 00000000 Col 001 080									
Command ==> Scroll ==> PAGE									
***** Top of Data *****									
SID	>---	DATE	TIME	---	SCHD	JOBNAME	JOBNO	C. CODE	JOB/NET SYSTEM
O390	98244	09/01/98	00.04.35	YES	R1338001	J00392	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.05.52	YES	CT33U002	J00396	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.15.16	YES	LP330002	J00399	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.15.45	YES	CT33D002	J00402	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.18.56	YES	R1337002	J00404	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.24.39	YES	R1338002	J00405	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.26.35	YES	CT33U003	J00406	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.35.54	YES	LP330003	J00408	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.37.55	YES	CT33D003	J00409	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.44.36	YES	R1338005	J00410	CC= 0000	*****	RMSPI33
SID	>---	DATE	TIME	---	SCHD	JOBNAME	JOBNO	C. CODE	JOB/NET SYSTEM
O390	98244	09/01/98	00.45.09	YES	CI33UP	J00411	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.45.12	YES	CT33UP	J00412	CC= 0000	*****	RMSPI33
O390	98244	09/01/98	00.46.39	YES	R133GEN7	J00416	CC= 0000	*****	RMSPI33

Additional data is available by scrolling the display screen. The screen can be scrolled by using the standard ISPF functions.

In order to exit the DH function:

1. From the browse screens - PF3.
2. Upon returning to the JOB/Master® AUDIT TRAIL SELECTION screen PF3, PF5 or CANCEL will return you to the tracking function you left.



## CO - Invoke MVS Console Facility

You can invoke a JOB/Master® function that will provide full MVS operator functions through the same JOB/Master® terminal on which they are currently logged. All MVS and JES commands can be processed through this interface.

```

CO----- JOB/Master® MVS Console Facility - Row 1 to 20 of 27
Command ==>                               Scroll = PAGE

                                           Console ID ==> 700
09.52.26      *IEE362A SMF ENTER DUMP FOR SYS1.MAN1 ON SCPMV5
09.52.26      IEE360I SMF NOW RECORDING ON SYS1.MAN2 ON SCPMV5
TIME=09:52:26
09.52.26      *IEE985A SMF IS PROCESSING ITS LAST AVAILABLE DATASET
09.52.28      IEE949I 09.52.28 SMF DATA SETS 099                U C
NAME          VOLSER SIZE(BLKS) %FULL STATUS
P-SYS1.MAN1  SCPMV5      3000  100  DUMP REQUIRED
S-SYS1.MAN2  SCPMV5      3000    1  ACTIVE
09.52.31 STC00062 $HASP100 SMFCLEAR ON STCINRDR
09.52.35 STC00062 $HASP373 SMFCLEAR STARTED
09.53.05 JOB00061 IEF404I OS1134S - ENDED - TIME=09.53.05
09.53.06 JOB00061 $HASP395 OS1134S ENDED
09.53.07 $HASP309 INIT  B INACTIVE ***** C=BA
09.53.10 JOB00061 $HASP150 OS1134S OUTGRP=1.1.1 ON PRT1      1,617 (1,
617) RECORDS
09.54.04 STC00062 IEF404I SMFCLEAR - ENDED - TIME=09.54.04
09.54.04 STC00062 $HASP395 SMFCLEAR ENDED
09.59.57 JOB00063 $HASP100 GENERBHW ON INTRDR      MANTISSA/BHAM
FROM TSU00056 P390J
10.00.02 JOB00063 $HASP373 GENERBHW STARTED - INIT  A - CLASS A - SYS
  
```

The JOB/Master® console displays, or mirrors, the MVS consoles. The console will not roll like an ordinary console. <ENTER> must be pressed to refresh the display. The console facility will mirror the address selected, therefore there are no buffers which would cause a buffer backup.

JOB/Master® uses the authorization that has been defined in ISF, for this user. If the user has only Console Display authority he will only be allowed to view MVS console messages; otherwise, the user will have full console facilities available and may enter commands.

### CONSOLE ID

The console defaults to the Master Console ID when a console address is not specified in the upper right hand corner of the screen. Authorized users can enter MVS or JES commands. Any console address can be entered in the console ID field of the screen. The console that is shown in the console ID field is the console address. Available console addresses can be obtained by entering the MVS “D C” command. Only display consoles can be simulated. Hard copy consoles will not be accepted.



*The command syntax is the same as when entered from a standard MVS console. No special preceding character is required. Also, the “Retrieve” function (default PF12) can help SAVE keystrokes by redisplaying previous commands.*

## DP - Display jobs Predecessor function

The DP option will display all job predecessors for a specified job. Negative and Co-Requirement dependencies are also displayed, indicating that the job requested may not be submitted while any negative dependency job is executing, or the job requires a job to be in execution.

This display is coming from the JOB/Master® Database record. The JOBQ is checked for existing conditions relating to the definition. If the Predecessor condition is found the display indicates the current Predecessor status. This display IS NOT a display of ALL conditions existing on the JOBQ. If the same Predecessor exists multiple times on the JOBQ, only the first condition is flagged for display. When the first condition is satisfied, the next condition is displayed.

Command ==>

Scroll ==> PAGE

-----

Dependencies for: TSTPRED2 - 00000 - 0000

: JOB NOT IN SCHEDULE QUEUE

-----

Dependency	Type	Position	Current Status of this Dependency			
-----						
DSNTRIG2	PRED -R	LAST RUN C	CC= 0000	98244	12:43:36	
JMJCL02	PRED -R	LAST RUN C	CC= 0000	98189	00:20:48	
***** Bottom of data *****						

### DEPENDENCIES FOR:

The job which is being queried.

### DEPENDENCY

The job name or dependency for which this job is waiting.

### TYPE

This field displays the type of dependency.

### POSITION

The current position of the dependency within the system.

### CURRENT STATUS OF THIS DEPENDENCY

The current status of this dependency.

## DT - Display Triggered jobs and job condition code entries

The DT option displays the condition code triggering criteria as coded on the data base for each job. The sample screen shows the condition code criteria for job JOB4. Job level criteria is displayed, as well as the criteria for each step, as it is defined to the data base.

```

DT----- JOB/Master@ Trigger and Condition Code Depend Row 1 to 3 of 3
Command ==>                                     Scroll ==> PAGE

-----
Dependencies For: TRIGREPR :

Trigger ST Type Op CC      Comments
-----
TRIG0002 A          <- DEPENDENCY APPLIED AT JOB END

***** Bottom of data *****

```

### DEPENDENCIES FOR:

The JOBNAME being queried.

### TRIGGER

The JOBNAME which will be triggered when the conditions are met.

### ST

The Submit Type of the job to be triggered.

### TYPE

The Type of trigger condition which is required for the job to be triggered. If left blank the job to be triggered is a normal trigger. If F is used, the job being triggered will only be triggered if the JOB FAILS.

### OP

This field displays the Operation Code that was specified.

### C.C.

This displays the condition code value which is to be tested by the system.

### COMMENT AREA

This area displays where and when the dependency will be applied. Dependencies are applied at either Job Exec, Step Exec, or both.

## DF - Display job Failure contact

Job failure contact information, as coded on the JOB/Master® data base, will be displayed by this command, as shown:

```

DF----- JOB/Master® Failure Contact -----
Command ==>

Jobname      => DSNJOB1
Alt Def For  =>
Run-Exit Instr => CREATES 2 DATASETS THAT WILL TRIGGER OTHER JOBS

System       => DSNTRIGS   Job/Network => *****

-----
                Job Description      Programmer Name
                -----
                DSN TRIGGERS TEST    PATTY SISBARRO

Failure Contact      Phone              Beeper
-----
PATTY SISBARRO      ( 205 )402-0280   Ext 2XX      (    )

```

This screen shows failure information for a specific job. Press <ENTER> to display the trigger jobs, as coded on the data base, for the job requested. Press PF3/15 to return to the menu.

### SYSTEM NAME

This field contains the name of the system to which the job belongs.

### JOB DESCRIPTION

This field displays a brief description of the job.

### PROGRAMMER NAME

This field displays the name of the programmer associated with the job.

### FAILURE CONTACT NAME

This field displays the name of the person to contact in the event the job abends.  
This information is only available if it was specified in the job's definition.

### FAILURE CONTACT PHONE

This field shows the phone number of the person to contact if the job abends.

## DM - Display job Manual task message definitions

This option displays the Manual Task entries as coded on the data base, for each job.

```

DM----- JOB/Master@ Manual Task Message Definition JPOSTB1 -----
Command ==>

Desc: _____

Send 015 minutes before submit time or, after dependencies => N (Y,N)
      At a frequency interval of => 015 Minutes

1 DATA ENTRY      Message to Userid/Console => _____
Msg= _____

2 CARD INPUT       Message to Userid/Console => P390W
Msg= MAKE SURE THIS TASK IS POSTED BY JMBPOST

3 TAPE INPUT       Message to Userid/Console => _____
Msg= _____

4 CONSOLE ROUTED   Message to Userid/Console => _____
Msg= _____

5 JCL SETUP        Message to Userid/Console => _____
Msg= _____
  
```

### DESC

This field displays a brief description about these manual tasks.

### SEND 000 MIN.

Amount of time before submitting that the MSG is to be sent.

### AFTER DEPENDENCIES

Send MSG only after all dependencies are met.

### FREQUENCY INTERVAL

How often a reminder message is sent until the manual task is posted.

### MANUAL TASK 1,2,3,4 and 5.

(Refer to Job Definition Screen 4 - Manual Task Messages)

## DA - Display Active jobs in execution for this control region

This option, displays only those jobs currently executing on the processor where the command is entered and only jobs under this JOB/Master® control region. When this option is selected, the following screen is displayed. All jobs executing on all CPU's will be shown along with everything else on the LQ display - List jobs on the schedule Queue.

```

(DA) ----- JOB/Master®      DISPLAY ACTIVE --- Row 1 to 1 of 1
COMMAND ==>                      SCROLL ==> PAGE

-----
JOBS IN EXECUTION FOR REGION ID: JM01

JOBNO.  JOBNAME  LAST STEP EXECUTED  ALTDEF.  JOBQNAME  SCHEDULED
-----  -
J03360  SCHEDULE  IN FIRST STEP        SCHEDULE  YES
***** Bottom of data *****
  
```

F1=HELP      F2=SPLIT      F3=END      F4=CONFIRM      F5=CANCEL      F6=CO  
 F7=UP        F8=DOWN      F9=SWAP      F10=SHIFT      F11=RIGHT      F12=RETRIEVE

### JOB NO.

The JES job number assigned to the job.

### JOBNAME

The name of the job as it is known to MVS.

### LAST STEP EXECUTED

The step name of the last step completed for the job.

### ALTDEF.

The name specified during an Alternate Definition, and is applicable only when the job is for an Alternate Definition (see *“Alternate Definition”* in *JOB/Master® Scheduling for additional information*).

### JOBQNAME

The name of the job as it was scheduled. The JOBQNAME can be different from the jobname, if the jobname on the jobcard JCL statement was different from the scheduled name.

### SCHEDULED

If the job was on the schedule or submitted by JOB/Master®, this field will indicate “YES”.

### DL - Display run data from the Last 9 executions

The DL command generates the job run statistics for the last nine executions of a job. The last nine runs of R88PC12 are shown in the following screen:

```

#####
DL          SYS98245.T091146.RA000.P390K.R0100086          Line 00000000 Col 001 080
Command ==>                                         Scroll ==> PAGE
***** Top of Data *****
SID  >---  DATE TIME  ---<  SCHD  JOBNAME  JOBNO  C. CODE  JOB/NET  SYSTEM
-----
0390  98236  08/24/98  09.38.32  YES  JMPOSTB1  J00063  CC= 0000  *****  JMPOST
0390  98236  08/24/98  09.31.57  YES  JMPOSTB1  J00000  CC= 0022  *****  JMPOST
0390  98231  08/19/98  10.37.04  YES  JMPOSTB1  J00152  CC= 0000  *****  JMPOST
0390  98230  08/18/98  09.14.30  YES  JMPOSTB1  J00094  CC= 0000  *****  JMPOST
0390  98226  08/14/98  09.05.10  YES  JMPOSTB1  J00056  CC= 0000  *****  JMPOST
0390  98225  08/13/98  08.36.55  YES  JMPOSTB1  J00051  CC= 0000  *****  JMPOST
0390  98222  08/10/98  16.19.35  YES  JMPOSTB1  J00000  CC= 0022  *****  JMPOST
0390  98244  09/01/98  23.00.26  YES  R1331010 J00497  CC= 0000  *****  RMSPI33
---  END OF SELECTION  ---

```



*A condition code of 22 is the code generated by JOB/Master® for a purge from the schedule.*

The DL display is an ISPF browse panel and can be scrolled left and right to display additional information. Refer to your PF key definition in the Profile “P” option.

The last nine executions will be displayed. However, the history file must be defined large enough to retain the last nine runs for the job. The file is a wrap file, therefore, if it is not large enough or a Job is run infrequently, i.e., yearly, there may not be 9 executions shown since older entries may be overlaid.

---

## DD - Display Detail statistics from the last run

---

### Overall Job Level Statistics

When the DD option is selected, the following screen is displayed:

DD----- JOB/Master® Detail Run Statistics For Last Run -----					
Command ==>					
For Job: CC4TRIG3		Step:	Procstep:		
Date = 98.245	Time= 10:17				
RDR Date/Time	Start Date/Time	End Date/Time	Cond Code	Elaps Time	
00000 00:00:00	00000 00:00:00	98236 13:35:07	CC= 0000	00:00:00	
CPU Time	Resident Time	Active Time	# Swaps	# Runs	#Abends
00:00:00.00	00:00:00.00	00:00:00.00	00000	00037	00001
Min Run Time	Max Run Time	Min CPUtime	Max CPUtime		
00:00:08	00:00:00	00:00:00.00	00:00:01.08		



*The first screen provides the user with overall job statistics. Each time <ENTER> is pressed, overall statistics for each step are shown. Step statistics are only available for those steps that have been defined to the JOB/Master® data base. The Global Profile must also be defined to track Step Level Statistics = Y.*

### Step Level Statistics

Press <ENTER> to display the step statistics for each job step. The step name is indicated to the right of the jobname, in the upper portion of the screen.



The following is a sample step level statistics screen:

DD----- JOB/Master® Detail Run Statistics For Last Run -----					
Command ==>					
For Job: STEPTST5 Step: Procstep: STEP01					
Date = 98.245 Time= 11:11					
RDR Date/Time	Start Date/Time	End Date/Time	Cond Code	Elaps Time	
98236 10:38:47	98236 10:38:50	98236 10:38:55	CC= 0000	00:00:04	
-----					
CPU Time	Resident Time	Active Time	# Swaps	# Runs	#Abends
00:00:01.08	00:00:02.98	00:00:02.96	00000	00028	00000
-----					
Min Run Time	Max Run Time	Min CPUtime	Max CPUtime		
00:00:04	00:00:12	00:00:01.08	: : .		
-----					



*To obtain Step level statistics the steps must be defined to the JOB/Master® database.*

## DO - Display jobs Output processing information

The following screen is displayed when this option is selected. The sample screen shows output processing information for the job OUTPOST01. This data must be specified in the job definition for it to be available in the tracking facility.

```

DO----- JOB/Master® Output Processing -----
Command ==>

Jobname      => OUTPOST1
Alt Def For  =>
Run-Exit Instr => ENSURE THAT JOB WAITS FOR MANUAL O/P POSTING

System       => MISCTEST   Job/Network => *****

-----
User Department      Submitting Department
-----
                        TECH SUPPORT
Output Destination   Delivery Method
-----

Burst => N Microfiche => N Decollate => N Photocopy => N Other => N

```

(Refer to the Output Processing fields in the Job Definition Section- Screen 05)

### ALT. DEF. FOR

This field shows the alternate name of the job if one has been defined.

### RUN-EXIT INSTR.

Any special Run Exit instructions necessary for this job.

### SYSTEM NAME

The name of the system to which the job is assigned.

### USER DEPARTMENT

The department that uses the data generated by the job.

### SUBMITTING DEPARTMENT

The department that submitted the job.

### OUTPUT DESTINATION

The destination of the job's output.

### DELIVERY METHOD

How the output is sent to the output destination.

## OUTPUT PROCESSES

Burst

Micro Fiche

Decollate

Photocopy

Other

A “Y” in any field indicates the output process required for the completion of the job.

## DR - Display jobs Run instruction data

The DR option displays run instructions that have been coded at both the job level and the step level.

This screen displays job run instructions for job OUTPUT01.

```

DR ----- JOB/Master® Run Instructions Definition ----- Row 1 to 1 of 1
Command ==>                                         Scroll ==> PAGE

-----
Run Instructions For:  KEYTABL1 :
-----
For Definition At   Run Instructions Field
-----
      JOB LEVEL      TESTING PROCESS KEYWORD TABLES
*****
***** Bottom of data *****
  
```

### RUN INSTRUCTIONS FOR

The name of the job.

### FOR DEFINITION AT

This column indicates the level at which the associated run instruction was specified.

### RUN INSTRUCTIONS

The free-form text of the specified instructions.

## HOLD / REL - Hold / Release System

Used to hold an entire system or to release an entire system for submission to the JES input queue. The command is issued from the command line of the JOBQ Entry screen.

```

----- JOB/Master® Scheduling Queue ----- Row 1 from 3
Command ==>HOLD CI33DOWN                               Scroll
= PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02  98.245  Time= 11:18 -----
S | Job |T|Date |Time|      C u r r e n t   S t a t u s      |M St|Alt Def
- - - - -
-- CI33DOWN Y 98245 0746 * PLACED ON HOLD BY -> P390K      P      P H
-- CT33DOWN Y 98245 0746 * PLACED ON HOLD BY -> P390K      P      P H
-- DTATNITE  98245 2200 DYNAMICALLY ADDED TO SCHEDULE      P P
***** Bottom of data *****

```

A system can be held from submission to the input queue or released to be submitted to the Input Queue. The commands are used in the following manner:

**Hold System=** From the LQ on the Tracking screen and at the command line level, issue a “HOLD” followed by the system name you wish to hold.

**HOLD SYSTEMA**

**Release System=** From the LQ on the Tracking screen and at the command line level, issue a “REL” followed by the system name you wish to release.

**REL SYSTEMA**

The above methods can be used to hold individual systems. The entire JOBQ can be held by using the “PS” command to stop the job submission facility. (*Refer to Job Submission*). Individual jobs may be held and released using the “H” and “R” operations specified in the S (*Select field*) column next to the Job Name.



***Some multi-session management software uses the HOLD command to hold the current session and transfer to another session. If this occurs at your facility, please contact Mantissa Technical Support. A special PTM is available to satisfy the requirement.***



# Chapter 8

---

## Symbolic Substitution

---

### Introduction

The Symbolic Substitution capability in JOB/Master® provides an easy-to-use, yet flexible method of entering variable information to production job control. Possible benefits include:

- Standard application parameter entry interface
- Date value substitution
- Variable JCL parameter substitution for both novice and experienced users. The novice user can gain access to the power afforded those experienced with JCL. The advantage to the experienced user would be the time savings afforded by being able to enter and see all the overrides (*VOL-SER*, *DSN's*, *ETC.*) on one panel.
- Preventing access to Job Control at the user level. The JOB/Master® symbolic substitution capability lets you give access to the variables and prevent access to the actual job control. You simply use Interactive Security to prevent access to the Library capability for that user.

### Symbolic Substitution Flow

Symbolic substitution might seem a little complicated unless you consider it in the overall context of the actual task to be accomplished. The primary objective is to successfully schedule a job with a variable parameter or job control requirements.

Symbolic substitution assumes that the job on which the values are to be replaced meets two very basic criteria.

1. The job has been scheduled by or will be submitted for execution by JOB/Master®.

2. The job, when it was defined to the JOB/Master® database, was defined as needing Manual Task Intervention (*MT#5 - JCL SETUP*).




---

***It is important to understand the value of not changing Manual Task #5 (JCL SETUP) to another installation-specific manual task. If this feature is to be used, DO NOT CHANGE THIS MANUAL TASK! Consider changing one of the other tasks for the installation-specific task. (See JOB/Master® DATA BASE Creation for more details on Manual Tasks.)***

---

Determining which jobs on the JOBQ require Manual Task setup is accomplished Real Time via the JOB TRACKING LQ SCREEN. (Refer to the *JOB TRACKING* commands in the previous section of the manual.)

Each Manual Task has been associated with a TSO user ID, and the appropriate message will be sent to that user, informing him/her, he/she should provide some type of input to the job. This message to the TSO user or to the console will recur at given intervals until the task is finally satisfied and marked as complete.

It is possible for jobs not containing symbolic variables to be processed via the Symbolic Substitution feature (*JCL/MASTER*). The jobs will be staged into the JOB/Master® Staging PDS or Resolved PDS and will be handled as any other scheduled job. This allows for JOB/JCL to be modified without altering the Base (*Master*) JCL. Audit trails are also provided indicating the JCL was changed and by whom.

A complete functional description is presented under Utilizing Substitution later in this chapter.




---

***To define data sets to be used by JCL Substitution, refer to the Interactive Security Facility manual under “Symbolic Substitution Security”.***

---

The following PDS datasets are used by the symbolic substitution process.

#### STAGING PDS

If this PDS is being used, it should also be defined as your Resolved PDS and Rerun PDS because it will be the library from which jobs will be submitted by the JOB/Master® submit function.

#### MASTER JCL

This is the data set used as input for the symbolic substitution function. The JCL will be copied from here leaving the “master” copy intact.

#### RESOLVED JCL

This is the data set in which the JCL member will be placed after symbolic substitution has been performed. It should be the same PDS as the Staging PDS if it is being used.

#### RERUN PDS

This data set is used by JOB/Master® to save a copy of the JCL at job submit time. This is an optional data set and it should be the same PDS as the Staging PDS if it is being used.



## DOCUMENT DATASET

This data set contains free format, user-entered data for job documentation and operational run instructions. The JOBNAME must be used as the member name for specific job documentation reference.

## SYMBOLIC SUBSTITUTION FLOW

**JOB/Master® Schedules the Job**

- |                                   |
|-----------------------------------|
| Place job on schedule queue.      |
| Set status to AWAITING JCL SETUP. |
| Send message to TSO User/Console. |

**TSO User/Console Operator Enters/Verifies Information**

- |  |
|--|
| 1. Confirm defaults or enter values for variables.         |
| 2. Resolve JCL for values entered.                         |
| 3. View operational setup instructions( <i>optional</i> ). |
| 4. Confirm JCL resolution.                                 |

**Complete JCL Setup Process**

- |  |
|--|
| After confirmation, JCL is automatically moved to the RESOLVED or STAGING JCL PDS.   |
| JOB/Master® posts JCL SETUP complete.<br>Stops sending messages for this manual task.  |
| At the time the job is submitted to JES ( <i>if no other dependencies are outstanding</i> ), the resolved JCL is taken from the RESOLVED OR STAGING JCL PDS. |

## Symbolic Substitution Menu

### Selecting Symbolic Substitution

Symbolic substitution is accessed by selecting option J on the JOB/Master® MENU.

[illegible]

The following panel is displayed after selection of option J from the JOB/Master® Primary Menu:

```

----- JCL/Master - Symbolic Substitution -----
Option ==>

      Jobname =>          Schedule Date => 00000  Schedule Time => 0000

1  RESOLVE   -   JCLMASTER symbolic substitution      Userid      - P390K
2  RESET     -   Reset JOB submission parameters       Pf Keys     - 12
3  DISPLAY   -   Display resolved JOB parameters       Time        - 11:25
4  RECOVERY  -   Perform JOB recovery functions        Greg Date   - 98/09/02
5  LIBRARY   -   Master JCL library maintenance        Jul Date    - 98.245
O  OPINS     -   Operational recovery instructions     Auto Help   - N
E  E/OPINS   -   Edit operational recovery instructions
J  JCL/scan   -   User written JCL scan interface exit
X  EXIT      -   Return to Primary menu

```

You must select an option from those listed and optionally, enter the name of the JOB calling for JCL SETUP. If a Jobname and/or Date and Time are entered, the job must be in the JMSTGPDS. If not, a “Member not Found” message is issued. Simply leaving the fields blank will insure that you see all the possible jobs to be selected.

#### JOBNAME

*(Only to be used when retrieving a Job from the JOBQ with a Prior Run Date).*  
Enter the Jobname of the job you desire to resolve.

If only the jobname is entered, with no Scheduled Date or Scheduled Time entered, the job will take the attributes of the current system date and a time of 0000. A time and date may be entered in order to pull the execution JCL from a prior run.

If no jobname is entered the user is presented with a JOBQ screen of all jobs currently in the scheduling queue requiring JCL SETUP. Use an S on the appropriate line to select the specific job desired. Refer to Option 1 Resolve (*No JOBNAME Entered*) this section.

#### SCHED. DATE

The Sched. Date ==> field provides the option to retrieve a job from a specific prior run date. Enter the desired Scheduled Date (YYDDD).

#### SCHED. TIME

The Sched. Time ==> field provides the specific time that the job was scheduled to run. Enter the desired Time (HHMM).

#### AUTO HELP (Y,N)

This field allows the user to turn on the auto help feature. This feature relates specifically to Option 4 (*Recovery*) and Option O (*Operations Recovery Instructions*). Refer to these options in this section.

**Option 1 - Resolve**

Option 1 invokes Symbolic Substitution, which takes a copy of the selected JCL located in the JMSTGPDS, and allows you to perform symbolic substitution to that job via an ISPF symbolic table. Selecting Option 1 without entering the JOBNAME will result in the display of a JOBQ panel containing those jobs awaiting JCL SETUP. You may continue the resolution process for a specific JOB by selecting (S) the JOB for which symbolic substitution is to take place.

```

----- JCL/Master - Symbolic Substitution -----
Option ==> 1

Jobname => STEPTST1  Schedule Date => 00000  Schedule Time => 0000

1 RESOLVE - JCLMASTER symbolic substitution      Userid - P390K
2 RESET   - Reset JOB submission parameters      Pf Keys - 12
3 DISPLAY - Display resolved JOB parameters      Time - 11:25
4 RECOVERY - Perform JOB recovery functions      Greg Date - 98/09/02
5 LIBRARY - Master JCL library maintenance      Jul Date - 98.245
O OPINS   - Operational recovery instructions    Auto Help - N
E E/OPINS - Edit operational recovery instructions
J JCL/scan - User written JCL scan interface exit
X EXIT    - Return to Primary menu

```

Use S to select the job desired, press <ENTER>. The job will be displayed as shown below:

```

----- JOB/Master® JOBQ Selection For RESOLVE ----- Row 1 from 1
Command ==>                                         Scroll = PAGE

Set=> Job= ----- Date= 98/09/02 98.245 Time= 11:27 -----
S Job | Date |Time| Altdef | Wait Reason
-----
S STEPTST1 98245 1032 J00077 ** FAILED ** -> STEP02 U= 0999
***** Bottom of data *****

```

## RESOLUTION PROCESS

Before allowing symbolic substitution to be performed, Symbolic Substitution ensures that the requested job is: a) on today's schedule and b) its JCL Setup flag has still to be posted as 'completed'.

In performing symbolic substitution, the system will ensure that positionality is retained in any data images when replacing symbolic keywords. The JCL on which substitution has been performed is copied to the RESOLVED, or STAGING JCL PDS from where JOB/Master® will submit it to the input queue. JMBPOST is then called to post JCL SETUP as completed for this job and make it eligible for processing. The MASTER JCL PDS member is left completely unchanged (*i.e., it remains a master copy*).

In the example above six symbolics are used in the JCL for OSLO0001.

They are:

CLS	DSNIN1
S1CODE	VOLSER
S2CODE	POSTIND

The user must supply the appropriate values.

## AVAILABLE OPTIONS

Use PF keys or enter on the command line.

CONFIRM -	Causes the JCL member to be resolved with the value currently in the symbolic field. The JCL is then added to the RESOLVED JCL PDS ( <i>Default PF4</i> ).
CANCEL -	Ends the resolution process and returns you to the main menu. ( <i>Default PF5</i> ).
SETUP -	Causes the associated help dataset to be retrieved and presented for viewing.

**Option 2 - Reset**

Option 2 offers the user the ability to remove jobs from the RESOLVED JCL PDS after symbolic substitution and to re-post its JCL Setup flag in situations where perhaps, parameters were specified incorrectly, or additional information has been made available.

The system checks to see if JOB/Master® has already submitted the substituted JCL member from the RESOLVED JCL PDS and if so, a message is issued informing the user that the job cannot now be reset. Otherwise, the RESOLVED JCL PDS member is deleted and its JCL Setup flag is re-posted as 'Awaiting Completion' at the user's request.

```

-----JOB/Master® JOBQ Selection For Reset CI33DOWN-- Row 1 from 19
JM202 CI33DOWN-SYMBOL PDS MEMBER DELETED AND "JCL SETUP" RE-POSTED Scroll = PAGE

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02  98.245  Time= 12:18 -----
S | Job |T|Date |Time|      C u r r e n t   S t a t u s      |M St|Alt Def
- |-----|-----|-----|-----|-----|-----|-----|-----|
-- CI33DOWN      98245 1600 SUBMISSION RESET                      P P
-- CI33DOW1 Y 98245 1615 WAITING FOR SUBMIT TIME                  P P
-- CI33DOW2 Y 98245 1615 WAITING FOR SUBMIT TIME                  P P
-- CI33DOW3 Y 98245 1615 WAITING FOR SUBMIT TIME                  P P
-- CI33DOW4      98245 2100 WAITING FOR SUBMIT TIME                  P P
-- CI33DOW5 Y 98245 2115 WAITING ON TIME OR PREDECESSOR          P P

```

Notice the right side of Line #1.

CI33DOWN =SUBMISSION RESET

By pressing PF1 Line 3 displays exactly what has taken place.

"JM202" CI33DOWN - SYMBOL PDS MEMBER DELETED AND JCL  
SETUP REPOSTED.

This job is now waiting for the JCL to be resolved and will not be submitted until the manual task is completed. The job has been removed from the JOB RESET SELECTION SCREEN.

### Option 3 - Display

Option 3 allows users to display the JCL for a job in the RESOLVED JCL PDS after symbolic substitution has been performed. We can thereby provide both a method of viewing the values to which each of the symbolic keywords was resolved and also, the JCL deck that JOB/Master® will submit to the input queue when all schedule conditions are satisfied.

```

----- JOB/Master® JOBQ Selection For  DISPLAY ----- Row 1 from 6
Command ==>                                         Scroll = PAGE

Set=> Job= ----- Date= 98/09/02  98.245  Time= 14:02 -----
S   Job   | Date |Time| Altdef |          Wait Reason
-----|-----|-----|-----|-----
- CI33DOWN 98245  0746      * TRIG. ON HOLD BY EXEC REQ.   P
- CT33DOWN 98245  0746      * TRIG. ON HOLD BY EXEC REQ.   P
- STEPTST1 98245  1032      *FAILED JOB, REQUIRES RESUBMIT
- DTATNITE 98245  2200      DYNAMICALLY ADDED TO SCHEDULE
S STEPTST3 98246  0100      TRIGGERED W/TIME WAIT BY --> STEPTST1
- STEPTST8 98246  0100      TRIGGERED W/TIME WAIT BY --> STEPTST5
***** Bottom of data *****

```

### PROCEDURE

1. Select Option ==> 3.
2. Do not use a JOBNAME just press <ENTER> . A JOBQ listing of all jobs in the scheduling queue is presented.
3. Select the job desired by placing an S on the appropriate line. The above screen is displayed.





### Execution JCL to correct for Restart

```

File Edit Config Menu Utilities Compilers Test Help
#####
OPS.PROD.JCLLIB(STEPTST3) - 01.01 Columns 00001 00072
Command ==> Scroll ==> PAGE
***** Top of Data *****
000100 //STEPTST3 JOB (0000,0001),'MANTISSA/TEST',CLASS=A,MSGCLASS=E
000110 /** TEST FOR STEP TRIGGERING. TRIGGERED BY STEPTST1.STEP01
000120 /** RUNS AFTER MIDNIGHT
000130 /**-----*
000140 //JOBLIB DD DSN=OPS.V520.LOADLIB,DISP=SHR
000141 //*****S1CODE= Condition Code for STEP1*****
000150 //STEP1 EXEC PGM=LOOPDRV,PARM='001,0008,001' *
000160 //*****S2CODE= Condition Code for STEP2*****
000162 //STEP2 EXEC PGM=LOOPDRV,PARMS='001,0008,001' *
000163 //DD1 DD DUMMY,DSN=OPS.V520.INPUTDS1,VOL=338015,Y
000170 //*****
000171 /** *
000172 /** JCLMASTER - SYMBOLIC SUBSTITUTION *
000173 /** *
000174 //*****
000180 /** *
000181 /** JCL JOB STEPTST3 WAS GENERATED BY P390K ON 98.921 AT 7:09:53PM *
000182 /** *
000183 /** JCLMASTER SYMBOLIC VARIABLE(S) WERE RESOLVED AS FOLLOWS:- *
000184 /** (D) CLS ==> A *
000185 /** (R) S1CODE ==> 0012 *
000186 /** (R) S2CODE ==> 0008 *
000187 /** (R) DSN1 ==> INPUTDS1 *
000188 /** (R) VOLSER ==> 338015 *
000189 /** (R) POSTIND ==> Y *
000190 /** *
000191 /** (D) - JCL SUPPLIED DEFAULT SYMBOL VALUE WAS TAKEN. *
000192 /** (R) - SYMBOL VALUE WAS SUPPLIED OR OVERRIDEN AT RESOLUTION TIME.*
000200 /**
000210 //*****
***** Bottom of Data *****

```

3. Edit as needed.
4. Press PF3 to file the new JCL back on the RERUN PDS.
5. Return to the LQ display in job tracking and issue a restart(E) for the job. If the RERUN PDS is not the same dataset as the STAGING PDS, make sure the flag to use JCL from the RERUN PDS is set to “Y” on the restart panel.

### *Option 5 - Library*

Option 5 allows users to edit and make any changes necessary to members of the MASTER JCL PDS dataset. The MASTER JCL library for each user (*in this case the person charged with the responsibility of entering the values for the JOB*) is designated in the Interactive Security Facility control record for that user.



***Note that the MASTER JCL and RESOLVED JCL files may not be the same file. Your MASTER JCL PDS is protected, so that only selected users can update JCL within it.***

[illegible]

## PROCEDURE

1. Select Option ==> 5.
2. Enter a desired JOBNAME <ENTER>. The above screen is presented.
3. Edit as needed.
4. Press PF3 to save.

Option O invokes the same section of code within the JMMENU program as AUTO HELP. It is used to display the Operational Recovery Instructions (*i.e. how to restart a job in the event of a failure and what JCL restart and override parameters to use*). If the recovery instructions cannot be located in the Document dataset a message will be issued to that effect.

[illegible]

1. Select **OPTION** ==> **O**.
2. Enter desired **JOBNAME** and press <ENTER>. The above screen is presented.

The operational recovery instructions include such information as how to restart a job in the event of a failure and the correct usage of specific JCL restart and override parameters. Option ==> E will invoke ISPF edit mode for the member to make the desired changes to the operational recovery instructions.

```
File Edit Confirm Menu Utilities Compilers Test Help  

ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss  

EDIT OPS.PROD.JCLLIB(STEPTST3) - 01.01 Columns 00001 00072  

Command ==> Scroll ==> PAGE  

***** Top of Data *****  

==MSG> -Warning- The UNDO command is not available until you change  

==MSG> your edit profile using the command RECOVERY ON.  

000000 * These are the Restart/Rerun Instructions from the Document Dataset *  

000100 //STEPTST3 JOB ( ,)'MANTISSA/TEST',CLASS=A,MSGCLASS=E  

000110 /**-----*  

000120 /* TEST FOR STEP TRIGGERING. TRIGGERED BY STEPTST1.STEP01  

000121 /* RUNS AFTER MIDNIGHT  

000130 /**-----*  

000140 //JOB LIB DD DSN=OPS.V520.LOADLIB,DISP=SHR  

000150 //STEP01 EXEC PGM=LOOPDRV,PARM='001,0000,001'  

000160 /*  

***** Bottom of Data *****
```

1. Select **OPTION** ==> **E**.
2. Enter desired **JOBNAME** and press **<ENTER>**. The above screen is presented.
3. Edit as needed.
4. Press **PF3** to save.

### ***Option J - JCL SCAN***

Provided inside of the JCL/MASTER module is an option which will allow the use of a JCL Scanning Module from another Software Vendor. The JCL SCAN option allows the customer to Edit run JCL, turn control over to the scanning product, and then return to JCL/MASTER. There is an exit point provided.

#### **USER WRITTEN JCL SCAN INTERFACE EXIT**

1. Upon entering the J from the JOB/Master® Main Menu, the user establishes contact with the JCL substitution module of the OPS/Master® product.
2. The options presented on the JCL/MASTER Menu indicate #J for JCLSCAN. When this option is selected, the user is presented with the Scheduling Queue (*JMJOBQ*) for all jobs containing a Y in Manual Task #5.
3. Select the job you want by placing an S next to the job.
4. The JCL will be retrieved from any of the following: JMSUBPDS, or a USER PDS. At this point ISPF is called and any symbolics needing replacement will be presented with the appropriate screen so the symbolics can be replaced. An ISPF Temporary Dataset will hold the JCL during the “Resolve” phase of the JCL SCAN.
5. Once the user CONFIRMS (*PF4*) the action required, the JMSCANEX EXIT is called and control is given over to the JCL Scanning product. The Customer has the responsibility to write the exit and during the exit all features and functions will be part of the exit.
6. Upon completion of the JMSCANEX exit, control is returned to JCL/MASTER and the User is again presented with the JCL/MASTER Menu. A sample JMSCANEX is located in the INSTLIB. Contact the person who installed OPS/Master® for the location of this file.

#### **Technical Exit Information**

1. The Exit must be named JMSCANEX.
2. Coming from the ISPF Screen, the Variable Name ZTEMPN contains the DDNAME of the JCL file where the JCL is called from.
3. REG. 1 points to an address which points to the JOBNAME of the job being resolved.

#### **Special Notes**

1. The JCL SCAN option should be used when JCL has been altered from the original production version for making certain the new changes are correct.
2. The OVERHEAD of ALL JCL SCAN products is relatively high. Use in an ON-LINE Environment should be restricted as much as possible. Most all of these products have a Batch Mode for scanning JCL. The batch mode should be chosen over the On-line interactive method.
3. Once the JCL Scan phase has been completed, the JOB on the Scheduling queue (*JMLJOBQ*), must be resolved and staged for submission to JES at the scheduled time.

The JCL SCAN will not write back the Scanned JCL into any of the libraries. The module was not developed to perform this function.

### ***Option X - Exit***

Option ==> X will redisplay the JOB/Master® Primary Menu.

## **Utilizing Substitution**

### ***JCL or Data Replacement***

Symbolic substitution will replace any value within JCL or the data parms with the JCL through keyword resolution.




---

***All standard naming conventions required by JES must be present within the JCL.***

---

1. When a job is selected for processing, Symbolic Substitution verifies that the job is present on the JOB/Master® schedule Queue and the JCL SETUP flag (*Manual Task 5*) has not been posted “complete” (N). If these criteria are not satisfied, substitution will be terminated with an error message indicating the condition.
2. A Scan is made of the JCL member requested in either the JMSUBPDS (*Whatever DSN contains the JCL to be used*) or the staging PDS (*JMSTGPDS*) datasets for any symbolic keywords. Keywords are names up to 8 characters in length prefixed by an “&” (*ampersand*). JCL images are scanned from columns 1 through 69. Data images are scanned from columns 1 through 79. All JCL comment cards (/\*) are ignored. Temporary system dataset names such as those prefixed by “&&” (*double ampersand*), are ignored and treated as part of the JCL statement and not as a symbolic keyword.
3. Each keyword is located and added to a TSO ISPF table with a keyword status indicator of U (*Update*). The indicator is later displayed on the resolution screen. This indicator signifies to the User that a value is required and should be assigned to this field before the completion of the substitution. Substitution can not be completed until all fields have been assigned values.
4. JCL is scanned for “Default Control Records” or Default Values. Default Control Records are individual images of the Symbolic keywords preceded by an “&” and are placed prior to the JOBCARD. (*They do not have any “/” or “/\*” characters in columns 1 through 3*). If the control records are included anywhere after the Jobcard they are ignored.

Each control record contains a value associated with the symbolic keyword. This value is the default value which will be assigned to the symbolic. These control records are used when, in the majority of submissions, a keyword would be resolved to one particular value.

Example 1:

Symbolic Keyword = &USER

Default Record value is to be TRSJ

```
&USER=TRSJ
//JOB CARD JOB (0000,0000),etc.....,
// USER=&USER
```

It is possible to have Default Control Records reside in a standard PDS, which then can be used to maintain the default values without having to alter the production JCL or require manual resolution of the job via the symbolic substitution screens. The PDS must be the Master JCL PDS defined in the ISF facility for JCL/MASTER with a member called \$GLOBAL\$.

\$GLOBAL\$ contains all of the symbols and their associated values, for which you may wish to establish default values. The values contained within \$GLOBAL\$ will be used for all jobs unless they are overridden by the job-level default value. (*If the job-level JCL has a default value then the \$GLOBAL\$ value is overridden*).

5. The table of keywords created in Step 3 is now ready for the substitution value to be assigned and the update flag changed from a U (*update*) to a D (*default assigned*). Now when the values are displayed during the Resolve function, the screen indicates that the default value was included in the JCL and unless re-assigned by the USER, will be used in substituting its associated symbol keyword.
6. When the last image has been successfully processed, a series of environmental records are appended to the JCL in the form of JCL Message (*Comment*) cards (//\*).

These comment cards provide an Audit Trail of how the JCL was set up for this run. This is done to assist both in problem determination and in performing job recovery.

## Sample

```

BROWSE -- OPS.R512.JMSTGPDS(..(A8...)) - 01.01 ----- LINE 00000000 COL 001 080
COMMAND ==> [ ] SCROLL ==> CSR
***** TOP OF DATA *****
//OSL00001 JOB (0000,0001),'JOB/MAST',CLASS=A,MSGCLASS=E
//JOB LIB DD DSN=OPS.R5.LOADLIB,DISP=SHR
//***** S1CODE = CONDITION CODE FOR STEP1 *****
//STEP1 EXEC PGM=LOOPDRV,PARM='001,0012,001'
//***** S2CODE = CONDITION CODE FOR STEP1 *****
//STEP2 EXEC PGM=LOOPDRV,PARM='001,0008,001'
//DD1 DD DUMMY,DSN=INPUTDS1,VOL=338015,Y
//*****
//*
//* JCLMASTER - SYMBOLIC SUBSTITUTION ***
//*
//*****
//*
//* JCL JOB OSL00001 WAS GENERATED BY TRSJ ON 92.315 AT 7.09.53 PM ***
//*
//* JCLMASTER SYMBOLIC VARIABLE(S) WERE RESOLVED AS FOLLOWS:- ***
//*
//* (D) CLS ==> A ***
//* (R) S1CODE ==> 0012 ***
//* (R) S2CODE ==> 0008 ***
//* (R) DSNIN1 ==> INPUTDS1 ***
//* (R) VOLSER ==> 338015 ***
//* (R) POSTIND ==> Y ***
//*
//* (D) - JCL SUPPLIED DEFAULT SYMBOL VALUE WAS TAKEN. ***
//* (R) - SYMBOL VALUE WAS SUPPLIED OR OVERRIDEN AT RESOLUTION TIME. ***
//*
//*****
***** BOTTOM OF DATA *****

```

In the above example you see the values placed into the symbolic keywords. Not only are the keywords displayed but also the date and time, and the user who performed the resolve function.

### JCL Setup Flag

The JCL setup indicator in the 5th manual task is posted as complete when the user CONFIRMS (PF4) the substitution. The flag was originally set to a Y and now gets set to an N. If all dependencies have been satisfied for this job, the job is free to be submitted by the scheduler.

Symbolic Substitution has been written in this manner to allow users to replace one or more values in the table and repeat substitution as many times as is necessary to get those values correct. If the facility had been coded to flag JCL Setup immediately after the first substitution, the user, realizing one or more values had been incorrectly specified, would have had to re-post JCL setup on the JOBQ via option 2 (RESET) of the JCL/MASTER Primary Menu in order for the system to permit substitution to be performed again.



## Default Control Records

### Format

Control records must begin in column 1 and precede the JCL Jobcard. If not prefixed by an *ampersand* (&) AND undelimited by an equal sign (=), it is ignored.

Example:

```
&USER=XXXX
```

The keyword cannot exceed eight (8) characters in length and must be followed by the equal sign (=). It will be ignored if this condition does not exist. The value itself must not exceed fifty (50) characters. Any characters beyond the 50 will be ignored.

Example:

```
&USER=TRSJ ENTER USERID FOR RESPONSIBLE PERSON
```

A description is available to the User which appears on the update screen during the resolution process. The description is placed next to the symbolic variable name. The description is considered any character string found after the second blank column beyond the default variable entry. The use of a description can give valuable meaning to an esoteric variable name. The text on the default symbolic description cannot exceed 50 characters.

Example of Valid /Invalid Default Control Records:

```
-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5
&WORKDAYS=27                (Valid)
WORKDAYS=27                 (Invalid - Ignored, No &)
&WORKINGDAYS=7              (Invalid - Ignored, Too Long)
&WORKDAYS=                  (Invalid - Ignored, No Data)
&WORKDAYS= 27               (Invalid - Ignored, Space After =)

&WORKDAYS=27  Enter The Number Of Workdays in a Month
                (Valid Comment OK)

//JOBA JOB (ACCOUNT),CLASS=X,...etc...
&TEST=XXX  ENTER DATE OF TEST.
                (Invalid - Not Prior To Job Card).
```

After default values have been assigned, these values are displayed. Those keywords with no defaults are positioned at the top of the table, before those with values.

```

----- JCL/MASTER - Symbolic Substitution ----- ROW 1 OF 6
COMMAND ==>                                     SCROLL ==> PAGE

      Resolve job submission parameter(s) for job OSL00001 below.
      Alternate definition name ..... ==>
CONFIRM ==> Confirm Update          SETUP ==> Job Setup Information
CANCEL  ==> Return to Menu

      (D) Job Default  (R) Resolved Value  (U) Update Value  (V) Validity Error
-----

      (U) S1CODE ==> > <
      (U) S2CODE ==> > <
      (D) CLS ==> A <
      (D) DSNIN1 ==> XXXXXXXX <
      (D) VOLSER ==> YYYYYY <
      (D) POSTIND ==> Z <

```

The user can enter CANCEL (PF5) or END (PF3) to leave the table and return to the Primary Menu without performing substitution at any stage, whether they have begun to assign values to keywords or not. The SETUP function can be entered to display help information, relating to the substitution process being performed.

Initiation of symbolic substitution requires all keywords within the table to be resolved to some value. When the user overrides or replaces a value within the table, the keyword STATUS indicator will change from either (D) or (U) to (R) (*Resolved*), indicating that the value has been modified. After all keywords have been set to their required values, the user enters the CONFIRM command to make the request to Symbolic Substitution that the process now commences.

Symbolic Substitution inserts the keyword names and the value to which each was resolved. After the CONFIRM command is entered a check is made to ensure that all keywords have been assigned a non-blank value. Symbolic substitution for JCL (cols 1-69) and data (cols 1-79) images takes place.

### Global Substitution Variables

Default symbolic variables can be globally defined. A global default variable will be used for all jobs unless a job level variable is found. If a job level variable is found then it will override the global default. All the same rules apply to global defaults as do to job level defaults.

The global default variables are taken from the Master JCL PDS identified in the ISF Facility under JCLMASTR, and are identified by the member name \$GLOBAL\$. If the global member contains a variable for &CLASS=A, and the JCL member for the job also contains the &CLASS=C variable, the job level variable will be used as the default value, CLASS=C.

### Symbol Name Specification

Symbol names may be up to eight characters in length and must be a name (*i.e.*, start with A-Z) prefixed by an ‘&’ (*ampersand*). Symbolic Substitution will attempt to locate a delimiter at the end of any symbol name, and by that method, it knows the symbol name in full. Those delimiters are ‘&’, ‘¢’, ‘=’, ‘‘’, ‘.’’, ‘,’’, ‘”’, ‘(‘, ‘)’’, and ‘/’. For example:

```

-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6
//SYSIN  DD      DSN=&INDEX..SYSJOBS,DISP=(,CATLG,DELETE)
//SYSOUT DD      DSN=SYS1.PARMLIB(&MEMBER),DISP=SHR
//JOBA   JOB      (ACCOUNT),CLASS=&CLASS,MSGCLASS=&MSGCLASS
&DAYS&TIME

```

A ‘.’ (*Full Stop*) must be used to concatenate a keyword with any other value. For example, if you want the value of WORKED to be appended to the resolved value of &DAYS use a (*Full Stop*) as a delimiter between the &DAYS keyword and WORKED. (*See example*). Otherwise, Symbolic Substitution attempts to locate a delimiter for &DAY-SWORKED thinking that it is one complete keyword and will detect that its length is greater than eight characters and display an error.

```

-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6
&DAYSWORKED                               (incorrect - excessive length)
&DAYS.WORKED                             (correct)

```



**Any full stop delimiting a keyword will be removed when Symbolic Substitution substitutes its real value. If the value must retain a full stop after it, two full stops should be included. If only one Full Stop is used to delimit the &INDEX keyword (see next example) you can see the results are syntactically incorrect and the job would fail when &INDEX was resolved to the value of ‘SYS1’.**

All standard JCL naming conventions are applied to symbolic substitution.

```

-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6
//SYSIN  DD      DSN=&INDEX.PARMLIB,DISP=SHR
//SYSIN  DD      DSN=SYS1PARMLIB,DISP=SHR          *resolved*

```

This is how it should be specified:

```

-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6
//SYSIN  DD      DSN=&INDEX..PARMLIB,DISP=SHR
//SYSIN  DD      DSN=SYS1.PARMLIB,DISP=SHR          *resolved*

```

### Overflow of Card Images

A calculation is made to see whether the value will logically fit into the card image. The JCL substitution will fit logically into a JCL image between columns 1 through 72. The Data images are to fit into columns 1 through 79. If the data will fit into the images, then the values will be substituted and an overflow error will not occur. An overflow error will be displayed if the image, after being reassembled in the buffers, exceeds the logical image of either the JCL or Data Cards.

All keywords are maintained in the JCL images required for standard JCL functions. This positional integrity will be discussed in greater length later. JCL code is relatively free-

form in structure, therefore, following the DD, EXEC, JOB keyword values are replaced in position.

Symbolic Substitution makes a note of all keywords it replaces in any single image, so in the event of an “overflow” condition, it is able to display all of the symbolic keywords that may have caused the error. Symbolic Substitution will re-display the values on the table and indicate a V (*Validity*) error. It will require the user to reverify the data value provided. The user may re-specify or may CANCEL (*PF5*) this attempt to resolve this job. If a cancel is selected the user may then select another job for resolution. (*Refer to Common Errors in Substitution.*)

Positional integrity, that is to say the location data resides within an image, is always maintained by Symbolic Substitution after substitution is performed, regardless of the length of the resolved data. This has been done because in certain instances, application programs may need to be able to start fields at specific locations within the image.

Note how Symbolic Substitution would alter positional data and symbol keywords in the following example. In all instances, the position of the value “1111” remains unchanged.

```

-----1-----2-----3-----4-----5-----6
&RUNNO          1111
01              1111   (&RUNNO IS RESOLVED AS 01)
000001         1111   (&RUNNO IS RESOLVED AS 000001)
99999999999999991111 (&RUNNO IS RESOLVED AS
                      999999999999999999)

```

```

-----1-----2-----3-----4-----5-----6
&RUNNO &DATE      1111
01      93099      1111   (&RUNNO IS RESOLVED AS 01)
                      (&DATE  IS RESOLVED AS 93099)

```

```

-----1-----2-----3-----4-----5-----6
&RUNNO&DATE       1111
0193099           1111   (&RUNNO IS RESOLVED AS 01)
                      (&DATE  IS RESOLVED AS 93099)

```

```

-----1-----2-----3-----4-----5-----6
&RUNNO.&DATE       1111
0193099           1111   (&RUNNO IS RESOLVED AS 01)
                      (&DATE  IS RESOLVED AS 93099)

```

It is possible for a ‘keyword overflow’ to occur within the data image, rather than at the end of the image. For example, in resolving the keyword &RUNNO in the data image, Symbolic Substitution detects that by resolving it with its associated value it would either overlay another symbol keyword or other value in the image. The value is not replaced and the table is displayed, requesting the re-specification of that value and any others substituted in the same image prior to this error.

This check is made to avoid destroying the integrity of the data image by specifying a value with an excessive length. Here are some examples:

```

-----1-----2-----3-----4-----5-----6
&RUNNO &DATE      1111   **correct**
01      93099      1111   (&RUNNO IS RESOLVED AS 01)
                      (&DATE  IS RESOLVED AS 93099)

```

```

-----+-----1-----+-----2-----+-----3-----+-----4-----+-----5-----+-----6
&RUNNO &DATE          1111      **overflow**
0000000001           1111      (&RUNNO IS RESOLVED AS 0000000001)
                                (&DATE WOULD BE RESOLVED AS 93099)

```

In this example, Symbolic Substitution detects that it cannot insert the value of &DATE into its correct location without destroying the last three characters of the resolved value of &RUNNO.

Let's look at another situation in which overflow occurs. The user resolves a symbol keyword to a value whose length is such that in replacing it, the value will extend past column 80 of a data image or column 71 of a JCL image. When this condition arises, the table is re-displayed with the symbol keyword in error shown with a 'status' indicator of (V) (*Validity Check*). For example:

```

... +-----3-----+-----4-----+-----5-----+-----6-----+-----7-----+-----8
                                &RUNNO
(&RUNNO RESOLVED AS 01)          **correct** 01
(&RUNNO RESOLVED AS 0000000001) **overflow** 0000000001

```

It should be understood that users must adhere to the syntax rules that apply in the specification of symbol names in both JCL and resolve data images at all times. Although Symbolic Substitution will resolve the keywords, the results may be unpredictable.



***Symbolic Substitution can ensure that overflow within an image does not occur. However, it cannot validate the image after symbolic substitution has been performed. Only the user can verify the results that are expected.***

### User ISPF Panels

You may define and display your own ISPF customized panels. This is accomplished by placing a control statement in the default variable section of the jobs JCL member. The format of the statement is:

&UPANEL=X

where; X is the name of your ISPF panel.

The specified panel must be in an allocated ISPF ISPLIB data set, and all variable display and store functions are the user's responsibility. JCL/MASTER will perform the symbolic substitution for all variables which were entered by panel entry or specified as default values through default variable statements, either at the job level or global level.



***The function described below is only valid if you use file tailoring (ISF JCLMASTER).***

The user panel process may perform any editing or processing which is available to ISPF panel processing logic. If you wish to deny or cancel the substitution function you can set the variable MJCLERR to a non-blank value, e.g., 'ERROR' on the panel display. JCL/MASTER will terminate the substitution function with an appropriate error message. If you would like to send a custom message to the user it can be accomplished by setting

the variable JMJCLMSG to the text string you wish displayed. The length of the user control variables is:

JMJCLERR = 8 characters  
JMJCLMSG = 70 characters

### ***ISPF File Tailoring***

ISPF file tailoring can optionally be used to complete the JCL tailoring and substitution process. If this method is used the appropriate option must be turned on in the JCL/MAS-TER ISF default record.

If file tailoring is in effect, then the ISPSLIB dataset becomes the MASTER JCL PDS. All functions are performed just as in non-file tailoring mode. At symbolic substitution time, when the user enters CONFIRM, all variables are passed to ISPF file tailoring and the ISPSLIB member is used by ISPF to perform all JCL tailoring and substitution functions. Upon completion of the file tailoring process, JCL/MASTER will place the final JCL stream into the JOB/Master® STAGING PDS and post JCL setup as complete (*MT#5*).

The ISPSLIB dataset must contain the JCL member, and the member may contain JCL/MASTER default variable control statements.

## Automatic Variable Substitution (AVS)

You can invoke JCL substitution, through the use of JCL/MASTER, and have substitution variables processed and replaced without manual intervention. This function is invoked through the JOB/Master® program “JMJCMB”, and through the use of the TSO batch environment.

All JCL/MASTER resolve functions and options are available in the AVS environment. For a complete description of options, such as data set usage, file tailoring, etc., refer to the appropriate section of the manual.

### Batch Substitution Processing

The JMJCMB module can be used to scan the JOBQ and process all jobs which are waiting for the manual task, “JCL SETUP”. AVS will perform the following functions:

- Determine which jobs are candidates for substitution;
- Optionally assign a TSO userid to the AVS function;
- Set up and invoke the TSO batch environment;
- Log messages for actions taken.

Although all eligible jobs are processed for substitution, only those jobs which have ALL variables assigned by user defaults will be substituted and placed into the JOB/Master® STAGING PDS and the JCL setup flag will be turned off.

Any job which has an outstanding symbolic variable to be resolved by panel entry will not be processed.



*If a job has a user PDS defined, the JCL will be pulled from the User PDS for substitution.*

A sample batch job which can be used to invoke the AVS function is shown below and can be found in the distributed HLQ.OPS.INSTLIB in member JMJCMB. Apart from the JCL statements needed for AVS processing, the required JCL is the same as would be needed for execution of ISPF in a batch mode.

```
//JMJCMB JOB (1,1),CLASS=A,MSGCLASS=A
//JMJCMB EXEC PGM=JMJCMB,PARM='N,JM01,USERID',
// DYNAMNBR=25, REGION=3000K
//*---ALLOCATE ISPF LIBRARIES
//ISPPROF DD DSN=USERID.ISPF.ISPPROF,DISP=SHR
//ISPPLIB DD PANEL LIBRARIES
//ISPMLIB DD MESSAGE LIBRARIES
//ISPSLIB DD SKELETON LIBRARIES
//*---ALLOCATE ISPF TABLES IF REQUIRED
//ISPTLIB DD TABLE LIBRARY
//*---ALLOCATE DIALOG LIBRARIES
//ISPLLIB DD DSN=HLQ.OPS.ISPLLIB,DISP=SHR
//*---ADDITIONAL LIBRARIES
//*---ALLOCATE TMP DATASETS
//ISPLOG DD SYSOUT=*
//SYSTSPRT DD SYSOUT=*
//SYSTSIN DD DSN=&&TMPCTL,UNIT=SYSDA,
// SPACE=(CYL(1,1)),
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120)
```

Three parm field values can be supplied; all are optional. The first parm indicates whether to turn off the submit facility during the resolve process.

Y	- will turn off submit
N	- will leave submit on
T	- will perform a trace function.

The second parm is the JOB/Master® region associated with this task, the default is JM01. The third value is the userid to be used for processing the AVS function. The value must be eight (8) characters, space fill if necessary. If no userid is supplied then the normal userid selection process used by MVS/TSO is used.

The user ID, which is used for the AVS function, must have “Resolve” authority through either the ISF (*Interactive Security Facility*) or the user command exit. If Resolve authority is not indicated, no substitution will take place. The user ID, which is logged in the JCL stream at substitution time, will be the name of the batch job which invokes AVS. The job-name is used so that one can distinguish an AVS function from an interactive function for audit purposes.

If the ISP or ISR LOADLIB is dormant, remove the ISP/ISR from the DD statement within the JCL.

### ***AVS Audit Log***

In an AVS environment all informational and error messages are written to the ISPF log file.



## JCL Override/Date Substitution

### *Substitution Control*

JCL statements can be inserted into the JCL stream and selectively activated or deactivated by JOB/Master® during the submission of the job. This selection has multiple options and can be mixed with date value substitution. JCL substitution is not necessary to use Override/Date Substitution. It is a stand alone process in the job submission logic.

Special JCL statements invoke JCL override or DATE substitution for a job stream. The special JCL contain one of three actions:

1. Y -coded at the end of a selection indicates activation of that selection.
2. N -coded at the end of a selection indicates deactivation.
3. E -indicates ending the selection.

JOB/Master® deactivates JCL statements by placing a comment (\*) character after the // (*JCL statement indicator*) when indicated. Selection and actions are based on the following control statements and are based on either the current or the submit date.

For JCL overrides:

//*JMJCLY	indicates that the JCL following this statement should be activated for the date specified.
//*JMJCLN	indicates that the JCL following this statement should not be activated for the date specified.
//*JMJCLE	end the previous JMJCLY or JMJCLN processing for date substitution.

For DATE substitution:

//*JMSYMY	indicates that any statements following this statement should be checked for date value substitution and if found substituted accordingly for the date specified.
//*JMSYMN	indicates that any statements following this statement should not be checked for date value substitution for the date specified.
//*JMSYME	end the previous JMSYMY or JMSYMN processing.




---

*These selection control cards are removed from the JCL stream.*

---

### *Optional Parameters*

An option is a means of limiting a selection and action by date. Options may be further defined by indicating manual or automatic substitution activity. Manual activity is indicated by the presence of the statements in the JCL stream. Automatic activity is indicated by use of the extended options DSN and MEM. These extended options indicate to JOB/Master® where to look for the statements to be inserted.

If the options coded are not true for the date the job is being processed, the inserted statements will be commented out. Therefore, selections and options should be inserted for

actual substitution and not as comments in the job stream. It is not necessary to place selections in an ordered format. They may be used in either order.

The following substitution keyword options are available for the selection and action cards described.

<i>Option</i>	<i>Definition</i>
?   ONS =	Indicates the action based on schedule date.
@   ONC =	Indicates the action based on current (submit) date.
DSN =	The name of the dataset to find the substitution statements to be inserted.
MEM =	The member name in the dataset to find the substitution statements to be inserted.
#   FLS =	From schedule date.
%   FLC =	From current (submit) date.

The values for ONS, ONC, FLS, or FLC can be any of the following:

- The day of the week - MON, TUE, WED, THU, FRI, SAT, SUN. ONC=WED indicates the action is for Wednesday.
- A string specifying the days of the week where Y signifies YES and N signifies NO. The string starts with Monday and ends on Sunday. ONC=YNYNNY is a string indicating the action is for Monday, Wednesday, Thursday and Sunday.
- A date representation of MMDDYY or MMDDYYYY. Any portion of MM, DD, or YY can have a wild card entry designated by \*\*. ONC=12\*\*93 - specifies all current days in December of 1993. A generic year is specified by \*\* or \*\*\*\* depending on the # of positions wanted. Substitution is based on the “?” character for schedule date, “@” for current (submit) date, “#” for from schedule date, and “%” for from current (submit) date.

Date substitution can be done based on two date types, schedule date or current (submit) date. If date substitution is specified and the schedule date for the job is 12-10-93 and it is submitted on 12-11-93 the following substitution will take place.

?M-?D-?Y	12-10-93
@M-@D-@Y	12-11-93
?YDDD	93344
@YDDD	93345
#M#D#Y	12-10-93
%D%M%Y	11-12-93
?M-?D-?YYY	12-10-1993
?YYY-?M-?D	1993-12-10
?YYYDDD	1993344
?DD	344
@DY	SAT

## EXAMPLE 1: (Schedule Date April 15, 1993)

```
//JOB1      JOB      (1,1),'JOB RUN',CLASS=A,MSGCLASS=A
//S1        EXEC     PGM=PGM1
//DD1       DD      DSN=PROD.FILE,DISP=SHR
//*JMJCLY   ONS=WED   DSN=PROD.INCLUDE.JCL MEM=JOB1WED
//DD2       DD      DSN=PROD.FILE2,DISP=SHR
//*JMJCLE
//*JMSYMY
//SYSIN     DD      *
DATE=?M/?D/?Y JDATE=?YDDD
//*JMSYME
```

## Results of Example 1:

STMT-4 Include the JCL in member JOB1WED from PROD.INCLUDE.JCL, if the schedule day is Wednesday.

STMT-5 The DD2 statement will be left active if WED.

STMT-9 DATE= 04/15/93 JDATE=93105

If no ONS, ONC, FLS, or FLC keyword is used the default is all days. If no DSN keyword is used then only instream JCL is activated or deactivated. The ONS, ONC, FLS and FLC control statements can be placed in the input stream and cause the date substitution values to be incremented or decremented by a numeric value which can be from 1 to 3 digits. The format of the control statement is:

ONS+NNN	Use schedule date+NNN dayse .
ONS-NNN	Use schedule date-NNN days.
ONC+NNN	Use current system date+NNN days.
ONC-NNN	Use current system date-NNN days.
FLS-NNN	From schedule date-NNN days.
FLC-NNN	From current date-NNN days.
FLS+NNN	From schedule date+NNN days.
FLC+NNN	From current date+NNN days.

These statements can be placed prior to the date symbolic variable and will be in effect until the same type of control statement is encountered. Each statement must be on a line by itself following the //\*JMSYMY statement.

FLS-2 From Schedule Date minus 2 days.

ONS+2 Use Schedule Date plus 2 days.

## EXAMPLE 2:

```
//JOB1          JOB
//S1            EXEC  PGM=PGM1
//DD1          DD    DSN=PROD.FILE, DISP=SHR
//*JMSYMY  ONS=WED  WED=051593 93139
//SYSIN        DD *
DATE=?M/?D/?Y  JDATE=?YDDD
ONS+7
DATER=?M/?D/?Y  JDATR=?YDDD
ONS+00
```

## Results of Example 2:

DATE=05/15/93          JDATE=93135

DATER=05/22/93        JDATER=93142

ONS+00    Reset the ONS date variables to default value.

***Substitution Error Processing***

If an error is encountered during substitution control card processing, the control card in question will have positions 3-8 overlaid with a JCL substitution error code. This overlay action will cause a JCL error to occur for the job and insures that an erroneous condition will not cause inaccurate processing to occur. The following error codes are used.

<b><i>Error Code</i></b>	<b><i>Description</i></b>
//JMERR1	Invalid Keyword on Control Card.
//JMERR2	Invalid Data Set or member specified on the DSN or MEM option. The DSN or MEM could not be located.
//JMERR3	The value for ONS or ONC is not valid, i.e., MON,TUE,ETC.

***Controlling Execution Through JCL***

A triggered job stream can be controlled through inserted JCL statements in two ways.

1. A job can be removed from the stream causing the trigger sequence to be interrupted.

If you want to remove the job from execution and discontinue the trigger chain, place a `//*JMNOEXC` statement into the job's JCL member. When JOB/Master® encounters this control statement the job will not be submitted and it will be removed from the JOB/Master® schedule queue (*JOBQ*).

2. A job can be bypassed, placed in checkmode, causing that job not to execute, but the trigger chain to continue.

If you want to bypass execution of the job but continue with the next job in the trigger chain, place a `//*JMCHECK` statement into the job's JCL member. When JOB/Master® encounters this control statement the job will not be submitted and will be placed in checkmode status. The checkmode status will cause the jobs' triggered jobs to be submitted, continuing the trigger chain.

# Chapter 9

## Profile

## PROFILE Option

The **PROFILE** option is used to set function key assignments, set job card JCL parameters, and display and update global option settings.

[illegible]

Enter P (*Profile*) the OPTION ==> field of the JOB/Master® Primary Menu as shown above.

After selecting the PROFILE option, the JOB/Master® PROFILE UPDATE DISPLAY OPTIONS screen will be displayed, as shown below:

```

----- JOB/Master® Profile Update/Display Options -----
-
Command ==>

Option      Functional Description      User= P390K
-----
1           Set PFKS and Job Card JCL Parameters      Date= 98/09/02
2           Display Global Option Settings             98.245
3           Update Global Option Settings             Time= 14:14

End          Exit

The first time you enter JOB/Master®, Option 1 must be selected and "CONFIRMed"

```

## Setting PFKS and Job Card JCL Parameters

The JOB/Master® PROFILE PFK USAGE screen is used to confirm and modify the function key assignments. It is also used to enter the JCL that is used for schedule creation.

```

Command ==>

PFK01= HELP          PFK13= HELP
PFK02= SPLIT         PFK14= SPLIT
PFK03= END           PFK15= END
PFK04= CONFIRM       PFK16= CONFIRM
PFK05= CANCEL        PFK17= CANCEL
PFK06= CO            PFK18= CO
PFK07= UP            PFK19= UP
PFK08= DOWN          PFK20= DOWN
PFK09= SWAP          PFK21= SWAP
PFK10= SHIFT         PFK22= LEFT
PFK11= RIGHT         PFK23= RIGHT
PFK12= RETRIEVE      PFK24= >BACK

-----
JCL used for JOB/Master® "CRTE" schedule functions
-----
> //P390KA          JOB (0000,0000),'P390KA      \,CLASS=A,
> //  MSGCLASS=E,NOTIFY=P390K
> //*
> /*
CONFIRM = PF4      CANCEL= PF5    or type "CANCEL" or "CONFIRM" at command line

```

When entering JOB/Master® for the first time, you must confirm the program function key assignments. You can also make changes to the assignments. However, you must at least CONFIRM the default assignments.

Follow the steps below to confirm the default settings:

1. The JOB/Master® PROFILE PFK USAGE screen should be displayed.
2. You can alter the default assignments by typing over the existing assignments. If you specify an invalid assignment the key will not function.
3. To confirm the settings, press <PF4> (*CONFIRM*).

The function keys can be set to any desired assignments. Three keys have been defined for use with database creation (*job definition*):

PF4/PF16	Confirm ( <i>save</i> ) an ADD, UPDATE or DELETE.
PF5/PF17	Cancel the current function.
PF24	Go to previous job definition screen.

Enter the JCL that will be used for JOB/Master® schedule creation and online report functions in the area at the bottom of the screen, as shown in the sample screen above.

## Display Global Option Settings

This JOB/Master® Profile feature allows users to view the global option settings. These settings are effective for all users, unless alternate settings were defined for specific user ID's. This option is accessed by selecting option 2 on the JOB/Master® PROFILE UPDATE/DISPLAY OPTIONS screen. This option is for display only. If changes need to be made to the global settings, select UPDATE GLOBAL OPTION SETTING from the JOB/Master® PROFILE UPDATE/DISPLAY OPTIONS screen.

## Update Global Option Settings

The GLOBAL OPTIONS SCREEN allows any authorized user to specify settings that will be effective for all users, unless alternate settings are defined for specific User IDs. Global Options can be changed only by a user who is authorized under the security facility (*ISF*).

When OPTION 3 is selected, the same screen is displayed as when you select DISPLAY GLOBAL OPTION SETTINGS. Refer to the description of DISPLAY GLOBAL OPTION SETTINGS for detailed information on each field.

When you select the display or update option, the following screen is displayed, showing all current global option settings:

```

U----- JOB/Master® Global Scheduling Options -----
Command ==>

                                Definition Last Updated by P390W   on 98231   at 1125
-----
Run Mode (Prod/Check) ==> P (P,C)   No MTSK msgs on Mode(C) ==> N (Y,N)
Migrate to JMRERUN PDS ==> N (Y,N)   CPU Route User Resource ==> N (Y,N)
Require Zero C.C.      ==> Y (Y,N)   Zero Time is End of Day ==> N (Y,N)
Trigger Undefined Jobs ==> Y (Y,N)   Set JCL Setup on Failure ==> Y (Y,N)
Verify Tape Drives     ==> Y (Y,N)   Send with "LOGON"       ==> Y (Y,N)
Compress JMSUBPDS Schd ==> Y (Y,N)   Record Step Detail Stats ==> Y (Y,N)
Default Message Group ==>           Dow Literal/ Sun - Sat ==> UMTWHFS
Use Logical Sched Day  ==> Y (Y,N)   Resolve DSN Contention ==> Y (Y,N)
Release TYPRUN=HOLD    ==> Y (Y,N)   Default Userid on Failure==>
PDS for "JCMCDEXT" Load==>

-----
Mn Task1=> DATA ENTRY      ID=> D E   M Task2=> CARD INPUT      ID=> C I
Mn Task3=> TAPE INPUT        ID=> T I   M Task4=> CONSOLE ROUTED   ID=> C R
Mn Task5=> JCL SETUP         ID=> J S

Next Schedule Creation Date ==> 98246      Time => 0600
Retention Days for History Records => 07      Run JCL => 07
History File Capacity : 034799   Last Used : 009310
Confirm = PF4      Cancel= PF5      or type "CANCEL" or "CONFIRM" at Command
  
```

## RUN MODE

If you enter P in this field, the mode can be overridden by entering C at the system or job level. Global Check Mode (C) cannot be overridden at the job level.

- P: Selects Production Mode (*all executable jobs will actually execute*).
- C: Selects Check Mode (*all jobs will simulate execution*). This specification will allow you to test JOB/Master®.

## MIGRATE FROM DAILY PDS

- Y: Enter if the JCL is to be removed from the individual daily Submit PDS, and migrated to the Rerun PDS at job submission.
- N: Enter if the JCL is not to be removed from the individual daily Submit PDS.

## REQUIRE ZERO C.C.

- Y: Specify if a condition code equal to zero is required for job steps which have not been defined to the database (*do not have OPS/Master® job definitions*). If the condition code is not zero, JOB/Master® will consider the job as ABENDED.
- N: Specify if a condition code equal to zero is not required.



### TRIGGER UNDEFINED JOBS

Suppose an update job (JOBA) completes and is setup to trigger 20 report jobs (JOB 1-20). Jobs 1 through 20 do not have to be defined to JOB/Master® in order to be triggered.

Y: Indicates to JOB/Master® all jobs which are triggered and undefined to the JOB/Master® database will be eligible for submission by JOB/Master®.

N: Will not allow undefined jobs to be triggered.

### VERIFY TAPE DRIVES

Y: Tape drive usage is to be used as a dependency requirement for submitting jobs. If the job definition indicates a specific number of drives are required the system will submit the job only if the number of drives available at least equals the number specified.

N: Jobs should be submitted regardless of number of drives available at the time of submission.

### COMPRESS JMSUBPDS SCHD

Y: Compression of the PDS allocated in the DD statement for JMSUBPDS will take place during the schedule run.

N: The PDS pointed to by the JMSUBPDS DD statement during schedule creation will not be compressed.




---

***This function elongates the schedule creation run.***

---

### DEFAULT MESSAGE GROUP

Specify the name (*up to 8 alphanumeric characters*) of the desired group of messages. The message group is defined on the MESSAGE GROUP SCREEN. The message group is used to specify the users who will receive specific groups of messages and when they will receive those messages.

### USE LOGICAL SCHED DAY

For example, if you create your schedule for 08:00 to 08:00 on Monday then a job which has a schedule time of 3:00 AM Tuesday will be scheduled because 24:00 to 08:00 on Tuesday will be treated as Monday. Any jobs falling into that time range will be scheduled if their scheduling criteria is Monday.

Y: The day used for scheduling will be treated as logical not physical.

N: Invokes a Physical Day Scheduling Option. Jobs are defined and scheduled using 0000 to 0000 (*physical 24-hour period*). Physical Day also links to the ZERO TIME IS EOD described later.

### RELEASE TYPRUN=HOLD

Y: A job which has a TYPRUN=HOLD on the JOBCARD will be

released to execute when it is submitted to JES by JOB/Master®. Release is through the MVS command \$A 'JOBNAME'.

N: Will force the JOB to be manually released from JES by operator.

#### PDS FOR "JMCMDEXT" LOAD

Specify the name of the library in which OPS/Master® should look for JMCMDEXT. If you enter an asterisk '\*' in this field, the system will look for JMCMDEXT in the regular MVS library search order. This module is the security EXIT for interface to the various security packages.

#### NO MTSK MSGS ON MODE(C)

Y: No manual task messages will be sent for jobs which are in check mode.

N: Manual task messages will be sent if check mode processing is active.

#### CPU ROUTE USER RESOURCE

Y: To force jobs to be submitted by JOB/Master® only to the processor to which the resource name is assigned. JOB/Master builds a CPU affinity statement.

N: If the jobs can be submitted by JOB/Master® to any processor. JOB/Master does not build a CPU affinity statement.

#### ZERO TIME IS EOD

Y: If a submit time of 00:00 should be treated as 23:59 (*one minute before the end of the current day*).

N: If a submit time of 00:00 should be treated as 00:01 (*one second after midnight*). This designation is ignored if logical schedule day is used (*Y in USE LOGICAL SCHED DAY*).

#### SET JCL SETUP ON FAILURE

Y: Sets the job queue's JCL setup task (*manual task #5*) to Y in the event of job failure. This would be equivalent to entering Y in the Manual Task #5 field on the job definition screen.

N: Avoids setting the job queue's JCL setup task to Y if the job abends.

#### SEND WITH "LOGON"

Y: Saves the JM02 (*Job Failed*) Message if the user is not logged in. The message would then be displayed upon login.

N: System will attempt to send the JM02 message. If the user is not logged in, the user will not know the message was sent.

#### RECORD STEP DETAIL STATS

Y: Step statistics will be recorded in the History file.

N: Step statistics will not be recorded for defined steps.

## DOW LITERAL/ SUN - SAT

This stands for day of week literal. Specify a single letter that represents each day of the week. The default is UMTWHFS, where U=Sunday, M=Monday, T=Tuesday, W=Wednesday, H=Thursday, F=Friday, and S=Saturday. These literals are used when displaying calendars. They indicate the various processing days. You may use these or assign your own.

## RESOLVE DSN CONTENTION

- Y: JOB/Master® will update the negative dependency list for job on the database record as it encounters waiting on dataset conditions. (*The CONSOLE/Master® module is required for update. See the discussion about activating Dataset Contention in the Introduction. If not installed the dataset contention message appears on the History Log.*)
- N: One of two messages (*JM12 or JM18*) listing the conflicts, will be produced in the History file.

## DEFAULT USERID ON FAILURE

TSO USERID to be notified on all job failures if none are specified at job level.

## MAN. TASK1 - 5

Manual task flags can be specified for any desired manual operation. These flags are set at the time the jobs are defined using the job definition screen. If the user specified (*in the job definition*) that a manual task (*data entry, for example*) is required, the system will hold the job until the manual task is completed and signed off (*in job tracking*). The fields on this screen are used to assign names (*that will be shown on the job definition screen*) to the manual tasks. The defaults are:

Data Entry (*task #1*),  
Card Input (*task #2*)  
Disk Input (*task #3*)  
Tape Input (*task #4*)  
JCL Setup (*task #5*).



***JCL Setup will require task #5. The title may be changed, but the function will be for setup of JCL.***

## ID

The 2 position mnemonics are abbreviations for the manual task names that are shown on the job tracking screen. These columns show the status of manual tasks for the jobs that are listed on the job tracking screen. This screen is also used to sign off on manual tasks (*telling the system that the task is complete*). The default mnemonics are:

DE (*Data Entry*)  
CI (*Card Input*)  
DI (*Disk Input*)  
TI (*Tape Input*)  
JS (*JCL Setup*)

#### NEXT SCHEDULE CREATION DATE ... TIME

The date and time of the next schedule creation cycle can be updated here. This field should not be altered unless you have run an INCLUDE SCHEDULE for a previous OR future day and want to reset the schedule date.

#### RETENTION DAYS FOR HISTORY RECORDS

Enter the number of days of history statistics that can be selected using the DH (*Display History*) command. The number of days selected should be set based on the history file size. If the number of days selected is large and the file size is small, the wrap around feature of this file can cause older days to be overlaid. (*Refer to the Installation Guide for a formula to check the History file size.*)

#### RUN JCL

Enter the number of days older than the schedule date that JCL should be kept in the STAGING PDS. File should be large enough to contain the number of jobs in relation to the number of days being kept.

#### HISTORY FILE CAPACITY

The number of History records is determined by space allocation given to the file JMHIST (*Refer to the Installation Guide for more information*).

#### LAST USED

The last record used in the history file. The number of records allowed in the history file is determined by the number specified in HISTORY FILE CAPACITY.

# Chapter 10

---

## Data Base Detail Reports

---

### Introduction

JOB/Master® provides a report facility which permits the user to generate a wide variety of reports. This facility, provides the information in pre-formatted reports which range from data base detail information to cross reference reports, as well as audit trail history and job execution history.

While all information about a jobs dependency and scheduling criteria is available on-line, some information, such as cross referenced information about calendars, etc. can be a valuable tool when researching schedule modifications. Additionally, the historical reports will give hard copy documentation about what occurred, either from a job execution point of view, or, from a schedule processing and alteration view through the audit log report.

JOB/Master® provides the user with an ISPF (*Interactive System Productivity Facility*) dialog to facilitate the use of report selection. The panel below shows the report menu panel from which the report selections are processed. It is selected by entering OPTION ==> R in the JOB/Master® Primary Menu as shown.

[illegible]

The report selection panel functions as a toggle switch for report selection. When a report is selected by specifying the number in the `OPTION==>` field as shown below, the selection flag next to the report number will be set to Y.

```

----- JOB/Master® Report Selection -----
-
COMMAND ==>

      ID: JM01      User = P390K      Date = 98/09/18 - 98.261   Time = 16:42
-----
Option = 10

                        Database Detail Reports
                        -----
      Y  10. Job/Step definitions          N  11. Calendar definitions
      N  12. Process Keyword def          N  13. Negative/Corequisite def
      N  14. Message definitions          N  15. Group definitions

                        Database Xref Reports
                        -----
      N  20. Calendar to job/Process Keyword  N  21. Process Keyword to Job
      N  22. Negative/Corequisite to job      N  23. Messages to Job/System
      N  24. Groups to Job/System             N  25. Job flow

                        History Recap Reports
                        -----
      N  30. Job Run/Audit Trail

Enter CONFIRM to process selections.

```

If, after selecting a report, you decide you do not want to produce that report, select it again and the report flag will be turned off. Similarly, to request the report again, select the report number once more, and the report selection will again be processed.

After all selections have been made, you must enter **CONFIRM** in order to generate the JCL for report processing. .

```

----- JOB/Master® Data Base Detail Report Selection --Row 1 to 2 of 2
Command ==>                                     Scroll ==> PAGE

      System      Job      Job/Net      Level Step
-----
Select> _____
-----
SELECTION =>      -   SYS=JMPOST      LEVEL=1  STEP=N
SELECTION =>      -   JOB=JMPOSTB1     LEVEL=1  STEP=N
***** Bottom of data *****

```

You now have the option to submit the job:

[illegible]

Since some of the report selections have related secondary selection items each will be discussed in further detail in this section. Once in the secondary panel, enter parameters (names may be specified generically) and press PF3 to exit back to the report selection menu.

## Definitions

### *Job/Step Definitions (10)*

This report will produce detail information about the job definition. If no secondary selection is made, then all job entries on the data base will be selected. When this report is selected a secondary selection panel is displayed as shown below.

```

----- JOB/Master® Data Base Detail Report Selection Row 1 to 3 of 3
Command ==>                                     Scroll ==> PAGE

      System      Job      Job/Net      Level  Step
-----
Select> -----
SELECTION =>      SYS=JMPURGE      LEVEL=1      STEP=N
SELECTION =>      -  SYS=TYPEHOLD      LEVEL=1      STEP=N
SELECTION =>      -  SYS=STEPTTEST      LEVEL=1      STEP=N
***** Bottom of data *****

```

The user has the option to request that only specific jobs, jobs related to systems, or, jobs related to job/networks, be selected for reporting. This is accomplished by entering the appropriate entry name in the selection area. Additional criteria can be specified for each entry.

If LEVEL=1 is requested, the default, only the first four dependencies for a job definition will be reported. This is equivalent to panel 1 of the job definition display. A level 2 request will report all dependencies and result in a 2- page report for each job.

If STEP=N is requested, the default, then step definitions will not be reported for the jobs selected.

You may remove a selected item from the selection list by placing a D next to the entry and pressing enter.

Reports 11 through 15 have no secondary selection options and will produce reports for the indicated category. All definitions for the category will be reported.



***Calendar Definitions (11)***

Calendar data base definitions. The report will show each day defined for the year by month and day. It will also list each Julian Day defined.

***Process Keyword Definitions (12)***

Process Keyword data base definitions.

***Negative/Corequisite Dependencies (13)***

Negative/Corequisite dependency data base definitions.

***Message Definitions (14)***

Message data base definitions.

***Group Definitions (15)***

Group data base definitions.

## Data Base XREF Reports

When any cross reference report is requested a secondary selection panel is displayed as shown below. You may use this panel to classify the report to a specific data base entry. If no selections are made from this panel then all entries for that entry type will be cross referenced. The type of report being processed can be the selection header.

You may remove a selected item from the selection list by placing a D next to the item and pressing enter.

```

----- JOB/Master® Data Base XREF Report Selection ----- Row 1 from 3
Command ==>                                           Scroll ==> PAGE

Select entry name for CALEN= > _____
-----
Selection =>      CALEN=  TSTPRED6
Selection =>  D   CALEN=  SELECT01
Selection =>      CALEN=  KEYTABLE
***** Bottom of data *****

```

### ***Calendar to Job/Process Keyword (20)***

This report will cross reference a Calendar, or all Calendars to the Job and Process Keyword definitions which use them.

### ***Process Keyword to Job (21)***

Report will cross reference a Process Keyword Definition, or all Process Keyword Definitions to the jobs which use them.



***Only Process Keyword Definitions are evaluated for inclusion in the report.***

### ***Negative/Corequisite Dependencies to Job (22)***

Report will cross reference a Negative/Corequisite Definition, or all Negative/Corequisite Definitions to the jobs which use them.



***Only Negative/Corequisite Definitions are evaluated for inclusion in the report.***

**Message to Job/System (23)**

A cross reference report of a Message Definition, or all Message Definitions to the jobs which use them will be created.




---

*Only Message Definitions are evaluated for inclusion in the report.*

---

**Groups to Job/System (24)**

Option 24 will create a reference report of a Group Definition, or all Group definitions to the jobs which use them.

**Job Flow (25)**

This report will produce a trigger stream flow and predecessor cross reference report. When requested a secondary panel of options will be displayed, shown below.

The additional criteria which can be selected are SYSTEM, JOB, and report format. If system is entered then all jobs in that system will be selected. If JOB is entered then that job and its predecessors and triggers will only be selected.

SHORT=Y, the default will produce a report which produces 1 line for each applicable job found. Part 1 consists of a cross-reference which shows each page number and type of reference for this job. The 3 types are (J)ob, (P)redecessor, and (T)rigger. For example: "JOB XYZ 5(J) 9(T) 12(P)" identifies that JOB XYZ is referenced by a jobstream on Page-5, as a trigger on Page-9, and as a predecessor on Page-12.

Press PF3 to return back to the initial selection panel.

```

----- JOB/Master® Job Flow - History Selection -----
Command ==>

Job Flow Selection:      (Valid only if report selection is 25)
System=> _____ Job=> _____ Short=> Y      N

-----
Recap Selection:        (Valid only if report selection is 30)
From=> 00000 To=> 00000 Audit Log=> Y System=> *****

1. Successfully completed jobs=> N 2. Failed jobs => N
3. Jobs scheduled, not run => N 4. Jobs run, not scheduled => N
5. Completion code summary => N 6. Completion code by system=> N

Optional Sort Selection for reports 1 - 4
Sort - Key1=> 10 Key2=> 10 Key3=> 11 Key4=> 01

01 Jobname      02 End Time      03 System ID
04 Job/Network  05 System Name   06 Schedule Date
07 Schedule Time 08 Reader Date  09 Reader Time
10 Start Date    11 Start Time   12 End Date
13 Job Number    14 Condition Code 15 CPU Time
  
```

## History Recap Reports

### *Job Run/Audit Trail (30)*

This report will allow you to select job run statistics, and optionally print the audit log. The parameters specified for this report are entered on the secondary panel which is displayed when the report is selected.

The start and end date can be entered. If either is left as zero, JOB/Master® will select history data which covers the current system date for the TO= parameter and one day previous for the FROM= parameter.

SYSTEM can be entered, which will cause only the jobs associated with that system name, as defined on the data base to be reported.

AUDIT LOG=Y will produce the audit log report for the same date period as the job run report. AUDIT LOG=N will not produce the log report. Press PF3 to return back to the initial selection panel.

```

----- JOB/Master@ Job Flow - History Selection -----
Command ==>

Job Flow Selection:      (Valid only if report selection is 25)
System=> _____ Job=> _____ Short=> Y      N

-----
Recap Selection:        (Valid only if report selection is 30)
From=> 98251 To=> 98252 Audit Log=> Y System=> *****

1. Successfully completed jobs=> Y  2. Failed jobs => Y
3. Jobs scheduled, not run => Y    4. Jobs run, not scheduled => Y
5. Completion code summary => Y    6. Completion code by system=> Y

Optional Sort Selection for reports 1 - 4
Sort - Key1=> 10 Key2=> 10 Key3=> 11 Key4=> 01

01 Jobname      02 End Time      03 System ID
04 Job/Network  05 System Name   06 Schedule Date
07 Schedule Time 08 Reader Date  09 Reader Time
10 Start Date   11 Start Time   12 End Date
13 Job Number   14 Condition Code 15 CPU Time
  
```

## Data Base Reporting by Selection

JOB/Master® provides a set of batch programs which allows you to dynamically build a report based upon information specified in a series of JCL input cards. This capability is provided for both Job definitions and Dataset definitions in the JOB/Master® Database.

These reports differ from the XREF reports in several ways. The user can specify what information is to be shown on the report, exactly what records to report on, and what order the report is to be sorted. The basic idea is "You get what you ask for."

### *Making the Database Selection*

JOB/Master® provides a batch program, JMJOB RPT, to generate reports based on Job Definitions and JMDSNRPT, to generate reports based on Dataset Definitions. The concept is the same for both report programs. The only difference is the field-names which are specified in the CARDIN input file. Tables 10.1 and 10.2 describe the field-names to be used in the selection and sorting process for JMJOB RPT and JMDSNRPT, respectively. For now, we will focus on the basic format of the input record statement.

```
//CARDIN DD *
FIELD-NAME OPERATOR VALUE CONJUNCTION
FIELD-NAME OPERATOR VALUE CONJUNCTION
FIELD-NAME OPERATOR VALUE CONJUNCTION
.
.
.
/*
```



*Any number of spaces can separate the four fields in the record for readability.*

#### FIELD-NAME

Any database definition field-name listed in Tables 10.1 and 10.2 can be used in the selection process. As a general rule, the Names are close to what is on the online definition screens and must begin in column-1.

#### OPERATOR

Valid operators are =, <, and >.

#### VALUE

Any value up to the length of the input record can be entered. This may be left blank.

#### EXAMPLE:

Report of jobs with no process keyword definition

```
KEYWDEF =
```

An asterisk (\*) can be used to show additional fields on the report (*other than what already shows*), without placing a restricting value.  
EXAMPLE:

Report deadline cancel jobs and show the wait time.

```
DEADCAN = Y
WAIT      = *
```

Wild-cards are permitted. You may want to see a report of jobs that begin with a specific character string.

EXAMPLE:

Report all jobs which begin with the letters ACCTG.  
 JOBNAME = ACCTG\*

### CONJUNCTION

A conjunction is used to combine the logic of two or more field-names. Valid conjunctions are AND, OR and EXC. AND is the default conjunction which does not have to be specified. The AND conjunction allows multiple fields/conditions to be grouped together as discussed previously, but its use must be logical. For example, it is not logical to specify:

SYSTEM = ENVSYS AND  
 SYSTEM = PAYSYS

... because a job can only belong to one system. The report program will run, but no jobs will be selected.

There are fields which have multiple values in their database definition. We call these fields Multiple Value Fields and they are marked in Tables 10.1 and 10.2 under the "Multi-Value" column. An example would be TRIG, since a job can have multiple triggers defined. Here are just a few examples.

EXAMPLE:

Report jobs which belong to system ENVSYS which uses calendar SPECIAL and have a runmode of P(*production*).

SYSTEM = ENVSYS  
 CALENDAR= SPECIAL  
 RUNMODE = P

EXAMPLE:

Report jobs belonging to either system ENVSYS or PAYSYS.

SYSTEM = ENVSYS OR  
 SYSTEM = PAYSYS

EXAMPLE:

Report of jobs that do not run select mode (*RUNMODE=S*). Because there is no "not equal" operator, we will need to combine two statements.

RUNMODE < S OR  
 RUNMODE > S

EXAMPLE:

Report jobs using any tape drive but whose tape drive usage is not updated.

TAPE1 > 0 OR  
 TAPE2 > 0 AND  
 UPDUSAGE = N OR  
 UPDUSAGE =

EXC (*exclusive*) can be used in the conjunction position but is not used to combine the logic for two fields. The exclusive option may only be used with multiple value fields (*Tables 10.1 and 10.2*). The function of EXC is to provide for

these multi-value fields, a means for database selection based upon only one value being true.

GIVEN:

JOB A triggers JOB1, JOB2, and JOB3  
JOB B triggers JOB2

EXAMPLE:

Report jobs which trigger JOB2. The following statement will include JOB A and JOB B in the report because it is true, JOB2 is a trigger of both JOB A and JOB B.

TRIG = JOB2

EXAMPLE:

Report jobs which only trigger JOB2. The following statement, with the EXC conjunction, will include JOB B in the report (*JOB A is not included because it contains other triggers*).

TRIG = JOB2EXC

### Setting options

Optionally, the report can be sorted on any one or two database field-names. To accomplish this requires an additional input card(s). The format of this input card statement is as follows:

**//CARDIN DD \*  
SORT-OPTION=FIELD-NAME**

#### SORT OPTION

This parameter should contain the value 'SORT BY' or 'GROUP BY'.

'SORT BY' can be used alone or in conjunction with an input card for 'GROUP BY'. However, if 'GROUP BY' is used, 'SORT BY' must also be used. 'GROUP BY' is issued as the high level sort key.

EXAMPLE:

Report of all jobs sorted by JOBNAME.

SORT BY = JOBNAME  
JOBNAME = \*

EXAMPLE:

Report of all triggered jobs sorted by JOBNAME within RUNMODE. Also, display the triggering job.

GROUP BY = RUNMODE  
SORT BY = JOBNAME  
TRIGJOB = Y  
TRIGBY = \*  
RUNMODE = \* (To print RUNMODE on report)

#### FIELD NAME

This can be any database field in Table 10.1 or 10.2, except the ones flagged as "multi-value".

### Sample Job Definition Report

JMJOB RPT is the batch program that generates reports for the Job Definition fields. The sample JCL below will create a report listing all job definitions meeting the following criteria:

1. The jobs that run in production mode.
2. The jobs that are externally submitted.
3. The report will sort on two fields, system name and job name. That is, all jobs belonging to a system will be grouped together and sorted, but jobs belonging to system BACKUP will show on the report before jobs belonging to system PAY-ROLL.

```
//JMJOB RPT JOB (0000,0001), 'JOBMASTER',
//                      CLASS=A,MSGCLASS=X
//*-----*
//* JMDB / JOB LEVEL QUERY REPORT
//*
//*  CHANGE VALUES: HLQ.OPS|TO CONFORM
//*  CHANGE VALUES: VSMHLQ |TO SITE NAMING STANDARDS
//*-----*
//JOB LIB DD DISP=SHR,DSN=HLQ.OPS.LOADLIB
//*
//STEP1 EXEC PGM=JMJOB RPT
//REPORT DD SYSOUT=*
//SYSOUT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//JMDB DD DISP=SHR,DSN=VSMHLQ.JMDB
//JMREPORT DD DSN=&TMP,DISP=(,PASS),UNIT=SYSDA,
//              SPACE=(CYL,(40,5)),
//              DCB=(RECFM=FB,
//              LRECL=2219,BLKSIZE=2219)
//CARDIN DD *
GROUP BY = SYSTEM
SORT BY = JOBNAME
RUNMODE = P OR
RUNMODE =
EXTSUB = Y
/*
//
```

### Job Definition Fields

Below is a Table of Job Definition fields to be used in the CARDIN statements for JMJOB RPT. These fields are directly related to the fields used in the Database Creation screens for job definitions.

<i>Job Definition Fields Table 10.1</i>		
<i>FIELD-NAME</i>	<i>DESCRIPTION</i>	<i>MULTI-VALUE</i>
JOBNAME	Jobname	
ALTNAME	Alternate Name For	



<b><i>Job Definition Fields    Table 10.1</i></b>		
SYSTEM	System	
PDSMEM	PDS Member	
SUBPDS	Submit PDS	
TRIGJOB	Trigger Job (Y/N)	
TRIGBY	Triggered By	
SUBTYP	Submit Type	
RESNAME1	Resource Name1	
RESNAME2	Resource Name2	
SCHEDNET	Schedule/Network	
CALENDAR	Calendar	
EXCAL1	Exception Calendar1	
EXCAL2	Exception Calendar2	
KEYWDEF	Keyword Definition	
PRIORITY	Priority	
LIBTYP	Library Type	
NEGDEF	Negative/Corequisite Definition	
TAPEMODEL1	Tape model number (ie 3480)	
TAPE1	Number of "TAPEMODEL1" tapes	
TAPEMODEL2	Tape model number (ie 3490)	
TAPE2	Number of "TAPEMODEL2" tapes	
UPDUSAGE	Update Tape Drive Usage	
RUNS	Number of Runs	
BETWNRUNS	Minutes Between Runs	
STIME	Start Submit Time	Y
ETIME	End Submit Time	Y
PRED	Predecessor	Y
PREDTYP	Predecessor Type	Y
NEGDEP	Negative Dependency	Y
COREQDEP	Corequisite Dependency	Y

<b>Job Definition Fields    Table 10.1</b>		
PKWD	Process Keyword	Y
NPKWD	Non-Process Keyword	Y
TRIG	Trigger Jobname	Y
TSUBTYP	Trigger Submit Type	Y
TRIGOPCD	Trigger OP CODE	Y
TRIGCC	Trigger Condition Code	Y
TRIGTYP	Trigger Type	Y
RUNMODE	Runmode	
SCHEDBEFORE	Do Not Schedule Before (YYDDD)	
SCHEDAFTER	Do Not Schedule After (YYDDD)	
EXTSUB	External Submit	
DEADCAN	Deadline Cancel	
WAIT	Wait Minutes Before Dead-line Cancel	
FAILUSERID	Job Fail UserID	
JM39MSG	Send Fail/JM39 Message	
MSGDEF	Message Definition	
MSGGROUP	Message Group	
REPAIR	Repair Jobname	
RSUBTYP	Repair Job Submit Type	
MTASK1	Manual Task1 (Y/N)	
MTASK2	Manual Task2 (Y/N)	
MTASK3	Manual Task3 (Y/N)	
MTASK4	Manual Task4 (Y/N)	
MTASK5	Manual Task5 (Y/N)	
MT1-MSG	Manual Task Message1	
MT2-MSG	Manual Task Message2	
MT3-MSG	Manual Task Message3	
MT4-MSG	Manual Task Message4	
MT5-MSG	Manual Task Message5	

<b><i>Job Definition Fields    Table 10.1</i></b>		
MT1-USERID	Send MT1 to UserID/ Console	
MT2-USERID	Send MT2 to UserID/Console	
MT3-USERID	Send MT3 to UserID/Console	
MT4-USERID	Send MT4 to UserID/Console	
MT5-USERID	Send MT5 to UserID/Console	
MT-SENDBEF	Send Manual Task Msg Min- utes Before Submit	
MT-FREQ	Send Manual Task Msg Fre- quency of Minutes	
MT-AFTER-DEP	Send Manual Task After Dependency (Y/N)	
OPROC1	Output Processing1 (Y/N)	
OPROC2	Output Processing2 (Y/N)	
OPROC3	Output Processing3 (Y/N)	
OPROC4	Output Processing4 (Y/N)	
OPROC5	Output Processing5 (Y/N)	
OUTPOST	Hold Job on Queue for Out- put Posting	
JOBDESC	Job Description	
PROCEDURE	Procedure Name	
PROGRAMMER	Programmer Name	
SUBDEPT	Submitting Department	
OUTDEST	Output Destination	
DELMETHOD	Delivery Method	
CONTACT	Contact Name on Abend	
PHONE-NUM	Contact Phone Number	
PHONE-EXT	Contact Phone Extension	
BEEP-NUM	Contact Beeper Number	
RUN-INS	Run-Exit Instructions	
LAST-ELPTIME	Elapse time of last Run	
LAST-ENDDATE	Ending date of last Run	
LAST-ENDTIME	Ending time of last Run	

### Sample Dataset Definition Report

JMDSNRPT is the batch program that generates reports for the Dataset Definition fields. The sample JCL below will create a report listing all dataset definitions meeting the following criteria:

1. The Dataset names begin with PROD.
2. The Trigger jobs will also appear on the report.
3. The report is Grouped by the type of dataset and Sorted by the Dataset name.

```
//JMDSNRPT JOB (0000,0001), 'JOBMASTER',
// CLASS=A,MSGCLASS=X
//*-----*
//* JMDB / DATASET LEVEL QUERY REPORT
//*
//* CHANGE VALUES: HLQ.OPS|TO CONFORM
//* CHANGE VALUES: VSMHLQ |TO SITE NAMING STANDARDS
//*-----*
//JOB LIB DD DISP=SHR,DSN=HLQ.OPS.LOADLIB
//*
//STEP1 EXEC PGM=JMDSNRPT
//REPORT DD SYSOUT=*
//SYSOUT DD SYSOUT=*
//SYSUDUMP DD SYSOUT=*
//JMDB DD DISP=SHR,DSN=VSMHLQ.JMDB
//JMREPORT DD DSN=&TMP,DISP=(,PASS),UNIT=SYSDA,
// SPACE=(CYL,(40,5)),
// DCB=(RECFM=FB,
// LRECL=380,BLKSIZE=380)
//CARDIN DD *
GROUP BY = DSN-TYPE
SORT BY = DSN
DSN = PROD*
TRIG = *
/*
//
```

### Dataset Definition Fields

Below is a Table of Dataset Definition fields to be used in the CARDIN statements for JMDSNRPT. These fields are directly related to the fields used in the Database Creation screens for dataset definitions.

<i>Dataset Definition Fields Table 10.2</i>		
<i>FIELD-NAME</i>	<i>DESCRIPTION</i>	<i>MULTI-VALUE</i>
DSN	Dataset Name	
DSN-DESC	Dataset Description	
DSN-TYPE	Type of Dataset	
NOTBEFORE	Do Not Process Event Before Date (YYDDD)	

<b><i>Dataset Definition Fields Table 10.2</i></b>		
<b><i>FIELD-NAME</i></b>	<b><i>DESCRIPTION</i></b>	<b><i>MULTI-VALUE</i></b>
NOTAFTER	Do Not Process Event After Date (YYDDD)	
JOBNAME	Task Causing Dataset Event to Occur	
JOBNET	JOB/NETWORK to which JOBNAME is Associated	
RUNMODE	Run Mode	
INPUT	Process Trigger If Dataset is Open/Input	
OUTPUT	Process Trigger if Dataset is Open/Output	
DEFINE	Process Trigger if Dataset is VSAM Defined	
OUTPUT-DATA	Process Trigger if Dataset is Open/Output/Data	
DELETED	Process Trigger if Dataset is Deleted	
UPDATED	Process Trigger if Dataset is Updated	
RENAMED	Process Trigger if Dataset is Renamed	
SCRATCHED	Process Trigger if Dataset is Scratched	
POSITION	Verify Information in Record 1 at Position	
IS	Comparison for Data Verification (E,N,G,L)	
VALUE	Character String Being Verified	
TYPE	Type of Data Being Verified (C=Char,H=Hex)	
TRIG	Jobname to be Triggered if Event Occurs	Y
TRIG-ST	Submit Type of Trigger Job	Y

## Sample Reports

### Data Base Detail Reports

JM2020	DETAIL JOB LEVEL DEFINITION(10)
JM3010	CALENDAR DEFINITION REPORT(11)
JM3020	PROCESS KEYWORD DEFINITION REPORT(12)
JM3030	NEGATIVE/COREQUISITE DEPENDENCY JOBS(13)
JM3040	MESSAGE DEFINITIONS(14)
JM3050	NOTIFY GROUP DEFINITIONS(15)

### Data Base XREF Reports

JM4010	CALENDAR DEFINITION JOB XREF(20)
JM4020	PROCESS KEYWORD JOB XREF(21)
JM4030	NEGATIVE/COREQ DEFINITION JOB XREF(22)
JM4040	MESSAGE DEFINITION JOB EXIT(23)
JM4050	MESSAGE GROUP DEFINITION JOB EXIT(24)
Job Flow	INDEX (25 - Part 1)
Job Flow	DETAIL (25 - Part 2)

### History Recap Reports

JM5010	MESSAGE AUDIT LOG REPORT(30)
JM5020	ALL JOBS RUN(30-1)
JM5020F	FAILED JOBS(30-2)
JM5020S	JOBS SCHEDULED BUT NOT RUN(30-3)
JM5020R	JOBS RUN BUT NOT SCHEDULED(30-4)
JM5030	SUMMARY BY COMPLETION CODE(30-5/6)

### Data Base Reporting By Selection

JMJOB RPT	JOB DEFINITION QUERY REPORT
JMDSNRPT	DATASET DEFINITION QUERY REPORT

## Data Base Detail Reports

## Sample Report(10): JM2020

## Sample Report(10): JM2020

```

REPORT   : JM2020                                JOB/Master® REPORTING SYSTEM          PAGE:      1
SYSTEM   : OPS                                  DETAIL JOB LEVEL DEFINITION REPORT    TIME:    10:04:51
RELEASE  :                                         DATE:      08/20/93

```

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SYSTEM: DSNTEST - \*\*\*\*\*

JOBNAME: JOBA - ALIAS: LAST UPDATED BY: TCJN on 93228 16:24

```

PDS MEMBER.:
PDS NAME....: TCJN.TSO.CNTL
CLASS.....:
TRIGGER JOB.: Y          PRIORITY:
SUBMIT TYPE.: A          TRIGGERED BY:
RES NAME1....:
JOB NETWORK..: *****
CALENDAR....: EXC. CAL1:          EXC. CAL2:
KEYWORD DEF.:
NEGCOR DEF.:
MSG DEF.....: MSG GROUP:
LIB TYPE....:

PROGRAMMER NAME:
SUBMITTING DEPT:
USER DEPARTMENT:
OUT DESTINATION:
DELIVERY METHOD:

** SUBMIT OPTIONS **
SUBMIT      END      SUBMIT      END
NO OF RUNS.....: 00      1) 03:00 - 00:00  6) 00:00 - 00:00
MIN. BETWEEN RUNS: 0000    2) 00:00 - 00:00  7) 00:00 - 00:00
                                   3) 00:00 - 00:00  8) 00:00 - 00:00
                                   4) 00:00 - 00:00  9) 00:00 - 00:00
                                   5) 00:00 - 00:00

```

```

RUN MODE.....: P          (P-PRODUCTION/C-CHECK)
DON'T SCHEDULE BEFORE: 00000 (YYDDD)
DON'T SCHEDULE AFTER.: 00000 (YYDDD)
EXTERNAL SUBMIT.....: N          (Y-NOT SUBMITTED BY JOB MASTER)
DEADLINE CANCEL.....: N    0    (Y-CANCEL FROM JOB QUEUE IN XXX MIN)
JOB FAIL USERID.....:          (ROUTE MESSAGE TO)
REPAIR JOB.....:          SUBMIT TYPE: (A,M,S)
HOLD JOB FOR (Y/N)....:
KEYPUNCH      : N BURST.....: N MESSAGE DEF:
CARD INPUT    : N FICHE.....: N MESSAGE GRP:
TAPE INPUT    : N DECOLLATE.....: N
CONSOLE ROUTED: N PHOTOCOPY.....: N
JCL SETUP     : N OTHER.....: N OUTPUT POSTING FLAG: N
**** FIRST JOB DEPENDENCY OPTIONS ****

```

```

+-----+
PRED    NEGATIVE    COREQ    TRIGGER    SUB    OPER    COND    TRIG    PROCESS    PROCESS    N-PROCESS    N-PROCESS
JOB      TYPE      DEP.      DEP.      JOB      TYPE    CODE    CODE    TYPE    KEYWORD    KEYWORD    KEYWORD    KEYWORD
+-----+
                                JOBC                                E                                ALL
+-----+

```

\*\*\*\* MANUAL TASK MESSAGES \*\*\*\*

SEND 0 MIN. BEFORE SUBMIT TIME OR AFTER DEPENDENCIES => AT A FREQUENCY INTERVAL OF 0 MINUTES

TO USERID MESSAGE TXT

MSG 1)  
MSG 2)  
MSG 3)  
MSG 4)  
MSG 5)

## Sample Report(11): JM3010

[illegible]

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NAME: CALTS01      YEAR: 93      LAST UPDATED BY: TCJN      on 93067 13:03

DESC: TEST FOR XYZ COMPANY

MONTH	*01	02	03	04	05	06	07	08	09	10	11	12		DAY OF THE MONTH	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	*	
JANUARY	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	
FEBRUARY	*	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	*	
MARCH	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	
APRIL	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	
MAY	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	
JUNE	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	
JULY	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	
AUGUST	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	
SEPTEMBER	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	
OCTOBER	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	
NOVEMBER	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	
DECEMBER	*	--	--	--	--	--	--	--	--	--	--	--	--		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*	

JULIAN DAYS FOR CALENDAR

32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59

PERIOD START / END DATES (MMDD)

1. 0000 0000	2. 0000 0000	3. 0000 0000	4. 0000 0000	5. 0000 0000
6. 0000 0000	7. 0000 0000	8. 0000 0000	9. 0000 0000	10. 0000 0000
11. 0000 0000	12. 0000 0000	13. 0000 0000		



## Sample Report(12): JM3020

REPORT : JM3020                      JOB/Master® REPORTING SYSTEM                      PAGE: 5  
SYSTEM : OPS                      PROCESS KEYWORD DEFINITION REPORT                      TIME: 10:07:06  
RELEASE :                      DATE: 08/20/93

-----  
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-----

NAME: DBASAT

LAST UPDATED BY: TCJN      on 93076    07:01

DESCRIPTION: SATURDAY IMAGE COPY

CALENDAR:                      EXC. CAL1:                      EXC. CAL2:

PROCESS KEYWORDS: 1) SAT      2) \_\_\_\_\_ 3) \_\_\_\_\_ 4) \_\_\_\_\_ 5) \_\_\_\_\_ 6) \_\_\_\_\_  
7) \_\_\_\_\_ 8) \_\_\_\_\_ 9) \_\_\_\_\_ 10) \_\_\_\_\_ 11) \_\_\_\_\_ 12) \_\_\_\_\_  
13) \_\_\_\_\_ 14) \_\_\_\_\_ 15) \_\_\_\_\_ 16) \_\_\_\_\_ 17) \_\_\_\_\_ 18) \_\_\_\_\_  
19) \_\_\_\_\_ 20) \_\_\_\_\_ 21) \_\_\_\_\_ 22) \_\_\_\_\_ 23) \_\_\_\_\_ 24) \_\_\_\_\_  
25) \_\_\_\_\_ 26) \_\_\_\_\_ 27) \_\_\_\_\_ 28) \_\_\_\_\_ 29) \_\_\_\_\_ 30) \_\_\_\_\_  
31) \_\_\_\_\_ 32) \_\_\_\_\_ 33) \_\_\_\_\_ 34) \_\_\_\_\_ 35) \_\_\_\_\_ 36) \_\_\_\_\_  
NON-PROCESS KEYWORDS: 1) 3SATFEB    2) 3SATMAY    3) 3SATAUG    4) 3SATNOV    5) \_\_\_\_\_ 6) \_\_\_\_\_  
7) \_\_\_\_\_ 8) \_\_\_\_\_ 9) \_\_\_\_\_ 10) \_\_\_\_\_ 11) \_\_\_\_\_ 12) \_\_\_\_\_  
13) \_\_\_\_\_ 14) \_\_\_\_\_ 15) \_\_\_\_\_ 16) \_\_\_\_\_ 17) \_\_\_\_\_ 18) \_\_\_\_\_  
19) \_\_\_\_\_ 20) \_\_\_\_\_ 21) \_\_\_\_\_ 22) \_\_\_\_\_ 23) \_\_\_\_\_ 24) \_\_\_\_\_  
25) \_\_\_\_\_ 26) \_\_\_\_\_ 27) \_\_\_\_\_ 28) \_\_\_\_\_ 29) \_\_\_\_\_ 30) \_\_\_\_\_  
31) \_\_\_\_\_ 32) \_\_\_\_\_ 33) \_\_\_\_\_ 34) \_\_\_\_\_ 35) \_\_\_\_\_ 36) \_\_\_\_\_



## Sample Report(14): JM3040

-----  
SEND 10 MIN. BEFORE SUBMIT TIME OR AFTER DEPENDENCIES => N AT A FREQUENCY INTERVAL OF 5 MINUTES  
-----

TO USERID MESSAGE TXT  
-----

MSG 1) DEUS1R1 TRANSACTIONS NEEDED. CLOSE OUT DAILY PROCESSING

MSG 2)

MSG 3) TAPLIB NEEDS TAPE WHICH WILL BE SENT TO REGION1

MSG 4)

MSG 5) PUSER1 RUN PARAMETERS REQUIRED FOR PROCESSING

MESSAGE DEFINITION: MANT01

-----  
SEND 60 MIN. BEFORE SUBMIT TIME OR AFTER DEPENDENCIES => N AT A FREQUENCY INTERVAL OF 5 MINUTES  
-----

TO USERID MESSAGE TXT  
-----

MSG 1)

MSG 2)

MSG 3)

MSG 4)

MSG 5) VERIFY MANUAL SYMBOLICS AS REQUIRED.....

MESSAGE DEFINITION: SALESMMSG

-----  
SEND 0 MIN. BEFORE SUBMIT TIME OR AFTER DEPENDENCIES => N AT A FREQUENCY INTERVAL OF 5 MINUTES  
-----

TO USERID MESSAGE TXT  
-----

MSG 1) ENTER SALES QUOTAS AND SIGN OFF UPON COMPLETION

MSG 2)

MSG 3) MOUNT SALES JOB TAPE AND SIGN OFF UPON COMPLETION

MSG 4)

MSG 5)

**Sample Report(15): JM3050**

REPORT : JM3050  
 SYSTEM : OPS  
 RELEASE :

JOB/Master® REPORTING SYSTEM  
 NOTIFY GROUP DEFINITIONS

PAGE: 1  
 TIME: 10:12:12  
 DATE: 08/20/93

-----  
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 -----

NAME: CAROYL

	USER ID	USER TYPE	MSG CLASS	SEND TYPE	* ON SHIFT * START END	* DO NOT BEFORE	SEND * AFTER
1)	TCJN	M	1	M	07 00 15 30	00000	00000
2)	TCJN	M	2	L	07 00 15 30	00000	00000
3)	TRSJ	M	5	L	15 00 23 50	92325	00000
4)	_____	-	-	-	00 00 00 00	00000	00000
5)	_____	-	-	-	00 00 00 00	00000	00000
6)	_____	-	-	-	00 00 00 00	00000	00000
7)	_____	-	-	-	00 00 00 00	00000	00000
8)	_____	-	-	-	00 00 00 00	00000	00000
9)	_____	-	-	-	00 00 00 00	00000	00000
10)	_____	-	-	-	00 00 00 00	00000	00000
11)	_____	-	-	-	00 00 00 00	00000	00000
12)	_____	-	-	-	00 00 00 00	00000	00000
13)	_____	-	-	-	00 00 00 00	00000	00000
14)	_____	-	-	-	00 00 00 00	00000	00000
15)	_____	-	-	-	00 00 00 00	00000	00000
16)	_____	-	-	-	00 00 00 00	00000	00000
17)	_____	-	-	-	00 00 00 00	00000	00000
18)	_____	-	-	-	00 00 00 00	00000	00000
19)	_____	-	-	-	00 00 00 00	00000	00000
20)	_____	-	-	-	00 00 00 00	00000	00000
21)	_____	-	-	-	00 00 00 00	00000	00000

## Sample Report(20): JM4010

REPORT : JM4010  
SYSTEM : OPS  
RELEASE :

JOB/Master® REPORTING SYSTEM  
CALENDAR DEFINITION JOB XREF

PAGE: 1  
TIME: 10:16:44  
DATE: 08/20/93

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NAME: WORKDY93  
DESC: WORKDAY 1993

LAST UPDATED BY: TCJN      on 93062   11:03

SYSTEM	DESCRIPTION	SOURCE	USED BY	DESCRIPTION
1. *****		JOB	HASA1	
2. BROWNFOR		JOB	BROWN001	
3. CYCLESYS		JOB	CYCLEJOB	
4. DATESUB		JOB	JCLDTE01	SYMBOLIC DATE SUBS
5. DATESUB		JOB	JMPOST0B	JMPOST-BATCH
6. EDSTEST		JOB	EDSJPI	
7. FABTEST1		JOB	FAB00002	
8. JCLSUBST		JOB	JCLSUB01	
9. JCLSUBST		JOB	JCLSUB02	
10. JCLSUBST		JOB	JCLSUB03	
11. JCLSUBST		JOB	JCLSUB04	
12. JCLSUBST		JOB	JCLSUB05	
13. JCLSUBST		JOB	JCLSUB06	
14. JCLSUBST		JOB	JCLSUB07	
15. JCLSUBST		JOB	JMJCLMB	JMJCLMB/SYSP.JOBLIB
16. JMEVENT		JOB	JMEVENT	TEST FOR JMEVENT
17. JMPOST		JOB	JMPOST0A	JMPOST-BATCH
18. JMPOST		JOB	JMPOST00	BATCH POSTING TEST
19. JM4DSNTR		JOB	JM4DSN00	
20. LWKDHOLW		JOB	JLWKDHOL	
21. MAINTDLY		JOB	OP511001	J/M BACKUP
22. MAINTDLY		JOB	RMSPPR87	DAILY BKUP/REST R8.7
23. MAINTDLY		JOB	RMSPPR88	DAILY BKUP/REST R8.8
24. MANTASK		JOB	MANTASK	
25. MANTASK		JOB	MANTASK2	
26. MEMSYS1*		JOB	MEM002	
27. MREORG		JOB	RJOB120	
28. NAMIC		JOB	NAMIC001	
29. OUTTPPST		JOB	OUTPOST1	OUTPUT POSTING JOB
30. PEPSIRES		JOB	PEPSI001	
31. PEPSIRES		JOB	PEPSI002	
32. PEPSIRES		JOB	PEPSI003	
33. PEPSIRES		JOB	PEPSI004	
34. PEPSIRES		JOB	PEPSI005	
35. PEPSIRES		JOB	PEPSI006	
36. PEPSIRES		JOB	PEPSI007	
37. PEPSIRES		JOB	PEPSI008	
38. PEPSIRES		JOB	PEPSI009	
39. PERSTORE		JOB	PRSTJOB1	
40. PERSTORE		JOB	PRSTJOB2	
41. PRDADT		JOB	OJOB000	
42. PRDADT		JOB	OJOB120	
43. PRDADT		JOB	OJOB158	
44. REPEAT		JOB	REPEAT01	REPEAT JOB
45. SYS		JOB	SYSTEMAK1	
46. TAPEXCLU		JOB	TAPEXCL1	TEST TAPE EXCLUSION
47. TAPEXCLU		JOB	TAPEXCL2	TEST TAPE EXCLUSION
48. TAPEXCLU		JOB	TAPEXCL3	TEST TAPE EXCLUSION
49. TAPEXCLU		JOB	TAPEXCL4	TEST TAPE EXCLUSION
50. TAPEXCLU		JOB	TAPEXCL5	TEST TAPE EXCLUSION









## Sample Report(24): JM4050

```
REPORT   : JM4050                      JOB/Master® REPORTING SYSTEM          PAGE:      3
SYSTEM   : OPS                        MESSAGE GROUP DEFINITION JOB XREF      TIME:    11:07:34
RELEASE  :                               DATE:    08/20/93
```

```
-----
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-----
```

NAME: DEMOGRP1

SYSTEM	DESCRIPTION	SOURCE	USED BY	DESCRIPTION
1. DEMOSYS1		JOB	DEMO01	DEMO01 SALES RECAP
2. DEMOSYS1		JOB	DEMO02	DEMO01 SALES RECAP

## Sample Report(25): Job Flow (Part 1)

```
=====
10/29/93   J O B M A S T E R   J O B   F L O W   X R E F   P A G E   3
=====
JOBNAME          REFERENCES (J)OB, (P)REDECESSOR, (T)RIGGER
=====
OSLOEXT1      1 (J)      1 (P)
OSLOEXT2      1 (J)
OSLOFIG       1 (J)
OSLO0001      1 (J)
OSLO0002      1 (J)      1 (P)      1 (T)
OSLO0003      1 (J)      1 (P)      1 (T)
OSLO0004      1 (J)      1 (P)      1 (T)
OSLO0005      1 (J)
OSLO0006      1 (J)
OSLO0007      1 (J)      2 (J)      1 (T)
OSLO0017      2 (J)
OSLO0018      2 (J)      2 (T)
OSLO0019      2 (T)
OSLO0020      2 (T)
OSLO0021      2 (T)
OSLO007A      1 (J)      2 (J)      1 (T)      2 (T)
OSLO007B      1 (J)      1 (T)
OSLO0400      2 (J)
OSLO1000      2 (J)
OSLO1001      2 (J)
OUTPUT01      2 (J)
OUTTRIG       2 (J)      2 (T)
=====
```

## Sample Report(25): Job Flow (Part 2)

```
=====
10/29/93   J O B M A S T E R   J O B   F L O W   R E P O R T   P A G E   1
=====

OSLOEXT1 <<<<<<  JOBSTREAM -----
  OSLOEXT1 SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN=00:04
      DESC=EXT-SUB BEGINS  TEST      SUBMIT  TIME=15:35

OSLOEXT2 <<<<<<  JOBSTREAM -----
  OSLOEXT2 SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN=00:04
      DESC=EXT-SUB BEGINS  TEST      SUBMIT  TIME=15:45

OSLOFIG <<<<<<  JOBSTREAM -----
  OSLOFIG  SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN= 0: 0
      DESC=EXT-SUB BEGINS  TEST      SUBMIT  TIME=00:00

OSLO0001 <<<<<<  JOBSTREAM -----
  PREDS. ==> OSLOEXT1
  OSLO0001 SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN=00:06
      DESC=      SUBMIT  TIME=09:30
      TRIGGER => JOB/END  OSLO0002 OSLO0003 OSLO0004

  OSLO0002 SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN=00:11
      DESC=2ND JOB IN TEST      SUBMIT  TIME=09:35

  OSLO0003 SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN=00:09
      DESC=3RD JOB IN TEST      SUBMIT  TIME=09:45

  OSLO0004 SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN=00:10
      DESC=4TH JOB IN TEST      SUBMIT  TIME=12:00

OSLO0005 <<<<<<  JOBSTREAM -----
  PREDS. ==> OSLO0002
  OSLO0005 SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN=00:16
      DESC=5TH JOB IN TEST      SUBMIT  TIME=12:30
      TRIGGER => STEP03  OSLO0007
      JOB/END  OSLO007B

  OSLO0007 SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN=00:07
      DESC=7TH JOB IN TEST      SUBMIT  TIME=00:00
      TRIGGER => JOB/END  OSLO007A

  OSLO007B SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN=00:07
      DESC=7TH JOB IN TEST      SUBMIT  TIME=00:00
  OSLO007A SYS=OSLOSYS1 CAL=      EXCAL=      PKYWRD=      RUN=00:03
      DESC=7TH JOB IN TEST      SUBMIT  TIME=00:15
=====
```

## Data Base Detail Reports

## Sample Report(25): Job Flow (Part 2)

```
OSLO0006 <<<<< JOBSTREAM -----
PREDS. ==> OSLO0003 OSLO0004
OSLO0006 SYS=OSLOSYS1 CAL=          EXCAL=          PKYWRD=          RUN=00:10
DESC=6TH JOB IN TEST              SUBMIT TIME=13:00

=====
10/29/93   J O B M A S T E R   J O B   F L O W   R E P O R T   P A G E   2
=====

OSLO0007 <<<<< JOBSTREAM -----
OSLO0007 SYS=OSLOSYS1 CAL=          EXCAL=          PKYWRD=          RUN=00:07
DESC=7TH JOB IN TEST              SUBMIT TIME=00:00
TRIGGER => JOB/END OSLO007A

OSLO007A SYS=OSLOSYS1 CAL=          EXCAL=          PKYWRD=          RUN=00:03
DESC=7TH JOB IN TEST              SUBMIT TIME=00:15

OSLO0017 <<<<< JOBSTREAM -----
OSLO0017 SYS=OSLOSYS1 CAL=          EXCAL=          PKYWRD=          RUN=00:36
DESC=7TH JOB IN TEST              SUBMIT TIME=08:00
TRIGGER => STEP1 OSLO0019
STEP2 OSLO0020
JOB/END OSLO0018 OSLO0021

OSLO0018 SYS=OSLOSYS1 CAL=          EXCAL=          PKYWRD=          RUN=00:00
DESC=7TH JOB IN TEST              SUBMIT TIME=10:00

OSLO0400 <<<<< JOBSTREAM -----
OSLO0400 SYS=OSLOSYS1 CAL=          EXCAL=          PKYWRD=          RUN=00:03
DESC=1ST JOB IN TEST              SUBMIT TIME=22:30

OSLO1000 <<<<< JOBSTREAM -----
OSLO1000 SYS=OSLOSYS1 CAL=          EXCAL=          PKYWRD=          RUN=00:03
DESC=SYSTEM1 TEST                SUBMIT TIME=08:00

OSLO1001 <<<<< JOBSTREAM -----
OSLO1001 SYS=OSLOSYS1 CAL=          EXCAL=          PKYWRD=          RUN=00:27
DESC=SYSTEM1 TEST                SUBMIT TIME=08:00

OUTPUT01 <<<<< JOBSTREAM -----
OUTPUT01 SYS=OSLOSYS1 CAL=          EXCAL=          PKYWRD=          RUN=00:00
DESC=1ST JOB IN TEST              SUBMIT TIME=08:00
TRIGGER => JOB/END OUTTRIG OUTTRIG

OUTTRIG SYS=OSLOSYS1 CAL=          EXCAL=          PKYWRD=          RUN=00:10
DESC=1ST JOB IN TEST              SUBMIT TIME=08:00
```

## Sample Report(30): JM5010

## Data Base Detail Reports

## Sample Report(30): JM5010

REPORT : JM5010	JOB/Master® REPORTING SYSTEM	PAGE: 1
SYSTEM : OPS	MESSAGE AUDIT LOG REPORT	TIME: 18:11:39
RELEASE :	PERIOD 92336 THRU 92337	DATE: 12/02/92

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SYSTEM ID	DATE	TIME	MESSAGE ID	REGION ID	USER ID	MESSAGE
SYSA	92336	12/01/92	06.45.48	JM03	JM01	SCHEDULE (J09976) SUBMITTED BY SCHEDULER FROM JMSTGPDS
SYSA	92336	12/01/92	07.00.27	JM03	JM01	B338002 (J09977) SUBMITTED BY SCHEDULER FROM JMSTGPDS
SYSA	92336	12/01/92	07.00.29	JM03	JM01	B338003 (J09978) SUBMITTED BY SCHEDULER FROM JMSTGPDS
SYSA	92336	12/01/92	07.00.30	JM32	JM01	B338004 * NEEDS TAPE DRIVES 3420S= 00 3480S= 01
SYSA	92336	12/01/92	07.27.43	JM02	JM01	JOB/STEP RMSPEF /JS010 .PS010 FAILED S= 222
SYSA	92336	12/01/92	07.29.47	JM03	JM01	B338004 (J09980) SUBMITTED BY SCHEDULER FROM JMSTGPDS
SYSA	92336	12/01/92	07.31.54	JM23	JM01	PURGE ISSUED BY TCJN FOR RMSPEF 92335 0000
SYSA	92336	12/01/92	07.31.56	JM23	JM01	PURGE ISSUED BY TCJN FOR R88PC11 92335 2000
SYSA	92336	12/01/92	07.31.58	JM23	JM01	PURGE ISSUED BY TCJN FOR R88PC12 92335 2000
SYSA	92336	12/01/92	07.32.00	JM23	JM01	PURGE ISSUED BY TCJN FOR O880PS1 92335 2100
SYSA	92336	12/01/92	07.32.02	JM23	JM01	PURGE ISSUED BY TCJN FOR O880P01 92335 2100
SYSA	92336	12/01/92	08.00.13	JM03	JM01	B338010 (J09992) SUBMITTED BY SCHEDULER FROM JMSTGPDS
SYSA	92336	12/01/92	08.00.15	JM03	JM01	B338011 (J09993) SUBMITTED BY SCHEDULER FROM JMSTGPDS
SYSA	92336	12/01/92	08.00.17	JM32	JM01	B338012 * NEEDS TAPE DRIVES 3420S= 00 3480S= 01
SYSA	92336	12/01/92	08.00.18	JM32	JM01	B338014 * NEEDS TAPE DRIVES 3420S= 00 3480S= 01
SYSA	92336	12/01/92	08.00.19	JM31	JM01	RDMSRGEN WAITING ON CO-REQ. DEPENDENCY ==> RMSCTL
SYSA	92336	12/01/92	08.00.20	JM32	JM01	RMSPR88 * NEEDS TAPE DRIVES 3420S= 00 3480S= 01
SYSA	92336	12/01/92	08.15.55	JM07	JM01	RDMSRGEN NOT STARTED, PREDECESSOR -> RDMSRGEN NOT COMPLETED
SYSA	92336	12/01/92	08.15.56	JM32	JM01	RMSPBESF * NEEDS TAPE DRIVES 3420S= 00 3480S= 01
SYSA	92336	12/01/92	08.30.39	JM07	JM01	RDMSRGEN NOT STARTED, PREDECESSOR -> RDMSRGEN NOT COMPLETED
SYSA	92336	12/01/92	08.33.18	JM03	JM01	B338012 (J00010) SUBMITTED BY SCHEDULER FROM JMSTGPDS
SYSA	92336	12/01/92	08.33.23	JM03	JM01	RMSPR88 (J00011) SUBMITTED BY SCHEDULER FROM JMUSRPDS
SYSA	92336	12/01/92	08.33.23	JM03	JM01	RMSPR88 (J00011) MVS JOBNAME = FROM JMUSRPDS USER PDS = SYSP.JOBLIB
SYSA	92336	12/01/92	08.33.25	JM03	JM01	RMSPBESF (J00012) SUBMITTED BY SCHEDULER FROM JMUSRPDS
SYSA	92336	12/01/92	08.33.26	JM03	JM01	RMSPBESF (J00012) MVS JOBNAME = FROM JMUSRPDS USER PDS = SYSP.JOBLIB
SYSA	92336	12/01/92	08.33.32	JM32	JM01	B338013 * NEEDS TAPE DRIVES 3420S= 00 3480S= 01
SYSA	92336	12/01/92	08.33.33	JM32	JM01	B338014 * NEEDS TAPE DRIVES 3420S= 00 3480S= 01
SYSA	92336	12/01/92	08.36.58	JM03	JM01	B338013 (J00014) SUBMITTED BY SCHEDULER FROM JMSTGPDS
SYSA	92336	12/01/92	08.38.18	JM32	JM01	B338014 * NEEDS TAPE DRIVES 3420S= 00 3480S= 01
SYSA	92336	12/01/92	08.46.04	JM07	JM01	RDMSRGEN NOT STARTED, PREDECESSOR -> RDMSRGEN NOT COMPLETED
SYSA	92336	12/01/92	08.47.53	JM35	JM01	RMSPEF TRIGGERED BY RMSPBESF
SYSA	92336	12/01/92	08.47.56	JM31	JM01	RMSPEF WAITING ON NEGATIVE DEPENDENCY ==> RMSPR88
SYSA	92336	12/01/92	08.50.46	JM35	JM01	RMSPR87 TRIGGERED BY RMSPR88
SYSA	92336	12/01/92	08.50.50	JM03	JM01	RMSPEF (J00020) SUBMITTED BY SCHEDULER FROM JMUSRPDS
SYSA	92336	12/01/92	08.50.50	JM03	JM01	RMSPEF (J00020) MVS JOBNAME = FROM JMUSRPDS USER PDS = SYSP.JOBLIB
SYSA	92336	12/01/92	08.50.54	JM03	JM01	RMSPR87 (J00021) SUBMITTED BY SCHEDULER FROM JMUSRPDS
SYSA	92336	12/01/92	08.50.54	JM03	JM01	RMSPR87 (J00021) MVS JOBNAME = FROM JMUSRPDS USER PDS = SYSP.JOBLIB
SYSA	92336	12/01/92	08.51.03	JM32	JM01	B338014 * NEEDS TAPE DRIVES 3420S= 00 3480S= 01
SYSA	92336	12/01/92	08.54.49	JM32	JM01	B338014 * NEEDS TAPE DRIVES 3420S= 00 3480S= 01
SYSA	92336	12/01/92	08.55.37	JM35	JM01	OPSPR88 TRIGGERED BY RMSPR87
SYSA	92336	12/01/92	08.55.41	JM03	JM01	B338014 (J00025) SUBMITTED BY SCHEDULER FROM JMSTGPDS
SYSA	92336	12/01/92	09.01.11	JM07	JM01	RDMSRGEN NOT STARTED, PREDECESSOR -> RDMSRGEN NOT COMPLETED
SYSA	92336	12/01/92	09.04.00	JM03	JM01	B338005 (J00026) SUBMITTED BY SCHEDULER FROM JMSTGPDS
SYSA	92336	12/01/92	09.15.22	JM07	JM01	RDMSRGEN NOT STARTED, PREDECESSOR -> RDMSRGEN NOT COMPLETED

## Sample Report(30-1): JM5020

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REPORT   : JM5020                                JOB/Master® REPORTING SYSTEM                                PAGE:      1
SYSTEM   : OPS                                  ALL JOBS RUN                                           TIME:    10:38:26
RELEASE  :                                PERIOD 93288 THRU 93288                                DATE:    10/29/93
```

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		CPU				*SCHEDULED*	*--READER--*		*--START--*		*--END--*				ELAPSED	FAILED	
		TIME				DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	JOB		TIME	
JOBNAME	JOBNO	SYSID	COND	CODE	MM.SS.TT	YYDDDD	HH.MM	YYDDDD	HH.MM	YYDDDD	HH.MM	YYDDDD	HH.MM	NETWORK	SYSTEM	HH.MM.SS	STEP
STS002E4	04661	SYSX	CC=	0000	00.00.30	932887	23:57	932888	08:59	932888	08:59	932888	09:04	*****	GBANKING	00.05.03	
JMSCHED4	04662	SYSX	CC=	0000	00.19.99	932888	06:45	932888	08:59	932888	08:59	932888	09:03	*****	JMSCHED4	00.04.00	
STS00296	04665	SYSX	CC=	0000	00.00.30	932888	00:01	932888	09:04	932888	09:04	932888	09:04	*****	GBANKING	00.00.05	
STS00200	04666	SYSX	CC=	0000	00.00.38	932888	09:04	932888	09:04	932888	09:04	932888	09:05	*****	GBANKING	00.00.08	

## Data Base Detail Reports

```
REPORT   : JM5020                                JOB/Master@ REPORTING SYSTEM      PAGE:      1
SYSTEM   : OPS                                  FAILED JOBS                TIME:    10:15:59
RELEASE  :                                PERIOD 93264 THRU 92365          DATE:    09/24/93
```

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					CPU		*SCHEDULE*		*-READER-*		*--START--*		*---END---*				ELAPSED		FAILED
JOBNAME	JOBNO	SYSID	COND	CODE	MM.SS.TT	YYDD	HH.MM	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	JOB	TIME		STEP
								YYDD	HH.MM	YYDD	HH.MM	YYDD	HH.MM	YYDD	HH.MM	NETWORK	SYSTEM	HH.MM.SS	
DEADCAN1	07582	SYSA	CC=	0022	00.00.00	93263	10:00	00000	00:00	00000	00:00	93264	07:02	*****	CANSYS		00.00.00		
FAILED REASON: J07582 CANCELLED BEFORE EXECUTION																			
001102RF	04916	SYSA	CC=	0022	00.00.00	93256	21:10	00000	00:00	00000	00:00	93257	09:22	*****	RMSPl100		00.00.00		
FAILED REASON: J04916 ** FAILED ** -> ALLOC CC= 0012																			
PRSTJOB1	07998	SYSA	CC=	0546	00.00.00	93264	09:20	00000	00:00	00000	00:00	93264	14:14	*****	PERSTORE		00.00.00		
FAILED REASON: J07998 ** FAILED ** -> S1 S= 222																			
PRSTJOB1	07569	SYSA	CC=	0546	00.00.00	93263	09:25	00000	00:00	00000	00:00	93264	07:02	*****	PERSTORE		00.00.00		
FAILED REASON: J07569 ** FAILED ** -> S1 S= 222																			
RMSPBR88	04487	SYSA	CC=	0546	00.00.00	93256	07:00	00000	00:00	00000	00:00	93256	14:20	*****	MAINTDLY		00.00.00		
FAILED REASON: J04487 ** FAILED ** -> STEP01 JCLERR																			
R1124001	05404	SYSA	CC=	0546	00.00.00	93258	07:28	00000	00:00	00000	00:00	93258	08:52	*****	RMSPl100		00.00.00		
FAILED REASON: J05404 ** FAILED ** -> RM80004 S= 222																			
R1128001	04891	SYSA	CC=	0012	00.00.00	93256	22:13	00000	00:00	00000	00:00	93257	09:22	*****	RMSPl100		00.00.00		
FAILED REASON: J04891 ** FAILED ** -> JS001 CC= 0012																			
R1128001	07843	SYSA	CC=	0546	00.00.00	93263	11:12	00000	00:00	00000	00:00	93263	18:07	*****	RMSPl100		00.00.00		
FAILED REASON: J07843 ** FAILED ** -> RM90008 S= 222																			
R1128002	05371	SYSA	CC=	0012	00.00.00	93258	00:00	00000	00:00	00000	00:00	93258	07:00	*****	RMSPl100		00.00.00		
FAILED REASON: J05371 ** FAILED ** -> JS001 CC= 0012																			
SYMTEST3	05091	SYSA	CC=	0022	00.00.00	93257	11:00	00000	00:00	00000	00:00	93257	13:15	*****	*****		00.00.00		
FAILED REASON: J05091 ** FAILED ** -> STEP1 U= 0106																			
TAPEXCL1	07950	SYSA	CC=	0546	00.00.00	93264	08:00	00000	00:00	00000	00:00	93264	14:14	*****	TAPEXCLU		00.00.00		
FAILED REASON: J07950 ** FAILED ** -> STEP1 JCLERR																			
TAPEXCL2	07952	SYSA	CC=	0546	00.00.00	93264	08:00	00000	00:00	00000	00:00	93264	09:35	*****	TAPEXCLU		00.00.00		
FAILED REASON: J07952 ** FAILED ** -> STEP1 JCLERR																			
TAPEXCL3	04524	SYSA	CC=	0022	00.00.00	93256	08:00	00000	00:00	00000	00:00	93256	09:36	*****	TAPEXCLU		00.00.00		
FAILED REASON: J04524 ** FAILED ** -> STEP1 JCLERR																			
TAPEXCL4	07953	SYSA	CC=	0546	00.00.00	93264	08:00	00000	00:00	00000	00:00	93264	09:35	*****	TAPEXCLU		00.00.00		
FAILED REASON: J07953 ** FAILED ** -> STEP1 JCLERR																			
TAPEXCL6	07954	SYSA	CC=	0546	00.00.00	93264	08:00	00000	00:00	00000	00:00	93264	09:35	*****	TAPEXCLU		00.00.00		
FAILED REASON: J07954 ** FAILED ** -> STEP1 JCLERR																			
TAPEXCL8	07955	SYSA	CC=	0546	00.00.00	93264	08:00	00000	00:00	00000	00:00	93264	09:35	*****	TAPEXCLU		00.00.00		
FAILED REASON: J07955 ** FAILED ** -> STEP1 JCLERR																			
TRIGJOBA	07767	SYSA	CC=	0012	00.00.00	93263	15:00	00000	00:00	00000	00:00	93263	18:25	*****	TRIGTEST		00.00.00		
FAILED REASON: J07767 ** FAILED ** -> STEP070 CC= 0008																			

## Data Base Detail Reports

## Sample Report(30-3): JM5020S

## Sample Report(30-3): JM5020S

REPORT : JM5020	JOB/Master® REPORTING SYSTEM	PAGE: 1
SYSTEM : OPS	JOBS SCHEDULED BUT NOT RUN	TIME: 10:16:03
RELEASE :	PERIOD 93264 THRU 92365	DATE: 09/24/93

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JOBNAME	JOBNO	SYSID	COND	CODE	CPU		*SCHEDULE*		*-READER--*		*--START--*		*---END---*		JOB	ELAPSED		FAILED
					MM.SS.TT	TIME	YYDD	HH.MM	YYDD	HH.MM	YYDD	HH.MM	YYDD	HH.MM		TIME	HH.MM.SS	
DEADCAN1	07582	SYSA	CC=	0022	00.00.00		93263	10:00	00000	00:00	00000	00:00	93264	07:02	*****	CANSYS	00.00.00	
DEADCAN1	00000	SYSA	CC=	0022	00.00.00		93260	10:00	00000	00:00	00000	00:00	93260	10:04	*****	CANSYS	00.00.00	
DEADCAN1	00000	SYSA	CC=	0022	00.00.00		93257	10:00	00000	00:00	00000	00:00	93257	10:04	*****	CANSYS	00.00.00	
DEADCAN1	00000	SYSA	CC=	0022	00.00.00		93256	10:00	00000	00:00	00000	00:00	93256	10:04	*****	CANSYS	00.00.00	
DEADCAN1	00000	SYSA	CC=	0022	00.00.00		93259	10:00	00000	00:00	00000	00:00	93259	10:04	*****	CANSYS	00.00.00	
DEADCAN1	00000	SYSA	CC=	0022	00.00.00		93258	10:00	00000	00:00	00000	00:00	93258	10:04	*****	CANSYS	00.00.00	
DEADCAN2	00000	SYSA	CC=	0022	00.00.00		93258	10:15	00000	00:00	00000	00:00	93258	10:20	*****	CANSYS	00.00.00	
DEADCAN2	00000	SYSA	CC=	0022	00.00.00		93259	10:15	00000	00:00	00000	00:00	93259	10:20	*****	CANSYS	00.00.00	
DEADCAN2	00000	SYSA	CC=	0022	00.00.00		93256	10:15	00000	00:00	00000	00:00	93256	10:20	*****	CANSYS	00.00.00	
DEADCAN2	00000	SYSA	CC=	0022	00.00.00		93257	10:15	00000	00:00	00000	00:00	93257	10:20	*****	CANSYS	00.00.00	
DEADCAN2	00000	SYSA	CC=	0022	00.00.00		93263	10:15	00000	00:00	00000	00:00	93263	10:20	*****	CANSYS	00.00.00	
DEADCAN2	00000	SYSA	CC=	0022	00.00.00		93260	10:15	00000	00:00	00000	00:00	93260	10:20	*****	CANSYS	00.00.00	
DEADCAN2	00000	SYSA	CC=	0022	00.00.00		93264	10:15	00000	00:00	00000	00:00	93264	10:20	*****	CANSYS	00.00.00	
GC10C100	00000	SYSA	CC=	0022	00.00.00		93260	10:03	00000	00:00	00000	00:00	93260	06:38	*****	GBANK	00.00.00	
GC10C100	00000	SYSA	CC=	0022	00.00.00		93256	00:00	00000	00:00	00000	00:00	93256	13:28	*****	GBANK	00.00.00	
GC10C100	00000	SYSA	CC=	0022	00.00.00		93256	00:00	00000	00:00	00000	00:00	93256	14:20	*****	GBANK	00.00.00	
GC10C100	00000	SYSA	CC=	0022	00.00.00		93256	00:00	00000	00:00	00000	00:00	93256	13:38	*****	GBANK	00.00.00	
HAROLDJ	00000	SYSB	CC=	0022	00.00.00		93261	00:00	00000	00:00	00000	00:00	93261	17:38	*****	*****	00.00.00	
MSGTEST	00000	SYSA	CC=	0022	00.00.00		93260	14:30	00000	00:00	00000	00:00	93260	14:32	*****	CANSYS	00.00.00	
OBTRSYTO	00000	SYSA	CC=	0022	00.00.00		93257	02:00	00000	00:00	00000	00:00	93256	13:38	*****	GBANK	00.00.00	
OBTRSYTO	00000	SYSA	CC=	0022	00.00.00		93257	02:00	00000	00:00	00000	00:00	93256	13:28	*****	GBANK	00.00.00	
OBTRSYTO	00000	SYSA	CC=	0022	00.00.00		93257	02:00	00000	00:00	00000	00:00	93256	14:20	*****	GBANK	00.00.00	
OBTRSYTO	00000	SYSA	CC=	0022	00.00.00		93262	02:00	00000	00:00	00000	00:00	93263	06:58	*****	GBANK	00.00.00	
OBTRSYTO	00000	SYSA	CC=	0022	00.00.00		93261	02:00	00000	00:00	00000	00:00	93263	06:57	*****	GBANK	00.00.00	
OO1102RF	00000	SYSA	CC=	0022	00.00.00		93256	13:42	00000	00:00	00000	00:00	93256	14:44	*****	RMSPI100	00.00.00	
OO1102RF	00000	SYSA	CC=	0022	00.00.00		93258	08:31	00000	00:00	00000	00:00	93259	09:13	*****	RMSPI100	00.00.00	
OO1102RF	04916	SYSA	CC=	0022	00.00.00		93256	21:10	00000	00:00	00000	00:00	93257	09:22	*****	RMSPI100	00.00.00	
OPSDUMY0	00000	SYSA	CC=	0022	00.00.00		93257	07:00	00000	00:00	00000	00:00	93257	07:12	*****	RMSPI100	00.00.00	
OPSDUMY0	00000	SYSA	CC=	0022	00.00.00		93256	08:24	00000	00:00	00000	00:00	93256	09:15	*****	RMSPI100	00.00.00	
OPSDUMY1	00000	SYSA	CC=	0022	00.00.00		93257	07:36	00000	00:00	00000	00:00	93257	15:50	*****	RMSPI100	00.00.00	
OPS51305	00000	SYSA	CC=	0022	00.00.00		93261	18:00	00000	00:00	00000	00:00	93263	06:57	*****	TSTEVEY	00.00.00	
OPS51306	00000	SYSA	CC=	0022	00.00.00		93261	22:00	00000	00:00	00000	00:00	93263	06:57	*****	TSTEVEY	00.00.00	
OPS51307	00000	SYSA	CC=	0022	00.00.00		93262	03:00	00000	00:00	00000	00:00	93263	06:58	*****	TSTEVEY	00.00.00	
OPS51308	00000	SYSA	CC=	0022	00.00.00		93262	06:00	00000	00:00	00000	00:00	93263	06:58	*****	TSTEVEY	00.00.00	
OPS51315	00000	SYSA	CC=	0022	00.00.00		93261	19:00	00000	00:00	00000	00:00	93263	06:57	*****	TSTALL	00.00.00	
OPS51316	00000	SYSA	CC=	0022	00.00.00		93261	22:00	00000	00:00	00000	00:00	93263	06:58	*****	TSTALL	00.00.00	
OPS51317	00000	SYSA	CC=	0022	00.00.00		93262	03:00	00000	00:00	00000	00:00	93263	06:58	*****	TSTALL	00.00.00	
OPS51318	00000	SYSA	CC=	0022	00.00.00		93262	06:00	00000	00:00	00000	00:00	93263	06:58	*****	TSTALL	00.00.00	
OP511001	00000	SYSA	CC=	0022	00.00.00		93256	07:00	00000	00:00	00000	00:00	93256	08:30	*****	MAINTDLY	00.00.00	
OSPDMY0	00000	SYSA	CC=	0022	00.00.00		93258	09:59	00000	00:00	00000	00:00	93258	10:30	*****	RMSPI100	00.00.00	
PRSTJOB1	00000	SYSA	CC=	0022	00.00.00		93263	09:30	00000	00:00	00000	00:00	93264	07:01	*****	PERSTORE	00.00.00	
PRSTJOB1	00000	SYSA	CC=	0022	00.00.00		93263	09:35	00000	00:00	00000	00:00	93264	07:01	*****	PERSTORE	00.00.00	
PRSTJOB1	00000	SYSA	CC=	0022	00.00.00		93263	09:40	00000	00:00	00000	00:00	93264	07:02	*****	PERSTORE	00.00.00	
PRSTJOB1	00000	SYSA	CC=	0022	00.00.00		93263	09:45	00000	00:00	00000	00:00	93264	07:02	*****	PERSTORE	00.00.00	
PRSTJOB1	00000	SYSA	CC=	0022	00.00.00		93263	09:50	00000	00:00	00000	00:00	93264	07:02	*****	PERSTORE	00.00.00	
PRSTJOB1	00000	SYSA	CC=	0022	00.00.00		93263	09:55	00000	00:00	00000	00:00	93264	07:02	*****	PERSTORE	00.00.00	
PRSTJOB1	00000	SYSA	CC=	0022	00.00.00		93263	10:00	00000	00:00	00000	00:00	93264	07:02	*****	PERSTORE	00.00.00	
PRSTJOB1	00000	SYSA	CC=	0022	00.00.00		93263	10:05	00000	00:00	00000	00:00	93264	07:02	*****	PERSTORE	00.00.00	
RMSCMND1	00000	SYSA	CC=	0022	00.00.00		93261	17:01	00000	00:00	00000	00:00	93263	06:57	*****	RM11CMND	00.00.00	
RMSFBR87	00000	SYSA	CC=	0022	00.00.00		93256	07:00	00000	00:00	00000	00:00	93256	14:20	*****	MAINTDLY	00.00.00	
R112DMY	00000	SYSA	CC=	0022	00.00.00		93258	00:00	00000	00:00	00000	00:00	93258	07:01	*****	*****	00.00.00	

Sample Report(30-4): JM5020R

## Data Base Detail Reports

## Sample Report(30-4): JM5020R

REPORT : JM5020  
SYSTEM : OPS  
RELEASE :

JOB/Master® REPORTING SYSTEM  
JOBS RUN BUT NOT SCHEDULED  
PERIOD 93264 THRU 92365

PAGE: 1  
TIME: 10:16:10  
DATE: 09/24/93

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				CPU		*SCHEDULE*		*-READER-*		*--START--*		*---END---				ELAPSED	FAILED	
				TIME		DATE TIME		DATE TIME		DATE TIME		DATE TIME		JOB		TIME		
JOBNAME	JOBNO	SYSID	COND	CODE	MM.SS.TT	YYDD	HH.MM	YYDD	HH.MM	YYDD	HH.MM	YYDD	HH.MM	YYDD	HH.MM	SYSTEM	HH.MM.SS	STEP
JM1TST02	04638	SYSA	CC=	0000	00.22.06	93256	11:57	93256	11:57	93256	11:57	93256	12:02	*****	*****		00.04.45	
JM01SCHD	04658	SYSA	CC=	0000	00.21.66	93256	13:31	93256	13:31	93256	13:31	93256	13:36	*****	*****		00.04.38	
JM01SCHD	04665	SYSA	CC=	0000	00.26.71	93256	13:39	93256	13:39	93256	13:39	93256	13:43	*****	*****		00.04.24	
JM01SCHD	04673	SYSA	CC=	0000	00.21.30	93256	14:23	93256	14:23	93256	14:23	93256	14:27	*****	*****		00.04.09	
JM01SCHD	05013	SYSA	CC=	0000	00.22.10	93257	09:15	93257	09:15	93257	09:15	93257	09:23	*****	*****		00.07.22	
JM01SCHD	05030	SYSA	CC=	0000	00.20.52	93257	09:33	93257	09:33	93257	09:33	93257	09:38	*****	*****		00.05.14	
JM01SCHD	05057	SYSA	CC=	0000	00.21.08	93257	09:51	93257	09:51	93257	09:51	93257	09:58	*****	*****		00.07.12	
JM01SCHD	05282	SYSA	CC=	0000	00.16.21	93257	18:04	93257	18:04	93257	18:04	93257	18:08	*****	*****		00.03.44	
JM01SCHD	05283	SYSA	CC=	0000	00.19.55	93257	18:08	93257	18:05	93257	18:08	93257	18:12	*****	*****		00.03.52	
JM01SCHD	05286	SYSA	CC=	0000	00.23.90	93257	18:28	93257	18:28	93257	18:28	93257	18:31	*****	*****		00.03.41	
JM01SCHD	05287	SYSA	CC=	0000	00.20.01	93257	18:32	93257	18:28	93257	18:32	93257	18:35	*****	*****		00.03.09	
STS00297	05348	SYSA	CC=	0000	00.00.30	93258	00:05	93258	00:05	93258	00:05	93258	00:05	*****	*****		00.00.06	
JMPURGE	05372	SYSA	JCLERR		00.00.00	93258	07:00	93258	06:59	93258	06:59	93258	07:00	*****	*****		00.00.04	S1
JMPURGE	05376	SYSA	CC=	0000	00.00.57	93258	07:01	93258	07:01	93258	07:01	93258	07:01	*****	*****		00.00.16	
JM01SCHD	06202	SYSA	CC=	0000	00.23.37	93259	09:07	93259	09:06	93259	09:07	93259	09:11	*****	*****		00.04.56	
JM01SCHD	06206	SYSA	CC=	0000	00.23.47	93259	09:12	93259	09:11	93259	09:12	93259	09:18	*****	*****		00.06.05	
JM01SCHD	06229	SYSA	CC=	0000	00.21.23	93259	09:21	93259	09:21	93259	09:21	93259	09:25	*****	*****		00.03.56	
STS00297	06294	SYSA	CC=	0000	00.00.30	93259	11:27	93259	11:27	93259	11:27	93259	11:27	*****	*****		00.00.06	
STS00297	06310	SYSA	CC=	0000	00.00.30	93259	12:42	93259	12:42	93259	12:42	93259	12:43	*****	*****		00.00.08	
STS00297	06318	SYSA	CC=	0000	00.00.29	93259	13:00	93259	13:00	93259	13:00	93259	13:01	*****	*****		00.00.06	
STS00297	06390	SYSA	CC=	0000	00.00.30	93259	14:07	93259	14:07	93259	14:07	93259	14:08	*****	*****		00.00.07	
STS00297	06521	SYSA	CC=	0000	00.00.30	93259	16:18	93259	16:18	93259	16:18	93259	16:18	*****	*****		00.00.08	
JM01SCHD	06533	SYSA	CC=	0000	00.19.14	93259	17:24	93259	17:24	93259	17:24	93259	17:27	*****	*****		00.03.28	
JM01SCHD	06535	SYSA	CC=	0000	00.19.11	93259	17:50	93259	17:50	93259	17:50	93259	17:54	*****	*****		00.03.22	
STS00297	06613	SYSA	CC=	0000	00.00.30	93260	00:04	93260	00:04	93260	00:04	93260	00:04	*****	*****		00.00.06	
JM01SCHD	06818	SYSA	CC=	0000	00.18.65	93260	06:33	93260	06:33	93260	06:33	93260	06:42	*****	*****		00.08.20	
JM01SCHD	06831	SYSA	S=	222	00.17.77	93260	06:43	93260	06:43	93260	06:43	93260	06:53	*****	*****		00.09.51	



## Sample Report(30-5/6): JM5030

REPORT : JM5030  
 SYSTEM : OPS  
 RELEASE :

JOB/Master® REPORTING SYSTEM  
 SUMMARY BY COMPLETION CODE  
 PERIOD 93264 THRU 92365

PAGE: 1  
 TIME: 10:16:14|  
 DATE: 09/24/93

-----  
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 -----

COMPLETION CODE	NUMBER OF JOBS	ELAPSED HH.MM.SS	CPU TIME HH.MM.SS.TT
CC= 0000	2,576	01.21.28	04.56.32.92
CC= 0004	7	00.03.05	00.00.06.30
CC= 0008	20	00.04.01	00.00.17.09
CC= 0012	44	00.02.58	00.01.10.53
CC= 0020	1	00.00.00	00.00.00.00
CC= 0022	534	00.00.00	00.00.00.00
CC= 0546	19	00.00.00	00.00.00.00
CC= 1769	8	00.00.00	00.00.00.00
JCLERR	13	08.59.27	00.00.00.00
S= 222	6	10.21.12	00.00.27.79
U= 0106	1	00.00.40	00.00.10.51
U= 0999	8	00.01.25	00.00.02.98
TOTAL:	3,237	320.54.16	04.58.48.12
GRAND TOTAL:	3,237	320.54.16	04.58.48.12

REPORT : JM5030  
 SYSTEM : OPS  
 RELEASE :

JOB/Master® REPORTING SYSTEM  
 SUMMARY BY COMPLETION CODE BY SYSTEM  
 PERIOD 93264 THRU 92365

PAGE: 1  
 TIME: 10:16:18  
 DATE: 09/24/93

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SYSTEM	COMPLETION CODE	NUMBER OF JOBS	ELAPSED HH.MM.SS	CPU TIME HH.MM.SS.TT
*****	CC= 0000	30	01.35.58	00.06.35.46
	CC= 0022	3	00.00.00	00.00.00.00
	JCLERR	1	00.00.04	00.00.00.00
	S= 222	1	00.09.51	00.00.17.77
	U= 0106	1	00.00.40	00.00.10.51
	TOTAL:	36	01.46.33	00.07.03.74
BACKUP	CC= 0000	39	69.41.47	00.42.45.96
	TOTAL:	39	69.41.47	00.42.45.96
CALTEST	CC= 0000	8	00.04.58	00.00.02.41
	TOTAL:	8	00.04.58	00.00.02.41
CANSYS	CC= 0022	14	00.00.00	00.00.00.00
	TOTAL:	14	00.00.00	00.00.00.00
COKERES	CC= 0000	122	01.27.45	00.00.36.70
	TOTAL:	122	01.27.45	00.00.36.70
CYCLE1	CC= 0000	7	00.02.51	00.00.18.32
	CC= 0004	7	00.03.05	00.00.06.30
	TOTAL:	14	00.05.56	00.00.24.62
DATESUB	CC= 0000	18	00.14.43	00.01.09.30
	TOTAL:	18	00.14.43	00.01.09.30
DRPPRES	CC= 0000	98	00.50.55	00.00.29.43
	TOTAL:	98	00.50.55	00.00.29.43

## JMJOBRPT

GROUP BY: SYSTEM  
SORT BY: JOBNAME

JOB/Master® REPORTING SYSTEM  
JOB DEFINITION QUERY REPORT

PAGE: 1  
DATE: 10/11/93  
TIME: 13:33:38

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JOBNAME	ADDITIONAL FIELDS	TRIG	SUB	EXT SUB TIME	CALENDAR NAME	EXCEPTN. CAL1	EXCEPTN. CAL2	ALT DEF	SYSTEM NAME	DESCRIPTION
OSLOETR1	RUNMODE =	Y	Y	0900					*****	
EXSAKST1	RUNMODE =	Y	Y	0000					ESTSAKS1	
EXTSUB01	RUNMODE =	N	Y	0130					EXTSUBMT	EXTERNAL SUBMIT
EXTJOB1	RUNMODE =	N	Y	0800					JOSTENS2	
EXTTRIG1	RUNMODE =	Y	Y	0200					JOSTENS2	
EXTTRIG2	RUNMODE =	Y	Y	0200					JOSTENS2	
EXTTRIG3	RUNMODE =	Y	Y	0200					JOSTENS2	
SC003211	RUNMODE =	N	Y	0000					MAREMONT	
SC003215	RUNMODE =	N	Y	0000					MAREMONT	
OSLOEXT1	RUNMODE =	N	Y	1535					OSLOSYS1	EXT-SUB BEGINS TEST
OSLOEXT2	RUNMODE =	N	Y	1545					OSLOSYS1	EXT-SUB BEGINS TEST
ROGLDC	RUNMODE =	N	Y	1800					OSLOSYS5	
SWTEST01	RUNMODE =	N	Y	0000					SHWNTEST	

GROUP BY: SYSTEM  
SORT BY: JOBNAME

JOB/Master® REPORTING SYSTEM  
JOB DEFINITION QUERY REPORT

PAGE: 2  
DATE: 10/11/93  
TIME: 13:33:38

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*** SELECTION CRITERIA ***			CONJUNCTION
FIELD-NAME	VALUE		
EXTSUB	= Y		AND
RUNMODE	= P		OR
RUNMODE	=		AND

JMDSNRPT

GROUP BY: DSN-TYPE  
SORT BY: DSN

JOB/Master® REPORTING SYSTEM  
DATASET DEFINITION QUERY REPORT

PAGE: 1  
DATE: 10/11/93  
TIME: 13:34:00

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DATASET / ADDITIONAL FIELDS				JOBNAME		TYP	DSN PROCESS TRIGGER WHEN DATASET IS										TYP
				OUT	DEF	INP	DAT	DEL	UPD	REN	SCR	POS	IS	VALUE			TYP
PROD.ENV3.JOB125															0000 E		C
TRIGGER & ST				= 1)	ENVJ130	A	2)	ENVJ140									
				= 5)			6)				4)						
											8)						
PROD.ENV3.JOB135															0000 E		C
TRIGGER & ST				= 1)	ENVJ150	A	2)	ENVJ155	A	3)	ENVJ160	A					
				= 5)			6)			7)		4)					
												8)					
PROD.ENV6.JOB400															0010 E	APPLES AND ORANGES	C
TRIGGER & ST				= 1)	JOB1945	A	2)			3)							
				= 5)			6)			7)		4)					
												8)					
PRODCNTL.BATCH.A									V		Y				0000 E		C
TRIGGER & ST				= 1)	TEMPJOB1	A	2)	TEMPJOB2	A	3)			4)				
				= 5)			6)			7)		8)					
PRODCNTL.BATCH.DAILY									V						0019 E		C
TRIGGER & ST				= 1)	BATCH119	A	2)			3)			4)				
				= 5)			6)			7)		8)					

GROUP BY: DSN-TYPE  
SORT BY: DSN

JOB/Master® REPORTING SYSTEM  
DATASET DEFINITION QUERY REPORT

PAGE: 2  
DATE: 10/11/93  
TIME: 13:34:00

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*** SELECTION CRITERIA ***		
FIELD-NAME	VALUE	CONJUNCTION
DSN	= PROD*	AND
TRIGGER & ST	= *	AND



# Chapter 11

---

## Batch Functions

---

### Batch Programs

#### *Introduction*

JOB/Master® has a number of its programs available through batch. This offers greater control of throughput by enabling functions which would normally require manual intervention to be scheduled and automatically performed by JOB/Master®. The following pages provide a brief overview of the functions performed, an example of the JCL and an explanation of the various parms within the JCL.

The JCL members are sent with the installation tape and are in the INSTLIB. For ALL the JCL members listed, some changes will be necessary prior to execution:

- **VSMHLQ** - a generic high-level qualifier assigned to the VSAM files. This must be altered to conform to site naming standards.
- **TUNIT** - a generic unit parameter used in the JCL to define tape. This must be altered to reference site unit parameter.
- **HLQ/HLQ.OPS** - a generic high-level qualifier assigned some files. This must be altered to conform to site naming standards.

In many instances, the JCL will have SUBID parameter for the four possible regions: JM01-JM04. When used, the JCL will execute the program against the specified region. If no subid is indicated, the default is JM01.

## JMBACKUP

JMBACKUP backs the JOB/Master® VSAM files to tape. Any or all of the three files may be backed up by selecting the appropriate parameter:

Parm options:

J = JMDB	[JOB/Master® Data Base]
S = JMJOBQ	[JOB/Master® Job Queue]
H = JMHIST	[JOB/Master® History]
J,S,H = ALL	

It is recommended that this be run on a daily basis just after the schedule has completed.

The JCL must be modified for multiple JOB/Master® Control Regions by changing the DD statements for JMDB, JMHIST, JMJOBQ and CONTROL.

```
//JMBACKUP JOB (0000,0001),'J/M',CLASS=A,MSGCLASS=X
/*-----*
/* THIS JOB BACKUPS ANY OR ALL OF THE J/M VSAM FILES
/*
/* PARM VALUES ARE AS FOLLOWS:
/* 'J,S,H' = BACKUP ALL FILES
/* 'J' = JMDB DATABASE
/* 'S' = JMJOBQ JOB QUEUE
/* 'H' = JMHIST HISTORY FILE
/*
/* CHANGE VALUES: HLQ.OPS | TO CONFORM
/* CHANGE VALUES: VSMHLQ | TO SITE STANDARDS AND
/* CHANGE VALUES: JM.BACKUP | NAMING CONVENTIONS
/*
/* IF DSN IS NOT CATALOGED, USE "TUNIT" AND "VVVVVV":
/* CHANGE VALUES: TUNIT
/* CHANGE VALUES: VVVVVV
/*
/*-----*
//STEP1 EXEC PGM=JMBACKUP,PARM='J,S,H'
//STEPLIB DD DSN=HLQ.OPS.LOADLIB,DISP=SHR
//SYSUDUMP DD SYSOUT=*
//JMBACKUP DD DSN=JM.BACKUP,
// DISP=(NEW,KEEP),
// UNIT=TUNIT,
// LABEL=(1,SL),
// DCB=(RECFM=FB,LRECL=1000,BLKSIZE=15000)
//JMDB DD DSN=VSMHLQ.JMDB,DISP=SHR
//JMHIST DD DSN=VSMHLQ.JMHIST,DISP=SHR
//JMJOBQ DD DSN=VSMHLQ.JMJOBQ,DISP=SHR
//CONTROL DD DSN=VSMHLQ.CONTROL,DISP=SHR
```

## JMBATSP

JMBATSP is a batch utility job that will allow a scheduler to "schedule" Job/Master CLASS priority changes or activation/deactivation commands into the system that used to require operators to enter via the ISPF interface.

```
/*
/*-----*
/*
/* JMBATSP IS A BATCH UTILITY PROGRAM THAT CAN BE USED
```

```

/* TO CHANGE THE PRIORITY OF J/M CLASSES. IT WILL DO THE
/* SAME FUNCTION AS THE "SP" FUNCTION IN THE JOB TRACKING
/* SECTION. EACH CLASS TO BE CHANGED MUST BE SPECIFIED IN
/* THE CARDIN INPUT FILE (FORMAT SHOWN BELOW). IF THE
/* CLASS IS NOT SPECIFIED, IT WILL NOT BE CHANGED.
/*
/* DUPLICATE CLASS RECORDS WILL NOT BE ALLOWED
/* (ONLY 1 "A" ETC...)
/*
/*-----
/* PARM VALUES: SUBID=XXXX,TRACE=TRAY
/*
/* CARDIN input record format:
/* Col 1 - 6 "CLASS="
/* Col 7 - 7 CLASS to be changed (A - Z)
/* Col 8 - 8 Blank
/* Col 9 -18 Action (DEACTIVATE/ACTIVATE )
/*
/* -or-
/* Col 1 - 1 "*" Indicates a comment
/* Col 2 -72 Comment
/*
/*-----
/*
//STEP1      EXEC  PGM=JMBATSP,REGION=1M,
//           PARM='SUBID=JM01'
//
//STEPLIB    DD    DSN=OPS.V521.LOADLIB,DISP=SHR
//SYSPRINT    DD    SYSOUT=*
//REPORT      DD    SYSOUT=*
//SYSUDUMP    DD    SYSOUT=*
//SYSABEND    DD    SYSOUT=*
//JMJOBQ      DD    DISP=SHR,DSN=OPS.V521.JMJOBQ
//CONTROL     DD    DISP=SHR,DSN=OPS.V521.CONTROL
//JMHIST      DD    DISP=SHR,DSN=OPS.V521.JMHIST
//CARDIN      DD    *
*-----*
*                                     *
* Sample comments to show how user can document the      *
* Priority list update in this JOB.                        *
*                                     *
*-----*

CLASS=A ACTIVATE
CLASS=B DEACTIVATE
CLASS=C ACTIVATE
CLASS=D DEACTIVATE
CLASS=E ACTIVATE
CLASS=F DEACTIVATE
CLASS=G ACTIVATE
CLASS=M ACTIVATE
CLASS=N ACTIVATE
CLASS=R ACTIVATE
CLASS=S ACTIVATE
CLASS=T ACTIVATE
CLASS=Z ACTIVATE
/*
//

```

## JMBPOST

JMBPOST posts any of the five manual task flags that have been set (*see MANUAL TASK discussed in Data Base Creation and Job Tracking section*).

Parm options:

JJJJJJ=	JOBNAME for which the manual task applies. If the name has less than eight (8) characters, it must be padded with spaces.
NNNNY=	Three correspond with the order of the Manual Task on the List Queue: 1=DE, 2=CI, 3=TI, 4=DI, 5=JS. Changing the appropriate flag from Y to N will post the task completed.
X=	A 'Y' in this field will issue a user abend 1001 if the JOB-NAME is not on the schedule queue.
SUBID=	Optional parm can be used to specify the JOB/Master® control region (JM01-JM04) if multiple regions are being used. Defaults to JM01.
ALL	All instructs JMBPOST to post all occurrences of a job on the schedule queue.

The JCL must be modified for multiple JOB/Master® Control Regions by changing the DD statements for JMJOBQ and CONTROL.

```
//JMBPOST    JOB    (91Y6,0000),'J/M',CLASS=A,MSGCLASS=X
//*-----*
//*
//* THIS JOB POSTS MANUAL TASK FLAG(S)
//*
//* JJJJJJ = JOBNAME PADDED TO(8)CHARACTERS WITH BLANKS
//*
//* NNNNN = THE FIVE AVAILABLE MANUAL TASKS IN THE SAME
//* ORDER AS ON THE JOBQ: DE, CI, TI, DI, JS.
//* N = MANUAL TASK POSTED AS COMPLETE.
//* Y = MANUAL TASK IS NOT POSTED; NOT COMPLETE
//*
//* X=ABEND OPTION: Y=A USER ABEND CODE OF 1001 IS ISSUED
//* TO INDICATE THAT THE JOB IS NOT
//* ON THE SCHEDULE QUEUE.
//* N=NO ACTION WILL BE TAKEN IF JOB IS
//* NOT ON THE SCHEDULE QUEUE.
//*
//* SUBID = OPTIONAL PARM WHICH CAN BE USED TO SPECIFY THE
//* J/M CONTROL REGION WHEN MULTIPLE REGIONS ARE
//* BEING USED. IF OMMITTED, JM01 IS THE DEFAULT.
//*
//* ALL INSTRUCTS JMBPOST TO POST ALL OCCURRENCES OF
//* A JOB ON THE SCHEDULE QUEUE (higher overhead if used).
//*
//* CHANGE VALUES: HLQ.OPS |TO CONFORM
//* CHANGE VALUES: VSMHLQ |TO SITE NAMING STANDARDS
//*-----*
//S1 EXEC PGM=JMBPOST,PARM='JJJJJ ,NNNNN,X,SUBID,ALL'
//STEPLIB DD DSN=HLQ.LOADLIB,DISP=SHR
//SYSUDUMP DD SYSOUT=*
//JMJOBQ DD DSN=VSMHLQ.JMJOBQ,DISP=SHR
//JMDB DD DSN=VSMHLQ.JMDB,DISP=SHR
//CONTROL DD DSN=VSMHLQ.CONTROL,DISP=SHR
```



## JMCLEAN

JMCLEAN is executed to check for invalid records in the JOBQ file.

Parm Options:           V = Verify and print record to sysout.  
                          D = Verify and Delete any invalid records.

The JCL must be modified for multiple JOB/Master® Control Regions by changing the DD statements for JMJOBQ and CONTROL.

```
//JMCLEAN    JOB
(91Y6,0000),JOBMASTER,CLASS=A,MSGCLASS=X
//S1         EXEC  PGM=JMCLEAN,PARM='V'
//STEPLIB    DD    DSN=HLQ.LOADLIB,DISP=SHR
//REPORT     DD    SYSOUT=*
//SYSUDUMP   DD    SYSOUT=*
//JMJOBQ     DD    DSN=VSMHLQ.JMJOBQ,DISP=SHR
//CONTROL    DD    DSN=VSMHLQ.CONTROL,DISP=SHR
```

## JMCOMND

JMCOMND is a batch utility job that will allow a scheduler to "schedule" various Job/Master commands into the system that used to require operators to enter via the ISPF interface.

```
/*-----*
/* J O B M A S T R      JOB/MASTER BATCH COMMAND PROCESSOR*
/*                      *
/* EDIT "VSMHLQ" TO PROPER HLQ FOR VSAM DATASETS.  *
/*                      *
/* EDIT "HLQ"   TO PROPER HLQ FOR OPS LIBRARIES.  *
/*                      *
/* EDIT "SYS1.SCEERUN" TO PROPER COBOL RUNTIME LIBRARY. *
/*                      *
/*-----*
/* JOB WILL ISSUE JOBQ COMMAND AGAINST SCHEDULE QUEUE. *
/*                      *
/* INPUT PARMS: 'C,X,JJJJJJ,SSSS,DDDDD,TTTT'          *
/*                      *
/* C = JOBQ COMMAND TO BE EXECUTED                    *
/* F: FORCE JOB                                         *
/* E: RESET JOB                                       *
/* S: SUBMIT JOB                                       *
/* R: RELEASE JOB                                      *
/* C: CANCEL JOB                                       *
/* K: KEEP JOB                                         *
/* H: HOLD JOB                                         *
/* P: PURGE JOB                                         *
/* I: INCLUDE JOB INTO SCHEDULE                        *
/* X: EXCLUDE JOB FROM SCHEDULE                        *
/* Y: SET TRACE ON HERE & SEND TRAY TO J/M            *
/* N: SET TRACE OFF HERE & SEND TRAN TO J/M.          *
/*                      *
/* X = ACTION FLAG:                                   *
/* J: COMMAND ON 1ST OCCURRENCE OF A JOB              *
/* Q: COMMAND ON ALL OCCURRENCES OF A JOB            *
/* S: COMMAND ON SPECIFIC JOB/DATE/TIME              *
/*                      *
/* JJJJJJJ = JOBNAME - PADDED TO (8)                 *
/*          CHARACTERS WITH BLANKS                   *
```

```

/*          *
/*      SSSS = SUBSYSTEM ID - PADDED TO (4)          *
/*          CHARACTERS WITH BLANKS                    *
/*      OPTIONAL PARAMETER WHICH CAN BE USED        *
/*      TO SPECIFY THE J/M CONTROL REGION WHEN      *
/*      MULTIPLE REGIONS ARE BEING USED.            *
/*      IF OMMITTED, JM01 IS THE DEFAULT.          *
/*          *
/*      DDDDD = 5 DIGIT JULIAN DATE FROM THE JOBQ    *
/*      ONLY USED WITH ACTION=S.                    *
/*          *
/*      TTTT = 4 DIGIT TIME (HHMM) FROM THE JOBQ    *
/*      ONLY USED WITH ACTION=S.                    *
/*          *
/*-----*
//S1      EXEC  PGM=JMCOMND,
//          PARM='C,X,JJJJJJ, SUBS, JDATE, TIME,
//          RPTOPTS(ON), RPTSTG(ON),
//          TERMTHDACT(UADUMP), TRAP(OFF)'
//STEPLIB  DD    DSN=HLQ.LOADLIB, DISP=SHR
//          DD    DSN=SYS1.SCEERUN, DISP=SHR
//          DD    DSN=CEE.SCEERUN, DISP=SHR
//SYSUDUMP DD    SYSOUT=*
//JMJOBQ   DD    DSN=VSMHLQ.JMJOBQ, DISP=SHR
//CONTROL  DD    DSN=VSMHLQ.CONTROL, DISP=SHR

```

## JMDBCOPY

JMDBCOPY copies database definitions, in their entirety, from one database to another. Multiple definitions may be copied in one execution of this batch program. This will make moving jobs from a "test" database to "production" virtually error free.

The definitions to be copied are specified in the CARDIN input file. The format of the record is record type, followed by a space, and the name of the definition.

The record types are:

- J - Job
- S - System
- P - Process Keyword Definition
- C - Calendar
- N - Negative/Corequisite Definition
- G - Group Message Definition
- D - Dataset Definition
- M - Message Definition

```

//JMDBCOPY JOB (0000,0001),'J/M',CLASS=A,MSGCLASS=X
/*-----*
/* THIS PROGRAM WILL COPY JOB/Master® DEFINITIONS
/* FROM ONE JOB/Master® DATABASE TO ANOTHER
/*
/* CHANGE VALUES: HLQ.OPS | TO CONFORM
/* CHANGE VALUES: VSMHLQ | TO SITE NAMING STANDARDS
/*-----*
//JOBLIB DD DISP=SHR,DSN=HLQ.OPS.LOADLIB

```

```

/*
//STEP1      EXEC  PGM=JMDBCOPY
//SYSOUT     DD    SYSOUT=*
//SYSUDUMP   DD    SYSOUT=*
//JMDBIN     DD    DISP=SHR,DSN=HLQ.OPS.JMDB
//JMDBOUT    DD    DISP=SHR,DSN=VSMHLQ.JMDB
//CARDIN     DD    *
J JOBA
J JOBB
C SPECIAL
S PAYSYS
D TLRG.TEST.DATASET
/*
//

```

This example will copy job JOBA and JOBB, SPECIAL calendar, system PAYSYS, and TLRG.TEST.DATASET dataset from HLQ.OPS.JMDB to VSMHLQ.JMDB. All definitions must be directly specified (*ie: specifying S PAYSYS will only copy the system definition, not the job definitions belonging to system PAYSYS*).

## JMDBUPD

JMDBUPD globally changes Job/Master database definitions based on whether the record matches the criteria specified in the input parameter file. Multiple definitions may be updated in one execution of this batch program. This will make changing jobs to virtually error free. For example, changing the name of a submit PDS on all occurrences in the database. The database records to be updated are specified in the CARDIN input file. The basic format of the input record statement follows.

```

//CARDIN DD *
FIELD-NAME OPERATOR VALUE CONJUNCTION
FIELD-NAME OPERATOR VALUE CONJUNCTION
FIELD-NAME OPERATOR VALUE CONJUNCTION
.
.
.
/*

```



***FIELD-NAME values must start in column 1 but any number of spaces can separate the four fields in the record for readability.***

FIELD-NAME	Any database definition field-name listed in Tables 10.1 and 10.2 can be used in the selection process. As a general rule, the Names are close to what is on the online definition screens.
OPERATOR	Valid operators are =, <, and >.
VALUE	Any value up to the length of the input record can be entered. Wild-cards are permitted. You may want to update all jobs that begin with a specific character string.  EXAMPLE:  Update all jobs which begin with the letters ACCTG.  JOBNAME = ACCTG*
CONJUNCTION	A conjunction is used to combine the logic of two or more

field-names. Valid conjunctions are AND, OR and EXC. AND is the default conjunction which does not have to be specified. The AND conjunction allows multiple fields/conditions to be grouped together as discussed previously, but its use must be logical. For example, it is not logical to specify:

SYSTEM = ENVSYS AND

SYSTEM = PAYSYS

... because a job can only belong to one system. The update program will run, but no jobs will be selected.

### ***Making the Database Record Selection***

JMDBUPD uses the same keyword field names that are used in the reporting jobs, JMJOB-  
BRPT and JMDSNRPT. They are listed in Tables 10.1 and 10.2.

### ***Additional statements specific to JMDBUPD***

REPLACE WITH      Control keyword. Any FIELD-NAME statements placed after this statement will be updated with the "Value" specified on the statement (even spaces).

ADD MULTI          Control keyword. Any FIELD-NAME statements placed after this statement will be updated with the "Value" specified on the statement (even spaces) in multiple value fields.

If HISTORY=Y, all changes will be logged into the history log. The file JMREPORT is a work file and can be a temporary file.

It is very important to be careful with the use of this program. The safe procedure is to do a backup of the JMDB database before starting the update and checking the results.

Examples:

```
//CARDIN DD *
SELECT
JOBNAME = HOSP*
COREQDEP = R1134SUB
REPLACE WITH
COREQDEP = R1135SUB
/*
```

This will select all jobs beginning with HOSP and change any corequisite dependencies of "R1134SUB" to "R1135SUB" (ie. a newer release).

## **JMFORCE**

JMFORCE is used to reset a Job/Master internal buffer to reusable on a job that was forced by an operator. Before this job, the buffer would not be available for use on a forced job until the system was cycled.

```
/* -----*
/* THIS JOB WILL SET A BUFFER TO REUSABLE ON A FORCED JOB *
/* *
/* EDIT "HLQ" TO HIGH LEVEL QUALIFIER FOR OPS LIBRARIES. *
/* *
/* -----*
/* PARM KEYWORD: *
```

```

/* SUBID=JM01          (JM01 IS THE DEFAULT)      *
/* JOBNM=XXXXXXXXX      *
/* DATE=YYDDD          *
/* TIME=HHMM           *
/*                      *
/* RC = 0000 SUCCESSFUL      *
/* RC = 0008 PARTIALLY SUCCESSFUL - SEE MESSAGES *
/* RC = 0012 UNSUCCESSFUL - SEE MESSAGES      *
/*                      *
/* <<< NOTE >>> WILL DELETE THE BUFFER OF 1ST JOB FOUND *
/* WITH NAME ENTERED IN PARM.      *
/* WILL DELETE THE JOBQ RECORD THAT MATCHES      *
/* WITH NAME/DATE/TIME ENTERED IN PARM.      *
/*                      *
/* -----*
/*STEP1 EXEC PGM=JMFORCE,REGION=1024K,
/* PARM=JOBNM=XXXXXXXX,SUBID=JM01,DATE=00006,TIME=0928'
/*
/*STEPLIB DD DSN=HLQ.LOADLIB,DISP=SHR
/*SYSOUT DD SYSOUT=*
/*SYSDBOU DD SYSOUT=*
/*SYSUDUMP DD SYSOUT=*
/*

```

## JMPURGE

JMPURGE will purge either a single job or all occurrences of a job on the JOBQ.

There are three (3) parms:

X=	'J' will purge the first occurrence of the JOB from the JOBQ.
	'Q' will purge all occurrences of the JOB from the queue.
JJJJJJJ=	JOBNAME to be purged. Less than eight (8) characters in the name must be padded with spaces.
SUBID=	Specify JOB/Master® control region (JM01-JM04) when using multiple regions. Default is JM01.

The JCL must be modified for multiple JOB/Master® Control Regions by changing the DD statements for JMJOBQ and CONTROL.

```

//JMPURGE JOB (91Y6,0000),JOBMASTER,CLASS=A,MSGCLASS=X
/*-----*
/*
/* THIS JOB WILL PURGE A JOB(S) FROM THE SCHEDULE QUEUE
/*
/* X = J: FLAG TO PURGE ONLY THE 1ST OCCURANCE OF A JOB
/* Q: FLAG TO PURGE ALL OCCURANCES OF A JOB.
/* ON THE SCHEDULE QUEUE.
/*
/* JJJJJJJ = JOBNAME PADDED TO(8)CHARACTERS WITH BLANKS
/*
/* SUBID = OPTIONAL PARM WHICH CAN BE USED TO SPECIFY THE
/* J/M CONTROL REGION WHEN MULTIPLE REGIONS ARE
/* BEING USED. IF OMMITTED, JM01 IS THE DEFAULT
/*
/* CHANGE VALUES: HLQ.OPS TO CONFORM
/* CHANGE VALUES: VSMHLQ |TO SITE NAMING STANDARDS
/*-----*
//S1 EXEC PGM=JMPURGE,PARM='X,JJJJJ ,SUBID'

```

```
//STEPLIB      DD      DSN=HLQ.LOADLIB,DISP=SHR
//SYSUDUMP     DD      SYSOUT=*
//JMJOBQ       DD      DSN=VSMHLQ.JMJOBQ,DISP=SHR
//CONTROL      DD      DSN=VSMHLQ.CONTROL,DISP=SHR
```

## JMRESORC

JMRESORC attaches or detaches resources (as defined in the JOB/Master® Data Base definition).

The parms are as follows:

X= 'A' for Attach.

'D' for Detach.

RRRRRRRRRI R-Resource name. Up to eight (8) characters, padded with spaces if less. I=id reserved for future development. Pad with a space.

SUBID = JOB/Master® control region (JM01-JM04) when using multiple regions. Default is JM01.

```
//JMRESORC JOB (91Y6,0000),JOBMASTER,CLASS=A,MSGCLASS=X
/*-----*
/* J M R E S O R C *
/*-----*
/*
/* THIS JOB WILL ATTACH OR DETACH JOB/Master® RESOURCES
/*
/* NOTE: SLASHES ARE REQUIRED IN THIS PARAMETER:
/* 'X/RRRRRRRRRI/SUBID'
/*
/* X = A/: ATTACH RESOURCE
/* D/: DETACH RESOURCE
/*
/* RRRRRRRRR = RESOURCE NAME PADDED TO (8) CHAR WITH
BLANKS
/*
/* I/ = PARM RESERVED FOR FUTURE DEVELOPMENT. BLANK FILL
/*
/* SUBID = OPTIONAL PARM WHICH CAN BE USED TO SPECIFY THE
/* J/M CONTROL REGION WHEN MULTIPLE REGIONS ARE
/* BEING USED. IF OMMITTED, JM01 IS THE DEFAULT
/*
/* CHANGE VALUES: HLQ.OPS TO CONFORM TO SITE STANDARDS
/*-----*
//S1 EXEC PGM=JMRESORC,PARM='X/RRRRRRRRRI/SUBID'
//STEPLIB DD DSN=HLQ.LOADLIB,DISP=SHR
//SYSUDUMP DD SYSOUT=*
```

## JMRESTOR

JMRESTOR restores JOB/Master® VSAM files. This JCL assumes the backup has been made to tape outside the control of a tape management system; thus the need to fill in the appropriate UNIT= parm (*site standard*) and the VOLSER.

Any or all of the three files may be restored by selecting the appropriate parameter:

Parm options:

J=JMDB	[JOB/Master® Data Base]
S=JMJOBQ	[JOB/Master® Job Queue]
H=JMHIST	[JOB/Master® History]

The JCL must be modified for multiple JOB/Master® Control Regions by changing the DD statements for JMDB, JMHIST, JMJOBQ and CONTROL.

```
//JMRESTOR JOB (0000,0001),'JOBMASTER',CLASS=A,MSGCLASS=X
/*-----*
/* THIS JOB RESTORES ANY OR ALL OF THE J/M VSAM FILES
/*
/* PARM VALUES ARE AS FOLLOWS:
/* 'J,S,H' = RESTORE ALL FILES
/* 'J' = JMDB DATABASE
/* 'S' = JMJOBQ JOB QUEUE
/* 'H' = JMHIST HISTORY FILE
/*
/* CHANGE VALUES: HLQ.OPS | TO CONFORM
/* CHANGE VALUES: VSMHLQ | TO SITE STANDARDS AND
/* CHANGE VALUES: JM.BACKUP | NAMING CONVENTIONS
/*
/* IF DSN IS NOT CATALOGED, USE "TUNIT" AND "VVVVVV":
/* CHANGE VALUES: TUNIT
/* CHANGE VALUES: VVVVVV
/*
/*-----*
//S1 EXEC PGM=JMRESTOR,PARM='J,S,H'
//STEPLIB DD DSN=HLQ.LOADLIB,DISP=SHR
//SYSUDUMP DD SYSOUT=*
//JMBACKUP DD DSN=HLQ.JMBAKUP,
// DISP=OLD,
// UNIT=TUNIT,
// VOL=SER=VVVVVV
//JMDB DD DSN=VSMHLQ.JMDB,DISP=OLD
//JMHIST DD DSN=VSMHLQ.JMHIST,DISP=OLD
//JMJOBQ DD DSN=VSMHLQ.JMJOBQ,DISP=OLD
```

## JMSHUT

JMSHUT cleanly brings down the JOB/Master® control region. In a multi-region environment, reference the appropriate SUBID: JM01-JM04. Default is JM01. For example, to shutdown JM04, enter “S JMSHUT,PARM=JM04” on the system console.

```
/*-----*
/* J M S H U T SHUTDOWN JOBMASTER CONTRL REGION *
/*-----*
/* SUBID = JM01-JM04. DEFAULT IS JM01. *
/*-----*
//JMSHUT PROC SUBID=XXXX JOBMASTER REGION
IDENTIFIER
```

```

/*
//JMSHUT      EXEC  PGM=JMSHUT,PARM='&SUBID'
//STEPLIB     DD    DSN=HLQ.OPS.LOADLIB,DISP=SHR
//SYSUDUMP    DD    SYSOUT=*

```

## JMSSCPSC

JMSSCPSC is used to stop and start the submit facility by altering the function parameter accordingly:

FUNC=

PSCD                      Stop submit facility

SSCD                      Start submit facility

SUBID=                    JOB/Master® control region (JM01-JM04) when using multiple regions. Default is JM01.

```

//JMSSCPSC    JOB    (0000,0001),'J/M',CLASS=A,MSGCLASS=E
/*-----*
/* J M S S C P S C  START/STOP SUBMIT FACILITY FROM CONS *
/*-----*
/* THIS JOB IS USED TO STOP AND START SUBMIT FACILITY
/* BY ALTERING THE FUNCTION PARAMETER ACCORDINGLY.
/* FUNC:  PSCD - STOP SUBMIT FACILITY
/*       SSCD - START SUBMIT FACILITY
/* SUBID:  JM01-JM04. DEFAULT IS JM01.
/*-----*
//S1          EXEC  PGM=JMSSCPSC,PARM='FUNC,SUBID'
//STEPLIB     DD    DSN=HLQ.OPS.LOADLIB,DISP=SHR

```

## JMSTATUS

JMSTATUS will verify the status of the automatic submit facility and end with a return code indicating the result..

Return Code 0016 indicates the submit facility is INACTIVE. Return Code 0000 indicates the submit facility is ACTIVE.

Parm options:

SUBID=                    Optional parm can be used to specify the JOB/Master® control region (*JM01-JM04*) if multiple regions are being used. Defaults to JM01.

The JCL must be modified for multiple JOB/Master® Control Regions by changing the DD statements for JMJOBQ and CONTROL.

```

//JMSTATUS    JOB    (0000,0001),'J/M',CLASS=A,MSGCLASS=X
/*-----*
/* THIS JOB CHECKS THE STATUS OF THE SUBMIT FACILITY.
/*
/* RC = 0016: SUBMIT FACILITY IS INACTIVE
/* RC = 0000: SUBMIT FACILITY IS ACTIVE
/*
/* SUBID = OPTIONAL PARM WHICH CAN BE USED TO SPECIFY THE
/* J/M CONTROL REGION WHEN MULTIPLE REGIONS ARE BEING
/* USED: JM01-04. IF OMITTED, JM01 IS THE DEFAULT
/*

```



```

/*  CHANGE VALUES: HLQ.OPS | TO CONFORM
/*  CHANGE VALUES: VSMHLQ | TO SITE NAMING STANDARDS
/*-----*
//S1          EXEC  PGM=JMSTATUS,PARM='SUBID'
//STEPLIB     DD    DSN=HLQ.OPS.LOADLIB,DISP=SHR
//SYSOUT      DD    SYSOUT=*
//JMJOBQ      DD    DSN=VSMHLQ.JMJOBQ,DISP=SHR

//CONTROLDDSN=VSMHLQ.CONTROL,DISP=SHR

```

## JMTRACE

JMTRACE will perform a diagnostic trace on a JOB/Master® control region. This is usually requested by Mantissa to assist in evaluating a problem:

FUNC=

TRAY                    Turn the trace on.

TRAN                   Turn the trace off.

SUBID=                   JOB/Master® control region (*JM01-JM04*) when using multiple regions. Default is JM01.

```

//JMTRACE     JOB    (0000,0001),'J/M',CLASS=A,MSGCLASS=X
/*-----*
/*  J M T R A C E  TURN ON/OFF JOBMASER TRACE FACILITY  *
/*-----*
/* JOB PERFORMS A DIAGNOSTIC TRACE ON THE JM02 MODULE
/* IN CONTROL REGION. THIS IS USUALLY REQUESTED BY
/* MANTISSA FOR PROBLEM DETERMINATION.
/*
/*  FUNC: TRAY = TURN THE TRACE FUNCTION ON
/*        TRAN = TURN THE TRACE FUNCTION OFF
/*
/*  SUBID = OPTIONAL PARAMETER USED TO SPECIFY A
/*        J/M CONTROL REGION WHEN MULTIPLE REGIONS
/*        ARE USED. IF OMITTED, JM01 IS THE DEFAULT.
/*
/* CHANGE VALUES: HLQ.OPS | TO CONFORM TO SITE STANDARDS
/*-----*
//S1          EXEC  PGM=JMTRACE,PARM='FUNC,SUBID'

//STEPLIBDDSN=HLQ.OPS.LOADLIB,DISP=SHR

```



# Chapter 12

---

## Tutorial

---

### Introduction

This section contains several “hands-on” tutorials for the user to follow while performing the steps on the system. You will learn how to define jobs and use the schedule monitoring features. All sample jobs have been provided with the software so that you can actually run the schedules that you produce with these tutorials.

The following tutorials are contained in this section (*detailed descriptions of the job schedule requirements can be found at the beginning of each lesson*):

1. Inventory Job Schedule
2. Sales Job Schedule
3. Commissions Paid Job Schedule
4. Running a Job Schedule Simulation
5. Monitoring the Job Queue
6. Posting Manual Task

Each tutorial introduces different features of the OPS/Master® scheduling system. The topics covered become progressively more advanced as you proceed through this section.

We strongly suggest that you begin learning the system by following the instructions in this section. Then proceed to set up actual production schedules, referring to the OPS/Master® Reference documentation as necessary.

### ***Sample Company Work Days and Holidays***

The following is a list of all workdays and holidays that are used in the tutorials.

#### **Work Days**

The standard work days are Monday through Friday (*excluding holidays*).

**Holidays**

For this tutorial, we will use HOLIDAY calendar, which will have all federal holidays and weekends marked. Proceed with the tutorial to learn how to create HOLIDAY. (*Refer to Calendars - JOB/Master® Creation.*)

**Creating a Sample Inventory Job Schedule*****Schedule Requirements***

This schedule must allow for the following jobs to be run according to the schedule shown below:

JOB NAME	SCHEDULED TO BE RUN:
INVNTRY1	Daily ( <i>each workday</i> )
INVNTRY2	Last workday of week, with manual data entry task. If last workday is a holiday, run on closest workday before the holiday. Data Entry message: Enter Time Cards and Sign Off upon completion ( <i>message sent to USERID TJRM</i> )
INVNTRY3	Last workday of month, with following documentation: JOB DESCRIPTION: MONTH-END INVENTORY SUBMITTING DEPT: INVENTORY MANAGEMENT PROGRAMMER NAME: SMITH, JOE USER DEPARTMENT: PAYROLL DEPT. DELIVERY METHOD: HAND DELIVER

Follow the steps below to define these jobs to the database according to the above requirements.



```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/02 - 98.245      Time = 14:35
-----

Option ==> A      A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> J      J ob / S ystem / P rocess Keyword
      C alendar / N eg and Coreq / G roup Message
      / D ataset / M essage

Name      ==> INVNTY1
Stepname  ==> _____ (Stepname (PROC) if jobstep definition)
Proc Stepname ==> _____ (Stepname (PGM=) if jobstep definition)

Data Set Name ==> _____ (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                  line when processing Data Base options

```

5. You have specified all necessary information to enter the option to add a job to the schedule. There are five job definition screens that can be used to define a schedule. You must complete the first screen, the others are optional. The first screen is shown below:

```

AJ----- JOB/Master® Job Definition ----- Row 1 to 4 of 72
Command ==>                               Scroll ==> PAGE
-----Definition Last Updated by P390W      on 98240 at 1006

Jobname ==> INVNTY1  Alt Name For => _____ System Name ==> INVNTY
PDS Mem ==> _____ PDS ==> _____
Trig Job ==> N (Y/N)  Triggered By==> _____ Submit Type ==> A (ACMRST)
Res Name1 ==> _____ Res Name2 ==> _____ Schedule/Net==> *****
Calendar ==> MON-FRI  Excep Cal1 ==> HOLIDAY  Excep Cal2 ==> _____
Keywd Def ==> _____ Priority ==> _____ Lib Type ==> _____
Neg/C Def ==> _____
Model / Count of Tapes: 3420 => 00 3480 => 00 Update Drive Usage=> Y
----- Submit Options -----
Enter submit time (HHMM) & optionally "number of runs"/"minutes between runs"
Submit=> 1045 End=> 0000 Number Of Runs=> 00 Minutes Between Runs=> 0000

----- Dependency Options -----
Pred  Negative  Coreq  Process  N-Proc  Trig  Sub:  OP  Cond  Trig
Jobs  Typ  Dep  Dep  Keyword  Keyword  Job  Typ:  CD  Code  Type
-----
_____ - | _____ | _____ | _____ | _____ | _____ | : - - - - -
_____ - | _____ | _____ | _____ | _____ | _____ | : - - - - -
_____ - | _____ | _____ | _____ | _____ | _____ | : - - - - -

```

6. You will notice that the first line on the screen contains the COMMAND ==> line. This field is used to enter any desired JOB/Master® or SPF command (*these commands are not internal OPS/Master® commands*). Refer to the SPF Manual

for more information on these commands. The COMMAND line appears at the top of all OPS/Master® screens.

7. Also notice that the top of the screen shows who last updated the job definition and when the update was made. The system will automatically display the job name specified on the previous screen.
8. The ALT NAME ==> field is used to specify an alternate name for the job, if desired. For this tutorial, you will not need an alternate name.
9. The SYSTEM NAME ==> field is used to specify an application system name of which the job is a part. For this tutorial, specify the system name INVNTY.
10. The PDS MEM ==> field is used to specify the Partitioned Data Set Member name. The PDS Member Name does not have to match the job name. This field is only needed if the member name is different from the job name. For this tutorial, leave this field blank.
11. The next field is the TRIG JOB ==> (Y/N) field. The JOB/Master® system allows you to specify that the successful completion of one job will cause the start of another job. This means that the second job is triggered by the first. For this tutorial, skip this field and leave the default of N unchanged.
12. The SUBMIT TYPE ==> field(A/C/M/R/S/T) can contain one of the six possible values:

A	Automatic (Submitted by JOB/Master®)
C	Command Stream (Command - No JCL. Works with CONSOLE/Master®)
M	Manual Task (Requires manual intervention)
R	Manual Submit (Repeating task will continue being re-scheduled until the last run is signaled complete).
S	Started Task (Started task initiated by JOB/Master®)
T	Timed trigger waiting for submit time (See Database Creation Section)

For this tutorial use A.

13. The RES NAME1 and RES NAME2 fields can be used to assign resource names to a particular CPU. The resource name can be up to 8 characters. If no name is specified, the function will be eligible on any processor. The system will attempt to execute the function on the resource name in RES NAME1. If that condition cannot be satisfied, it will attempt to execute the function on the resource in RES NAME2.
14. The cursor is now in the SCHEDULE/NET ==> field. The SCHEDULE/NETWORK, if specified in this field, is used to limit access to this definition to a specific user or group of users (i.e., a group of users at a remote site). The SCHEDULE/NET is defined on the ISF (Interactive Security Facility) JOB/Mas-

ter® Security Definition Screen at the User ID level. For this job definition, leave this field blank.

15. The CALENDAR ==> field is used to tell the system which days of the year to run your jobs. You will learn how to set up a calendar later in this tutorial. Enter the calendar name MON-FRI in this field.
16. You are now at the EXC. CAL1 ==> field. This stands for exception calendar. You can specify up to two exception calendars. The exception calendar tells the system which days are not valid to run the jobs. The exception calendar is typically used to specify holidays. For this job definition, enter HOLIDAY in this field and press <TAB> to advance the cursor to the next field.
17. The cursor is now in the EXC. CAL2 ==> field. Press <TAB> again, since only one exception calendar is necessary for this tutorial.
18. The cursor is now in the KEYWD. DEF ==> field. This stands for Keyword Definition. Keywords are used to represent a set of conditions for which the job should be run. It may not be necessary to use keywords to satisfy the requirements of your schedule. Some keywords require references to calendars, others represent conditions that the system can interpret without a calendar.

The system provides a list of keywords. If your conditions require the specification of more than one keyword, you should use the Keyword Definition Screen. This screen allows you to group the system keywords into a user-defined keyword. The user-defined keyword can be specified in this field. You can specify a user-defined keyword on the Job Definition Screen before defining it. A message will be displayed implicating a keyword not found. Press the <TAB> key to advance the cursor.

19. The PRIORITY ==> field is used to establish a potential submission sequencing. Refer to "SP" in the *Tracking* section of this manual. For this job definition, leave this field blank.
20. The LIB.TYPE ==> field is unused at this time. For this tutorial, the JCL can be found in the default library. The sample JCL was placed in this library when JOB/Master® was installed.
21. The NEG/C DEF ==> field stands for Negative/Co-requisite Definition. A negative dependency is a job that cannot be in the MVS input queue or in execution for the job to be submitted. A corequisite dependency is a job that must be executing for the job being defined to be submitted. You can define a group of these dependencies under a user-specified name. This can be done with the Add Negative/Corequisite definition from the JOB/Master® main menu. The user-defined dependency group name can be specified in this field.
22. NO. OF TAPE DRIVES: The 3400 ==> field name refers to reel tape drives and the 3480 ==> field name refers to cartridge tape drives. You can specify the number of each type of drive that is needed to run the job. When you enter a number in these fields, the system will check to make sure the specified number of drives are available before submitting the job.

If 00 (*zero*) is specified, the system won't check tape drive availability. However, the system will insert the number of drives that were required after running the job each time if the update drive usage ==>Y. For this job definition, leave the 00 default.



23. Now, <TAB> to the SUBMIT OPTIONS area of the screen. If you choose to specify a submit option, you can either enter a submit and end time or specify a number of times for the job to run and the minutes between runs. Do not specify both.

The SUBMIT and END TIMES should be entered in the form HHMM. If additional submit/end times are desired, they can be specified on the second job definition screen.

If you specify a start and end time in this area of the screen (*and/or on the second job definition screen*), you can also tell the system to cancel the job if it is past the specified start time(s). The DEADLINE CANCEL feature is on Job Definition Screen 3. For this job definition, you do not need to specify any start and end times.

24. The NUMBER OF RUNS ==> field is used to specify the number of times you want the job to run. If you specify a number of run times, you must also specify a time interval between runs (*described below*). For this job definition, leave this field blank.
25. The MIN. BETWEEN RUNS ==> field specifies the number of minutes from the end of the job to the beginning of the next run. For this job definition, leave this field blank.
26. The DEPENDENCY OPTIONS area is used to define conditions that must be satisfied before the job can run. For example, you can specify jobs that must run before the job being defined (*predecessors*). You can also specify process keywords that represent specific conditions that must be met. You can also test for a specific condition code and trigger another job based on the value of the code. You can specify a virtually unlimited number of dependency definitions. If additional dependency definitions are required, they can be entered on job definition screen 2.
27. The PRED JOBS column stands for predecessor jobs. A predecessor job is any job that must run before the job being defined can run. You can specify any job name, including one that is not in the system currently being defined. Do not enter a predecessor job or type this job definition.
28. The TYP column works in conjunction with the predecessor job (*if specified*). (*Refer to Database Creation for more information*).
29. The NEGATIVE DEP. column stands for negative dependency. A negative dependency job cannot be in the input queue or be executing for the system to run the job being defined. For this job definition, leave this field blank.
30. The COREQ DEP. column stands for corequisite dependency. If you specify a job name in this field, that job must be running for the job being defined to run. Leave this field blank.
31. The PROCESS KEYWORD ==> field represents a set of conditions that, when true, causes the job to be scheduled.

This job definition does not require a process keyword because a calendar is being used which tells the system to run the job Monday through Friday. The system refers to the exception calendar for holidays that may occur during the work week. If a holiday occurs, the job will not run. Refer to the JOB/Master® Data-

base Creation (*Process Keywords*) for a list of system keywords. Leave this field blank.

32. The N-PROC KEYWORD ==> field represents a set of conditions that, when true, cause the job not to be scheduled. Leave this field blank.
33. If there is a job(s) that should be submitted when the job being defined completes, enter the job name(s) in the TRIG. JOB (*Trigger Job*) column. Also include the submit type (*described below*) for each job specified. Press the <TAB> key to move the cursor.
34. The SUB TYPE column is associated with the TRIG. JOB and types. (*For listing of sub types, see #12*).
35. The OP CD ==>field stands for operator code and works together with the COND CODE and TRIG TYPE columns. These three columns are used to perform a condition code test. If the conditions of the test are met, the TRIG. JOB is run (*if a job is specified in this column*). The following operator codes can be specified:

L	Less than
G	Greater than
E	Equal to
N	Not equal to

You won't be testing for a condition code in this tutorial.

36. The COND CODE ==>field (*condition code*) is a value of the condition code for which you are testing. Since you are not testing a condition code in this tutorial, this field can remain blank.
37. The TRIG TYPE column is not needed for this job definition.
38. That completes the definition for the first job. The other screens are not needed for this job definition. Press <PF4> to confirm the update.

### Creating the Workday Calendar

1. The JOB/Master® DATA BASE FUNCTIONS Menu Screen should be displayed, as shown below:

```

----- JOB/Master® DATA BASE FUNCTIONS -----
COMMAND ==>>

      ID: JM01      USER = P390K      DATE = 97/09/29 - 97.272  TIME = 10:40
-----

OPTION ==> A  A DD / B ROWSE; / U PD; / D EL; / I NQ. D.B. ENTRIES
TYPE  ==> C  J OB      / S YSTEM      / P PROCESS KEYWORD DEF.
          C ALENDAR    / N EG/COREQ DEF. / G ROUP MESSAGE DEF.
                      / D ATASET DEF.  / M ESSAGE DEFINITION

NAME      ==> MON-FRI_
STEPNAME  ==> _____ (STEPNAME (PROC) IF JOBSTEP DEFINITION)
PROC STEPNAME ==> _____ (STEPNAME (PGM=) IF JOBSTEP DEFINITION)

DATA SET NAME ==> _____ (IF TYPE D)

CONFIRM = PF4      CANCEL= PF5      OR TYPE "CANCEL" "CONFIRM" AT COMMAND LINE
                                WHEN PROCESSING DATA BASE OPTIONS

F1=HELP      F2=SPLIT      F3=END      F4=CONFIRM      F5=CANCEL      F6=CO
F7=UP        F8=DOWN      F9=SWAP     F10=SHIFT     F11=RIGHT    F12=RETRIEVE
  
```

You will now create the calendar that specifies all work days (*Monday through Friday*). You only need to create this calendar once.

2. To create a calendar, select OPTION ==> A and TYPE ==> C from the JOB/Master® DATA BASE FUNCTIONS screen.
3. The cursor should now be in the first NAME ==> field. Enter MON-FRI in this field. Now press <ENTER> to display the JOB/Master® CALENDAR DEFINITION screen.
4. Enter the data shown on the following screen. This screen is used to establish the structure of the calendar. Any days that cannot be defined here, can be added to the calendar on the Calendar Display/Update screen (*explained later in this tutorial*).

```

AC----- JOB/Master®  Calendar Definition Screen -----
-
Command ==>
-----
Calendar Name => WORKDAY      Year => 98  Schedule/Net => *****
Description  => MONDAY THROUGH FRIDAY WORKDAY CALENDAR
-----
Month       => A  _  _  _  _  _  _  _  _  _  _  _  _
Week        => A  _  _  _  _  _  _  _  _  _  _  _  _
Reiday      => MO  TU  WE  TH  FR  _  _  _  _  _  _  _
Actdate     => _  _  _  _  _  _  _  _  _  _  _  _
-----
----- Period Start and End Dates (MMDD) -----
1. 0000 0000  2. 0000 0000  3. 0000 0000  4. 0000 0000  5. 0000 0000
6. 0000 0000  7. 0000 0000  8. 0000 0000  9. 0000 0000 10. 0000 0000
11. 0000 0000 12. 0000 0000 13. 0000 0000

```

5. The cursor should be in the DESCRIPTION==>field. Enter MONDAY THROUGH FRIDAY WORKDAY CALENDAR (or any desired description) in this free-form field.
6. The system will automatically enter the calendar name specified on the JOB/Master® DATA BASE FUNCTIONS screen. The system will enter the current year. Press the <TAB> key until the cursor is in the MONTH area. This part of the screen is used to specify the month(s) you want to include in the calendar. If you want to include all months, you can specify A in the first entry (as shown above). Otherwise, enter the numeric value for those months you want to include (i.e., 01 = January, 02 = February, etc.). For this tutorial, specify A in the first entry field. Press <TAB> to continue.
7. The WEEK area is used to indicate the desired weeks of each month(s) you want to include in the calendar. There are six weeks in order to accommodate the partial weeks that may occur at the beginning and end of the month. Just as in the MONTH area, you can enter A in the first entry to include all weeks. Otherwise, enter the numeric value of the week(s) you want to include (i.e., 1 = Week 1, 2 = Week 2, etc.). For this tutorial, enter A in the first entry and press <TAB> to advance the cursor.
8. The cursor is now in the RELDAY area of the screen. You can specify the days of the week you want to include in your calendar. Use the following abbreviations:

MO	MONDAY
TU	TUESDAY
WE	WEDNESDAY
TH	THURSDAY
FR	FRIDAY

9. The cursor is in the first field of the ACTDATE area. This area of the screen can be used to indicate specific days (*01 through 31*) that you want to include for each month specified in the MONTH area. For this calendar, you do not need to specify any days here. The combination of MONTH, WEEK and RELDAY covers all days needed for this calendar.
10. You will notice the PERIOD START END DATES at the bottom of the screen. This is used to alter the beginning and end days of any desired month(s). For example, suppose you want the January period to begin on the 5th and end on the 25th. You would enter 5 and 25 in the first period in this area of the screen. There is room to alter the periods for all 12 months, plus January of the following year. These dates will not be altered for this definition.
11. You have now completed the Calendar Definition screen. Press <PF4> to confirm the update. The JOB/Master® DATA BASE FUNCTIONS Menu screen will be re-displayed.

1. You can now view the entire calendar you just created by specifying OPTION==> U (*Update a Calendar*) and TYPE ==>C (*as well as the CALENDAR NAME in the NAME==> field*) on the JOB/Master® DATA BASE FUNCTIONS screen. Note that you can also view, (*browse*) the calendar, however, no changes can be made within the view option.
2. The JOB/Master® CALENDAR DISPLAY/UPDATE screen should be displayed, as shown below:

```

UC ==> TRAIN001 ----- JOB/Master@ CALENDAR DISPLAY/UPDATE -----
COMMAND ==>
-----
1. 0104 0203 2. 0204 0303 3. 0304 0405 4. 0000 0000 5. 0000 0000
6. 0000 0000 7. 0000 0000 8. 0000 0000 9. 0000 0000 10. 0000 0000
11. 0000 0000 12. 0000 0000 13. 0000 0000
DESCRIPTION =: TEAM1
LAST UPDATED BY TEAM1 ON 97056 AT 0851 =====SCHEDULE/NET=> *****
|YEAR: 97 | | | | | | | | |1|1|1|1|1|1|1|1|1|2|2|2|2|2|2|2|2|2|3|3| |
|*CAL/REL |1|2|3|4|5|6|7|8|9|0|1|2|3|4|5|6|7|8|9|0|1|2|3|4|5|6|7|8|9|0|1| |
|=====|
| JAN ( WED ) | - - - - - - H F S U M T W H F S U M T W H F S U M T W H F |
| FEB ( SAT ) | S U M T W H F S - - X X - - - U M T W H F S U M T W H F S - - |
| MAR ( SAT ) | U M T W H F S U M T W H F S U - - - - - M T W H F S U M T |
| APR ( TUE ) | W H F S U M T W H F S U M T W H F S U M T W - - - W H - - |
| MAY ( THU ) | F S U M T W H F S U M T W H F S U M T W H F S U M T W H - - - |
| JUN ( SUN ) | - - - H F S U M T W H F S U M T W H F S U T W H F S U M T - - |
| JUL ( TUE ) | W H F - - - - - - S U M T W H F S U M T W H F S U M T W H F |
| AUG ( FRI ) | S U M T W H F S U M T W H F S U M T W H F S U M T W H F S U M |
| SEP ( MON ) | T W H F S U M T W H F S U M T W H F S U M T W H F S U M T W H |
| OCT ( WED ) | F S U M T W H F S U M T W H F S U M T W H F S U M T W H F S U |
| NOV ( SAT ) | M T W H F S U M T W H F S U M T W H F S U M T W H F S U M T W |

```

3. The entire calendar can be viewed on a single screen. The characters represent all days you have selected to be included in the calendar. The screen above shows all Mondays through Fridays as specified on the CALENDAR DEFINITION

SCREEN. You can make changes at this point, if desired. However, no changes need to be made for this tutorial. The characters used in the display are those which have been defined on the global profile.

4. Now press <PF4> (*CONFIRM*).
5. That completes calendar creation and updating for this tutorial. Remember, we are using the system default HOLIDAY calendar for the exception calendar.

### ***Creating The HOLIDAY Calendar***

1. From the JOB/Master® Database Functions menu screen select:  
OPTION ==> A; TYPE ==> C; NAME ==> HOLIDAY
2. Press <ENTER> to display the JOB/Master® CALENDAR DEFINITION SCREEN.
3. Enter HOLIDAY in NAME==> field. Press <ENTER> to display the JOB/Master® CALENDAR DEFINITION SCREEN.
4. Calendar Name will be automatically entered.
5. <TAB> to Description and key in free-form description of the calendar: (*i.e.*, *HOLIDAYS AND WEEKENDS*).
6. As was done in the Mon-Fri tutorial calendar, key in an A at MONTH==> field; and an A at WEEK==> field so that we use all months and all weeks.
7. <TAB> to RELDAY and key is SA (*Saturday*), SU (*Sunday*) to mark the week-ends.. Press (*PF4*) to confirm.
8. Once confirmed, you must update the newly created calendar for the following holidays: New Years, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving, Christmas Eve and Christmas.
9. At the JOB/Master® DATABASE FUNCTIONS MENU SCREEN key in a U in OPTION==> field; C in TYPE ==> field and HOLIDAY in NAME==> field. Press <ENTER> for JOB/Master® CALENDAR DEFINITION SCREEN.
10. These days must be marked individually on the calendar by determining the date\* of the holiday and marking it with an X. Press (*PF4*) (*CONFIRM*).



***\*The “rule” is: If a HOLIDAY falls on Saturday, it is observed on Friday; if it falls on Sunday, it is observed on the following Monday.***



***Keep in mind that it will be necessary to update this calendar EVERY year as actual dates are being used, as well as relative dates and this calendar will not propagate at year end. (Refer to “Year End Calendar Propagation” in Job Database Creation).***

### Creating the Job Definition for INVNTRY2

1. Be sure the JOB/Master® DATA BASE FUNCTIONS Screen is displayed, as shown below. If you need instructions on getting to this point, refer to the section Creating the Job Definition for INVNTRY1.
2. Enter 'A' in the OPTION ==> field and 'J' in the TYPE ==> field to add a job.
3. Enter INVNTRY2 in the NAME ==> field. Press <ENTER>.
4. The first job definition screen should now be displayed. Complete this screen as shown below:

```

----- JOB/Master® Job Definition ----- Row 1 to 4 of 72
Command ==>                               Scroll ==> PAGE
-----Definition Last Updated by          on          at

Jobname  ==> INVNTRY2  Alt Name For => _____ System Name ==> INVNTRY
PDS Mem  ==> _____ PDS ==> _____
Trig Job ==> N (Y/N)   Triggered By==> _____ Submit Type ==> A (ACMRST)
Res Name1 ==> _____ Res Name2 ==> _____ Schedule/Net==> *****
Calendar ==> MON-FRI_ Excep Cal1 ==> _____ Excep Cal2 ==> _____
Keywd Def ==> _____ Priority ==> _____ Lib Type ==> _____
Neg/C Def ==> _____
Model / Count of Tapes: 3420 => 00 3480 => 00 Update Drive Usage=> Y
----- Submit Options -----
Enter submit time (HHMM) & optionally "number of runs"/"minutes between runs"
Submit=> 0000 End=> 0000 Number Of Runs=> 00 Minutes Between Runs=> 0000

----- Dependency Options -----
Pred   Negative   Coreq   Process   N-Proc   Trig   Sub:   OP   Cond   Trig
Jobs  Typ|   Dep   Dep|   Keyword Keyword|   Job   Typ: CD Code Type
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----
|         |         |         |         |         |         |         |         |         |
|         |         |         |         |         |         |         |         |         |
|         |         |         |         |         |         |         |         |         |
|         |         |         |         |         |         |         |         |         |

```



**Note that the same calendar is specified above as was used for the job definition of INVNTRY1. Once a calendar (base and exception calendars) is created, it can be referenced from any job definition.**

5. No SUBMIT OPTIONS are needed for this job definition, press <TAB> or <NEWLINE KEY> until you reach the PROCESS KEYWORD ==> field.
6. This job will be scheduled for the last workday of the month. The system supplied keyword LWKD is entered into the PROCESS KEYWORD ==> field. This specific keyword (LWKD) requires the use of a calendar in order to establish which days are actual workdays. The calendar, defined earlier, is used for this purpose.
7. No other fields are required. Press <ENTER> to continue to the second JOB DEFINITION screen.
8. No other fields are required. Press <ENTER> to move to the next screen.

9. Complete the third job definition screen as shown below:

```

----- JOB/Master® Job Definition For  INVNTY2 -----
Command ==>

Run Mode           ==> P      (P=Production, C=Check, S=Select)
Do Not Schedule Before ==> 00000 (YYDDD)
Do Not Schedule After  ==> 00000 (YYDDD)
External Submit      ==> N      (Y=Not Submitted By JOB/Master®)
Deadline Cancel      ==> N      (Y=Cancel From JOBQ)  Wait ==> 000 Minutes
Job Fail Userid      ==> _____ Send Fail Msg - (JM39) ==> N (Y,N)
-----
Message Definition  ==> _____ Message Group ==> _____
Repair Job         ==> _____ Submit Type   ==> _____ (A,C,M,R,S,T)
-----
***      Hold Job For      *** | ***      Output Processing Information      ***
DATA ENTRY      ==> Y (Y,N) | Burst           ==> N (Y,N)
CARD INPUT      ==> N (Y,N) | Fiche           ==> N (Y,N)
TAPE INPUT      ==> N (Y,N) | Decollate       ==> N (Y,N)
CONSOLE ROUTED  ==> N (Y,N) | Photocopy       ==> N (Y,N)
JCL SETUP       ==> N (Y,N) | Other           ==> N (Y,N)
-----
Hold Job on Schedule Queue for Output Posting ==> N
(Y=Requires manual posting after job completion, through Job Tracking
Manual Task Display)

```

10. Remember, the requirements stated that this job would require a manual data entry task to be performed before the system would consider the job complete. Therefore, you must specify Y in the HOLD JOB FOR KEY PUNCH [DATA ENTRY] ==> field (shown above).
11. Press <ENTER> to display the fourth JOB DEFINITION screen. Complete the screen as shown below:

```

-----JOB/Master® Manual Task Message Definition  INVNTY2 -----
Command ==>

Desc: _____

Send 000 minutes before submit time or, after dependencies => N (Y,N)
At a frequency interval of => 005 Minutes

1 DATA ENTRY      Message to Userid/Console => _____
Msg= DATA ENTRY PENDING FOR INVENTORY SYSTEM _____

2 CARD INPUT       Message to Userid/Console => _____
Msg= _____

3 TAPE INPUT        Message to Userid/Console => _____
Msg= _____

4 CONSOLE ROUTED    Message to Userid/Console => _____
Msg= _____

5 JCL SETUP         Message to Userid/Console => _____
Msg= _____

```



12. According to the job requirements, INVNTRY2 should be defined with a manual data entry task. You already specified Y in the DATA ENTRY==> field on the previous screen. Here you are able to specify the actual message and USERID to whom the message will be sent.
13. That completes the job definition for INVNTRY2. Remember, the calendars for this job (*MON-FRI* and *HOLIDAY*) already exist. No further calendar definitions are required.
14. Press <PF4> (*CONFIRM*). The JOB/Master® DATABASE FUNCTIONS screen will be displayed.

You are now ready to enter the definition for the user-defined keyword LASTWKD (*last workday of the week*), used with INVNTRY3:

### Creating the LASTWKD Keyword Definition

1. Be sure that the JOB/Master® DATA BASE FUNCTIONS screen is displayed.
2. Enter A in the OPTION ==> field and press P in the TYPE ==> field. Follow by pressing <ENTER>.
3. The KEYWORD DEFINITION screen should be displayed. Complete this screen as shown below:

```

----- JOB/Master® Process Keyword Definition Screen -----
Command ==>
Definition Last Updated by      on      at

Name      ==> LASTWKDY  Schedule/Net ==>
Calendar  ==> LASTWKDY  Exceptn Call ==>      Excp Cal2 ==>
Description ==> LAST WORKDAY OF THE MONTH

Process Keywords: (Make Entries left to right from line 1)
FRIWKD  HOLIDY-W
____
____
____
____

Non-process Keywords: (Make Entries left to right from line 1)
____
____
____
____
  
```

4. There are two system keywords used to define LASTWKD (*Last Workday of each week*):

#### FRIWKD

The format for this keyword is xxxWKD. This system keyword represents the xxx day of each week, as long as it is a workday. In this case, xxx is FRIday. xxx can be MON, TUE, WED, THU, FRI, SAT, or SUN.

#### HLYDAY-W

This system keyword tells the system that if the scheduled day (*in this case, Friday*) is a holiday run the job on the closest workday before the holiday.

5. The combination of the two system keywords achieves the desired results: run the job on Friday of every week, except when Friday is a holiday. If a holiday, run on the nearest workday before the holiday.
6. That completes the keyword definition for INVNTY3. Press <PF4> (*CONFIRM*); the JOB/Master® DATABASE FUNCTION screen is displayed.

### ***Creating the Job Definition for INVNTRY3***

1. Be sure the JOB/Master® DATA BASE FUNCTIONS screen is displayed, as shown below. If you need instructions on getting to this point, refer to the section Creating the Job Definition for INVNTRY1.

```

AP  ----- JOB/Master® Process Keyword Definition Screen -----
Command ==>

                                     Definition Last Updated By P390K   on 96089   at 1407

Name      ==> LASTWKD   Schedule/Net ==>
Calendar  ==> MON-FRI   Exc. Cal1  ==> HOLIDAY_   Exc. Cal2 ==> _____
Description ==> LAST WORK DAY OF THE WEEK_____

Process Keywords: (Make entries from left to right of line 1)
FRIWKD_   HLYDAY-W   _____   _____   _____   _____
_____   _____   _____   _____   _____   _____
_____   _____   _____   _____   _____   _____
_____   _____   _____   _____   _____   _____

Non-Process Keywords: (Make entries from left to right of line 1)
_____   _____   _____   _____   _____   _____
_____   _____   _____   _____   _____   _____
_____   _____   _____   _____   _____   _____

F1=HELP    F2=SPLIT    F3=END      F4=CONFIRM   F5=CANCEL    F6=CO
F7=UP      F8=DOWN     F9=SWAP    F10=SHIFT   F11=RIGHT   F12=RETRIEVE
  
```

2. Enter A in the OPTION ==> field and J in the TYPE ==> field. Enter INVNTRY3 in the first NAME ==> field. Remember, this job is to be run on the last workday of each week.
3. Press <ENTER> to display the first job definition screen.

4. Complete the first job definition screen as shown:

```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/09 - 98.252   Time = 13:18
-----

Option ==> A   A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> J   J ob / S ystem / P rocess Keyword
      C alendar / N eg and Coreq / G roup Message
              / D ataset / M essage

Name          ==> INVNTY3
Stepname      ==>          (Stepname (PROC) if jobstep definition)
Proc Stepname ==>          (Stepname (PGM=) if jobstep definition)

Data Set Name ==>          (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                   line when processing Data Base options

```

5. Note that the same calendars can be used for this job.

A new keyword was introduced: LASTWKD. This is a system keyword that tells the system to run the job on the last workday of each week. This keyword requires the base calendar (*MON-FRI*) to determine which days are workdays. In addition, this keyword requires the holiday calendar (*HOLIDAY*) to determine which days are holidays. This combination enables the system to find the last workday of each week.

6. This completes the first JOB DEFINITION screen. The only other screen needed for this job definition is the fifth screen. You will be entering the job documentation as specified in the job requirements.

7. Now press <ENTER> until the fifth JOB DEFINITION screen is displayed. Complete this screen as shown:

```

----- JOB/Master® Job Definition For  INVNTRY3 -----
Command ==>

Job Description      ==> MONTH END INVENTORY_
Pprocedure Name      ==>
Programmer Name      ==> JOE SMITH
Submitting Dept       ==> INVENTORY CONTROL
User Department       ==> PAYROLL/ACCOUNTING
Output Destination    ==>
Delivery Method       ==>

----- Abending Contact Information -----
Contact Name ==> JOE SMITH Phone ==> ( 218 ) 402 0280 Ext ==> 311
Beeper ==> (   )   ___

Run-Exit Ins= _____

```

8. This completes the job definition for INVNTRY3. Again, no calendar definitions are required (*MON-FRI and HOLIDAY are already created*).
9. Press <PF4> (*CONFIRM*). The JOB/Master® DATA BASE FUNCTIONS screen is displayed.
10. Now proceed to the next tutorial, which will illustrate other features of JOB/Master®.

## Defining a Sample Sales Job Schedule

### *Schedule Requirements*

This schedule must allow for the following jobs to be run at the times listed below:

JOB NAME	SCHEDULED TO BE RUN
REGSALE	First workday of week. If the first workday is a holiday, run on first workday after holiday. This job should use the dependency definition REGDEFS that includes the following requirements: CICS cannot be running while REGSALE is running ESF must be running while REGSALE is running System = SALES Res. Name = SYSTEMA Calendar = MON-SAT Exc. Cal = HOLIDAY
TOTSALES	First workday of month. Run twice at 120 minute intervals starting at 0800. System = SALES Res. Name = SYSTEMA Calendar = MON-SAT Exc. Cal = HOLIDAY The job step SALESTP1 should be defined.
System Definition	Description = Sales Jobs Programmer Name = Smith, Joe Submitting Dept = Programming User Dept = Sales Message Definition = SALESMSG Message Group = SALESGRP
Message Definition	Data Entry Message: Enter sales quotas and sign off upon completion.  Tape Input Message: Mount sales job tape and sign off upon completion.
Message Group	All messages should go to TS01 and TS02.

### *Calendar Requirements*

Sales personnel work Monday through Saturday. The work (*base*) calendar must reflect these workdays.

The holiday calendar contains all legal holidays.

### *Creating the System Definition for SALES*

Follow the steps below to create the System Definition for SALES.

1. Go to the JOB/Master® PRIMARY MENU screen.

2. The following screen will be displayed, as shown:

[illegible]

3. Enter D in the OPTION ==> field to create a database definition.
4. The JOB/Master® DATA BASE FUNCTIONS screen is then displayed:

[illegible]

5. Enter A in the **OPTION ==>** field and S in the **TYPE ==>** field. Also enter **SALES** in the **NAME ==>** field. Press **<ENTER>**.

6. The SYSTEM DEFINITION screen is displayed, as shown. Remember that all definitions on this screen can be overridden by a job's definition.

```

----- JOB/Master® System Definition For SALES -----
Command ==>
Definition Last Updated by      on      at

-----
Run Mode      ==> P (P=PROD/C=CHECK/S=SEL)  Message Def ==>
System Description==> SALES JOBS             Message Group==> SALESGRP
Programmer Name ==> JOE SMITH                Do Not Schedule
Submitting Dept ==> SALES DEPARTMENT         Before      ==> 00000 (YYDDD)
User Department ==>                         After       ==> 00000 (YYDDD)
Output Destination==>                       Priority      ==>
Delivery Method ==>                         Schedule/Net ==> *****

Submit PDS    ==>
Lib Type      ==>

----- Abending Contact Information -----
Contact Name ==> Phone ==> (  )  Ext ==>
Beeper ==> (  )  ___

```

7. The cursor should be in the SYSTEM DESCRIPTION==> field. You can specify whether jobs in this system should run in production mode or check (*simulation*) mode. The RUN MODE may be changed by tabbing backwards.
8. You may also enter MESSAGE DEF. ==> field. This allows you to specify the name of a pre-defined group of users receiving system messages. This field may be changed by tabbing backwards. Tab to this field and enter SALESMMSG. Press <TAB> .
9. The SYSTEM DESCRIPTION ==> field is used to enter a brief description of the system being defined by this screen. For this tutorial, enter Sales Jobs in this field. Press <TAB> to advance.
10. The MESSAGE GROUP==> field is next and is used to specify the user-defined name of a group which will receive the manual task messages. These messages will be displayed concerning manual tasks that must be accomplished for the job to be considered complete. The Manual Task message group definition can be accessed from the JOB/Master® opening menu. Manual Task message group definition will be described later in this tutorial. Enter SALESGRP. Press <TAB> to continue.
11. The next field is the PROGRAMMER NAME ==> field. This field specifies the name of a programmer who is responsible for the programs in this system. For this tutorial, enter Smith, Joe in this field. Press <TAB> to continue.
12. The cursor should now be in the SUBMITTING DEPT ==> field. This free-form field is used to specify the name of the department submitting jobs in this system. For this tutorial, enter Programming in this field and press <TAB>.



13. The cursor should be in the DO NOT SCHEDULE BEFORE ==> field. This is a date that will be checked before any job assigned to this system is scheduled. Leave this field by pressing <TAB>.
14. Now enter Sales in the USER DEPARTMENT ==> field and press <TAB>.
15. Now the cursor is in the DO NOT SCHEDULE AFTER ==> field. This is a field that will prevent jobs assigned to this system from being scheduled after this date. Skip to the next field by pressing <TAB>.
16. The next field is the OUTPUT DESTINATION ==> field. This free-form field is used to specify the destination of output from this job. Now press <TAB>.
17. The free-form DELIVERY METHOD ==> field is used to specify the method by which the job's output will be delivered to the destination. Press the <TAB> key to advance the cursor.
18. The SUBMIT PDS ==> field is used to specify the submitting PDS dataset name. All JCL for jobs within this system will have their JCL submitted from this library, if the jobs in the system do not have the associated JCL in the JOB/Master® default PDS library. If the JCL comes from a master JCL library defined in the DD JMSUBPQS, this field can be blank. It's primary function is to provide a method to call the JCL from a specific "user" library. Press <TAB> to continue.
19. The LIB TYPE ==> field is reserved for future use. Press <TAB> to continue.
20. The Abending Contact Information is a free-form area used to specify a contact and phone and/or beeper number in case a job(s) in this system abends.
21. That completes the system definition. Now press <PF4> (*CONFIRM*) to save this screen and re-display the JOB/Master® DATA BASE FUNCTIONS screen.

### *Creating the SALESMMSG Message Definition*

1. The JOB/Master® DATA BASE FUNCTIONS screen should be displayed, as shown:

```

----- JOB/Master® Data Base Functions -----
-
Command ==>

      ID: JM01      User = P390K      Date = 98/09/09 - 98.252   Time = 13:31
-----

Option ==> A   A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> M   J ob      / S ystem      / P rocess Keyword
      C alendar      / N eg and Coreq   / G roup Message
                        / D ataset       / M essage

Name          ==> SALESMMSG
Stepname      ==>          (Stepname (PROC) if jobstep definition)
Proc Stepname ==>          (Stepname (PGM=) if jobstep definition)

Data Set Name ==>          (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                   line when processing Data Base options
  
```

2. To add a Manual Task Message Group, specify A in the OPTION ==> field, M in the TYPE ==> field, and SALESMMSG in the NAME ==> field.

3. Now press <ENTER> and the Manual Task Message Group Screen is displayed. Complete this screen as shown below (*this is according to the original specifications*):

```

----- JOB/Master® Manual Task Message Definition  SALESMG -----
Command ==>

Desc: _____

Send  000 minutes before submit time or, after dependencies => N  (Y,N)
      At a frequency interval of  => 005 Minutes

1 DATA ENTRY      Message to Userid/Console => _____
Msg= _____

2 CARD INPUT       Message to Userid/Console => _____
Msg= _____

3 TAPE INPUT        Message to Userid/Console => P390J
Msg= MOUNT SALES JOB TAPE AND SIGN OFF UPON COMPLETION_____

4 CONSOLE ROUTED    Message to Userid/Console => _____
Msg= _____

5 JCL SETUP         Message to Userid/Console => _____
Msg= _____

```

4. Notice that you can specify a number of minutes before the scheduled submit time to display the messages on this screen. You can also specify to display these messages after the dependency jobs are completed (*by entering Y in the AFTER DEPENDENCIES ==> field*). Only specify one of these options. For either of these options, tell the system how often you want the messages re-displayed by entering a number of minutes in the AT A FREQUENCY INTERVAL OF ==> field (*the default is 5 minutes*).
5. If you enter a user ID on this screen, it will be in addition to the user IDs specified in the Notify Group (*which can be specified in the System Definition and/or on the third job definition screen*). Complete the screen as indicated.
6. That completes the message group. Press <PF4> (*CONFIRM*) to save the screen and re-display the JOB/Master® DATA BASE FUNCTIONS screen.

### ***Creating the SALESGRP Group Message Def.***

1. The JOB/Master® DATA BASE FUNCTIONS screen should be displayed, as shown:

```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/09 - 98.252  Time = 13:35
-----

Option ==> A   A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> G   J ob           / S ystem           / P rocess Keyword
      C alendar           / N eg and Coreq       / G roup Message
                        / D ataset              / M essage

Name          ==> SALEGRP
Stepname      ==>          (Stepname (PROC) if jobstep definition)
Proc Stepname ==>          (Stepname (PGM=) if jobstep definition)
Data Set Name ==>          (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                   line when processing Data Base options
  
```

2. To add a group of users that get the messages defined by SALESMSG, specify A in the OPTION ==> field, G in the TYPE ==> field, and enter SALESGRP in the NAME ==> field.
3. The MESSAGE GROUP DEFINITION screen should be displayed. Complete as shown in the following screen:

[illegible]

4. You can specify each user that is assigned to this notify group. The ID should be entered in the USER ID ==> field.
5. The following USER TYPE code is available:  
M                      Manual Task Station. Receives only manual task messages.
6. The following MSG CLASS codes are available:  
1,2,3,4,5              Specify the number corresponding to the desired manual task message. Must have user type M.
7. The following SEND TYPE codes are available:  
F              Send to first logged on user.  
L              Send if logged on.  
M              Send unconditionally.
8. The ON SHIFT area can be used to specify a time within a specific work shift when the message can be sent.
9. The DO NOT SEND (*BEFORE/AFTER*) can be used to specify a valid time period during which the message can be sent.
10. That completes the Notify Group definition. Now press <PF4> (*CONFIRM*) to save the screen and re-display the JOB/Master® DATA BASE FUNCTIONS screen.

### Creating the Job Definition for REGSALES

1. At the JOB/Master® DATA BASE FUNCTIONS screen, select  
OPTION ==> A, TYPE==> J, and enter REGSALES in the NAME ==> field.
2. The first job definition screen will be displayed. Complete this screen as shown:

```

----- JOB/Master® Job Definition ----- Row 1 to 2 of 72
Command ==>                               Scroll ==> PAGE
-----Definition Last Updated by          on      at

Jobname ==> REGSALES  Alt Name For =>      System Name ==> SALES
PDS Mem  ==>          PDS ==>
Trig Job ==> N (Y/N)  Triggered By==>      Submit Type ==> A (ACMRST)
Res Name1 ==> SYSTEMA Res Name2 ==>      Schedule/Net==> *****
Calendar ==> MON-SAT Excep Cal1 ==>      Excep Cal2 ==>
Keywd Def ==>         Priority ==>        Lib Type ==>
Neg/C Def ==>
Model / Count of Tapes: 3420 => 00 3480 => 00 Update Drive Usage=> Y
----- Submit Options -----
Enter submit time (HHMM) & optionally "number of runs"/"minutes between runs"
Submit=> 0000 End=> 0000 Number Of Runs=> 00 Minutes Between Runs=> 0000

----- Dependency Options -----
Pred  Negative  Coreq  Process  N-Proc  Trig  Sub:  OP  Cond  Trig
Jobs  Typ|   Dep   Dep| Keyword Keyword| Job  Typ: CD Code Type
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----
      |         |     | MONWKD |         |         |         |         |         |
      |         |     |         |         |         |         |         |         |
      |         |     |         |         |         |         |         |         |
Menu Utilities Compilers Options Status Help

```

3. You will create the MON-SAT calendar and the NEG/C.DEF for REGDEPS later in this tutorial.
4. Now press <PF4> (*CONFIRM*) and the JOB/Master® DATA BASE FUNCTIONS screen should be displayed.
5. You are now ready to create the negative/co-requisite dependency definition (*specified as REGDEPS in the NEG/C DEF field*).

6. Select OPTION ==> A and TYPE==> N to Add a Negative/Corequisite Definition. Also enter REGDEPS in the NAME ==> field. The following screen should then be displayed:

```

----- JOB/Master® Negative/Corequisite Dependency For: REGDEPS -----
Command ==>
Definition Last Updated by      on      at
Description => DEPENDENCIES FOR REGSALES JOBS
Schedule/Net=>      Failed Negative Dependencies are Preds => N (Y,N)

Will not be submitted if these tasks are in the MVS input Q, or executing
Jobname Jobname Jobname Jobname Jobname Jobname Jobname Jobname
-----
CICS
-----

Will only be submitted if the following tasks are executing:
Jobname Jobname Jobname Jobname Jobname Jobname Jobname Jobname
-----
ESF
-----

Menu Utilities Compilers Options Status Help

```

7. The above dependency definition means that CICS cannot be running or in the MVS input queue for REGSALES to be submitted. In addition, ESF must be running for REGSALES to be submitted.
8. That completes the screens for this job definition. Press <PF4> (*CONFIRM*) so that the JOB/Master® DATA BASE FUNCTIONS screen is displayed.

### ***Creating the MON-SAT Calendar***

1. Be sure the JOB/Master® DATA BASE FUNCTIONS screen is displayed.
2. Enter A in the OPTION ==> field, C in the TYPE ==> field, and MON-SAT in the NAME ==> field.
3. Press <ENTER> and the CALENDAR DEFINITION screen will be displayed.
4. The only difference between this calendar and the one created previously (*MON-FRI*) is a single day. We can take advantage of this by copying the MON-FRI calendar into the MON-SAT calendar definition. Then, only a simple addition will be necessary to complete the MON-SAT calendar.

5. Enter COPY MON-FRI <ENTER> in the COMMAND ==> field, as shown in the following illustration:

```

----- JOB/Master®  Calendar Definition Screen -----
-
Command ==> COPY MON-FRI
-----
Calendar Name   => MON-SAT      Year => 98   Schedule/Net => *****
Description    =>
-----
Month          =>  _ _ _ _ _
Week           =>  _ _ _ _ _
Reiday         =>  _ _ _ _ _
Actdate        =>  _ _ _ _ _
               _ _ _ _ _
               _ _ _ _ _
               _ _ _ _ _
-----
Period Start and End Dates (MMDD) -----
1. 0000 0000  2. 0000 0000  3. 0000 0000  4. 0000 0000  5. 0000 0000
6. 0000 0000  7. 0000 0000  8. 0000 0000  9. 0000 0000 10. 0000 0000
11. 0000 0000 12. 0000 0000 13. 0000 0000

Menu Utilities Compilers Options Status Help

```

6. After you press <ENTER>, the screen will display edits.:

```

MON-SAT ----- JOB/Master@ Calendar Display/Update -----
Command ==>
-----
1. 0000 0000 2. 0000 0000 3. 0000 0000 4. 0000 0000 5. 0000 0000
6. 0000 0000 7. 0000 0000 8. 0000 0000 9. 0000 0000 10. 0000 0000
11. 0000 0000 12. 0000 0000 13. 0000 0000
Description =>
Last Updated by P390K on 98244 at 1201 =====Schedule/Net=> *****
|Year: 98 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|*CAL/REL | 1|2|3|4|5|6|7|8|9|0|1|2|3|4|5|6|7|8|9|0|1|2|3|4|5|6|7|8|9|0|1|
|-----|
|Jan (THU) | H F - - M T W H F - - M T W H F - - M T W H F - - M T W H F -
|Feb (SUN) | - M T W H F - - M T W H F - - M T W H F - - M T W H F -
|Mar (SUN) | - M T W H F - - M T W H F - - M T W H F - - M T W H F - - M T
|Apr (WED) | W H F - - M T W H F - - M T W H F - - M T W H F - - M T W H
|May (FRI) | F - - M T W H F - - M T W H F - - M T W H F - - M T W H F -
|Jun (MON) | M T W H F - - M T W H F - - M T W H F - - M T W H F - - M T
|Jul (WED) | W H F - - M T W H F - - M T W H F - - M T W H F - - M T W H F
|Aug (SAT) | - M T W H F - - M T W H F - - M T W H F - - M T W H F - - M
|Sep (TUE) | T W H F - - M T W H F - - M T W H F - - M T W H F - - M T W
|Oct (THU) | H F - - M T W H F - - M T W H F - - M T W H F - - M T W H F -
|Nov (SUN) | - M T W H F - - M T W H F - - M T W H F - - M T W H F - - M
|-----|
Menu Utilities Compilers Options Status Help

```

7. Enter the next available day location after each F (*Friday*) by placing an "X" in the slot. JOB/Master® will translate the X's to the appropriate letter for Saturday.
8. Press <PF4>. The JOB/Master® DATA BASE FUNCTIONS screen will be displayed.



## Creating the Job Definition for TOTSALES

1. Be sure the JOB/Master® DATA BASE FUNCTIONS screen is displayed.
2. Enter OPTION ==> A, TYPE ==> , and TOTSALES in the NAME ==> field. Press <ENTER>.
3. The first job definition screen will be displayed. Complete this screen as shown:

```

----- JOB/Master@ Job Definition ----- Row 1 to 2 of 72
Command ==>                                Scroll ==> PAGE
-----Definition Last Updated by          on          at

Jobname ==> TOTSALLES  Alt Name For => _____ System Name ==> SALES
PDS Mem ==> _____ PDS ==> _____
Trig Job ==> N (Y/N)    Triggered By==> _____ Submit Type ==> A (ACMRST)
Res Namel ==> SYSTEMA  Res Name2 ==> _____ Schedule/Net==> *****
Calendar ==> MON-SAT   Excep Call ==> HOLIDAY_ Excep Cal2 ==> _____
Keywd Def ==> _____ Priority ==> _____ Lib Type ==> _____
Neg/C Def ==> REGDEPS
Model / Count of Tapes: 3420 => 00 3480 => 00 Update Drive Usage=> Y
----- Submit Options -----
Enter submit time (HHMM) & optionally "number of runs"/"minutes between runs"
Submit=> 0000 End=> 0000 Number Of Runs=> 00 Minutes Between Runs=> 0000

----- Dependency Options -----
Pred      Negative   Coreq      Process  N-Proc      Trig      Sub:  OP  Cond  Trig
Jobs  Type  Dep       Dep       Keyword  Keyword    Job      Typ:  CD  Code  Type
-----
_____ -  _____  _____  MON      _____  _____  - : - - - -
_____ -  _____  _____  HOLIDY+1 _____  _____  - : - - - -
-----
Menu Utilities Compilers Options Status Help

```

4. You are now ready to complete the job step definition. Press <PF4> (*CONFIRM*) to save the job definition screen and re-display the JOB/Master® DATA BASE FUNCTIONS screen.
5. To display the JOB STEP DEFINITION screen, specify option A (*Add a Job or job step*) and enter SALESTP1 in the STEPNAME ==> and PROC STEPNAME ==> fields. The following screen will then be displayed. No dependency definitions need to be specified.

```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/09 - 98.252   Time = 14:05
-----

Option ==> U   A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> J   J ob / S ystem / P rocess Keyword
      C alendar / N eg and Coreq / G roup Message
              / D ataset / M essage

Name          ==> TOTSALES
Stepname      ==> SALESTP1 (Stepname (PROC) if jobstep definition)
Proc Stepname ==> SALESTP1 (Stepname (PGM=) if jobstep definition)

Data Set Name ==> _____ (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                line when processing Data Base options

· Menu Utilities Compilers Options Status Help · · · · ·

```

6. Complete this screen as shown above. Now press <PF4> (*CONFIRM*) to save this screen and re-display the JOB/Master® DATA BASE FUNCTIONS screen.

## Defining A Sample Commissions Job Schedule

### *Schedule Requirements*

This schedule must allow for the following jobs to be run at the times listed below:

JOB NAME	SCHEDULED TO BE RUN:
COMM1	1st and 16th of each month and one day prior if this is a holiday System = COMM Resource = SYSTEMB
TOTCOMM	Last workday of each month System = COMM Resource = SYSTEMB Test for Condition Code Equal to 0001. If equal to 0001, trigger job TOTSALES

### *Calendar Requirements*

- COMM1 has no need for a calendar. It will run on a specific day.
- TOTCOMM will use the calendar MON - SAT.
- Both jobs will use the Exception Calendar HOLIDAY created in previous tutorial.

### *Creating the Job Definition for COMM1*

Follow the steps below to create the schedule according to the above requirements.

1. Be sure, the JOB/Master® DATA BASE FUNCTIONS screen is displayed, as shown:

```

----- JOB/Master® Data Base Functions -----
Command ==>

      ID: JM01      User = P390K      Date = 98/09/09 - 98.252      Time = 14:12
-----

Option ==> A      A dd / B rowse / U pdate / D elete / I nquire Index
Type  ==> J      J ob          / S ystem          / P rocess Keyword
      C alendar        / N eg and Coreq        / G roup Message
                        / D ataset             / M essage

Name          ==> COMM1
Stepname      ==>          (Stepname (PROC) if jobstep definition)
Proc Stepname ==>          (Stepname (PGM=) if jobstep definition)

Data Set Name ==>          (If Type D)

CONFIRM = PF4      CANCEL= PF5      or type "CANCEL" or "CONFIRM" at Command
                                line when processing Data Base options

. Menu Utilities Compilers Options Status Help . . . . .

```

2. Enter OPTION ==>A and TYPE ==>J to create a job definition.

3. Enter COMM1 in the NAME ==> field and press <ENTER>.
4. The first job definition screen should be displayed. Complete this screen as shown:

:

```

----- JOB/Master® Job Definition --- Row 1 to 2 of 72
Command ==>
-----Definition Last Updated by
on at

Jobname ==> COMM1 Alt Name For => System Name ==> COMM
PDS Mem ==> PDS ==>
Trig Job ==> N (Y/N) Triggered By==> Submit Type ==> A (ACMRST)
Res Name1 ==> SYSTEMB Res Name2 ==> Schedule/Net==> *****
Calendar ==> MON-SAT Excep Cal1 ==> HOLIDAY_ Excep Cal2 ==>
Keywd Def ==> 1AND16_ Priority ==> Lib Type ==>
Neg/C Def ==>
Model / Count of Tapes: 3420 => 00 3480 => 00 Update Drive Usage=> Y
----- Submit Options -----
Enter submit time (HHMM) & optionally "number of runs"/"minutes between runs"
Submit=> 0000 End=> 0000 Number Of Runs=> 00 Minutes Between Runs=> 0000

----- Dependency Options -----
Pred Negative Coreq Dependency Options
Jobs Typ Dep Dep Process N-Proc Trig Sub: OP Cond Trig
Keyword Keyword Job Typ: CD Code Type
-----
Menu Utilities Compilers Options Status Help

```

5. This is the only job definition screen needed for this job. Now press <PF4> (*CONFIRM*) to save the record and re-display the JOB/Master® DATA BASE FUNCTIONS screen. You are now ready to define the keyword 1AND16.

### Defining the Process Keyword 1AND16

1. Enter OPTION ==> A and TYPE ==> P on the JOB/Master® DATA BASE FUNCTIONS screen (*Add a process Keyword Definition*). Press <ENTER>.
2. The JOB/Master® PROCESS KEYWORD DEFINITION screen will be displayed. Complete the screen as shown:

```

----- JOB/Master® Process Keyword Definition Screen -----
Command ==>

Definition Last Updated by      on      at

Name      ==> 1AND16      Schedule/Net ==>
Calendar  ==>      Exceptn Cal1 ==> HOLIDAY  Excp Cal2 ==>
Description ==> RUNS FOR THE 1ST AND 16TH OF THE MONTH

Process Keywords: (Make Entries left to right from line 1)
D01      D16      HOLIDAY-1
          _____
          _____
          _____
          _____
          _____

Non-process Keywords: (Make Entries left to right from line 1)
          _____
          _____
          _____
          _____
          _____

Menu Utilities Compilers Options Status Help

```



**Three system keywords were specified. Two are in the form Dxx, where xx is the actual date you want the job to run. Therefore, D01 and D16 means to run the job on the 1st and 16th of each month. The addition of the HLYDAY-1 means that if the job is scheduled on the first or sixteenth and it happened to be a holiday, then it would be scheduled the day before.**

Also note that no calendars were specified. The keyword Dxx does not require calendar references since the specific day is specified by the keyword itself.

3. You have now completed all definitions for this job. Now proceed to specify the definitions for TOTCOMM by pressing PF4 (*CONFIRM*) to save the record and re-display the JOB/Master® DATA BASE FUNCTIONS screen.

## Creating the Job Definition for TOTCOMM

1. Enter **OPTION** ==> **A** and **TYPE** ==> **J** on the **JOB/Master® DATA BASE FUNCTIONS** screen.
2. Enter **TOTCOMM** in the **NAME** ==> field. Press <ENTER> and the first job definition screen should be displayed. Complete this screen as shown:

```

----- JOB/Master@ Job Definition ----- Row 1 to 2 of 72
Command ==>                                Scroll ==> PAGE
-----Definition Last Updated by          on          at

Jobname ==> TOTCOMM      Alt Name For => _____ System Name ==> COMM
PDS Mem ==>              PDS ==>
Trig Job ==> N (Y/N)      Triggered By==>          Submit Type ==> A (ACMRST)
Res Name1 ==> SYSTEMB     Res Name2 ==>          Schedule/Net==> *****
Calendar ==> MON-SAT      Excep Call ==> HOLIDAY_ Excep Cal2 ==> _____
Keywd Def ==> LWKD        Priority ==> _          Lib Type ==> _____
Neg/C Def ==>
Model / Count of Tapes: 3420 => 00 3480 => 00 Update Drive Usage=> Y
----- Submit Options -----
Enter submit time (HHMM) & optionally "number of runs"/"minutes between runs"
Submit=> 0000 End=> 0000 Number Of Runs=> 00 Minutes Between Runs=> 0000

----- Dependency Options -----
Pred      Negative      Coreq      Process      N-Proc      Trig      Sub: OP Cond Trig
Jobs      Type          Dep          Dep          Keyword      Keyword      Job      Type: CD Code Type
-----
_____      _____      _____      _____      _____      _____      _____      : - - - - -
_____      _____      _____      _____      _____      _____      _____      : - - - - -
_____      _____      _____      _____      _____      _____      _____      : - - - - -

Menu Utilities Compilers Options Status Help

```

3. Note that the keyword LWKD was specified. This keyword tells the system to run the job on the last workday of each month. The system can reference the previously defined MON-SAT and HOLIDAY calendars to find the last workday of each month.
4. Press <TAB> to move down to the TRIG.JOB==> field. Enter TOTSALES here and an A in the SUB TYP ==> field. This means that if the TOTCOMM job ends and meets the condition code check (*described next*), TOTSALES will be automatically submitted to run. The choices for the SUB TYP are outlined in the instruction text of INVNTY1 in this tutorial section. Please reference.
5. Use the condition code test to trigger TOTSALES when the COND CODE is 0001 and the OP CD is E (*equal*). The TRIG TYPE is I because we want to include the job if the condition is met.

OP CD selections are:

L	Less Than
G	Greater Than
N	Not Equal
E	Equal

- That completes all definitions for this job. Press <PF4> (*CONFIRM*) to save the record and re-display the JOB/Master® DATA BASE FUNCTION screen.

## Running a Job Schedule Simulation

1. To run a simulation, first select **OPTION ==> J** (*JOB/Master® Scheduler from the master menu*) and press <ENTER>.
2. From the **JOB/Master® Primary Menu** enter **T** for Job Tracking:

[illegible]

3. Enter **GSS** (*GENERATE SIMULATION SCHEDULE CREATION JCL*) in the **OPTION ==>** field of the **JOB/Master®** tracking functions menu. No name is necessary.
4. Press **<ENTER>**.

5. The JOB/Master® SCHEDULE RUN PARAMETER screen will be displayed, as shown:

```

----- JOB/Master® Schedule Run Parameters -----
Command ==>                                     Scroll ==> PAGE
-----
Date= 98/09/09  98.252  Time= 14:22  Next Sched Date= 98253  -----
From Date = 98252  From Time = 0700  To Date = 00000  To Time = 0000

Simulation -----> N  (Y,N)  Backlog report only -> N  (Y,N)
Include selections only -> Y  (Y,N)
-----
Enter System|Job and  I nclude| E xclude| S elect value
          System      Jobname  Inc/Exc
          -----
                               (I,S,E)
-----
***** Bottom of data *****

```

6. Notice the Y in the INCLUDE SELECTIONS ONLY==> field. Enter the desired system or job in the ENTER SYSTEM AND JOB INCLUDED SELECTIONS area of the screen. If more than one entry is required, enter the first entry (*sales system*), followed by the INC/EXC value.
- I = Include (*No matter what the calendar or keywords may be*).
- E = Exclude (*DO NOT schedule this entry*).
- S = Schedule only if it is due to be scheduled.
7. Specify a FROM DATE/TIME and a TO DATE/TIME. These are the lower and upper bounds to select jobs for the schedule queue. If TODATE=0000 and TO TIME = 0000, the schedule generated will be a 24-hour period.
8. You are restricted from changing the Y in the SIMULATION ==> field. This screen will always produce a simulation run only. All jobs in a simulated schedule will not be placed on the queue, but can be used to review a schedule before it is generated.
9. Refer to the “Job Tracking” reference section in this manual for more information on this screen.
10. Proceed to the tutorial “Monitoring the Queue” to learn how to list the jobs on the queue and check for the simulated job.



## Monitoring the Queue

1. Log into the OPS/Master® system.
2. The OPS/Master® Main Menu will be displayed, as shown below:

[illegible]

- Next, select OPTION => J (*JOB/Master® Scheduler*) and press <ENTER>.
- The JOB/Master® Introductory screen will then be displayed.

[illegible]

5. Enter T for JOB TRACKING. Be sure you have already confirmed the function key assignments with the PROFILE option.
6. After entering T (*JOB TRACKING*), the scrollable JOB/Master® JOB TRACKING SYSTEM Menu is displayed, as shown below:

```

----- JOB/Master® Tracking Functions ----- Row 1 to 12 of 24
Command ==>
                                           Scroll ==> PAGE
      ID: JM01      User = P390K      Date = 98/09/09 - 98.252  Time = 14:26
-----
Option ==> LQ
Job      ==> _____ (If applicable)

Options      Function      (Scroll list for options)
-----
LQ <== - List jobs on the Schedule Queue
AJ <== - Add a job to the Schedule Queue
GS <== - Generate schedule creation JCL
GSS <== - Generate simulation schedule JCL
PQ <== - Purge entire Schedule Queue
PS <== - Inactivate Auto Job submission
SS <== - Activate Auto Job submission
SP <== - Modify Priority Selection list
TE <== - Update Tape Unit Exclusion list
RT <== - Initiate Resource Table processing
ST <== - Display Control Region settings

. Menu . Utilities . Compilers . Options . Status . Help .

```

7. Enter LQ (*List Jobs on the Schedule Queue*) in the OPTION ==> field.
8. The system will then display all jobs that are scheduled at that time or have any outstanding requirements. You can scroll the screen up and down with the <PF7> and <PF8> keys. You can scroll the screen right and left with the <PF10> and <PF11> (*these are the default key assignments*). You can find out more information about this screen by referring to the “Job Tracking” chapter in this manual.

## Posting Manual Task Complete

1. From the JOB/Master® Primary Menu enter T for Job Tracking. Press <ENTER>.
2. The scrollable Job Tracking Options Menu is displayed, as shown:

```

----- JOB/Master® Tracking Functions ----- Row 1 to 12 of 24
Command ==>                                     Scroll ==> PAGE

      ID: JM01      User = P390K      Date = 98/09/09 - 98.252  Time = 14:26
-----
Option ==> LQ__
Job      ==> _____ (If applicable)

      Options      Function      (Scroll list for options)
-----
LQ <== - List jobs on the Schedule Queue
AJ <== - Add a job to the Schedule Queue
GS <== - Generate schedule creation JCL
GSS <== - Generate simulation schedule JCL
PQ <== - Purge entire Schedule Queue
PS <== - Inactivate Auto Job submission
SS <== - Activate Auto Job submission
SP <== - Modify Priority Selection list
TE <== - Update Tape Unit Exclusion list
RT <== - Initiate Resource Table processing
ST <== - Display Control Region settings

      . Menu Utilities Compilers Options Status Help . . . . .

```

3. Select OPTION ==> LQ (*List All Jobs on the Schedule Queue*).
4. The system will then display all jobs in the queue.
5. If you know the desired jobname, enter the name in the JOB ==> field on the SET ==> command line and press <ENTER>. The listing for that job will be displayed. Remember Generic Masking is possible.
6. If you do not know the desired jobname or you want to sign off on manual tasks for multiple jobs, enter X in the MT ==> field of the SET ==> command line and press <ENTER>.
7. The system will then display all jobs that are awaiting manual tasks. A “SHIFT” command, PF10 or PF11, is required to see the additional data.
8. You will see a Y in one or more of the manual task columns (*depending on the job's definition*). The default column headers for the manual tasks are DE (*data entry*), CI (*card input*), TI (*tape input*), DI (*disk input*), and CR (*console routed*). These headers are user definable and may have been modified in the Global settings.
9. When the required manual task(s) is complete, move the cursor over the Y in the appropriate listing and enter N followed then by pressing <ENTER>. This tells the system that the task is complete.
10. Jobs that were defined with output posting requirements may show a Y in the OP==> field (*this column header cannot be changed*). You can sign off on an output posting requirement in the same way as the manual tasks. Simply change

the Y to an N when the requirements are met. To sign off on a job waiting for output processing, select the OP on the LQ. Set line by placing an X in the OP.

11. That is all that is required to sign off on manual tasks (*and output posting requirements*). Now press <PF4> (CONFIRM) to save the record and re-display the JOB/Master® Main Menu.



# Mantissa Corporation

Operations Productivity System™  
OPS/Master® System Reference Manual  
Version 5.20.1

Mantissa ASO  
Automated Systems Operation  
OPS/MASTER®



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# Preface

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## Overview of Documentation

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The OPS/Master® Reference Guide contains the following sections:

### ***JOB/Master® Reference***

JOB/Master® is used to create all definitions required for schedule generation. This section contains illustrations of all JOB/Master® screens and detailed descriptions of the contents of these screens.

### ***User Tutorials***

This section contains step-by-step instructions for creating several job definitions and other important tasks performed by OPS/Master® users. These tutorials also include detailed instructions for creating calendar and process keyword definitions.

### ***CONSOLE/Master® Reference***

This module simplifies MVS functions and automates console operations. This section illustrates all CONSOLE/Master® screens and provides detailed descriptions of all fields on these screens.

### ***RUN/Master® Reference***

This module is a rerun management system that automates the restarting or rerunning of a batch job. All screens involved in the restart process are described in this section.

### ***System Administration***

This section of the reference guide contains information on setting up OPS/Master® security (*for all modules*), specifying Global Parameters, establishing user exits, and OPS/Master® systems customization.

***Implementation Checklist***

This section contains a list of all steps that are required to install and learn the system. Although some items may only apply to certain personnel, this list will provide your site with a list of all steps that should be completed before starting production.

***Installation Guide***

This section provides all the necessary information for the successful installation of all OPS/Master® modules. Instructions are also provided for verifying the successful installation of OPS/Master® modules.

***Messages and Codes***

This section contains a list of all messages and codes in the OPS system.





## CONSOLE/Master®

Release 5.20.1

**Mantissa Corporation®**  
1012 Edenton Street  
Birmingham, Alabama 35242

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# Chapter 2

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## Job Scheduling Concepts

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### Introduction

A wise man once said, “Any automated scheduling system is only as good as the concepts utilized to implement the system”. In other words a poorly designed implementation of a manual system will be a manual system processing much faster, but it will still be a manual system in concept.

It is for this reason this section on scheduling concepts has been added to this manual.

Each and every installation running production systems today will use an automated scheduling system slightly different. There are however, some basic concepts which can and should be reviewed in all facilities prior to embarking on automated scheduling.

Manual schedules are being used to control the day to day processing in shops not running an automated scheduling system. It is extremely important to recognize the major differences between manual and automated schedules.

Manual schedules tend to be singular in nature and will be released to process in this manner. The reasons for this are associated with the lack of computer operator time to adequately control a multi-processing environment. The interaction and interfacing requirements of today's systems preclude operators from knowing all of the intricate relationships. These interfaces now can cause many scheduling errors, or they will force the single stream processing concept.

Automated scheduling allows for all of the interfacing of systems to occur totally without the operations staff being aware of the various parts. Now the systems can be processed in a multi-processing environment. It is critical however, to include the operations staff in the scheduling implementation. They are the individuals responsible for meeting the processing windows, and must understand the capabilities of the JOB/Master® system.

## Job Level and Step Level Concepts

All data base creation functions, with the exception of scheduling calendars, define job-streams. A JOB/Master® record, when being built or displayed, should be thought of in terms of general job information and separately-linked step information.

The term “Job Level” describes controllable or schedulable criteria that are built on a level that will be valid at job end. Condition code checking can be performed for the job.

A user can also define dependencies at the Step Level. Trigger jobs can be submitted after each step rather than at job completion. This allows a job’s successors to be controlled at step completion time. Condition code checking criteria for step completion is also defined at this level.

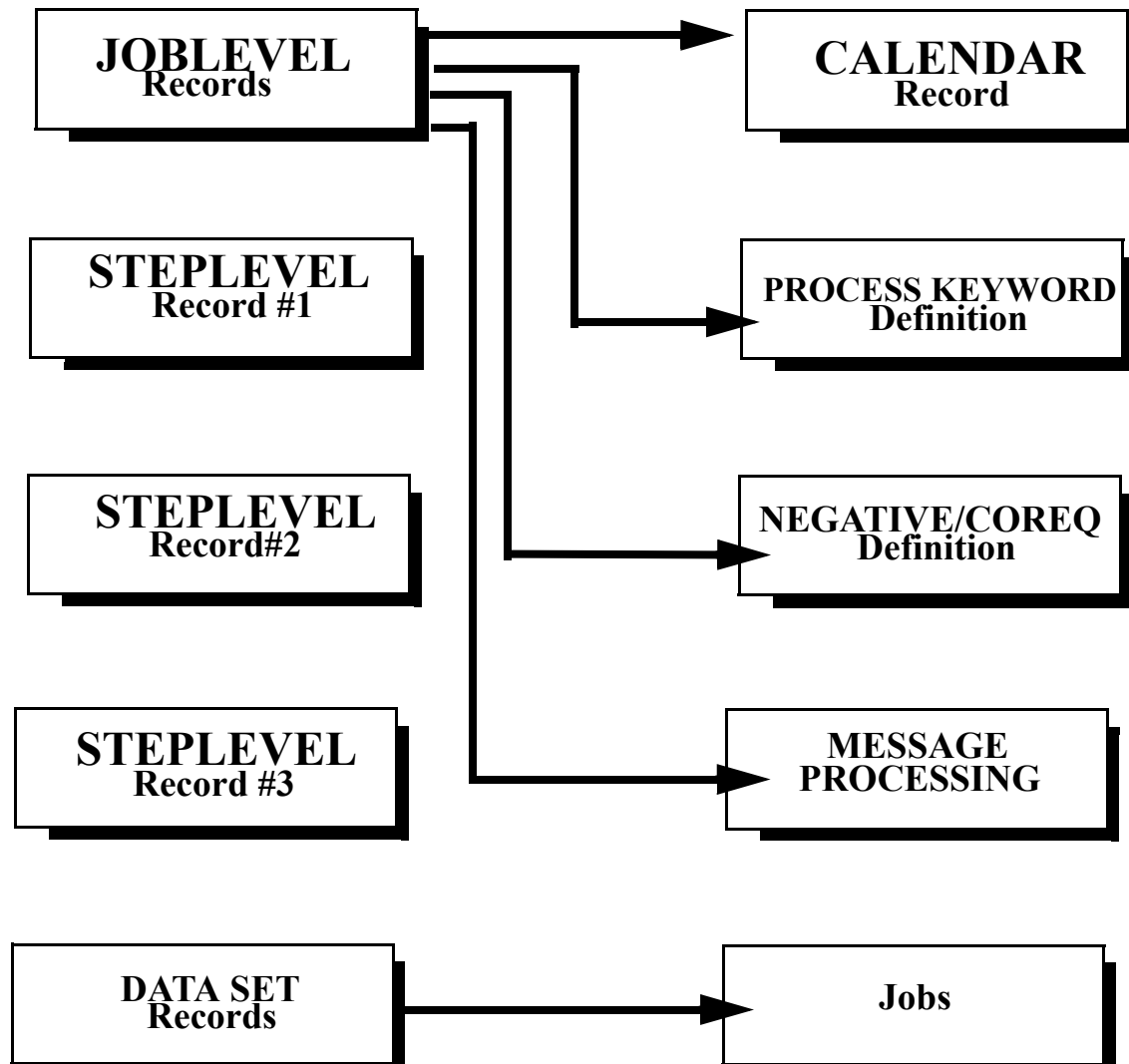
Coding or defining each step of a job in the data base, will allow JOB/Master® to keep historical step information. Historical statistics can not be kept for steps which have not been defined. Steps only need to be defined if statistics are desired or if steps are to be used to trigger other jobs.

## Design and Methodology

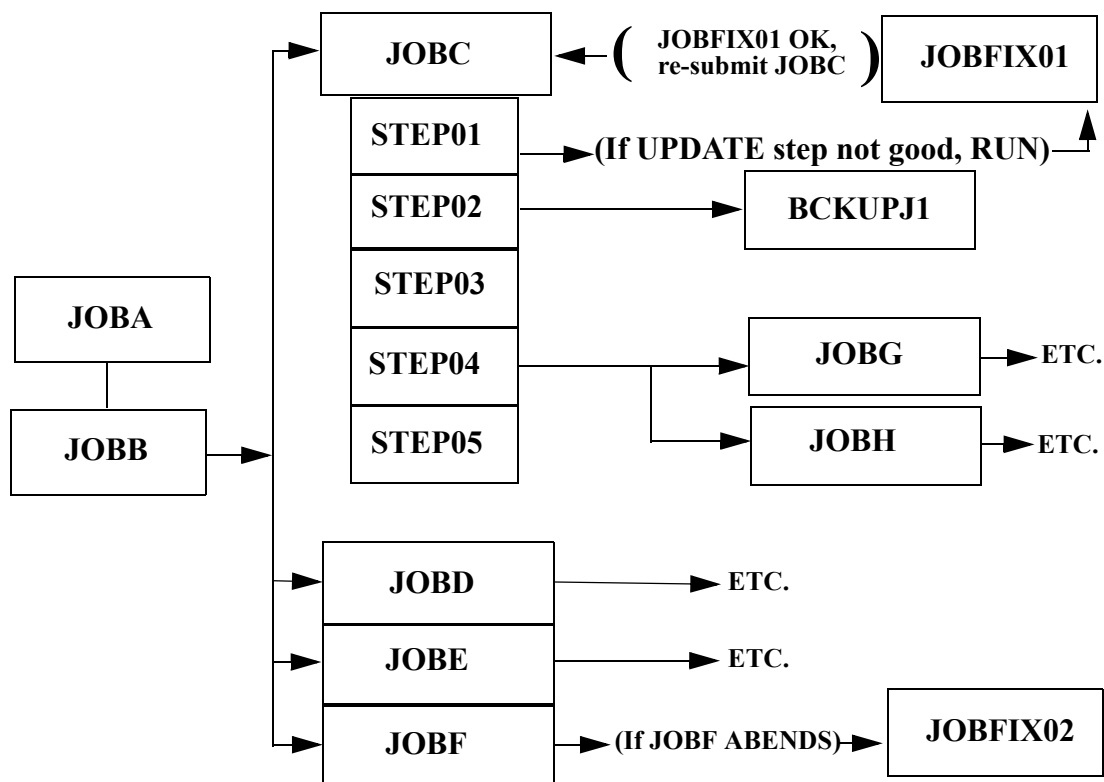
The JOB/Master® data base is defined through the use of interactive screens. The user can ADD, DELETE, UPDATE, or BROWSE jobs, calendars and a variety of other definitions controlled by JOB/Master®.

Jobs are defined to the JOB/Master® data base in hierarchical form. Although there are many different records in the actual data base, JOB/Master® logically links them in a dynamic fashion, allowing for full or partial addition or deletion of a job and its steps. A job is defined to JOB/Master® by job Level records and optionally by one or more step Level records. The following is a sample structure of a data base job definition.

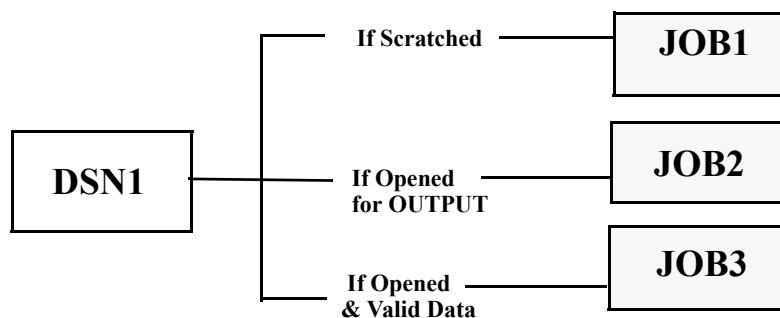
*Sample structure of a typical JOB/Master® data base job definition:*



*Before creating a data base, we suggest that you document job interrelationships within the system being defined, in flow chart format, as shown in the following example.*



In the example above, JOBA, JOBB, JOBD, JOBE and JOBF only need to be coded on the job level. However, JOBC releases jobs at step end, and therefore requires step level coding.



In this example, processing a Dataset can trigger job execution!

## Sample System Worksheets

Another method which can be used as a preliminary coding tool is a worksheet like the one shown below.

<b>Worksheet For System=_____ No. of Jobs in System=_____</b> <b>Run Frequency=_____</b> <b>User Department=_____ Dept. Submitting Job=_____</b> <b>Person to be Contacted for Problems=_____</b> <b>Phone No. to be Contacted for Problems=_____ - _____ - _____</b>					
JOBNAME or Data set	Procname	Stepnames	Program Names	Predecessor To Run Before	Triggered Jobs After

This is an example of how a general ledger system may flow for coding:

Worksheet For System= <u>GENLEDGR</u> No. of Jobs in System= <u>06</u>					
Run Frequency= <u>RUN EVERY MONDAY MORNING FOR THE PREVIOUS WEEK</u>					
User Department= <u>ACCOUNTING DEPARTMENT</u> Dept. Submitting Job= <u>MIS COMP SVS</u>					
Person to be Contacted for Problems= <u>JOHN SMITH - PRG. DEPT.</u>					
Phone No. to be Contacted for Problems= <u>201</u> - <u>245</u> - <u>6881</u>					

JOBNAME or Data set	Procname	Stepnames	Program Names	Predecessor To Run Before	Triggered Jobs After
GENLGR01	GLPROC01	GLSTP001 GLSTP002 GLSTP003 GLSTP004	GLPGM001 GLPGM002 GLPGM003 GLPGM004	--NONE--	GENLGR02  GLRESTOR *ONLY IF ABEND
GLRESTOR	GLRESTOR	RESTORE	GLPGMRS	GENLGR01	GENLGR01 *ONLY IF GOOD RUN
GENLGR02	GENLGR02	GLSTPSRT GLSTP002 GLSTP004 GLSTP005	SORT GLPGM004 GLPGM005 GLPGM006		GENLGR03 GENLGR04 GENLGR05 GENLGR06
GENLGR03	GLPROC03	GLSTPSRT GLSTPPRT GLBCKUP	SORT GLPGM007 GLBCKUP	GENLGR02	GLFINAL
GENLGR04	GLPROC04	GLSTPSRT GLSTPPRT GLBCKUP	SORT GLPGM008 GLBCKUP	GENLGR02	GLFINAL
GENLGR05	GLPROC05	GLSTPSRT GLSTPPRT GLBCKUP	SORT GLPGM009 GLBCKUP	GENLGR02	GLFINAL
GLFINAL	GLPROC06	GLSTP001 GLSTP002 GLSTP003	GLPGM010 GLMERGE GLPGM011	GENLGR03 GENLGR04 GENLGR05	--NONE--



## Interactive Data Base Creation

The on-line JOB/Master® monitor provides a number of automatic facilities designed to decrease the amount of time needed to define a master data base. The facilities are grouped into four major functions as follows:

- Job level Creation
- Step level Creation
- Dataset Level functions
- Calendar or Process Keyword Creation

The functions use screens with cursor prompting, and need little explanation for coding purposes.

A user may have as many JOB/Master® terminals active and performing maintenance as the number of TSO userids and terminals available. All changes are dynamically made to the data base from the terminal, therefore, a batch update does not need to be run for changes and additions to take place.

## Identifying Jobs Under JOB/Master® Control

JOB/Master® controls any job that is assigned to its control. A job can be marked for control by JOB/Master® with one of the following methods:

### METHOD 1 - COL 71

The first method requires placing a tracking character (*default is a cent sign “¢”*) in column 71 of the job card.



*The ¢ (cent sign) is a hexadecimal X'4A'. Keyboards may vary, depending upon country of use, and the user must indicate the corresponding character of this hexadecimal representation. For example, in the United Kingdom hexadecimal 4A is represented as a £ sign. In this manual, reference will be to the cent sign. Any special character can be used and is specified in the JOB/Master® procedure as a parm. Refer to the “Installation Guide”.*

Jobs in the JOB/Master® data base which are submitted by JOB/Master® will have the tracking character placed on the job card automatically, if column 71 is blank.

Any user submitted job that needs to be tracked will be tracked if the tracking character is placed in column 71. Even jobs not defined to the JOB/Master® data base can be tracked in this way. For example:

```
//JOBEXAMP  JOB      (ACTG) , "EXAMPLE JOB" ,      (COL 71) ¢
//                                     CLASS=A
```

### METHOD 2 - NOTIFY

The second method requires the coding of a notify parameter on the job card. The userid used for the notify and the JOB/Master® region to be assigned can be found in the following table:

<u>USERID</u>	<u>JM REGION</u>
NOTIFY=JOBMST1 JOBMAST	JM01
NOTIFY=JOBMST2	JM02

```

NOTIFY=JOBMST3          JM03
NOTIFY=JOBMST4          JM04

```

```

//JOBEXAMP JOB (ACTG) ,"EXAMPLE JOB",
CLASS=A,NOTIFY=JOBMAST

```

However, if the UserID used is not defined to TSO, then a message will be issued by TSO indicating an undefined UserID. This method should only be used if there is a problem using METHOD 1 (i.e., a conflict with COL 71 in the JOB card). The IKJ144I message could be suppressed with CONSOLE/Master®.

## IMPORTANT

If neither Method 1 nor Method 2 is used on the job statement, no JOB/Master® tracking or control functions will be performed for that job. The above two methods have been chosen for performance reasons. JOB/Master® only processes data for the jobs under its control. Because it is not necessary for JOB/Master® to process every job and do a lookup against its data base, system overhead is reduced.

### METHOD 3 - STARTED TASKS

JOB/Master® can track and control started tasks. This allows the started task to have scheduling attributes similar to other jobs within the system. Condition code checking, notification, recovery, plus all other criteria may be utilized for the started tasks. If the started task is to be only tracked on the JOBQ without database processing, skip #1 and go to #2 below. In order for the tracking to take place the following should be done:

1. Define the Started Task to the JOB/Master® database as a Job. It must have a submit type of "S". The fifth screen of the job definition in the database contains a field called RUN-EXIT-INS. The field should be filled out as follows:  
"JMACT=&JID (+ any other descriptive data)".

There must be a space between "&JID" and any Description on the Run-Exit Ins data field. The &JID will be dynamically altered to indicate the JOB/Master® Region which the started task will be tracked in.



***If the run instructions are incorrectly defined in the Job Definition Screen #5, the started task will not be displayed on the Tracking Screen.***

2. The started task's procedure must be altered as follows. The started task must have a dummy DD with a DSN of &JMACT and the PROC statement should have a Symbolic of JMACT=JMxx. If the started task is manually started at a console, enter "S procname, JMACT=JM##" where ## is the ID (01 thru 04) of the JOB/Master® region which will do the tracking. If the started task is started by JOB/Master®, the following command is issued: "S procname, JMACT=&JID" by JOB/Master®. The &JID will be filled in by JOB/Master® to the appropriate ID for tracking.

An example is shown in the following screens:

```

----- JOB/Master® Job Definition --- Row 1 to 4 of 72
Command ==>
-----Definition Last Updated by
Jobname ==> LOGINT      Alt Name For =>      System Name ==> LOGSYS**
PDS Mem ==>            PDS ==>
Trig Job ==> N (Y/N)    Triggered By==>      Submit Type ==> S (ACMRST)
Res Name1 ==>          Res Name2 ==>          Schedule/Net==> *****
Calendar ==>           Excep Cal1 ==>         Excep Cal2 ==>
Keywd Def ==>          Priority ==>           Lib Type ==>
Neg/C Def ==>
Model / Count of Tapes: 3420 => 00 3480 => 00 Update Drive Usage=> Y
----- Submit Options -----
Enter submit time (HHMM) & optionally "number of runs"/"minutes between runs"
Submit=> 0000 End=> 0000 Number Of Runs=> 00 Minutes Between Runs=> 0000

----- Dependency Options -----
Pred   Negative   Coreq   Process   N-Proc   Trig   Sub:   OP   Cond   Trig
Jobs  Typ|    Dep    Dep    Keyword  Keyword  Job    Typ:  CD  Code  Type
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
      | LOGWINT  CONSMSTR | ALL      |         |         | :    | -   | -   | -
      | LOGWTR   |         |         |         |         | :    | -   | -   | -
      |         |         |         |         |         | :    | -   | -   | -

```

Nothing special here. Just the job definition with submit type S. Also, note the COREQ dependency of the CONSMSTR control region All dependencies will be satisfied like any other job before the task is started..

```

----- JOB/Master® Job Definition For LOGINT -----
Command ==>

-----
Job Description ==>
Procedure Name ==>
Programmer Name ==>
Submitting Dept ==>
User Department ==>
Output Destination ==>
Delivery Method ==>

----- Abending Contact Information -----
Contact Name ==> Phone ==>( ) Ext ==>
Beeper ==>( )

-----
Run-Exit Ins=

```

The RUN-EXIT INS ==> field will cause the started task to be tracked. This field must have JMACT=&JID as the value. After at least one blank, a description can be entered.

```
Menu Utilities Compilers Help
ssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssssss
      SYS3.STANDARD.PROCLIB(LOGWINT)                               Line 00000000 Col 001 080
Command ==>                                                         Scroll ==> PAGE
***** Top of Data *****
//LOGWINT PROC JMACT=JMXX
//*
//*
//*
//IEFPROC EXEC PGM=IASXWR00,PARM='PE'
//IEFRDER DD DISP=MOD,DSN=SYS3.SYSLOG
//DD1 DD DUMMY,DSN=&JMACT
***** Bottom of Data *****
```

The symbolic JMACT must be in the Started Task's PROC. When JOB/Master® issues the STC start command it will be with the JMACT added. e.g. S LOGWINT, JMACT=JM01. The value of the JMACT variable will be the JOB/Master® region id, JM01, JM02, JM03 or JM04.



*For this to work properly, the SMF option for STC exits must be on. The SMF option for STC should be: SUBSYS(STC,EXITS(IEFU83,IEFU84,IEFUJV,IEFACTRT,IEFUJI))*

## Run Mode Option

The Run Mode option allows the user to schedule jobs according to the readiness of the application. Jobs can be scheduled to actually execute or only simulate execution. There are three possible Run Mode Options:

### PRODUCTION (P)

Global Record(Profile): Can be overridden at the System and Job level.

System Record: Can be overridden at the Job level.

Job Record: Will place job onto LQ and actually run JCL.

When To Use PRODUCTION:

Once JOB/Master® has been installed and system testing completed, the Global Record in the Profile should be changed to production mode so jobs may begin executing. From that point forward (*taking into consideration site standards and change control procedures*) the majority of the jobs in the system will be executed.

### CHECK (C)

Global Record(Profile): Cannot be overridden at the System and Job level.

System Record: Cannot be overridden at the Job level.

Job Record: Will place job onto LQ but will simulate execution.

When To Use CHECK:

Check mode is most often used to test a job or system and its interaction with JOB/Master® functions. Scheduling criteria can be defined to the JOB/Master® database before the programs are ready when the system or job is put in check mode. Check mode only simulates the job execution, as none of the execution JCL actually gets moved to the JMSTGPDS or is called at submit time. This JMSTGPDS technique gives an opportunity to make certain everything is working properly, jobs are scheduling, predecessor relationships are met, triggers are working etc. BEFORE all jobs are moved into production.

### SELECT (S)

Global Record(Profile): N/A

System Record: Will default to check mode unless overridden at the Job level.

Job Record: Will default to check mode unless included on LQ prior to submit.

When To Use SELECT:

During the last phase of testing, some jobs in a new or modified application stream may not be ready to execute regularly in production. Also, User Departments may have a series of jobs that may or may not need to be executed that night and they do not know before the schedule is run. Jobs in select mode will be placed on the JOBQ, but will default to executing in check mode, unless the job is included from the LQ prior to submission.



***Select mode should NOT be used indiscriminantly because of overhead and storage issues in processing the JOBQ.***

## Select Mode On The List Queue

As described in the Job Tracking section, an additional field has been added on the LQ screen. The M ==> field reflects the mode in which a job has been defined to run: P,S, or C.

```

----- JOB/Master@ Scheduling Queue ----- Row 1 from 6
Command ==>                               Scroll = Page

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/02  98.245  Time= 07:59 -----
S | Job   |T|Date|Time|      C u r r e n t   S t a t u s      |M St|Alt Def
-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
-- SELECT12  98244 0000 * IN SELECT MODE / ENTER I TO RUN JOB      S P
-- SELECT13 Y 98244 0000 * IN SELECT MODE / ENTER I TO RUN JOB      S P
-- SELECT14 Y 98244 0000 * IN SELECT MODE / ENTER I TO RUN JOB      S P
-- SELECT15 Y 98244 0000 * IN SELECT MODE / ENTER I TO RUN JOB      S P
-- SELECT16 Y 98244 0000 * IN CHECK MODE, NOT SUBMITTED            C P
-- JCLSUBA Y 98245 0055 * WAITING FOR MANUAL TASKS                  S P
-- CI33DOWN Y 98245 0746 * TRIG. ON HOLD BY EXEC REQ.              P   P H
-- SELECT01 Y 98245 0746 * SELECT MODE / ENTER I TO RUN JOB      S H
-- JPOSTB1  98245 0815 *EXCLUDED TO SIMULATE BY                    P390K P C
***** Bottom of data *****

```

To include/exclude those jobs defined as select mode, before the job goes into execution, take the cursor to the line in the S column of the LQ which corresponds with the job to be changed. Enter one of the following values:

I= INCLUDE

Include this job in production cycle; at submit time call the JCL from staging PDS or the user library.

X=EXCLUDE

Exclude this job from running in production; only simulate. May be used for jobs which are flagged as select mode, and having once been changed to include, now must be altered back to exclude. (*This feature can also be utilized to exclude a job on the LQ in production mode*).

Press <ENTER>.

- The M(mode) ==> field represents the mode defined for each job.
- Initially, the ST (status) ==> field represents the default for the mode (i.e., the default status for Select mode is Check status). Now, however, the ST ==> field reflects the current execution status.
- Note that the CURRENT STATUS ==> field reflects the changes made (SELECT04, SELECT05 and SELECT13) as described below:

SELECT04

No action is required to run this job in check status.

SELECT05

S mode has been flagged to include; to run in production status; to actually execute the JCL.

SELECT13

P mode has now been altered to exclude; to run in check status; to simulate.

After the changes, the LQ screen will look like this:

```

----- JOB/Master@ Scheduling Queue ----- Row 1 from 15
Command ==> Scroll = PAGE
Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/01 98.244 Time= 11:02 -----
S | Job |T|Date|Time| C u r r e n t S t a t u s |M St|Alt Def
-----
-- SELECT04 Y 98244 1100 * SELECT MODE/ENTER 1 TO RUN JOB S S C
-- SELECT05 Y 98244 1100 * INCLUDED TO RUN BY -> P390K P S P
-- SELECT13 Y 98244 1100 * EXCLUDED TO RUN BY -> P390K P P C
***** Bottom of data *****

```

Jobs in select or check mode will indicate that the JCL was not submitted and the ST ==> field will change to a status of D to indicate that the LQ record will be deleted.



***Once the job(s) have entered the JES input queue and/or gone into execution; it is TOO LATE to make the change to include or exclude.***

## Adding Systems and Jobs

Prior to using JOB/Master® in production, the user should do the following:

1. Develop logical structures to represent each sequence of events or jobs that are to be processed
2. Give each logical group of regularly scheduled jobs a unique system name
3. Define manual and automatic recovery procedures used at the installation
4. Define data requirements and resources needed for each job stream or system
5. Identify imbalances or problems in existing applications, in terms of triggered jobs and scheduling criteria
6. Identify those systems, or jobs within a system, that should be submitted automatically, manually, or as started tasks

JOB/Master® is a flexible scheduling product, with the ability to add jobs and systems to the data base as they are added to the production workload. New systems or jobs can be

added at any time by defining the proper information through the on-line data base creation session.

By identifying and understanding jobs, their flows and requirements, definition and implementation proceed more efficiently. The proper definition of predecessor and successor relationships eliminates lag time due to job to job transition. This cuts many hours from the production shift workload.

## Job Dependencies

The most essential element of the JOB/Master® system is the dependency relationships that are defined by the user. Jobs can be submitted based on time, scheduling calendars, data sets, or the completion of other events such as manual tasks or setup postings. Another type of dependencies are job and system predecessors which must be completed before a job will be submitted. It is not necessary to have all the jobs in a system submitted automatically. A system can have processing breaks defined, and the submission of jobs can be halted by specifying a manual submit on any job in the system. Jobs can also be dependent on externally submitted jobs utilizing JOB/Master® Tracking.

JOB/Master® verifies that all predecessors to a job have ended successfully or with the proper condition code, before submitting any subsequent jobs for processing. Any attempt to start a job out of sequence results in a predecessor check condition. At this time, a message is sent to inform the operator of this condition. If required, the operator can override this condition and "FORCE" submit the job.

All scheduled jobs can be found on the JOB/Master® waiting queue (*JOBQ*), which are displayed using various commands provided through the job tracking session. (*See Job Tracking Section.*)

## Alternate Job Definition

An alternate definition name can be given to a job when its predecessor or successor relationships change, and the user does not want to change the jobname.

The following scenario illustrates the requirement for this function:

1. JOBA is the first job in the jobstream.  
JOBB is the second job and has JOBA defined as a predecessor.  
JOBC is the third job and has both JOBA and JOBB defined as predecessors.
2. The above stream executes Monday through Friday. However, on Friday JOBB must execute first, therefore, on Friday, JOBA has JOBB as a predecessor.

To accomplish the above, the following steps should be performed:

1. Define a calendar for Monday through Thursday.  
Define JOBA and JOBB, establishing the relationship between them, and referencing the Monday through Thursday calendar.
2. Define a calendar for Friday.  
Code a new (alternate) definition for JOBA, specifying JOBB as its predecessor. When coding this job's definition, using Job Definition Screen 1, the user must specify that it is an Alternate Criteria Definition for JOBA.  
Code a new (alternate) definition for JOBB, not containing JOBA as a predecessor.



3. Define a calendar for Monday through Friday.

Define JOBC having JOBA, JOBB and the two alternate definitions as predecessors.

To summarize, JOBA and JOBB would reference a Monday through Thursday calendar. The alternate definitions for JOBA and JOBB would reference a Friday calendar, and JOBC would reference a Monday through Friday Calendar.

The Alternate Criteria function satisfies the need where a user has a specific requirement of using the same jobname for more than one set of predecessor or successor criteria.

Another method recommended for the above situation, is to have a separate jobstream with different job names for the alternate sequence. This can be accomplished via the following steps:

1. Define a calendar for Monday through Thursday.

Define the first set of criteria for JOBA, JOBB and JOBC to execute in that order and be scheduled for Monday through Thursday.

2. Define a calendar for Friday.

Code a new definition for JOBD, JOBE and JOBF, specifying JOBE as a predecessor for JOBD, and both JOBE and JOBD as predecessors for JOBF. Under this definition, JOBD, JOBE and JOBF correspond to JOBA, JOBB and JOBC, respectively.

## Validating Systems

JOB/Master® creates a number of data base reports, which list the jobs, calendars and systems that have been defined to the data base. Each of these reports should be reviewed, and any errors should be corrected through the update facilities supplied by JOB/Master®.

Once the system has been created, all the information concerning scheduling criteria and jobs is retained permanently on the JOB/Master® data base and need not be specified again. The data base should be backed up on a regular basis, using the JMBACKUP program. (*Refer to the Installation Guide or Batch Functions in this manual*).

Once one or more systems have been created, they can be checked for accuracy by creating and testing them using the Mantissa-supplied utility in place of the real programs in each step. The LOOPDRV utility is located in the JOB/Master® load library.

## LOOPDRV

A LOOPDRV is a Mantissa-supplied utility program, that performs the following functions:

1. Executes for a user-defined amount of CPU time (*mss*)
2. Issues a condition code (*optional*)
3. Accumulates a user-defined amount of wall clock time (*mss*)
4. Issues a user ABEND (*U999*) (*optional*)

Formats (*mss*); where m=minutes and ss=seconds.

The sample JCL is located in the hlq.INSTLIB. The actual program can be found in the hlq.LOADLIB.

### ***LOOPDRV Examples***

EXAMPLE 1:

```
//STEP1      EXEC  PGM=LOOPDRV,PARM=' 003,0004,005'
//STEPLIB    DD    DSN=OPS.LOADLIB,DISP=SHR
```

PARM VALUES (*Example 1*):

```
003      = 3 seconds of CPU time
0004     = condition code value 0004
005      = 5 seconds of wall clock time
```

The above example of LOOPDRV executes for 3 seconds of CPU time, issues a condition code of (4) at step termination, and accumulates 5 seconds of wall clock time.

EXAMPLE 2:

```
//STEP1      EXEC  PGM=LOOPDRV,PARM=' 003,0000,100,A'
//STEPLIB    DD    DSN=OPS.LOADLIB,DISP=SHR
```

PARM VALUES (*Example 2*):

```
003      = 3 seconds of CPU time
0000     = has no value
100      = 1 minute of wall clock time
A        = abend U0999 at step completion
```

This example of LOOPDRV executes for 3 seconds of CPU time, accumulates 1 minute of wall clock time, and issues ABEND U999 at step completion. The U999 ABEND is requested by coding the “A” after the wall clock time parameter.

### ***How and When To Use LOOPDRV***

The LOOPDRV program is supplied, as previously stated, to provide a method of verifying the accuracy of the job & system definitions without actually running the programs. The network structures can be verified for processing accuracy, sequential continuity, and all predecessor relationships.

A Sample system could be defined as follows:

This system is to run every Monday and Begins at 6:00 P.M.

```
JOB A  (Triggers B if its Condition code = 0022)
JOB B  (Triggers C & D)
JOB C  JOB D
JOB E  (Must wait until C & D completed before 10:00 P.M.)
```

### ***Procedure***

1. Define the System to the Database (*Add System SYSTEMX*). Identify a TEST Library where the LOOPDRV test jobs will reside.
2. Define each of the Jobs to be Scheduled... (*JOB A & JOB E are the only ones needing a Start Time Defined - JOB A = 1800 and JOB E = 2200*)
3. After the system has been defined, create PDS members in the test library, defined above, having the names of the executing jobs.

*(JOBS A - E)*

Place the criteria into the jobs as required.

JOB A should have PARM='003,0022,100'

Values =           003 (3 Seconds CPU)  
                       0022 (Cond Code)  
                       100 (1 min Wall Clock)

4. After the jobs have been defined into the Test library, create a schedule using the Tracking Command GS for SYSTEMX.
5. Monitor the processing via the tracking system or verify the accuracy by viewing the Audit History log. The submission criteria may be adjusted as many times as necessary until the system has been defined properly. All changes to the submission criteria are dynamic and take effect with the next Schedule Creation for scheduled jobs, and immediately for triggered jobs.
6. When the system is verified correct, change the test library name in the system definition to the production library where the real jobs are. If necessary, place into the system record of the database, the DO NOT SCHEDULE BEFORE YYDDD field, the date you wish this system to begin scheduling.
7. You are NOW ready for production. You may clean up your testing library or reuse the jobs for other tests.

The actual amount of CPU time will vary based on the processor in use.



***Mantissa has supplied LOOPDRV jobs for the inventory, sales, and commission jobs described in the tutorials in this manual.***

## Schedule Events from Outside JOB/Master®

JOB/Master® provides for event completion from an external source by use of the program JMEVENT. For example, if you have a job, which starts a series of jobs beginning after certain files are closed in an on-line system, then the transaction that closes the files can issue a call to this JOB/Master® function, and start the first job in the stream. The following parameters are passed to JMEVENT:

JOBNAME	Eight (8) characters; padded with blanks.
STEPNAME	Eight (8) characters; padded with blanks.
SUBID	Four (4) characters. Values can be JM01 through JM04.

These parameters are passed in the following manner:

FOR COBOL (in Working Storage):

```
01  JOBM.
   05  JMLEN      PIC S9(4) COMP VALUE +21.
   05  JMJOBNM    PIC X(8) .
   05  JMSTPNM    PIC X(8) .
   05  FILLER     PIC X      VALUE SPACE.
   05  JMSUBID    PIC X(4)  VALUE 'JM01' .
      .
      .
```

```

MOVE 'JOBNAME' TO JMJOBNM.
MOVE SPACES TO JMSTPNM.
CALL 'JMEVENT' USING JOBM.

```

FOR ASSEMBLER:

```

MVC    JMJOBNM,=C'JOBNAME'
LA     R1, PARMJ
CALL   JMEVENT
.
.
.
PARMJ   DC    A(JMEVTPM)
JMEVTPM DC    AL2(JMPRMEND-JMJOBNM)
JMJOBNM DC    CL8' '
JMSTPNM DC    CL8' '
        DC    CL1' '
JMSUBID DC    CL4'JM01'
JMPRMEND EQU  *

```

The following example illustrates the process of posting event completion with JMEVENT:

1. Job CICSPI has been defined to the JOB/Master® data base. CLS1 has been defined as a step with a dependent job, JOB1. CLS2 has been defined as a step with a dependent job, JOB2. The following table shows the resultant JOB/Master® data base entries.

<i><b>JOBNAME</b></i>	<i><b>STEPNAME</b></i>	<i><b>DEPENDENT JOB</b></i>
CICSP1	CLS1	JOB1
	CLS2	JOB2

2. The steps CLS1 and CLS2 represent the transactions CLS1 and CLS2 respectively. Transaction CLS1 on CICS closes files and terminates the online processing for System1.
3. Transaction CLS2 on CICS closes files and terminates the online processing for System2.

When JMEVENT is called from transaction CLS1 with the jobname CICSP1 and the stepname CLS1, the simulated completion of CICSP1, step CLS1, will cause JOB1 to be triggered and System1 started.

The same will happen for transaction CLS2. It is not necessary to code these transactions as separate steps because each could have been set up as a job. However, if there are multiple CICS regions with the same or different transactions, they can be defined as the jobname and each transaction as a stepname for ease of reference.

# Chapter 13

## Introduction to CONSOLE/Master®

### Overview

Today's sophisticated data processing environments are utilizing the services of many data processing professionals who are truly specialists in their field. While some professionals master several software areas, it is becoming more and more difficult to find help with many needed activities which are normal tasks for every data center. Each time a technical task is required, several technicians may need to be consulted.

Data center management is often forced to depend on help from Systems Programming or Technical Services personnel because data center personnel may lack the skill or training required for understanding the intricate details of MVS internals. Many times, as a stop gap measure, which may eventually be automated, a cumbersome set of manual procedures is developed in-house. This often curbs initiative as well as productivity.

CONSOLE/Master® was designed to perform several complex functions by simply selecting the task from a full screen menu. This initiates the chosen dialog which will prompt the User by providing additional panels and tutorials as may be needed. The main objective for CONSOLE/Master® is to offer higher productivity levels by simplifying often cumbersome and complex tasks.

CONSOLE/Master® is a software management tool that exploits and simplifies MVS functions. It was developed to be used in a TSO-ISPF environment. However, whenever possible and appropriate, equivalent functions are provided via commands or callable load modules for use outside of ISPF.

CONSOLE/Master® consists of ISPF dialogs which will assist the User in selecting the specific function. Often one selection menu will lead to another where more functions or utilities will be found.

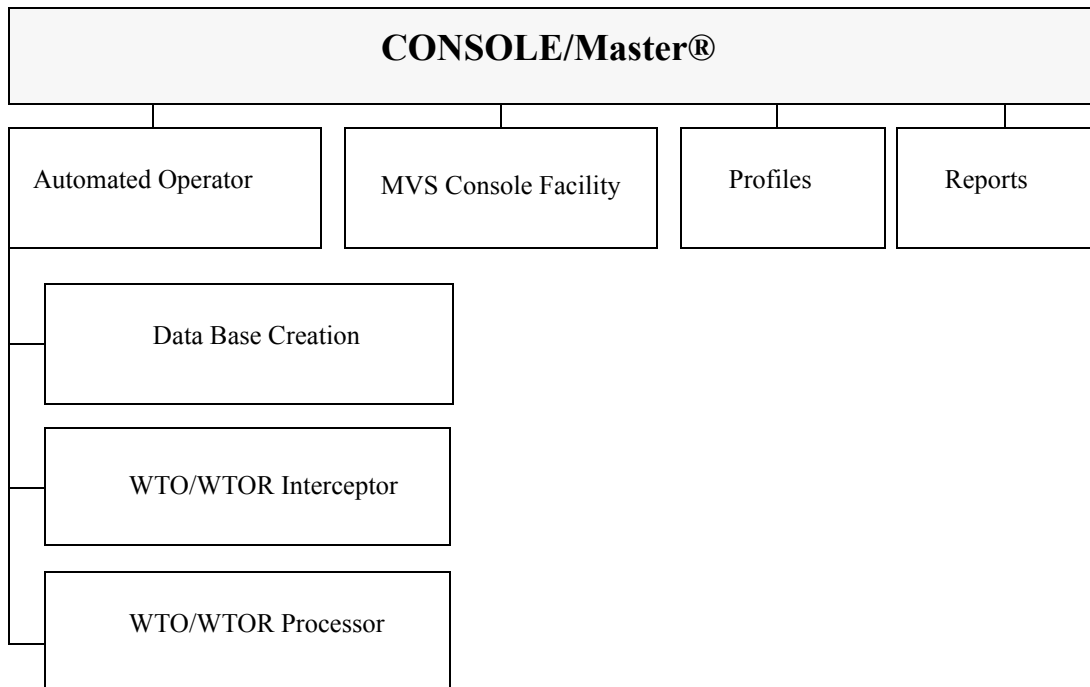
CONSOLE/Master® is supported on all MVS versions from Base 3.8 (*pre MVS / SP*), MVS/ESA through ZOS.

## Benefits

- The Automated Operator provides for programmatic control and management of console message text.
  - Re-route messages
  - Suppress messages
  - Reply to messages
  - Make messages non-rollable
- Initiate actions based on message text.
  - Start/stop on-line systems
  - Start/stop initiators, etc.
- CICS, TSO, etc. can be started and shutdown automatically.
- The MVS Console Facility can be provided to many departments in the data center: operations support, scheduling, distribution, etc. Although it is not recommended, potentially every TSO User could also be an MVS Console User.
- The MVS Console can solve the often unfulfilled requirement of a full operator console at a remote site.
- Where channel extenders are used to make remote devices appear to be local, the MVS Console Facility can be used to provide operator functions.
- This facility can save hardware costs by eliminating the need for a separate 3270 type terminal. The User simply invokes the MVS Console from a TSO session.
- The MVS Console can save maintenance requirements by eliminating the need to SYSGEN another console when the intended User already has a terminal for TSO use.
- Job Scheduling communication can be automatically achieved through the JOB/Master® interface of the Automated Operator.
  - Automatically post manual tasks complete
  - Specify completion of an event

## CONSOLE/Master® Components

The product concentrates control of console message processing, as shown in the following diagram:



## Starting the Control Region

In order to initiate CONSOLE/Master®, execute the procedure CONSMSTR, which you should have modified and placed into your PROCLIB. For additional information, refer to the Installation section in this manual.

CONSOLE/Master® can be started in one of two ways:

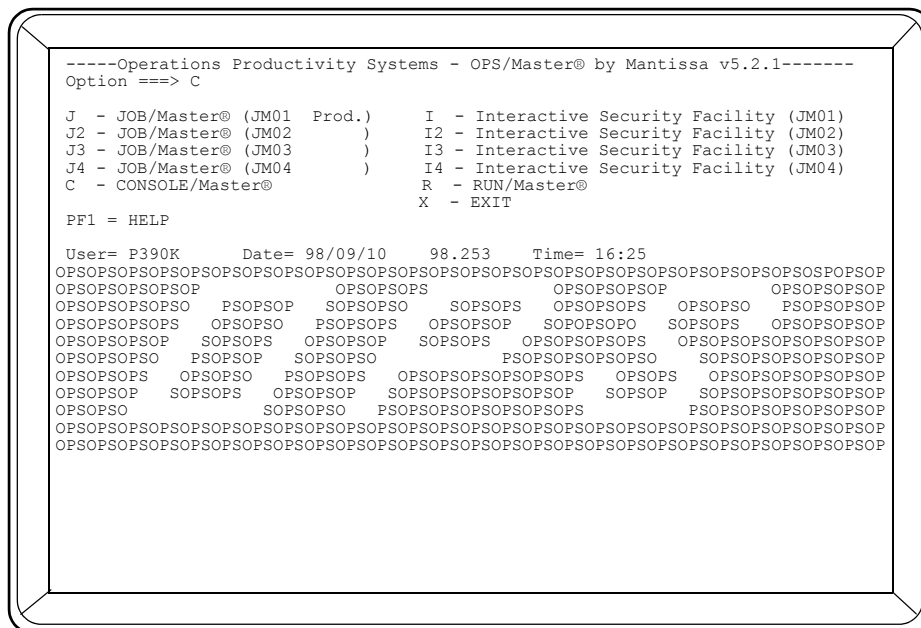
1. As a started task, issue the command  
**S CONSMSTR**
2. As a batch job, place a JOB statement before the following execute statement.  
**//STEP1 EXEC CONSMSTR**

## Stopping the Control Region

In order to stop the execution of CONSOLE/Master®, issue the following command:

**P CONSMSTR**

To start CONSOLE/Master®, select option C on the OPS/Master® Primary Menu and press <ENTER>. Refer to the OPS/Master® Installation and User's Guide for additional information.



```

----- CONSOLE/Master® by Mantissa -----
Option ==>

A - Automated Operator          P - Profile
C - MVS Console Facility       R - Reports
                                X - EXIT

-----

      CCCCCC  OOOOOOO  NN  NN  SSSSSSS  OOOOOOO  LL      EEEEEEE
    CC  CC  OO  OO  NNN  NN  SS  SS  OO  OO  LL      EE
  CC  CC  OO  OO  NNNN  NN  SS  SS  OO  OO  LL      EE
CC  CC  OO  OO  NN  NN  NN  SSSSSS  OO  OO  LL      EEEEE
CC  CC  OO  OO  NN  NN  NN  SS  SS  OO  OO  LL      EE
CC  CC  OO  OO  NN  NN  SS  SS  OO  OO  LL      EE
CCCCCCC  OOOOOOO  NN  NN  SSSSSSS  OOOOOOO  LLLLLL  EEEEEEE

      MMM  MMM  AAAAAAAA  SSSSSSS  TTTTTTTT  EEEEE  RRRRRR
    MM  M  M  MM  AA  AA  SS  SS  TT  EE  RR  RR
  MM  M  M  MM  AA  AA  SS  TT  EE  RR  RR
MM  MM  MM  AAAAAAAA  SSSS  TT  EEEE  RRRRRRRR
MM  MM  MM  AA  AA  SS  TT  EE  RR  RR
MM  MM  AA  AA  SS  SS  TT  EE  RR  RR
MM  MM  AA  AA  SSSSS  TT  EEEEE  RR  RR

F1=HELP      F2=SPLIT      F3=END      F4=RETURN      F5=RFIND      F6=RCHANGE
F7=UP        F8=DOWN       F9=SWAP     F10=LEFT      F11=RIGHT     F12=RETRIEVE

```

E:\Manuals\Product Manuals\ASO\OM (OPS Master)\Reference Guide\Current Release\OPS\_C13.fm



Enter C in the OPTION==> field to access the MVS Console Facility.

Enter P in the OPTION ==> field to access the Profile option.

Enter R in the OPTION==> field to access the Reports facility.

Enter X in the OPTION ==> field to exit CONSOLE/Master®. The OPS/Master® Primary Menu will be re-displayed.

These options are described in the following sections.

---

***F      The function keys must be set (using option P;1) before other CONSOLE/Master® functions can be used. Refer to the chapter “Profiles” for information on how to do this.***

---

CONSOLE/Master® provides an interactive HELP facility via standard convention of PF1 or the ISPF HELP command. The HELP/Tutorial mode can be entered from any online screen by pressing the PF1 key.

When a message is displayed in the upper right corner, a brief explanation can be displayed by pressing the PF1 key. If the PF1 key is pressed a second time, a tutorial screen is displayed.

If the PF1 key is pressed when there is no message in the upper right corner, then a tutorial screen is displayed immediately.



# Chapter 14

---

## Automated Operator

---

### Overview

The WTO/WTOR Processor, an integral part of the Automated Operator, provides systematic recognition and handling of “Write To Operator” traffic. It can also be used to reply to WTOR messages.

Automated Operator was designed as a system management aid which allows OPS personnel to automatically manage and control the MVS operating system console functions.

### *Automated Operator Components*

#### **Data Base Creation and Maintenance**

The Data Base Creation and maintenance portion provides an easy to use ISPF dialog to input and control console message and reply functions. These data base parameters are used to automatically process WTO traffic and reply to “Write To Operator” with reply (*WTOR*) messages. An interface to the JOB/Master® job scheduling system is also provided.

#### **WTO/WTOR Processor**

The Message Interceptor/Processor monitors all console activity and takes the appropriate action, as specified on the data base entry for the message being processed.

## Automated Operator Data Base Session

To display the Automated Operator Data Base, select A from the CONSOLE/Master® Facilities menu and press <ENTER>. The following screen is then displayed:

```

----- Automated Operator - Data Base Functions -----
Option ==>
User= P390K
Date= 98/09/10
      98.253
Time= 15:58

Option      Functional Description
-----
1 - ADD      Add Console Message definition
2 - ENTER    Display Messages on Data Base for ADD/UPDATE
              or BROWSE processing
  
```

### Menu Options

**1 = ADD**

Add a Console Message Definition.

**2 = ENTER**

Displays messages defined on the Data Base for Add/Update, Delete or Browse Processing. This entry will display all messages currently defined in the system.

### Console Message Table

The Automated Operator - Console Message Table is an ISPF table of the “KEY” elements of the Automated Operator data base. A key element is defined as the command, message or a character string which is identifiable within data entered by a console operator or within a WTO/WTOR line.

----- Automated Operator - Console Message Table -Row 1 to 8 of 74										
Option ==> ADD					Scroll ==> CSR					
B	Command or Message Key			Date	Time		A	Last Update		
D							C			
U	SID	Job	String	Start	End		T	Date	Time	By
-	-	TEST OPSMASTER					Y	98043	08:03	P390W
-	-	SYSLOG					Y	95142	08:27	TCJN
-	-	POW					Y	97140	09:08	P390C
-	-	PONDFROG					Y	98065	11:08	P390W
-	-	MARKSMF					Y	97163	09:22	P390W
-	-	JMCN JMCOMAND					Y	98159	16:20	P390M
-	-	JMCN DTATNITE					Y	97049	10:43	P390C
-	-	JMCN DSNFIX					Y	00001	00:33	P390W

Users can enter ADD in the OPTION ==> field to enter new message or L, followed by the desired string, to locate a specific message in the table. Be sure there is a space between the L and the specified string.

The functions B (*browse*), D (*delete*), and U (*update*) can be entered in the select field next to the desired message (*as shown above*).

If selection limitation has been specified for the message, it will be displayed under the message text. Message processing can be limited by system ID, jobname, date or day of week values, and time range.

The Console Message Table is displayed in **descending order** of key elements. This corresponds to the order in which the elements are matched to the console line, providing recognition of most specific to least specific strings. For example, string IEF233A will be processed before a less specific string such as IEF.

### Functional Fields

This screen contains a two (2) line associated display. Each line will be described by field and function.

#### LINE 1

**This is the highlighted line on the screen.**

B D U

This field is used to select the line and the function desired when the line is selected.

1. Move the cursor to the message line desired.
2. Select the action desired.

**B** = Browse

**D** = Delete

**U** = Update

3. The Console Message Definition Screen will be displayed.
4. Perform the necessary action.
5. If a U or D were selected press CONFIRM (PF4) to update the screen or CANCEL (PF5) to cancel the action and return to the Console Message Table Screen. If a B was selected press END (PF3).

Refer to the Update, Browse, and Delete section of the manual.

#### COMMAND OR MESSAGE KEY

This line identifies the message number or the message key (*how System recognizes this message as unique*).

#### LINE 2

This line is the un-highlighted line on the screen.



*All items in the following four field definitions are used by the CONSOLE/Master® system to act as selection limits for the Message Processing.*

#### SID

This field identifies the SYSTEM which provides this message for processing.

#### JOB

This is the JOBNAME of the job which will provide the message. The message will only be processed if it has been issued from this job.

#### DATE STRING

These are the dates for which the message will be effective. The Date String field has four (4) different types of date formats.

1. **YYDDD** Julian Date.
2. **MMDDYY** This format is used to handle the various month/day/year. You may use \*\* to assist in the need for complete months without having to enter each day. (i.e. 04\*\*90 = all of April 1990).
3. **Day of Week** Mon, Tue, Wed, Thu, Fri, Sat, Sun are all valid.
4. **XXXXXXX** The X's represents Monday - Sunday. To activate a day, place a Y in the corresponding position. (i.e. Mon & Fri = YXXXYXX)

**TIME / START / END**

These fields provide for a specific time range for which the message is valid.  
(HHMM - use 24 hour time.)

**ACT**

This field designates whether the message is active or inactive.

Y = Active

N = Inactive.

**LAST UPDATE / DATE / TIME / BY**

This area shows the Date and Time of the Last message update, and the ID of the person who generated the update.

CONSOLE/Master® takes advantage of the ISPF feature which allows for multiple selections to be made from the Message Table Screen. Each message will be processed one at a time until all selections have been completed. When all have been finished the Console Message Table will be re-displayed.

## ADD - Console Message Definition

When the ADD option is entered on the command line of the Console Message Table Screen or Option 1 was entered on the Data Base Function Selection panel, the following panel is displayed:

```

----- Automated Operator - Console Message Definition -----
Command ==>

User=P390K
Date=98/09/10
Time=16:03

Message Text From The Console Line:

Offset From Beginning Of Console Line: => 000 <= Scan to E-O-M: => N <= (Y,N)
For SID: _____ Job: _____ Date: _____ Time Start: _____ End: _____

Command (C='XXX'), Reply (R='XXX') or Wait (W=nnnn) Text:
_____

Route Code: ==> 0_ <== Add or Replace Route Code: ==> A <== (A,R)

Console Message Action:
Display on SYSLOG Only: ==> N <== (Y,N) Roll Message: ==> N <== (Y,N)
Intensify and Keep: ==> N <== (Y,N)

Extended Rule: ==> N <== (Y,N) This Rule is Active: ==> Y <== (Y,N)

Last User=>P390K <= Last Update=>98253 <= Time Last Update=>16:03 <=

```

The previous panel is required for adding console message definitions to the data base for automatic console action. Each field on this screen is described below.

Once the screen is complete, enter CONFIRM or CANCEL in the COMMAND ==> field, and press <ENTER>. If the <PF3> or END key is used and BROWSE was selected, CONSOLE/Master® will exit the session..

Automated Operator performs most validations and editing on fields as they are entered. Not all fields are required. However, optional information can be used for documentation purposes. It is recommended that as many fields as possible be coded, so that this information will then be available for future reference as documentation.

#### MESSAGE TEXT FROM THE CONSOLE LINE

The text of the message, as it appears on the MVS operator console (*for the portion being defined*), should be entered in this field in the exact format. This data element is the key to the data base file, and is also the message that appears in the Console Message Table (*described previously*). The maximum number of characters is 64. The character string identified in this field is the portion of the MVS console line which will be used as a trigger for WTO/WTOR processing.

#### OFFSET FROM BEGINNING OF THE CONSOLE LINE

This field is used to specify the beginning position of the character string identified in the "MESSAGE TEXT FROM THE CONSOLE LINE" field. It is zero (0) relative from the beginning of the message line on the MVS operator console.

#### SCAN TO E-O-M

This field can be used to identify message strings which cannot be defined by a simple offset, such as multi-line messages. If this field is coded as Y, the entire line will be scanned for the occurrence of the message text. Obviously, this option requires more overhead than using an offset with no E-O-M scan.

#### FOR

The data elements on this line are used if the processing of the console message is to be limited by system ID, jobname, date, or time range.

#### SID

This data element can be used to limit the system on which the message should be acted upon. The value specified here is the SMF ID of the processing system. If entered, the message will be processed only if issued on the specified processor.

#### JOB

This data element can be used to restrict the processing of this message by specifying the job name. The message will only be processed if issued by the job entered in this field.

#### DATE

These are the dates for which the message will be effective. The Date String field has four (4) different types of date formats.

1. **YYDDD** - Julian Date.

2. **MMDDYY** - This format is used to handle the various month/day/year. You may use \*\* to assist in the need for complete months without having to enter each day. (*i.e.* 04\*\*90 = *all of April 1990*).



3. **Day of Week** - Valid values are Mon, Tue, Wed, Thu, Fri, Sat or Sun.

4. **XXXXXX** - The X's represents Monday - Sunday. To activate a day, place a Y in the corresponding position.  
(i.e. *Mon & Fri* = YXXYXX).

#### TIME START

This field can be used to restrict the processing of this message to a start time. The message will not be processed before the time specified. The format is HHMM on a 24-hour clock.

#### END

This field can be used to restrict the processing of this message to an upper bound time. The message will not be processed after the time specified. The format is HHMM on a 24-hour clock.

#### COMMAND (C='XXX'), REPLY (R='XXX') OR WAIT (W=NNNN) TEXT

This data element serves three functions. It can be a command to perform a specific function. It can act as a "REPLY" text to a WTOR message, or it can be used to suspend the processing of the following request(s) for NNNN number of seconds. The text for each command must be preceded by a C= for a Command, R= for a Reply or W= for a Wait request, with the text enclosed in single quotes. The quotes can be omitted if the text does not contain any imbedded blanks. In the case of a Wait request, up to four numeric characters can be used to specify the wait time (*in seconds*). Multiple commands, one reply, and/or waits can be specified, provided each is separated by a comma and each has a command string (C=,R=,W=) specified.

For example:

**C='D T',C=\$SI25,W=15,C=\$ZI25,W=5,R='U'**

The above requests are interpreted as follows:

1. Display Time
2. Start Initiator 25
3. Wait 15 seconds
4. Halt Initiator 25
5. Wait 5 seconds
6. Reply U

The processing of commands or replies which are subject to waits, as illustrated above, is performed in an asynchronous manner via an attached task. The waits

in no way affect any processing performed on behalf of any other rule coded for other “Message Text from the Console Line” specifications.




---

***R='XXXX',C='YYYYYY' will give a syntax error.***

***Only one reply (R=) is valid per message and it must be last.***

***If R= is specified, a replacement message is not valid. If specified, the reply will not be satisfied by CONSOLE/Master®.***

---




---

***If you to issue a MODIFY command to CONSOLE/Master, you must issue a WAIT first. Example, “W=0001,C='F CONS MSTR,.....’”.***

---

You can issue a command that contains variable information. There are 3 types of variables:

Word Variable

Complex Variable

Global Variable

Word variables are in the form:

**&nn**

where nn is the number of the desired word (*left to right*) within the message specified in the Message text field. The end of a word is a comma, or one or more spaces. For example, if the message “ISTIO5I NYC02 MODE NOW INACTIVE” were specified in the Message Text field, the word variable &2 would contain the mode name NYC02. &0 is a special word variable defined for persistent store processing (*described at the end of this chapter*).

Complex variables are in the following form:

**&(l,r)**

where l represents the position of the first character of the desired string in the message text. The r can either represent the length (*including the first character*) of the string or the character immediately following the last character in the string. For example, suppose the following message were specified in the Message Text field:

**IEF450I TESTJOB STEP05 - ABEND=5013**

The complex variable &(25,5) represents the word ABEND. It indicates that the string begins at the 25th position (*A in ABEND*) and the length of the string is five characters. The complex variable &(25,=) would produce the same result.

Global variables are in the following form:

**&name**

Global variables are predefined in CONSOLE/Master® and represent the internal name for that specific item. The global variables are shown in the chart below:

<i>Variable Name</i>	<i>Length</i>	<i>Type</i>	<i>Formal</i>	<i>Description</i>
JOBNAME	8	Fixed	Character	Job Name
MSG	125	Variable	Character	WTO(R) text
SMFID	4	Fixed	Character	SMFID
TCBTYPE	3	Fixed	Character	JOB,STC,TSO
DATE	8	Fixed	Character	MM/DD/YY
DAY	3	Fixed	Character	Character day (i.e., SAT, SUN, MON, TUE, WED, THU, FRI)
JDATE	6	Fixed	Character	YY.DDD
PROGRAM	8	Fixed	Character	Program name
TIME	8	Fixed	Character	HH:MM:SS

The maximum length of this field is (128) characters. Each command and/or reply is edited by the system. If an error is detected in the text, the message “ERROR WITH TEXT” appears in the upper right hand portion of the panel.

#### ROUTE CODE

The two digit MVS Route Code specifies the routing codes to be assigned unsolicited messages which are broadcast. The Route Code dictates on which console the message will be displayed, if it is issued. A Route Code of 0(zero) will indicate no change is required.

#### ADD OR REPLACE ROUTE CODE

A one-character code which identifies the action to be taken (*A=Add or R=Replace*) for the Route Code as previously described. The “R” option will cause the originally assigned code to be replaced with the route code specified in the ROUTE CODE field (*described above*). An “A” will add the route code specified above to the route code(s) embedded in the original message.

#### CONSOLE MESSAGE ACTION

The following is a list of mutually exclusive actions which can be requested. These actions govern the disposition of the MVS message. To request the particular action, enter Y; to decline the action, enter N.

#### DISPLAY ON SYSLOG ONLY

The message is re-routed to the MVS System Log only and not displayed on any operator console.

**INTENSIFY AND KEEP**

The message is highlighted and retained on the operator console until it is manually removed by the operator.

**ROLL MESSAGE**

The MVS Descriptor Code for the message is altered so that the message will not be highlighted. The same message will roll off the screen automatically without any further intervention from the operator.




---

***Route Code Add/Replace Route Code and Console Message Action may not be specified for a message with a “R=” reply specified.***

---

**EXTENDED RULE**

If this value is specified as Y then the “Extended Console Message Definitions” panel (*described later*) is displayed for additional definition or requirements.




---

***In order to delete anything on the extended panel, you must clear the data first then go back and set the EXTENDED RULE field to N. Just changing the EXTENDED RULE field without clearing the data will not clear extended information.***

---

**RULE IS ACTIVE**

A rule refers to the specifications on the “Console Message Definition” and “Console Message Definition Extended” screens.

Any rule can be deactivated by setting this value to N. This feature can be used to add rules to the Automated Operator Data Base while leaving them in an “inactive” status. Later, these rules can be reviewed and activated by changing this value to a Y.

In order to implement the change of rule status to active (Y) or inactive (N), the CONSOLE/Master® Control Region must be refreshed. See the REFRESH Function described in the Advanced Functions chapter of this manual for information on how refreshing the rules is accomplished.

## Multi-line Messages

Multi-line messages are currently being used in MVS components. If there is a need to process a multi-line message by CONSOLE/Master®, several considerations must be taken into account:

- To use data in lines past the first one as a key, use SCAN E-O-M if specifying an offset will not work.
- Any variable &1 ... &N may not be correct after the first line.
- Replacing the message or changing the route or descriptor codes may not work correctly.

The various considerations are summarized below (where 1 = line 1, 2+ = lines 2....N):

<i>Type of Multi-Line PLIST</i>	<i>Variable</i>	<i>Rep-msg. Rt.-Desc.</i>	<i>Control Region</i>
Multiple lines in one PLIST	1 - Yes 2+ - No	No	1 - Yes 2+ - Scan E-O-M
Multiple single line PLISTs chained together	Yes	1 - No 2+ - Yes	Yes
Multiple single line PLISTs CONNECTED together	Yes	Yes	Yes

## Persistent Store Processing

The persistent store feature will allow the saving of data or JES Reply Number from a message in a table to be available for use by any other message until the next IPL. It will be available even if CONSOLE/Master® is brought down and back up.

### Implementation

To implement the persistent store feature, two (2) new symbolic variables are provided. They are:

**&&???????** where the eight question marks (?) signify the name assigned to identify the persistent store value (1 to 8 characters).

**&0** the variable used to retrieve the JES Reply Number if needed. &0 is only valid in 'C=' commands.

The format of the persistent store storage command is:

**C='CMPSV=name(value)'**

Where **name** is the name used to reference the stored **value**. CMPSV= and the parenthesis are required.

These values are implemented using the existing command statement. For example:

**C='CMPSV=replyid(&0)'**

sets the current JES Reply Number into a persistent store symbolic named **replyid**. To retrieve the value, enter the following command in the appropriate message:

**C='R &&replyid,'response''**

This will send a reply to the MVS console using the value in **&&replyid** as the Reply Number.

This capability can be used to save up to 30 characters of information for later reference. For example:

C='CMPSV=**holdname**(&3)'

will pull a name from position &3 in the current message and save it in a persistent store symbolic named **holdname**. To retrieve the value, enter the following command:

C='S &&**holdname**,PARM=TEST'

This will send a start command for **holdname** to the MVS console.

## Extended Console Message Definition

The following panel is displayed if Y is specified on the EXTENDED RULE field of the ADD - Console Message Definition Screen.

```

----- Automated Operator - Console Message Definition Extended -----
COMMAND ==>

      (Use BACK command to view previous panel)

Extended Action:
Cancel Issuer      ==> N <== (Y,N)
Replacement Message ==> _____

User Comments:
_____
_____
_____
_____

Send To:
_____
_____
_____
_____

JOB/Master@ ACTION:
JOBNAME ==> _____ <==
POST DE N (Y,N) BR N (Y,N) TI N (Y,N) DI N (Y,N) JS N (Y,N)
SIGNAL COMPLETE:
JOBNAME ==> _____ <== STEPNAME ==> _____ <==

F1=HELP      F2=SPLIT      F3=END      F4=>CONFIRM  F5=>CAN      F6=RCHANGE
F7=UP        F8=DOWN       F9=SWAP     F10=        F11=        F12=RETRIEVE
  
```

### EXTENDED ACTION

#### CANCEL ISSUER

If a “Y” is entered in this field, then the task issuing the message will be cancelled. The task is cancelled by issuing an OS cancel command.

#### REPLACEMENT MESSAGE

This field allows a replacement message to be entered. The original message is received and can be reformatted to issue a different response. In re-formatting, you may use the three types of variables described in the COMMAND TEXT field of the ADD Console Message Definition section.



***Replacement message may not be specified for a message with a “R=” reply specified.***

#### USER COMMENTS

This field is used to specify a sixty four (64) character, free format field, for User comments. This character string can also be sent to a TSO User as documented below. Variables are also valid in this field. Refer to COMMAND TEXT field in the Add Console Message Definition section.

**SEND TO**

This data element is used to indicate the Userid of the User you want to notify. This field is 8 characters long. When the notify is performed, the message sent is the “USER COMMENTS” character string entered in the USER COMMENTS field adjacent to this SEND TO field.

The two fields USER COMMENTS and SEND TO are closely coupled. They can appear multiple times in each rule. Their processing depends on the presence or absence of its counterpart. If no SEND TO Userids are specified, then each USER COMMENTS field is used as documentation only.

When SEND TO Userids are specified, then the first Userid will receive the first USER COMMENTS; the second Userid will receive the second USER COMMENTS; etc. The first USER COMMENTS field is also the default notify text.

Therefore, when more than one Userid is specified, without any corresponding USER COMMENTS, the notify text will be taken from the first USER COMMENTS.

**JOB/Master® ACTION**

Used to specify the completion of a manual task for a job on the JOB/Master® Scheduling Queue. This function is applicable only if the JOB/Master® Scheduling Product is also installed.

**JOBNAME**

Identifies the job for which the manual task has been completed.

**POST XX**

This data element identifies the manual task which has been completed. The entry to be posted complete should be set to “Y”. Each manual task, represented here by ‘XX’, is described in the JOB/Master® documentation supplied with the JOB/Master® software.

**SIGNAL COMPLETE**

The job or jobstep defined on the JOB/Master® Data Base will be considered as ended and will cause any specified jobs to be triggered. This function is applicable only if the JOB/Master® Scheduling Product is also installed.

**JOBNAME**

Identifies the job which should be considered as ended.

**STEPNAME**

Identifies the jobstep which should be considered as ended.

Either JOB/Master® action or signal complete may be specified. If both are specified, only JOB/Master® action will be processed.

The remainder of this screen indicates the current User ID, date and time.

Once the screen is complete, specify CONFIRM or CANCEL on the command line when <ENTER> is pressed. If the <PF3> or END key is used, then the system will ignore the command, and exit the session without saving the data.



## UPDATE / BROWSE Console Message Definition

The UPDATE and/or BROWSE processing is entered when the Console Message Table option U or B is selected.

The U option is for updating, and B is for browse only. No data can be updated when option B is selected.

Once data entry is complete on update, specify CONFIRM or CANCEL on the command line, when the ENTER key is pressed. If the PF3 or END key is used, then the system will ignore the command, and exit the session without saving the data.

## DELETE Request

The Verify Delete Request panel is accessed by entering D in the Select (S) field on the Console Message Table, for the message(s) you want to delete.

Once the messages are selected, press <ENTER> key, and the Verify Delete Request panel is displayed.

To delete the message(s) selected, enter CONFIRM in the COMMAND field. If you want to ignore the delete, then enter CANCEL in the COMMAND field. You must either Confirm or Cancel to exit this panel. The <PF3> (END) key will not function.

When delete request is confirmed, a message of “RECORD DELETED” will appear on the next display panel, in the upper right hand corner.



# Chapter 15

---

## MVS Console Facility

---

### Overview

The MVS Console Facility provides full MVS operator functions through the same TSO terminal on which the User is currently logged. All MVS and JES commands can be processed through this interface. Besides productivity, this facility provides many benefits which are partially listed below. The MVS Console can be individually secured via Interactive Security Facility (*ISF*).

The MVS Console Facility is a sophisticated ISPF dialog, which is capable of scanning the buffers of any operator console. After the proper buffers are located, MVS Console will display, or mirror, the contents of console buffers. With this method, there is no need to worry about backing up on console buffers. The console will not roll like an ordinary operator console; to see a new display you must press <ENTER> each time.

ISF is used to define the security of functions within the MVS Console. The ISF administrator can define “display only” Users, as well as full-function Users. In the absence of an individual User record, ISF will use the default security record. The default record is normally set by the ISF administrator according to each installation’s security guidelines. Usually, the default Users are allowed display only mode.

## Invoking the MVS Console

To bring up the MVS Console, enter C in the OPTION ==> field of the CONSOLE/Master® Banner Menu and <ENTER>.

The next panel will be displayed, as illustrated:

```

----- MVS Console Facility ----- ROW 8 OF 25
Command ==>                               Scroll ==> CSR
                                           Console Id ==> 700
13.56.40 STC03350          STORCLAS (STANDARD) MGMTCLAS (INTERIM)
DATACLAS (NONTMM)
13.56.44 STC00153 -RM7818      83 % SPOOL UTILIZATION
13.56.48 STC03350 IGD17042I EXPIRATION DATE FOR DATA SET
PROD.R132.D970929.A1135638.DEFAULT#.RMSARC WAS OVERRIDDEN
13.56.49 STC03350 DURING DELETE PROCESSING
13.56.49 STC00040 %RM7106 FILE 5953 PURGED, OWNER=RMSC0007 =RMSC0007
13.57.18 STC00153 -RM7818      83 % SPOOL UTILIZATION
13.57.29 STC03350 RM0337I ARCHIVE(1) SERVER IS WAITING FOR WORK ON
09/29/97 AT 13:57:29. (RM10001 (ARCHSERV))
13.57.54 STC00153 -RM7818      83 % SPOOL UTILIZATION
13.58.24 STC00153 -RM7818      83 % SPOOL UTILIZATION
13.58.58 STC00153 -RM7818      83 % SPOOL UTILIZATION
13.59.14 JOB03392 $HASP100 P390NA ON INTRDR P390N TSU03386 P390N
13.59.15 JOB03392 $HASP904 CONVERSION COMPLETE (HASX06A).
13.59.17 JOB03392 $HASP373 P390NA STARTED - INIT A - CLASS A - SYS
13.59.34 STC00153 -RM7818      83 % SPOOL UTILIZATION
**END**

F1=HELP      F2=SPLIT      F3=END      F4=>CONFIRM  F5=>CAN      F6=RCHANGE
F7=UP        F8=DOWN      F9=SWAP    F10=        F11=        F12=RETRIEVE

```

The address of the console being mirrored is shown in the Console ID ==> field of the panel. The Console ID will default to the address defined under ISF in the Initial Console Address ==> field. This address will be taken from the Userid record, if available or the Product Default record. For more information, refer to the description of the Interactive Security Facility in this guide.

To change Console ID, move the cursor to the Console ID ==> field and key in the new console address, then press <ENTER>.



**The ability to change Console ID is controlled by ISF. The user must be authorized for this function.**

The display will not automatically refresh itself. Pressing <ENTER> will refresh the display with current information. This may be necessary after entering the commands discussed below.

## Entering JES Commands

JES commands can be entered on the command line. In the following example, the display of JES2 initiators is requested:

```

----- MVS Console Facility ----- ROW 8 OF 25
Command ==> $di                               Scroll ==> CSR
                                           Console Id ==> 700

13.56.40 STC03350          STORCLAS (STANDARD) MGMTCLAS (INTERIM)
DATACLAS (NONTMM)
13.56.44 STC00153 -RM7818      83 % SPOOL UTILIZATION
13.56.48 STC03350 IGD17042I EXPIRATION DATE FOR DATA SET
PROD.R132.D970929.A1135638.DEFAULT#.RMSARC WAS OVERRIDDEN
13.56.49 STC03350 DURING DELETE PROCESSING
13.56.49 STC00040 %RM7106 FILE 5953 PURGED, OWNER=RMSC0007 =RMSC0007
13.57.18 STC00153 -RM7818      83 % SPOOL UTILIZATION
13.57.29 STC03350 RM0337I ARCHIVE(1) SERVER IS WAITING FOR WORK ON
09/29/97 AT 13:57:29. (RM10001 (ARCHSERV))
13.57.54 STC00153 -RM7818      83 % SPOOL UTILIZATION
13.58.24 STC00153 -RM7818      83 % SPOOL UTILIZATION
13.58.58 STC00153 -RM7818      83 % SPOOL UTILIZATION
13.59.14 JOB03392 $HASP100 P390NA ON INTRDR P390N TSU03386 P390N
13.59.15 JOB03392 $HASP904 CONVERSION COMPLETE (HASX06A).
13.59.17 JOB03392 $HASP373 P390NA STARTED - INIT A - CLASS A - SYS
13.59.34 STC00153 -RM7818      83 % SPOOL UTILIZATION
**END**

F1=HELP      F2=SPLIT      F3=END      F4=>CONFIRM  F5=>CAN      F6=RCHANGE
F7=UP         F8=DOWN       F9=SWAP     F10=         F11=         F12=RETRIEVE

```

Key in **\$DI** and press <ENTER>. The following panel is then displayed:

```

----- MVS Console Facility ----- ROW 12 OF 29
Command ==>                               Scroll ==> CSR
                                           Console Id ==> 700

14.02.22 STC00153 -RM7818      83 % SPOOL UTILIZATION
14.02.22 STC03350 RM0339I OUTPUT (1) SERVER HAS BEEN DETACHED.
(RM99999 (MAIN ))
14.02.22 STC03350 RM0338I RECOVER(1) SERVER HAS ENDED. (NORMALLY )
(RM99999 (MAIN ))
14.02.22 STC03350 RM0339I RECOVER(1) SERVER HAS BEEN DETACHED.
(RM99999 (MAIN ))
14.02.24          $HASP605 INIT  A ACTIVE  JOB03392 C=AS
14.02.24          $HASP605 INIT  B INACTIVE ***** C=BA
14.02.24          $HASP605 INIT  C DRAINED ***** C=CBA
14.02.24          $HASP605 INIT  D DRAINED ***** C=DCBA
14.02.24          $HASP605 INIT  E DRAINED ***** C=EDCBA
14.02.24          $HASP605 INIT  F INACTIVE ***** C=R
14.02.24          $HASP605 INIT  G INACTIVE ***** C=R
14.02.24          $HASP605 INIT  H INACTIVE ***** C=R
14.02.24          $HASP605 INIT  I INACTIVE ***** C=R
14.02.24          $HASP605 INIT  R INACTIVE ***** C=RS
**END**

F1=HELP      F2=SPLIT      F3=END      F4=>CONFIRM  F5=>CAN      F6=RCHANGE
F7=UP         F8=DOWN       F9=SWAP     F10=         F11=         F12=RETRIEVE

```

## Entering MVS Commands

MVS commands can be entered on the command line. In the following example, the MVS Display Active is requested:

Key in **D A,L** and press **<ENTER>**. The following screen is then displayed:

```

----- MVS Console Facility ----- ROW 12 OF 29
Command ==> Scroll ==> CSR
Console Id ==> 700

14.03.31 STC00153 -RM7818 83 % SPOOL UTILIZATION
14.03.32 JOB03392 JMDD - DATASET FOR DDNAME=JMSUBSUN NOT SUPPLIED WILL
NOT BE USED
14.03.32 JOB03392 JMDD - DATASET FOR DDNAME=JMSUBMON NOT SUPPLIED WILL
NOT BE USED
14.03.32 JOB03392 JMDD - DATASET FOR DDNAME=JMSUBTUE NOT SUPPLIED WILL
NOT BE USED
14.03.32 JOB03392 JMDD - DATASET FOR DDNAME=JMSUBWED NOT SUPPLIED WILL
NOT BE USED
14.03.32 JOB03392 JMDD - DATASET FOR DDNAME=JMSUBTHU NOT SUPPLIED WILL
NOT BE USED
14.03.32 JOB03392 JMDD - DATASET FOR DDNAME=JMSUBFRI NOT SUPPLIED WILL
NOT BE USED
14.03.32 JOB03392 JMDD - DATASET FOR DDNAME=JMSUBSAT NOT SUPPLIED WILL
NOT BE USED
14.03.32 JOB03392 JMDD - DATASET FOR DDNAME=JMRERUN NOT SUPPLIED WILL
NOT BE USED
**END**

F1=HELP F2=SPLIT F3=END F4=>CONFIRM F5=>CAN F6=RCHANGE
F7=UP F8=DOWN F9=SWAP F10= F11= F12=RETRIEVE

```

## Ending the Console Facility

Press the **END (PF3)** key to terminate the MVS Console Facility and re-display the CONSOLE/Master® Banner Menu.

# Chapter 16

## Profiles

The CONSOLE/Master® Profile maintenance is selected from the CONSOLE/Master® Banner panel by entering **P** in the OPTION ==> field and pressing <ENTER>.

```

----- CONSOLE/Master® by Mantissa -----
Option ==> P

A - Automated Operator          P - Profile
C - MVS Console Facility       R - Reports
                               X - EXIT

-----

      CCCCCC  OOOOOOO  NN  NN  SSSSSS  OOOOOOO  LL  EEEEEEE
      CC  CC  OO  OO  NNN  NN  SS  SS  OO  OO  LL  EE
      CC  OO  OO  NNNN  NN  SS  SS  OO  OO  LL  EE
      CC  OO  OO  NN  NN  NN  SSSSSS  OO  OO  LL  EEEEE
      CC  OO  OO  NN  NNNN  SS  SS  OO  OO  LL  EE
      CC  CC  OO  OO  NN  NNN  SS  SS  OO  OO  LL  EE
      CCCCCC  OOOOOOO  NN  NN  SSSSSS  OOOOOOO  LLLLLL  EEEEEEE

      MMM  MMM  AAAAAAA  SSSSSS  TTTTTTTT  EEEEE  RRRRRR
      MM M  M MM  AA  AA  SS  SS  TT  EE  RR  RR
      MM M  M MM  AA  AA  SS  SS  TT  EE  RR  RR
      MM  MM  AAAAAAA  SSSSS  TT  EE  RRRRRR
      MM  MM  AA  AA  SS  SS  TT  EE  RR  RR
      MM  MM  AA  AA  SS  SS  TT  EE  RR  RR
      MM  MM  AA  AA  SSSSSS  TT  EEEEEEE  RR  RR
  
```

The next panel displayed is the CONSOLE/Master® Profile Update/Display Options panel:

```
----- CONSOLE/Master® Profile Update/Display Options -----  
-  
Command ==>  
  
User= P390K  
Date= 98/09/10  
98.253  
Time= 16:14  
  
-----  
Option      Functional Description  
-----  
1           Set PF Keys  
2           Display Profile parameters  
3           Update Profile parameters  
  
END         Exit
```

Select 1 to set Program Function (PF) keys.

Select 2 to DISPLAY all Profile Parameters for a specific installation.

Select 3 to set Profile Parameters for a specific installation.



***The function keys must be set (using option 1) before other CONSOLE/Master® functions can be used.***



## Profile Function Keys

The PF keys can be set to conform to the standards specified at any installation. When option 1 is selected from the previous panel, the Profile PFK Definitions panel is displayed:

```

----- CONSOLE/Master® - Profile PF Key Definitions -----
-
Command ==>

      PFK01=  HELP                PFK13=  HELP
      PFK02=  SPLIT              PFK14=  SPLIT
      PFK03=  END                PFK15=  END
      PFK04=  >CONFIRM          PFK16=  >CONFIRM
      PFK05=  >CAN              PFK17=  >CAN
      PFK06=  RCHANGE           PFK18=  RCHANGE
      PFK07=  UP                PFK19=  UP
      PFK08=  DOWN             PFK20=  DOWN
      PFK09=  SWAP              PFK21=  SWAP
      PFK10=                   PFK22=
      PFK11=                   PFK23=
      PFK12=  RETRIEVE          PFK24=  RETRIEVE

-----
      JCL used for batch funtions
      -----
      //P390K   JOB (0000,0000),'P390K   ',CLASS=A,MSGCLASS=X
      /*
      /*
  
```

The default PF keys are displayed, and the User can override any or all of them. The Job-card at the bottom of the panel can also be modified to your installation's specifications.

To exit this panel, you must enter CONFIRM or CANCEL in the COMMAND ==> field.

## Profile Parameters

The CONSOLE/Master® Profile Parameters panel is selected with option 2 for the display of current settings, or option 3 for adding or updating the Profile Parameters. The following panel is displayed when these options are selected:

```
----- CONSOLE/Master® - Profile Parameters -----  
-  
Command ==>  
-----  
  
Installation Name    ==>  MANTISSA CORPORATION _____  
Procedure Name      ==>  CMREPORT
```

The Profile Parameters is a record used for the batch report feature of CONSOLE/Master®.

### INSTALLATION NAME

This is a 30-character field for the title used on the reports.

### PROCEDURE NAME

An eight (8) character name is required which names the PROCLIB member used for execution of the batch reports.

# Chapter 17

## Report Facility

### Initiating the Report Facility

The Report Facility is accessed by selecting option R from the CONSOLE/Master® Banner panel and pressing <ENTER>. The next panel displayed is the CONSOLE/Master® Report Facility menu, as shown:

```

----- CONSOLE/Master® Report Facility -----
-
Command ==>                                     User= P390K
                                                Date= 98/09/10
                                                98.253
                                                Time= 16:16

Option ==>

  Option      Functional Description
  -----
  1 - PRT     Automated Operator Reports - All
  2 - PRC     Automated Operator Reports - By Message
  3 - PRJ     Automated Operator Reports - By Jobmaster
  4 - PRU     Automated Operator Reports - By Notify/User ==> P390K__ <==

```

This panel allows the user to select the type of report, or package of all reports, currently provided by CONSOLE/Master®.

Option 1: PRT, allows the user to print all available reports. It can be

- selected either by keying 1 or PRT in the OPTION field.
- Option 2: PRC, is a report listing of all console message records.
- Option 3: PRJ, is a listing of all console message records that are JOB/Master®-related.
- Option 4: PRU, produces a listing of all console message records that have the NOTIFY USER OF CONSOLE MESSAGE ACTION==> field defined with a specified Userid. When this option is selected, the NOTIFY/USER ==> field must be completed with the Userid for whom the report is requested. The NOTIFY/USER==> field is initialized with the Userid of the currently logged User. If this field is not modified then the report will be generated for the currently logged on User.

After the selection is complete, the next panel to be displayed is the Job Submit panel for the report option selected.

```

-----CONSOLE/Master® Report Submit Facility ----- Columns 000 000
Command ==> Scroll ==> Page
***** ***** Top of Data *****
==MSG> -Warning- The UNDO command is not available until you change
==MSG> your edit profile using the command RECOVERY ON.
000001 //P390K JOB (0000,0000),'P390K ',CLASS=A,MSGCLASS=X
000002 /*
000003 //CMREPORT EXEC CMREPORT
000004 //STEP2.FILE715 DD *
000005 CMPRT PRJ
000006 /*
***** ***** Bottom of Data *****

```

This panel is an ISPF edit-type panel which allows the user to modify the JCL as desired. The standard ISPF submit convention is used by keying SUB in the COMMAND ==> field once the JCL is correct.

CMREPORT is the distributed procedure name and can be found in the INSTLIB.

## Sample Report

The following is a sample report, generated from option 1 on the REPORT FACILITY screen.

```
=====
MANTISSA CORPORATION                                PAGE 1
                                                    10/29/93
=====
AUTOMATED OPERATOR CONSOLE MESSAGE FILE
=====

RECORD NO. 00001  0      1      2      3      4      5      6      7      8      9      0
                  0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0
MESSAGE =          <RMS100 SIMPLE                                SYSA                                TFES
OFFSET = 000      *
RESPONSE=          (1) C='S RMSCTL'
                  (2)
NOTIFY/COMMENT =

CONSOLE           ROLL MESSAGE = N
MESSAGE           INTENSIFY AND KEEP = N
ACTION:           DISPLAY ON SYSLOG ONLY = N
                  NOTIFY USER OF CONSOLE MESSAGE ACTION:          ROUTE CODE = 000

RECORD NO. 00002  0      1      2      3      4      5      6      7      8      9      0
                  0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0
MESSAGE =          $HASP100 LOG                                TLCR
OFFSET = 000      *
RESPONSE=          (1) C='W'
                  (2)
NOTIFY/COMMENT =

CONSOLE           ROLL MESSAGE = N
MESSAGE           INTENSIFY AND KEEP = N
ACTION:           DISPLAY ON SYSLOG ONLY = N
                  NOTIFY USER OF CONSOLE MESSAGE ACTION:          ROUTE CODE = 000

RECORD NO. 00003  0      1      2      3      4      5      6      7      8      9      0
                  0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0
MESSAGE =          $HASP190                                TLCR
OFFSET = 000      *
RESPONSE=          (1) C='$SPRT1'
                  (2)
NOTIFY/COMMENT =

CONSOLE           ROLL MESSAGE = N
MESSAGE           INTENSIFY AND KEEP = N
ACTION:           DISPLAY ON SYSLOG ONLY = N
                  NOTIFY USER OF CONSOLE MESSAGE ACTION:          ROUTE CODE = 000

RECORD NO. 00004  0      1      2      3      4      5      6      7      8      9      0
                  0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0...5...0
MESSAGE =          $HASP375 ESTIMATE EXCEEDED BY 20,000                                TCJN
OFFSET = 000      *
RESPONSE=          (1)
                  (2)
NOTIFY/COMMENT =

CONSOLE           ROLL MESSAGE = N
MESSAGE           INTENSIFY AND KEEP = Y
ACTION:           DISPLAY ON SYSLOG ONLY = N
                  NOTIFY USER OF CONSOLE MESSAGE ACTION:          ROUTE CODE = 000
```

### Report Data Items

The following is a list of the Report Data Items and a description of each.

#### RECORD NO.

This field indicates the position of the record in the file.



---

*The file is shown in ascending sequence on Report Output, but is scanned in descending sequence when looking for a match!*

---

#### MESSAGE

This field is the record key and console message which is interpreted by the automated operator internals. The message is printed under a ruled header which indicates the offset position of the message on the console. The Message Limiters (*SID, JOB, DATE & TIME*) are shown at the right of the message.

#### OFFSET

The offset is a three character numeric field indicating the starting position of the console message on the console. This position is shown under the rule header by an asterisk.

#### RESPONSE

The response is two lines of 64 characters which show the command or reply to be executed on the console. These responses are labeled as C for command, R for reply and W for wait.

#### NOTIFY/COMMENT

This field serves two purposes. First, it can be used as a user comment field if the notify user field is blank. Second, it is used as a message routing field when the notify user field contains a valid userid. This message is routed to the terminal of the specified userid.

#### CONSOLE MESSAGE ACTION

These actions govern the disposition of the MVS message.

##### ROLL MESSAGE

The MVS Descriptor Code for the message is altered so that the message will not be highlighted. The message will roll off the screen automatically without any intervention from the operator.

##### INTENSIFY AND KEEP

The message is highlighted and retained on the operator console until it is manually removed by the operator.

##### DISPLAY ON SYSLOG ONLY

If Y is specified, the message will only be displayed on the system log and not on the console. If N is specified, the message will be displayed on the system log and the console.

#### NOTIFY USER OF CONSOLE MESSAGE ACTION

Identifies the Userid of the user you wish to notify of this console message. The message sent is the “NOTIFY/COMMENT” character string documented above.

#### ROUTE CODE

The 2 digit MVS Route Code which is to be added to the current Route Codes assigned to the message text, or the code which is to replace the Route Codes which are currently assigned to the message text.

#### JOB/Master® ACTION

Used to specify the completion of a manual task for a job on the JOB/Master® Scheduling Queue.

##### JOBNAME

Identifies the job for which the manual task is completed.

##### POST

Identifies the manual task.

##### SIGNAL COMPLETE

Identifies processing which will signal that a job or a jobstep has completed processing.

##### JOBNAME

Identifies completed job.

##### STEPNAME

Identifies completed jobstep.





# Chapter 18

---

## Technical Specifications

---

### Architecture

The CONSOLE/Master® product for MVS systems provides control and monitoring of Write-to-Operator and Write-to-Operator-with-Reply traffic.

The CONSOLE/Master® system consists primarily of:

- The Data Base Creation functions are a set of interactive TSO dialogs utilizing full screen and menu driven functions to fill in required information for console message recognition. The data base also describes the action to be performed when a WTO/WTOR is recognized.
- The CONSOLE/Master® control region is a control task which handles all processing commands, replies and user notification as requested during Automated Operator Data Base creation. When the JOB/Master® product is also installed, CONSOLE/Master® performs additional functions which augment the scheduling system. The CONSOLE/Master® controller must be active at all times for Automated Operator to perform its functions, and must be active on each CPU, in a multi CPU environment, where automated operations are desired.
- The WTO/WTOR dynamic front-end processor intercepts all traffic normally handled by SVC 35. Performs Multiple Console Support (MCS) actions, such as adding or changing Routing and Description codes as requested by the Automated Operator Data Base rules, and depending on the same rules, passes a copy of the WTO/WTOR buffer to the CONSOLE/Master® control region for further processing.
- The MVS Console Facility is a full function operator console under the control of an ISPF dialog.

## Machine and Software Environment

CONSOLE/Master® operates on any IBM processor or IBM compatible processor that meets the following requirements:

- MVS release 3.8, MVS/ESA THROUGH z/OS with the Time Sharing Option (TSO), and ISPF release 2.0 or higher.
- Access methods, QSAM, VSAM.
- IBM or IBM compatible display terminals. Any terminals supported by ISPF can be used by CONSOLE/Master®.
- Approximately 10 cylinders of IBM 3380 DASD space for installation.
- Approximately 20 cylinders of IBM 3380 DASD space for data files and production use.
- The CONSOLE/Master® control region task must execute from an APF authorized library, and executes in a region size of 4096K.

# Chapter 19

---

## File Backup and Recovery

---

### Backing Up Files

Job CMBACKUP, which is available as member CMBACKUP in the INSTLIB data set, will back up the CONSOLE/Master® data base.

To back up the data base, modify the JCL in member CMBACKUP according to your installation standards and submit for execution.



---

***CONSOLE/Master® data base should be backed up on a regularly scheduled basis.***

---

### Restoring Files

Job CMRESTOR in the INSTLIB data set will restore the CONSOLE/Master® data base.

To restore the data base, modify the JCL in member CMRESTOR according to your installation standards and submit for execution.



# Chapter 20

## Advanced Functions

### Fast Path Message Processing

Many console messages are triggered by certain unpredictable incidents such as I/O errors. While their arrival is sporadic, when errors do occur, these messages arrive at an extremely fast pace. Furthermore, usually there are no commands or replies associated with these messages. Such messages can and should be defined to the CONSOLE/Master® Data Base to be expedited through the system taking advantage of the Fast Path Message Processing.

All console messages defined to CONSOLE/Master® with the following specifications are automatically eligible for Fast Path Message Processing.

1. Route code changes, console message actions, or replacement message.
2. Does not require any additional command, reply or notification processing.

Such messages will not be passed on to the CONSOLE/Master® control region. The Multiple Console Support (MCS) actions will be handled entirely by the WTO/WTOR Interceptor module which will alter the appropriate Route Code or Descriptor Code as necessary to achieve the requested "CONSOLE MESSAGE ACTION".

### REFRESH Function

This function provides dynamic implementation of new or replacement message processing rules which have been defined to CONSOLE/Master® data base via the Automated Operator on-line session.

To request the REFRESH function, enter the following command from an operator console or via the MVS Console Facility.

**F CONSMSTR,REFRESH**

This procedure builds a new copy of CONSOLE/Master® message processing rules and then replaces the old copy with this new copy.

## JOB/Master® Interface

When the JOB/Master® product is also installed, CONSOLE/Master® performs additional functions which augment the scheduling system.

- Manual task, as defined to JOB/Master®, may be posted complete based on a console message action.
- Events, jobs/steps, can be posted as complete causing dependent jobs to be triggered.

## Initial Command Stream Processing

The presence or absence of the Initial Command Stream is totally at your discretion. Upon successful initialization of CONSOLE/Master® Control Region, the system parameter library (*SYS1.PARMLIB*) will be interrogated for the presence of a member which is used to contain the Initial Command Stream.

The member name consists of seven (7) characters. It is composed of the three (3) characters “SIS” which are followed by four characters used as the name of the subsystem entry (default is “CM01”). Therefore, using defaults, the member name used for initial commands is SISC01.

The contents of columns 1 through 72 of each record within this member are presented to your system, via standard SVC 34 interface, as if they were entered from an operator console. Columns 73 through 80 are ignored by CONSOLE/Master®.

The purpose of this function is to provide an unconditional command execution at start-up. Since this is not dependent on recognition of any system message, it can be used to initiate tasks that will then generate messages which will be recognized and acted upon by CONSOLE/Master®.

For example, member SISC01 contains the following commands:

```
S NET  
SSI1-10  
V A80-AFF,OFFLINE
```

The system messages, generated when the above commands are issued, can be used to trigger subsequent actions. The actions may include starting other system tasks (*TSO*, *CICS*, *DB2*, etc.), starting teleprocessing lines, varying paths or other device online/offline, etc.

## Global Status Change And Display

The Automated Operator can be disabled and subsequently enabled via the MODIFY (F) command. For example:

```
F CONSMSTR,INACT
```

The above command will cause CONSOLE/Master® Control Region to halt its processing without terminating its address space. The intercept and processing of new WTO/WTOR lines will be suspended.

However, any commands and/or replies which may have been scheduled for delayed execution via the Wait (W=) specification will be issued once their wait interval has expired.

Normal processing may be reinstated by the following command:

```
F CONSMSTR,ACT
```

The modify command can also be used to display the current Global Status of the Automated Operator.

#### **F CONSMSTR,STATUS**

The display may include additional information which is intended for CONSOLE/Master® Product support personnel.







# **RUN/Master®**

Version 5.20.1

*Mantissa Corporation®  
1012 Edenton Street  
Birmingham, Alabama 35242*

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# Chapter 21

## Introduction to RUN/Master®

### Overview

RUN/Master® is a sophisticated rerun management system designed to automatically handle the manual tasks of restarting or rerunning a batch job.

RUN/Master® is a module of The Operations Productivity Systems (*OPS/Master®*) that provides data center personnel with a significant tool for performing high level tasks, with easy to use full screen dialogs. OPS/Master® is supported on all versions of MVS from MVS/SP, MVS/ESA through z/OS.

The system provides an online database and tracking facility which operates with an ISPF dialog. The online system supports both an inquiry and edit feature to the RUN/Master® database, which contains historic and real-time information on each production and rerun job. The tracking facility is invaluable in analyzing production status and recurrent causes of job resubmissions.

RUN/Master® automatically controls the entire job rerun procedure. It accounts for the adjustment of GDG relative numbers and the uncataloging of datasets that are to be recreated in the rerun and dataset scratching. It also handles temporary datasets, volume referbacks and dsn referbacks that affect the step restartability of a job.

RUN/Master® utilizes expert systems technology which is used to build and maintain the Knowledge Base. This Knowledge Base is then used to determine which steps of the failing job are restartable.

### Features

- Adjustment of GDG relative (*bias*) numbers.
- Determination of restart step in an abended job.
- Uncataloging of datasets that are to be recreated in the rerun.
- Track temporary datasets, volume referbacks, and dsn referbacks that affect the step restartability of a job.
- ISPF based online access to the data base and system functions.

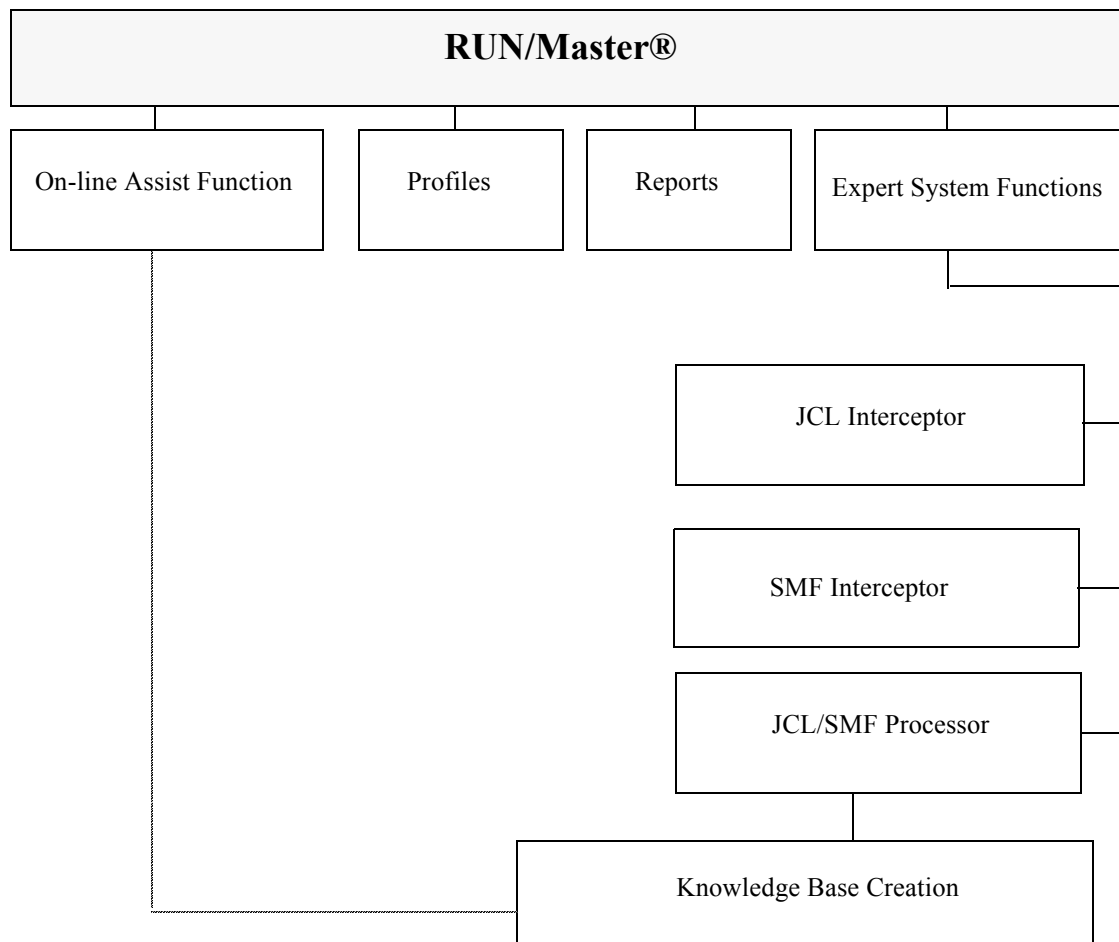
- Online verification/override of all restart functions performed.

### ***Benefits***

- Decreases the amount of time it takes to recover in an abend situation.
- Prevents errors that occur during reruns (*such as uncataloging the wrong file, JCL errors, or putting in the wrong GDG number*).
- Documents problem areas in the workload that have a history of abending with the same cause. This helps reduce future abend/restart situations.

## **Components**

The following diagram shows the various aspects of RUN/Master®:



## **Job Indicator Flag**

RUN/Master® will build restart entries for any job which has a ¢ (*cent sign*) in column 71 of the Job Card. The value chosen for this indicator flag can be changed during RUN/Master® control region initialization.

In order to initiate RUN/Master®, execute the procedure RUNMASTR, which you should have modified and placed into your PROCLIB. For more information, refer to the Installation section of this manual.

1. As a started task, issue the command:

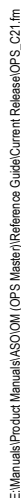
- As a batch job, place a JOB statement before the following execute statement:

CHAR=xxxx

Where x is the job indicator flag(s) which will be used in the job card. Up to four values can be assigned. If JOB/Master® is installed, one of the characters should be the same as the JOB/Master® character.

In order to stop the execution of RUN/Master®, issue the following command:

To invoke RUN/Master® select option **R** on the OPS/Master® Primary Menu and press **<ENTER>**.



The RUN/Master® Banner Panel will be displayed, as illustrated:

```

----- RUN/Master® - By Mantissa -----
Option ==> A

  A - On-Line Assist      R - Reports
  P - Profile             X - EXIT      z/OS
Tutorial = PF1/HELP
-----

          RRRRRRRR   UU   UU   NNN   NN
          RR   RR   UU   UU   NNNN  NN
          RR   RR   UU   UU   NN  NN  NN
          RRRRRRRR   UU   UU   NN  NN  NN
          RR  RR   UU   UU   NN  NN  NN
          RR  RR   UU   UU   NN  NN  NN
          RR   RR   UUUUUUU  NN   NNN

      MMM   MMM   AAAAAAAA   SSSSSSS   TTTTTTTT   EEEEEEEE   RRRRRRR
      MM M   M MM   AA   AA   SS   SS   TT   TT   EE   EE   RR   RR
      MM M   M MM   AA   AA   SS   SS   TT   TT   EE   EE   RR   RR
      MM MM   MM   AAAAAAAA   SSSSS   TT   TT   EEEEEEEE   RRRRRRR
      MM   MM   AA   AA   SS   SS   TT   TT   EE   EE   RR   RR
      MM   MM   AA   AA   SS   SS   TT   TT   EE   EE   RR   RR
      MM   MM   AA   AA   SSSSSSS   TT   EEEEEEEE   RR   RR

F1=HELP   F2=SPLIT   F3=END   F4=RETURN   F5=RFIND   F6=RCHANGE
F7=UP     F8=DOWN   F9=SWAP   F10=LEFT   F11=RIGHT  F12=RETRIEVE

```

Enter **A** in the OPTION ==> field to access the On-line Assist feature.

Enter **P** in the OPTION ==> field to access the profile screens.

Enter **R** in the OPTION ==> field to access the report feature.

Enter **X** on the RUN/Master® Banner Panel to exit RUN/Master®.

These options are described on the following pages.



***The function keys must be set (using option P;1) before other RUN/Master® functions can be used. Refer to the chapter “Profiles” for information on how to do this.***

RUN/Master® provides an interactive HELP facility via standard convention of PF1 or the ISPF HELP command. The HELP/Tutorial mode can be entered from any online screen by pressing the PF1 key.

When a message is displayed in the upper right corner, a brief explanation can be displayed by pressing the PF1 key. If the PF1 key is pressed a second time, a tutorial screen is displayed.

If the PF1 key is pressed when there is no message in the upper right corner, then a tutorial screen is displayed immediately.

# Chapter 22

## On-line Assist Functions

### Starting the On-line Assist Functions

To invoke the On-line Assist Function, select option **A** from the RUN/Master® Banner panel (*as shown below*) and press <ENTER>.

```

----- RUN/Master® - by Mantissa -----
Option ==> A

  A - On-Line Assist          R - Reports
  P - Profile                X - EXIT      OS/390
Tutorial = PF1/HELP
-----

              RRRRRRRR   UU   UU   NNN   NN
              RR   RR   UU   UU   NNNN   NN
              RR   RR   UU   UU   NN NN   NN
              RRRRRRRR   UU   UU   NN NN   NN
              RR RR   UU   UU   NN   NN NN
              RR   RR   UU   UU   NN   NNNN
              RR   RR   UUUUUUU   NN   NNN

          MMM   MMM   AAAAAAAA   SSSSSSS   TTTTTTTT   EEEEEEEE   RRRRRR
          MM M   M MM   AA   AA   SS   SS   TT   EE   RR   RR
          MM M   M MM   AA   AA   SS   SS   TT   EE   RR   RR
          MM MM   MM   AAAAAAAA   SSSSS   TT   EEEEEEEE   RRRRRRRR
          MM   MM   AA   AA   SS   SS   TT   EE   RR   RR
          MM   MM   AA   AA   SS   SS   TT   EE   RR   RR
          MM   MM   AA   AA   SSSSSSS   TT   EEEEEEEE   RR   RR

F1=HELP   F2=SPLIT   F3=END   F4=RETURN   F5=RFIND   F6=RCHANGE
F7=UP     F8=DOWN   F9=SWAP   F10=LEFT   F11=RIGHT   F12=RETRIEVE
  
```

The RUN/Master® On-Line Assist panel will then be displayed, as illustrated below.

[illegible]

From this screen, jobs can be selected for restart processing, or historical run data can be displayed. In addition, RUN/Master® messages that were logged can be reviewed. These selections can be limited by date range and can represent all jobs or only failed jobs.

## RESTART ASSIST FOR JOB

This field is used to specify the job to be restarted. The values which can be entered in this field and the resulting action are listed below:

VALUE	ACTION
Blank	Will list jobs on the JOB/Master® schedule queue.
*	Will list jobs from the RUN/Master® database.
Jobname	Will select a specific job from the RUN/Master data base.
JJJ*	Generic jobname. Any job from the RUN/Master database matching the jobname characters ( <i>represented by JJJ</i> ) entered up to the * will be listed for selection.



The following chart shows which fields are required based on what type of Job-name is entered:

<b><i>JOBNAME</i></b>	<b><i>DAILY FAILED JOBS</i></b>	<b><i>FROM DATE</i></b>	<b><i>TO DATE</i></b>
(blank)	A	N/A	N/A
*	A	A	A
JOBNAME	A	A	A
JJJ*	A	A	A
Log	N/A	A	A
A = applies N/A = not applicable			

#### ONLY FAILED JOBS

Enter Y to cause the selection being performed to be limited to failed jobs. Enter N to select all jobs.

#### FROM

This field specifies the lower bound date for the specified restart selection.

#### TO

This field specifies the upper bound date for the specified restart selection.

#### LOG REVIEW FACILITY

This field specifies the type of selection from the history file. Place an L in this field to select a display of the RUN/Master® log. Place a J in this field to display job run data. These options will be discussed later in this chapter in the section entitled, "RUN/Master® Audit Trail".

The following list of jobs on the JOB/Master® Schedule Queue is displayed if no jobname or log review facility parameter is specified on the ON-LINE ASSIST FUNCTIONS screen.

```

----- RUN/Master® JOBQ Selection For Restart Jobs -----
Command ==>                                         Scroll =

----- Date= 97/09/29  97.272  Time= 14:51 -----
S   Job   | Date |Time| ALTDEF |      Wait Reason      |
-----|-----|-----|-----|-----|
- LOOPDRV9 97271 0828      J01889 ** FAILED ** -> STEP1  CC= 009
***** Bottom of data *****

F1=HELP      F2=SPLIT    F3=END      F4=>CONFIRM  F5=>CANCEL  F6=RCHANGE
F7=UP        F8=DOWN     F9=SWAP     F10=        F11=       F12=RETRIEVE

```

You can then select a job(s) for restart processing by entering an S in the Select Column (labeled S) and the TABLE OF RESTART JOBNAMES is displayed, as shown on the next page.

## Table of Restart Jobnames

This screen lists all abended jobs that were selected for restart.

Now select a specific job to display the TABLE OF STEP NAMES by entering S in the Select column next to the desired job. Then press (PF4) (*CONFIRM*) to continue restart processing.

```

----- RUN/Master® - Table of Restart Jobnames -----
Command ==>                                         Scroll ==> CSR
-----
S      Jobname      Auto      Res      JES      Reader      Ended      Completion
-      -            Restart    Flag     Jobno    Date Time   Date Time   Code
-      -            -----    -       -       -       -       -       -
-      LOOPDRV9      -          -       01889    97271 0828  97271 0828  CC= 0099
***** Bottom of data *****

```

F1=HELP

F2=SPLIT

F3=END

F4=>CONFIRM

F5=>CANCEL

F6=RCHANGE

F7=UP

F8=DOWN

F9=SWAP

F10=

F11=

F12=RETRIEVE

### AUTO RESTART

The auto restart option can be overridden for a job by changing the flag to Y or N on this panel. The designation will remain in effect until changed. The values N and null both indicate no auto restart.

See the discussion of Auto Restart in the Profile Chapter. Do not use unless instructed to do so.

### RES FLAG

If the restart flag is shown as Y, the job has been restarted, but the restarted job has not run yet.

### JES JOBNO

The number assigned to the job by JES.

### READER DATE/TIME has not run yet

The reader date and time fields reflect the date and time the job was read into the system when it first failed. Restart processing does not update these fields.

### ENDED DATE/TIME

Date and time of when the job ended.

### COMPLETION CODE

Overall job completion code. Completion code SYS indicates system ABEND, CC indicates a program-assigned cond. code, USR is a user-assigned abend code.

The END command can be used at any point in the process to terminate restart processing. The CONFIRM command is used at each point to continue restart processing.

## Table of Stepnames

The Table of Stepnames screen lists all the steps for the job selected from the Table of Restart Jobnames screen.

The member field is the member name of the JCL in the PDS. You must verify that the correct rerun PDS and member name is displayed. If either name is incorrect, you must overwrite the name with the correct PDS or member name.

```

----- RUN/Master® - Table of Stepnames ----- Row 1 to 10 of 11
Command ==>                                     Scroll ==> CSR

For Job => SI9010      Assign Rerun To = _____ Dept./Loc.
Rerun Reason ==>
Rerun PDS ==> OPS.PROD.JMSTGPD ( SI9010 )<=
Staging ==> Y
      Start Procstep:      Start Step: STEP11
      End Procstep:      End Step: STEP10
-----
S  Procstep  Step  Compcode  Decision Support Information
-----
-          STEP11  CC= 0000
-          STEP02  CC= 0000
-          STEP03  NOEXEC
-          STEP04
-          STEP05  NOEXEC
-          STEP05A
-          STEP06
-          STEP07
-          STEP08
-          STEP09

F1=HELP      F2=SPLIT      F3=END      F4=>CONFIRM  F5=>CANCEL  F6=RCHANGE
F7=UP        F8=DOWN       F9=SWAP     F10=        F11=        F12=RETRIEVE
  
```

### FOR JOB

This field displays the name of the restart job.

### ASSIGN RERUN TO = (DEPT./LOC.)

A user-defined code can be entered in this field representing the department or location that is responsible for the rerun. This data can be used for reporting purposes.

### RERUN REASON

The rerun reason can be assigned by entering a rerun reason code. The rerun reason codes are defined in the profile menu, option-4 "Update Rerun Reason Codes". If the code is not known, a question mark (?) in this field will display the table for selection of the code.

### RERUN PDS

The rerun PDS field is the name of the dataset where the original JCL for this run is stored.

## STAGING

Indicates whether member is in staging PDS (Y or N).




---

***The default for this flag is in each user's ISF record for RUN/Master®.***

---

## START/END PROCSTEP

These fields are used to indicate the name of the first and last proc steps to be run. These fields are changed by entering S or E in the S(select) column next to the desired jobstep in the table described below.

## START/END STEP

These fields are used to indicate the start and end jobsteps to be run. These fields are changed by entering S or E in the S(select) column next to the desired jobstep in the table described below.

**TABLE ENTRIES**

Steps may be selected for bypass and/or inclusion in the restart process by using the Select (S) field described below:

## S (SELECT)

The selection characters define to RUN/Master® which steps are to be RERUN. They will update the START/END STEP|PROCSTEP fields above. The following values can be entered in this field:

S Specify Start step.

E Specify End step.

B Bypass Step.

## PROCSTEP

This column displays the stepname given to the execute statement that executes this PROC.

## STEP

This column displays the stepname within the PROC.

## COMPCODE

This column displays the step completion code. SYS indicates system ABEND, CC indicates a program-assigned condition code, USR indicates a user-assigned ABEND code.

## DECISION SUPPORT INFORMATION

This field provides information on the step's restartability (i.e., "VSAM File Updated").

By pressing the ENTER key, the selected steps are updated and the Decision Support Information field is updated. ENTER must be pressed to update the variables before confirming or canceling. Pressing the PF4(CONFIRM) will tell RUN/Master® to continue with recovery Assist Processing.

## Online Assist JCL Processing

Once the steps have been selected for processing, the Table of Replacement JCL will be displayed. Before pressing <PF4> to CONFIRM the replacement JCL, you may want to view the actions to be taken for restart processing or the job's original JCL.

- To display the Table of Restart Actions, enter MESSAGES in the COMMAND ==> field.
- To display the Table of Original JCL, enter OLDJCL in the COMMAND ==> field.
- To re-display the Replacement JCL, enter NEWJCL in the COMMAND ==> field.

Pressing CONFIRM once from any of these three tables brings up the Post Confirmation panel.



*You can only display the Restart Actions and Original JCL before confirming the new JCL (shown in the Table of Replacement JCL).*

### Table of Replacement JCL

The replacement JCL screen displays the JCL that will be submitted to rerun the job.

The restart JCL will be displayed as follows:

```

Edit ----- P390K.SPFTEMP1.CNTL----- COLUMNS 00001 00072
Command ==> Scroll ==> PAGE
***** ***** Top of Data *****
000001 //SI9010 JOB (D1001910,PD,RQ,N1,DA000124),'PROD',
000002 // REGION=3072K,MSGCLASS=X,CLASS=A,
000003 // MSGLEVEL=(1,1),
000004 // RESTART=STEP02
000005 //*****
000006 //STEP01 EXEC PGM=LOOPDRV,PARM='001,0000,001'
000007 //STEPLIB DD DSN=OPS.PROD.LOADLIB,DISP=SHR
000008 /**
000009 /** THIS STEP STOPS THE SALES INFORMATION DATABASES
000010 /**
000011 //*****
000012 //STEP02 EXEC PGM=LOOPDRV,PARM='001,0000,001'
000013 //STEPLIB DD DSN=OPS.PROD.LOADLIB,DISP=SHR
000014 /**
000015 /** QUIESCE TABLESPACES FOR THE SALES INFORMATION SYSTEM
000016 /**
000017 //*****

F1=HELP      F2=SPLIT    F3=END      F4=>CONFIRM  F5=>CANCEL  F6=RCHANGE
F7=UP        F8=DOWN     F9=SWAP    F10=       F11=       F12=RETRIEVE
. . . . .

```

### Table of Restart Actions

This table displays the actions that will be taken to restart the job and can be displayed by entering MESSAGES in the COMMAND ==> field of the Table of Replacement JCL Screen.

To display the Original JCL, enter OLDJCL in the COMMAND ==> field.

To display the Replacement JCL, enter NEWJCL in the COMMAND ==> field.

RUN/Master® Table of Action results as shown below in illustration screen:

```

----- RUN/Master® - Table of Actions ----- Row 1 to 8 of 8
Command ==>                                     Scroll ==> CSR

Restart Job: SI9010__ Start Step: STEP02      Start Procstep:
                  End Step: STEP11      End Procstep:

-----
Actions To Be Taken For Restart Processing
-----
RM27 I RESTART ANALYSIS      JOB SI9010
- RM24 A RC  SCRATCH DSN=TRSJ.TEMP.IBKUP2 (+1)
- RM24 A RC  SCRATCH DSN=TRSJ.TEMP.IBKUP3 (+1)
- RM24 A RC  SCRATCH DSN=TRSJ.TEMP.IBKUP4 (+1)
- RM24 A RC  SCRATCH DSN=TRSJ.TEMP.IBKUP5 (+1)
- RM24 A RC  SCRATCH DSN=TRSJ.TEMP.IBKUP6 (+1)
- RM24 A RC  SCRATCH DSN=TRSJ.TEMP.IBKUP7 (+1)
- RM28 I END OF RESTART ANALYSIS
***** Bottom of data *****

F1=HELP      F2=SPLIT      F3=END      F4=>CONFIRM  F5=>CANCEL  F6=RCHANGE
F7=UP        F8=DOWN      F9=SWAP     F10=       F11=       F12=RETRIEVE
. . . . .

```

### Table of Original JCL

This table displays the job's original JCL and can be accessed by entering OLDJCL in the COMMAND field of the Table of Replacement JCL Screen.

To display the restart actions, enter MESSAGES in the COMMAND field.

To display the Replacement JCL, enter NEWJCL in the COMMAND field.

Edit ---- P390K.SPFTEMP1.CNTL----- COLUMNS 00001 00072					
Command ==> Scroll ==> PAGE					
***** ***** Top of Data *****					
000001	//SI9010	JOB	(D1001910,PD,RQ,N1,DA000124), 'PROD',		¢
000002	//		REGION=3072K,MSGCLASS=X,CLASS=A,		
000003	//		MSGLEVEL=(1,1),		
000004	//	RESTART=STEP02			
000005	//*****				
000006	//STEP01	EXEC	PGM=LOOPDRV,PARM='001,0000,001'		
000007	//STEPLIB	DD	DSN=OPS.PROD.LOADLIB,DISP=SHR		
000008	/**				
000009	/**	THIS STEP STOPS THE SALES INFORMATION DATABASES			
000010	/**				
000011	//*****				
000012	//STEP02	EXEC	PGM=LOOPDRV,PARM='001,0000,001'		
000013	//STEPLIB	DD	DSN=OPS.PROD.LOADLIB,DISP=SHR		
000014	/**				
000015	/**	QUIESCE TABLESPACES FOR THE SALES INFORMATION SYSTEM			
000016	/**				
000017	//*****				
F1=HELP F2=SPLIT F3=END F4=>CONFIRM F5=>CANCEL F6=RCHANGE					
F7=UP F8=DOWN F9=SWAP F10= F11= F12=RETRIEVE					
. . . . .					



## Table of Actions - Postconfirmation

Entering CONFIRM from any of the previous three screens (*Table of Replacement JCL*, *Table of Restart Actions*, *Table of Original JCL*) will cause the actions specified for backout of this job to be performed. The Table of Actions - Postconfirmation panel will then be displayed with an indication of the completion of each action. After completion of the actions, the CONFIRM command must be entered.

```

----- RUN/Master® - Table of Actions ----- Row 1 to 8 of 8
Command ==>                                     Scroll ==> CSR

Restart Job: SI9010__ Start Step: STEP02 Start Procstep:
                  End Step: STEP11 End Procstep:

-----
Actions To Be Taken For Restart Processing
-----
RM27 I RESTART ANALYSIS JOB SI9010
RM24 A RR01 SCRATCH DSN=TRSJ.TEMP.IBKUP2 (+1)
RM24 A RR01 SCRATCH DSN=TRSJ.TEMP.IBKUP3 (+1)
RM24 A RR01 SCRATCH DSN=TRSJ.TEMP.IBKUP4 (+1)
RM24 A RR01 SCRATCH DSN=TRSJ.TEMP.IBKUP5 (+1)
RM24 A RR01 SCRATCH DSN=TRSJ.TEMP.IBKUP6 (+1)
RM24 A RR01 SCRATCH DSN=TRSJ.TEMP.IBKUP7 (+1)
RM28 I END OF RESTART ANALYSIS
***** Bottom of data *****

F1=HELP      F2=SPLIT    F3=END      F4=>CONFIRM  F5=>CANCEL  F6=RCHANGE
F7=UP        F8=DOWN     F9=SWAP    F10=       F11=       F12=RETRIEVE
. . . . .

```

The actions required to be taken for backout processing can be terminated by entering the END command. In order to perform backout processing, you must enter CONFIRM in the COMMAND ==> field.

When backout processing is complete the table of actions is redisplayed. The RC (*Return Code*) value next to each action will indicate the completion of that action. A non-zero return code is an indication that the function did not need to be performed; i.e., the dataset was already scratched or uncataloged. The Return Code consists of 4-bytes. The first byte is always an 'R'; the second byte indicates the failing function.

R = REQUEST ERROR

S = SCRATCH ERROR

U = UNCATALOG ERROR

The final two bytes are the return codes from the "scratch" or "catalog" macros for the S and U function. If function = R, then 01 (one) is trying to scratch a tape; 02 (two) is no DSN to process.

To continue, enter CONFIRM in the COMMAND ==> field. The JCL submit screen will then be displayed.

## Submit JCL Screen

This screen displays the JCL that will be used to rerun the job.

```

Edit ---- P390K.SPFTEMP1.CNTL----- Columns 00001 00072
Command ==>                               Scroll ==> PAGE
***** ***** Top of Data *****
000001 //SI9010 JOB (D1001910,PD,RQ,N1,DA000124),'PROD',
000002 // REGION=3072K,MSGCLASS=X,CLASS=A,
000003 // MSGLEVEL=(1,1),
000004 // RESTART=STEP02
000005 //*****
000006 //STEP01 EXEC PGM=LOOPDRV,PARM='001,0000,001'
000007 //STEPLIB DD DSN=OPS.PROD.LOADLIB,DISP=SHR
000008 /**
000009 /** THIS STEP STOPS THE SALES INFORMATION DATABASES
000010 /**
000011 //*****
000012 //STEP02 EXEC PGM=LOOPDRV,PARM='001,0000,001'
000013 //STEPLIB DD DSN=OPS.PROD.LOADLIB,DISP=SHR
000014 /**
000015 /** QUIESCE TABLESPACES FOR THE SALES INFORMATION SYSTEM
000016 /**
000017 //*****

F1=HELP      F2=SPLIT    F3=END      F4=>CONFIRM  F5=>CANCEL  F6=RCHANGE
F7=UP        F8=DOWN     F9=SWAP     F10=       F11=       F12=RETRIEVE
. . . . .

```

Enter SUB in the COMMAND ==> field to submit the job for rerun processing.

If the JCL is not submitted, the “R”estart flag in the database record will not be reset. The next time this job is run, the system still believes this job is in restart status and will not save anything but the new job number.

## Ending the On-line Assist Functions

Press the <END> key to terminate the On-line Assist Function and RETURN to RUN/Master® Banner panel.

## RUN/Master® Audit Trail

The Audit Trail is displayed by entering L or J in the LOG REVIEW FACILITY ==> field on the On-Line Assist Functions Panel and pressing <ENTER>. Use “Only Failed Jobs” and From/To dates to tell RUN/Master what log data is presented.

[illegible]

The Audit Trail Screen is then displayed. This panel displays the RUN/Master® log of actions performed. This data can be scrolled using standard ISPF facilities.



## Chapter 23

### Profiles

The RUN/Master® Profile maintenance is selected by entering a P in the OPTION ==> field of the RUN/Master® Banner Panel.

```

----- RUN/Master® - By Mantissa -----
Option ==> P

  A - On-Line Assist          R - Reports
  P - Profile                 X - EXIT      OS/390
Tutorial = PF1/HELP
-----

          RRRRRRRR   UU   UU   NNN   NN
          RR      RR   UU   UU   NNNN  NN
          RR      RR   UU   UU   NN NN  NN
          RRRRRRRR   UU   UU   NN NN  NN
          RR RR      UU   UU   NN NN  NN
          RR  RR      UU   UU   NN  NNNN
          RR      RR   UUUUUUU  NN   NNN

          MMM  MMM  AAAAAAAA  SSSSSSS  TTTTTTTT  EEEEEEEE  RRRRRR
          MM M  M MM  AA  AA  SS  SS      TT      EE      RR  RR
          MM M  M MM  AA  AA  SS      TT      EE      RR  RR
          MM MM  MM  AAAAAAAA  SSSSS  TT      EEEEEEEE  RRRRRRRR
          MM      MM  AA  AA  SS  SS      TT      EE      RR  RR
          MM      MM  AA  AA  SS  SS      TT      EE      RR  RR
          MM      MM  AA  AA  SSSSSSS  TT      EEEEEEEE  RR  RR

F1=HELP  F2=SPLIT  F3=END  F4=RETURN  F5=RFIND  F6=RCHANGE
F7=UP    F8=DOWN   F9=SWAP  F10=LEFT  F11=RIGHT F12=RETRIEVE
  
```

The next panel displayed is the RUN/Master® Profile Update/Display Options:

```

----- RUN/Master® Profile Update/Display Options -----
Command ==>
User= P390K
Date= 98/09/11
      98.254
Time= 11:57

Option      Functional Description
-----
1           Set PFKS
2           Display Profile Parameters
3           Update Profile Parameters
4           Update Rerun Reason Codes
END         Exit
  
```

Select 1 to set Program Function (PF) keys.

Select 2 to DISPLAY all Profile Parameters for a specific installation.

Select 3 to set Profile Parameters for a specific installation.

Select 4 to set Rerun Reason Codes for a specific installation.



***The function keys must be set (using option 1) before other RUN/Master® functions can be used.***

## Profile Function Keys

The PF keys can be set to conform to the standards specified at any installation. When option 1 is selected from the RUN/Master® PROFILE/UPDATE DISPLAY OPTIONS screen, the Profile PFK Definitions panel is displayed:

```

----- RUN/Master® - Profile PFK Definitions -----
Command ==>

PFK01=  HELP                      PFK13=  HELP
PFK02=  SPLIT                     PFK14=  SPLIT
PFK03=  END                       PFK15=  END
PFK04=  >CONFIRM                  PFK16=  >CONFIRM
PFK05=  >CANCEL                   PFK17=  >CANCEL
PFK06=  RCHANGE                   PFK18=  RCHANGE
PFK07=  UP                        PFK19=  UP
PFK08=  DOWN                      PFK20=  DOWN
PFK09=  SWAP                      PFK21=  SWAP
PFK10=                               PFK22=  >NEWJCL
PFK11=                               PFK23=  >MESSAGES
PFK12=  RETRIEVE                  PFK24=  >OLDJCLE

-----
JOB CARD FOR BATCH JCL
-----
//P390K   JOB (0000,0000), 'P390K   ', CLASS=A, MSGCLASS=X
// *
// *

```

The default PF keys are displayed, and can be modified by overtyping the desired function next to the PF key number. The Jobcard at the bottom of the panel can also be modified to your installations' specifications. To exit this panel, enter CONFIRM or CANCEL in the COMMAND ==> field and press <ENTER>.

## Profile Parameters

This screen is displayed with option 2 (*DISPLAY PROFILE PARAMETERS*) and 3 (*UPDATE PROFILE PARAMETERS*) on the Profile Update/Display Options screen.

```

----- RUN/Master® - Profile Parameters -----
Command ==>

Installation Name ==> _____
Procedure Name   ==> _____
  
```

The Profile Parameters is a record used for the batch report feature of RUN/Master®.

### INSTALLATION NAME

The installation name is a 30 character field that is used in the title of RUN/Master® reports.

### PROCEDURE NAME

The procedure name is an 8 character field which names the PROCLIB member used for execution of the batch reports.

### AUTO RESTART MODE

**This option is not shown on the distributed panel - SEE NOTE BELOW.** The Auto Restart Mode option automatically starts backout processing for all abended jobs which are RUN/Master® controlled. Backout processing will scratch and uncatalog datasets which will be created or cataloged in the current run. Generation (*G**D**G*) datasets will not be affected. The “Repair Job” feature of JOB/Master® can be used to handle datasets when a job abends. This could be a more flexible way of backing out datasets.

The options specified on this screen are global and apply to all jobs. The options can be overridden (*or turned on or off*) at the job level.



***If you plan to use AUTO RESTART, contact Mantissa Product Support.***



## Update Rerun Reason Codes

This screen is displayed with option 4 (UPDATE RERUN REASON CODES) on the Profile Update/Display Options screen.

```

----- RUN/Master®  Rerun CodeTable -----
Command ==>                                         Scroll =CSR
-----
      S      Rerun
      -      Code
      -      ----- Rerun Reason Text -----
>>>>> A      _____
***** Bottom of daa*****

```

A rerun reason can be specified for any job which is rerun. The code can be selected and the associated text can be specified at the time the job is being restarted. The rerun code table entries are added, updated, or deleted from this table display.

Entries are added on the first line of this screen (*indicated by an A in the Select column*) by specifying the RERUN CODE and any desired text for the RERUN REASON. Entries can be updated by placing a U in the Selection column next to the code and overtyping the reason text. Entries can be deleted by placing a D in the Selection ==> field next to the code.

When table maintenance is complete, you must enter the CONFIRM command to exit this function and update the table. The CANCEL command will exit this function without recording the table updates.

Examples:

D037	Space exhausted
S722	Lines exceeded - check results
S222	Job cancelled by operations
1001	JOB/Master® userabend

## Run/Masters predefined rerun reason codes.

RM20	F	RESTART JOB NOT FOUND xxxxxxxx
RM21	F	RESTART PROC/STEP NOT FOUND xxxxxxxx.xxxxxxxx
RM22	I	DATASET UPDATED PROC = 12345678 STEP = 12345678 DD = 12345678

RM23	F	CAN NOT RESTART THIS STEP TEMP DSN DD = 12345678
RM24	A	RC SCRATCH DSN= xxxxxxxxxxxxxxxxxxxxxxxxxxxx vvvvvvvv uuuu
RM25	I	OVERIDE PROC = xxxxxxxx STEP = xxxxxxxx DD = xxxxxxxx
RM26	I	PARAMETER OVERRIDDEN DSN = xxxxxxxx....
RM27	I	RESTART ANALYSIS JOB = xxxxxxxx
RM28	I	END OF RESTART ANALYSIS
RM29	I	JCL UPDATED PROC = xxxxxxxx STEP = xxxxxxxx DD = xxxxxxxx
RM30	I	FIRST JCL RECORD NOT JOB CARD
RM31	F	JCLMERGE FAILED PROC = xxxxxxxx STEP = xxxxxxxx DD = xxxxxxxx
RM32	I	DATA SET SCRATCHED DSN = xxxxxxxx....
RM33	I	DATA SET UNCATALOGED DSN = xxxxxxxx....

# Chapter 24

## Report Facility

### Initiating the Report Facility



*The Reporting Function is not currently implemented.*

The Report Facility is accessed by selecting option R on the RUN/Master® Banner panel.

```

----- RUN/Master® - By Mantissa -----
Option ==> R

  A - On-Line Assist          R - Reports
  P - Profile                X - EXIT      z/OS
Tutorial = PF1/HELP
-----
                RRRRRRRR   UU   UU   NNN   NN
                RR   RR   UU   UU   NNNN   NN
                RR   RR   UU   UU   NN NN   NN
                RRRRRRRR   UU   UU   NN NN   NN
                RR RR   UU   UU   NN   NN NN
                RR   RR   UU   UU   NN   NNNN
                RR   RR   UUUUUUU   NN   NNN

                MMM   MMM   AAAAAAAA   SSSSSSS   TTTTTTTT   EEEEEEEE   RRRRRRR
                MM M   M MM   AA   AA   SS   SS   TT   TT   EE   EE   RR   RR
                MM M   M MM   AA   AA   SS   SS   TT   TT   EE   EE   RR   RR
                MM MM   MM   AAAAAAAA   SSSSS   TT   TT   EEEEEEEE   RRRRRRR
                MM   MM   MM   AA   AA   SS   SS   TT   TT   EE   EE   RR   RR
                MM   MM   AA   AA   SS   SS   TT   TT   EE   EE   RR   RR
                MM   MM   AA   AA   SSSSSSS   TT   TT   EEEEEEEE   RR   RR

F1=HELP   F2=SPLIT   F3=END   F4=RETURN   F5=RFIND   F6=RCHANGE
F7=UP     F8=DOWN   F9=SWAP   F10=LEFT   F11=RIGHT   F12=RETRIEVE
  
```

The next panel displayed is the RUN/Master® Report Facility Menu.

```

----- RUN/Master® Report Facility -----
Command ==>                                     User= P390K
                                                Date= 98/09/11
                                                Time= 98.254
                                                12:30

Option ==> 1

Option      Functional Description
-----
1 - Prt     Database Listing - All

```

This panel allows the user to select the type of report, or package of all reports currently provided by RUN/Master®. The first selection, 1 (*PRT*), allows the user to print all available reports. It can be selected either by keying 1 or PRT in the **OPTION ==>** field.

The next panel to be displayed is the Job Submit panel for the report option selected. This panel is an ISPF-style edit panel that allows the user to modify the JCL as required. The standard ISPF submit convention is used by entering SUB in the **COMMAND ==>** field once the JCL reads as desired.

This JCL, when submitted, will print the report information.

```

----- RUN/Master® Report Submit Facility ----- Columns 000 000
Command ==>                                     Scroll ==> Page
***** ***** Top of Data *****
000001 //P390K   JOB (0000,0000),'P390K   ',CLASS=A,MSGCLASS=X
000002 /*
000003 //          EXEC
000004 //STEP2.FILE715 DD *
000005 PRINT PRT
000006 /*
***** ***** Bottom of Data *****

F1=HELP      F2=SPLIT    F3=END      F4=>CONFIRM  F5=>CANCEL  F6=RCHANGE
F7=UP        F8=DOWN     F9=SWAP     F10=        F11=        F12=RETRIEVE
. . . . .

```

# Chapter 25

## Technical Specifications

### Architecture

The RUN/Master® product for MVS systems provides automatic capture of JCL images which are used to maintain a Knowledge Base which supports the restart processing.

The RUN/Master® system consists primarily of:

- JCL Interceptor, which captures all JCL and passes a copy of the JCL image to the RUN/Master® control region for further processing.
- SMF Interceptor, which captures selected SMF records and passes a copy of the required SMF data to the RUN/Master® control region.
- The RUN/Master® control region is a control task that handles all JCL and selected SMF data and performs automatic Knowledge Base creation. The RUN/Master® controller must be active at all times for JCL Interceptor, SMF Interceptor and JCL/SMF Processor to perform its functions, and must be active on each CPU (*in a multi CPU environment*) where automated job restarts are desired.
- On-line Assist Functions, which are a set of ISPF dialogs for viewing the selection of abended jobs. The jobs may be restarted via easy to use selection panels. The dialogs include Knowledge Base override processing as well as automated reports.

### Machine and Software Environment

RUN/Master® operates on any IBM processor or IBM-compatible processor that meets the following requirements:

- MVS release 3.8 MVS/ESA through z/OS with the Time Sharing Option (TSO), and ISPF release 2.0 or higher.
- Access methods, QSAM, VSAM.
- IBM or IBM-compatible display terminals. Any terminals supported by ISPF can be used by RUN/Master®.

- Approximately 10 cylinders of IBM 3380 DASD space for installation.
- Approximately 50 cylinders of IBM 3380 DASD space for data files and production use.
- The RUN/Master® control region task must execute from an APF authorized library, and execute in a region size of 4096K.

# Chapter 26

---

## File Backup and Recovery

---

### Backing Up Files

Job RMBACKUP, which is available as member RMBACKUP in the INSTLIB data set, will back up the RUN/Master® data base.

To back up the data base, modify the JCL in member RMBACKUP according to your installation standards and submit for execution.



---

***RUN/Master® Knowledge Base should be backed up regularly.***

---

### Restoring Files

Job RMRESTOR in the INSTLIB data set will restore the RUN/Master® data base.

To restore the data base, modify the JCL in member RMRESTOR according to your installation standards and submit for execution.







# SECURITY ADMIN

Release 5.20.1

Mantissa Corporation®  
1012 Edenton Street  
Birmingham, Alabama 35242

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# Chapter 27

## Interactive Security Facility (ISF)

### Introduction

INTERACTIVE SECURITY FACILITY (*ISF*) is a Proprietary Software Product designed to provide controlled access to individual functions within OPS/Master® modules.

Interactive applications bring out many concerns about security. The issues transcend the simple matter of having the ability to logon to a time-sharing option (*TSO*), having access to a particular data set, or having authority to use a specific program or a *TSO* command. Most on-line applications are a composite of many separate programs referred to as transactions. Each transaction may perform one or more different functions. At the same time, a given function may consist of one or more transactions.

Each OPS/Master® product has clearly defined functions and interfaces with ISF to determine whether the logged on *TSO* user has the necessary authority to perform that particular function that he/she has requested. ISF does not replace Security systems such as ACF2 and RACF; it secures the individual functions, of a given on-line application in a manner consistent with the objectives of data center management and with their approval for or against an individual *TSO* userid.

For each product, such as JOB/Master®, at least two records must be present on the security data base. These records serve to define the individual functions of the product, and provide a default authorization in the event that an individual *TSO* userid is not explicitly defined for that product. Additional records, one for each *TSO* userid, may be created to explicitly authorize an individual for a given function within the software product.

The ISPF dialogs that maintain the data base are written to allow similar functions that ISPF/PDF itself allows, i.e., BROWSE, DELETE and EDIT of the security records. EDIT and DELETE of course means that the records can be modified, deleted or saved via that function by the *TSO* users who are assigned the responsibility of ISF administration.

### Benefits

ISF provides the following benefits:

- Easy installation using standard IBM utilities

- Ease of authorization of non-pervasive functions via the use of a product default record
- Control over access to specific functions by only those TSO users who are authorized to perform the given functions
- Global on/off switch availability for individual functions within a software product
- ISPF dialogs that support other concurrent ISPF functions via “split screen”
- Support for ISF HELP/tutorials via a standard ISPF HELP command or PF key (*usually PFI*) as defined for ISPF
- A security function that has already been approved by both internal and external auditors at other installations

### ***Data Base Components***

The security data base consists of records which are identified with a product name and TSO userid. These two fields can be referred to as the record key to the security data base.

#### **PRODUCT DEFAULT RECORD**

The product default record defines which functions are accessible to TSO users who are not specifically defined for that software product. The product default record is uniquely identified with a product name in the product field and blanks in the userid field.

#### **USERID RECORD**

The userid record defines which functions are accessible to individual TSO users. In effect, this record overrides the product default record, but only for that userid. It can be used either to place more restrictions on the individual or to offer access to additional functions.

### ***Global Security Attributes***

#### **PRODUCT LIMITATION RECORD**

The product limitation record is identified by a product name in the product field and eight dollar signs (\$\$\$\$\$\$) in the userid field.

The product limitation record defines all available functions within the software product and globally authorizes or shuts off a specific function. This record can also be used to temporarily withdraw a specific function. *For example, this can apply when a given function is present in the software product, regardless of whether it is allowed for the individual TSO user via his/her own userid record or through the product default record.* The product limitation record can be used to turn off the particular function. In effect, this causes that function to be disallowed for any TSO userid.

The product limitation record can be used to shut down a specific function, or to impose cutoff time for one function without affecting other functions in the same software product. Subsequently the same function can be reinstated for authorized TSO users via a single interactive transaction that modifies the product limitation record.

SPECIAL SECURITY ATTRIBUTE

The Special Security Attribute indicator is related to the Product Limitation Record. For those Userids which have a Y coded in this field, the Product Limitation Record is not used. This means that even if the function is globally disallowed (*through the Product Limitation Record*) the Userid with the Special Security Attribute flag will still be allowed access to the command (*if that command is allowed in his/her Userid record*).

## ISF ACCESS RESTRICTED

The ISF Access Restricted indicator can be used to prevent unauthorized maintenance of the Security Data Base. Any explicitly defined User who has this indicator set to “Y” will not be allowed to modify (*EDIT or DELETE*) any ISF record.

If the logged on TSO User is not defined to ISF, the access level to the ISF Security Data Base will depend on the associated Product Default Record. When the ISF Access Restricted indicator in the Product Default Record is set to Y, only explicitly defined users with the indicator coded as N, will be permitted to update the ISF Security Data Base.

## Accessing ISF

To access ISF, select option I, I2, I3 or I4 based on the appropriate JOB/Master® region, from the OPS/Master® Primary Menu:

[illegible]

The ISF Banner Screen is displayed:

```
-----  
Command ==>  
  
Press Enter Key When Ready  
-----  
  
*****  
*****          IIIIII          SSSSSSS          FFFFFFFF  
*****          II             SS             FF  
***           II             SSSSS          FFFF  
**    SECURITY **         II             SS             FF  
**              IIIII            SSSSSSS          FF  
**    SYSTEM   **  
***  
*****  
*****          *****  
***** / \ *****          ***      ** INTERACTIVE  
***** ( ) *****          ***  
***** / \ *****          ***      ** SECURITY  
***** | | *****          ***      **  
***** | | *****          * *      ** FACILITY  
***** _ _ _ *****          * *      **  
*****  
  
F1=HELP       F2=SPLIT     F3=END        F4=RETURN     F5=RFINDD    F6=RCHANGE  
F7=UP         F8=DOWN      F9=SWAP      F10=LEFT      F11=RIGHT    F12=RETRIEVE  
. . . . .
```

Press <ENTER> to display the SECURITY DATA BASE MAINTENANCE SCREEN.

This screen provides access to all “security definition” records.

```

----- Security Data Base Maintenance -----
Option ==>

  B or Blank - Browse Security Records
  D - Delete a Security Record
  E - Edit (Add or Change) Security Record
  X - Exit Data Base Maintenance

Security Data Base: OPS.V520

Product ==>                (Required if Option "D", or "E" is Selected)
Userid ==>

    (If Product and Userid are specified with option "Blank" -
     will limit display to the specific Product and Userid)

    (If only Product is specified with option "Blank" -
     will limit display to the specific Product)

```

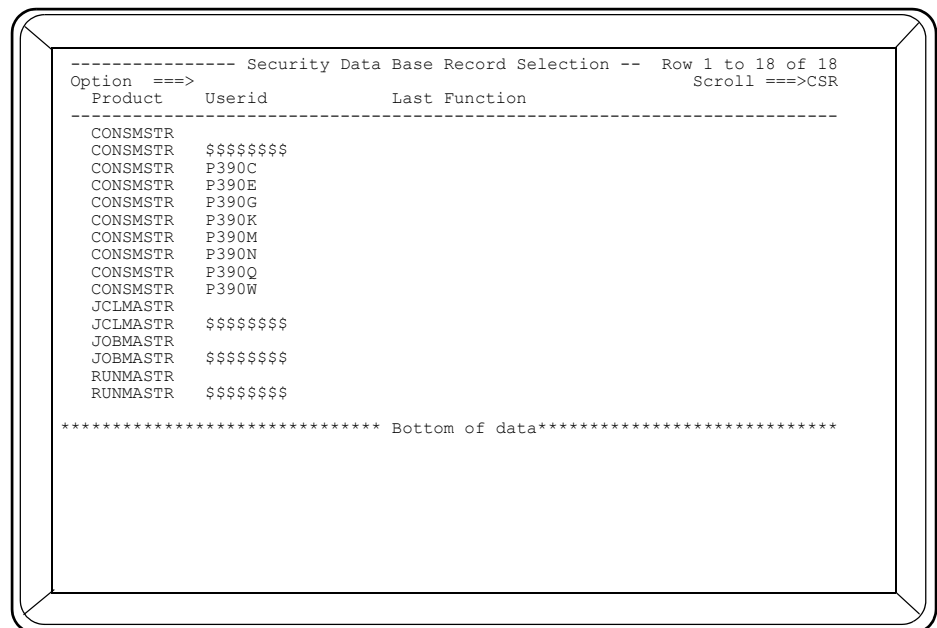
When the product ==> field is completed and the userid ==> field is blank, then all userid records for that product are displayed. When both fields are omitted, then all userid records for all products are displayed.

- Enter **B** (or *blank*) in the OPTION ==> field to browse a table of existing security data base records.
- Enter **D** in the OPTION ==> field to delete a security data base record. You must also specify the name of the product for which you want to delete the record.
- Enter **E** in the OPTION==> field to add or change a security data base record. You must also specify the name of the product for which you want to add or change the record.
- Enter **X** in the OPTION ==> field to return to the OPS/Master® Primary Menu.

If you select option E, specify the PRODUCT (*and the USERID, if desired*) and press <ENTER>. The SECURITY DATA BASE RECORD SELECTION SCREEN is displayed. The following product names can be specified:

JOBMASTR	- JOB/Master®
JCLMASTR	- Symbolic Substitution
RUNMASTR	- RUN/Master®
CONSMSTR	- CONSOLE/Master®

The Security Data Base Record Selection Screen is displayed like an ISPF table. Once a table is displayed, one or more entries can be Browsed, Edited or Deleted, by specifying B, E or D in the field immediately preceding the product and userid fields.



```

----- Security Data Base Record Selection -- Row 1 to 18 of 18
Option ==>                                     Scroll ==>CSR
Product      Userid      Last Function
-----
CONSMSTR
CONSMSTR     $$$$$$$$
CONSMSTR     P390C
CONSMSTR     P390E
CONSMSTR     P390G
CONSMSTR     P390K
CONSMSTR     P390M
CONSMSTR     P390N
CONSMSTR     P390Q
CONSMSTR     P390W
JCLMASTR
JCLMASTR     $$$$$$$$
JOBMASTR
JOBMASTR     $$$$$$$$
RUNMASTR
RUNMASTR     $$$$$$$$

***** Bottom of data*****

```

- The product default record can be identified by the blank USERID.
- The product limitation record can be identified by the USERID of \$\$\$\$\$\$\$\$.
- Multiple requests are processed, one at a time, until all requests are completed.

## JOB/Master® Security



**For JOB/Master®, use the product name “JOBMASTR” when defining security records.**

All JOB/Master® commands are listed on the screen below. The screen is divided into three sections: data base creation commands, job tracking commands, and special functions. The commands correspond to the JOB/Master® Main Menu selections and the JOB/Master® Job Tracking Menu selections.

```

-----| Jobmaster Security Definition For ==> $$$$$$-----
Command ==>
  Indicate if function or message should be supplied to userid (Y or N):
----- Jobmaster Data Base Functions -----
Add:  JOB=> Y SYS=> Y CAL=> Y PKY=> Y N/C=> Y GRP=> Y MSG= Y DSN=> Y
Upd:  JOB=> Y SYS=> Y CAL=> Y PKY=> Y N/C=> Y GRP=> Y MSG= Y DSN=> Y
Del:  JOB=> Y SYS=> Y CAL=> Y PKY=> Y N/C=> Y GRP=> Y MSG= Y DSN=> Y
Browse: JOB=> Y SYS=> Y CAL=> Y PKY=> Y N/C=> Y GRP=> Y MSG= Y DSN=> Y

----- Jobmaster On-Line Tracking Functions -----
LQ => Y  AJ => Y  GS => Y  PQ => Y  PS => Y  SS => Y  SJ => Y  DR => Y
DA => Y  DJ => Y  DL => Y  DD => Y  DT => Y  DH => Y  DF => Y  GSS => Y
DM => Y  DP => Y  DO => Y  DS => Y  ST => Y  RT => Y  UR => Y  RR => Y
U  => Y  H  => Y  R  => Y  E  => Y  F  => Y  C  => Y  P  => Y  K  => Y
Post ==> Y  MT1 ==> Y  MT2 ==> Y  MT3 ==> Y  MT4 ==> Y  MT5 ==> Y

----- Special Functions -----
Allow User Submit PDS ==> Y  Authorized for Schedule/Net ==> *****
MVS Console (Display Authority) ==> Y  (Command Authority) ==> Y
Allow Edit of Crte JCL => Y
Update Profile ==> Y  Jobmaster Shutdown Authority ==> Y
ISF Access Restricted ==> Y  Special Security Attribute ==> Y

```

To allow use of a particular command, enter Y; to disallow the use of a command, enter N.

### JOB/Master® ON-LINE TRACKING FUNCTIONS

Refer to Tracking Facility in OPS System Reference Manual Volume 1.

### POST AND MANUAL SETUP REQUIREMENTS

The indicator for the POST command affects and controls the functionality of its subset indicators for manual setup requirements (*MT1/DE*, *MT2/CI*, *MT3/II*, *MT4/DI*, and *MT5/JS*) as follows:

1. If the post indicator is set to N (POST ==> N), then the user has no authority for POST, and therefore, the manual setup indicators are not functional.
2. If the post indicator is set to Y (POST ==> Y) and at least one manual setup indicator is set to Y, then posting of only those manual setup requirements, which correspond to the indicators that have been set to Y, is allowed.
3. To maintain upward compatibility with previous versions of JOB/Master® and ISF, if the post indicator is set to Y (POST ==> Y) and all manual setup indicators are set to N, then the POST function is allowed for all manual setup require-



ments. That is, MT1/DE, MT2/CI, MT3/TI, MT4/DI, and MT5/JS are logically set to Y and function as if they were physically set to Y.

The post subset indicators correspond to the five manual task functions as defined on the Global Profile Record and the Job Security Definition Screen (03).

### SPECIAL FUNCTIONS

#### ALLOW USER SUBMIT PDS

Specify Y to allow the user to be able to specify a PDS library in the job definition.

#### AUTHORIZED FOR SCHEDULE/NET

This field identifies a station which is owned by this user. This field corresponds to the SCHEDULE/NET field on Job Definition Screen 1. When this field is used, the user is only able to control jobs that have been defined for that Schedule/Network. A default of eight asterisks (\*\*\*\*\*) denotes access to all jobs. Generic names may be specified (*i.e.*, *AP\**) to allow access to several related stations.

#### MVS CONSOLE (DISPLAY AUTHORITY) (COMMAND AUTHORITY)

Specify Y to allow user access to console display and commands.

#### ALLOW EDIT OF CRTE JCL

Specify Y to allow user to make changes to job schedule create JCL.

#### UPDATE PROFILE

The update profile indicator refers to user's authority to set and maintain the global values that control options within the JOB/Master® scheduler. See the JOB/Master® Installation Manual for further information on JOB/Master® initialization options.

#### JOB/Master® SHUTDOWN AUTHORITY

Specify Y to allow user to shutdown the JOB/Master® Control Region in Job Tracking.

#### ISF ACCESS RESTRICTED

The ISF Access Restricted indicator can be used to prevent unauthorized maintenance of the security data base. Any explicitly defined user who has this indicator set to Y will not be allowed to modify (*EDIT or DELETE*) any ISF record. In the event that the logged on TSO user is not explicitly defined to ISF, his/her authority to maintain the ISF security data base will depend on the appropriate product default record. That is, when the ISF access restricted indicator in the product default record is set to Y, only explicitly defined users with indicator coded as N are permitted to update the ISF security data base.

#### SPECIAL SECURITY ATTRIBUTE

The Special Security Attribute indicator has additional meaning concerning the product limitation record (*see the section on Product Limitation Record*). For those userids that have a Y coded in this field, the product limitation record is not used. This means that even if the function is globally disallowed through the product limitation record, the userid with the Special Attribute flag is still

allowed access to the command provided that command is allowed in his/her user-id record. This attribute is useful if a function is disallowed for general use for problematic reasons; however, function testing needs to be done.

### MESSAGE ROUTING

From the First Security Definition Screen press <ENTER>. The Message Routing Screen is displayed.

The product default record, which is identified by a blank userid, controls the sending of messages to the operator console. Messages can be sent or suspended by coding Y or N in the same manner as for individual userids. Messages can be suppressed from being sent to the MVS console. This option is controlled by the default ISF record for JOB/Master®, which has a blank userid. For example, if the job failed message is to be sent every time a job fails, then message JM02 should be coded as Y in this record.

```

-----| Jobmaster Security Definition For ==> $$$$$$-----
Option ==>

      Indicate if message should be supplied to userid (Y, N or A):

----- Jobmaster Messages: -----
JM01 ==> Y  JM11 ==> Y  JM21 ==> Y  JM31 ==> Y  JM41 ==> Y  JM51 ==>Y
JM02 ==> Y  JM12 ==> Y  JM22 ==> Y  JM32 ==> Y  JM42 ==> Y  JM52 ==>Y
JM03 ==> Y  JM13 ==> Y  JM23 ==> Y  JM33 ==> Y  JM43 ==> Y  JM53 ==>Y
JM04 ==> Y  JM14 ==> Y  JM24 ==> Y  JM34 ==> Y  JM44 ==> Y  JM54 ==>Y
JM05 ==> Y  JM15 ==> Y  JM25 ==> Y  JM35 ==> Y  JM45 ==> Y  JM55 ==>Y
JM06 ==> Y  JM16 ==> Y  JM26 ==> Y  JM36 ==> Y  JM46 ==> Y  JM56 ==>Y
JM07 ==> Y  JM17 ==> Y  JM27 ==> Y  JM37 ==> Y  JM47 ==> Y  JM57 ==>Y
JM08 ==> Y  JM18 ==> Y  JM28 ==> Y  JM38 ==> Y  JM48 ==> Y  JM58 ==>Y
JM09 ==> Y  JM19 ==> Y  JM29 ==> Y  JM39 ==> Y  JM49 ==> Y  JM59 ==>Y
JM10 ==> Y  JM20 ==> Y  JM30 ==> Y  JM40 ==> Y  JM50 ==> Y  JM60 ==>Y

      Note 1: Code "A" is applicable only to the product default record.

```

JOB/Master® messages can be routed to the operator console by specifying Y next to each desired message. Any message that is coded as A generates an alert on the operator console. The alert message is held until it is deleted by the console operator. Specify N to suppress the sending of a message. (*Refer to the Messages and Codes for a description of each message*). JM05 should be set to a 'Y' or 'A' if the Manual Task message definitions are used.



***The specification of A to indicate that a message is to generate a console alert, as described above, is applicable to the product default record only.***

### MESSAGE POSTING TO SPECIFIC USERID

The ability to send messages to specific userids will be implemented in the same manner as console messages by setting the Y flag in the individual userid record. This function is currently not active.

### ***Symbolic Substitution Security***

For symbolic substitution, use the product name JCLMASTR when defining security records. All symbolic substitution functions are listed on the screen shown below.

```

-----| JCL/Substitution Security Definition for ==> $$$$$$-----
Option ==>

        Indicate if function should be supplied to Userid (Y OR N):

-----|----- JCL/Master Functions -----|-----
        RESOLVE ==> Y          RESET ==> Y          DISPLAY ==> Y
        LIBRARY ==> Y          OPINS ==> Y          RECOVERY ==> Y
        JCLSCAN ==> Y          E/OPINS=> N

        --- <== Use staging PDS (JMSTGPDS) Y,N
        |
        | Master JCL          ==>
        --> Resolved JCL      ==>
        | Document Data Set ==>
        --> Rerun PDS        ==>

        Use ISPF File Tailoring for symbolic substitution ==>

-----|----- Special Functions -----|-----
        ISF Access Restricted ==> Y          Special Security Attribute ==> Y

```

To allow use of a particular function, enter Y; to disallow the use of a function, enter N.

#### **JCL/MASTER FUNCTIONS**

See “Symbolic Substitution” in the JOB/Master® User Manual for a description of these functions.

The PDS data sets used by the symbolic substitution process are defined on this panel. The product default record must specify the data sets which will be used. All or any individual data sets can be overridden on the userid record.

#### **USE STAGING PDS (JMSTGPDS)**

Specify Y to allow use of the staging PDS. This field is related to the Resolved JCL and Rerun PDS fields. If using staging PDS, the Resolved JCL and Rerun PDS should be your staging PDS because it will be the library from which jobs will be submitted by the JOB/Master® submit function.

#### **MASTER JCL**

This is the data set used as input for the symbolic substitution function. This is the PDS library from which the JCL member will be copied for the substitution to be made leaving the “master” copy intact.

#### **RESOLVED JCL**

This is the data set in which the JCL member will be placed after symbolic substitution has been performed. It should be the same PDS as the Staging PDS if it is being used.

**DOCUMENT DATASET**

This data set contains free format, user-entered data for job documentation and operational run instructions. The JOBNAME must be used as the member name for specific job documentation reference.

**RERUN PDS**

This data set is used by JOB/Master® to save a copy of the JCL at job submit time. This is an optional data set for JOB/Master® and it should be the same PDS as the Staging PDS if it is being used.

**USE ISPF FILE TAILORING**

Specify Y to allow use of File Tailoring Symbolic Substitution. See ISPF documentation for more information.

**SPECIAL FUNCTIONS****ISF ACCESS RESTRICTED**

Specify N to disallow user access to security setup.

**SPECIAL SECURITY ATTRIBUTE**

Specify Y to allow this user to override the limitation record.

***RUN/Master® Security***

For RUN/Master®, use the product name RUNMASTR when defining security records. All RUN/Master® functions are listed on the screen shown:

```

-----| RUN/Master® Security Definition for ==> $$$$$$|-----
Option ==>

      Indicate if function should be supplied to Userid (Y OR N):

----- Knowledge Base Functions -----
      RESTART      RESTART      HISTORY
      REVIEW ==> Y      ACTION ==> Y      DISPLAY ==> Y

----- On-line Assist Functions -----
      ALTER JCL ==> Y      RERUN SUBMIT ==> Y

      Default Rerun PDS ==>
      Use JOB/Master®
      Staging PDS ==>

----- Special Functions -----
      ISF ACCESS RESTRICTED ==> Y      SPECIAL SECURITY ATTRIBUTE ==> Y

```



***If no re-run PDS is specified and JOB/Master® staging PDS=Y, enter the staging PDS for this default library.***

To allow use of a particular function, enter Y, to disallow use of a particular function enter N.

### **KNOWLEDGE BASE FUNCTIONS**

#### **RESTART REVIEW**

Specify Y to allow viewing of restart actions which RUN/Master® will perform.

#### **RESTART ACTION**

Specify Y to allow the execution of the restart actions.

#### **HISTORY DISPLAY**

Specify Y to allow viewing of the history file.

### **ONLINE ASSIST FUNCTIONS**

#### **ALTER JCL**

Specify Y to allow the altering of the Restart JCL prepared by RUN/Master®.

#### **RERUN SUBMIT**

Specify Y to allow the prepared JCL to be submitted.

#### **DEFAULT RERUN PDS**

Specifies the default PDS to be used to retrieve JCL of Jobs to be restarted. This PDS must be specified in JOB/Master® with a DD of JMRERUN.

#### **USE JOB/Master® STAGING PDS**

Allows the use of the JOB/Master® Staging PDS instead of the rerun PDS.

### **SPECIAL FUNCTIONS**

#### **ISF ACCESS RESTRICTED**

Specify N to disallow user access to Security setup.

#### **SPECIAL SECURITY ATTRIBUTE**

Specify Y to allow this user to override the limitation record.

### CONSOLE/Master® Security

To create security records for CONSOLE/Master® use the Product Name CONSMSTR. CONSOLE/Master® functions are listed on the panel shown below.

In order to allow a particular function, enter Y; to disallow the use of a function enter N.

```

-----| CONSOLE/Master® Security Definition for =====
Option ==>

      Indicate if function should be supplied to Userid (Y OR N):

----- Automated Operator Functions -----
      BROWSE ==> Y      DELETE ==> Y      ADD/UPDATE ==> Y

----- MVS Console Facility -----
      SELECT ==> Y      DISPLAY ==> Y      COMMAND ==> Y      REPLY ==> Y
                                     INITIAL CONSOLE ADDR ==> 700

----- Special Functions -----
      ISF ACCESS RESTRICTED ==> Y      SPECIAL SECURITY ATTRIBUTE ==> Y

```

### AUTOMATED OPERATOR FUNCTIONS

Each function such as browse, add/update and delete can be individually secured.

### MVS CONSOLE FACILITY

This area secures or allows specific privileges under the MVS Console Facility.

#### SELECT

Specify Y to allow the User to specify or change the Console ID for the current session. When this field is specified as N, the user will only be able to see the buffers of the console specified in the INITIAL CONSOLE ADDR field.

#### DISPLAY

Specify Y to allow the user to display console buffers.

#### COMMAND

When set to Y, this function allows the User to enter any command which can normally be entered via operator console.

#### REPLY

When set to Y, this function allows the User to reply to any outstanding Write-to-Operator-with-Reply (WTOR). CONSOLE/Master® supports both long (R nn,...) format as well as short (nn,...) format of operator reply.

**INITIAL CONSOLE ADDR**

Specifies the console address which will be used as the default Console ID for the specific User. If this field is omitted on an individual Userid record, the Console ID value will be taken from this field in the Product Default record. The specified value may be “locked” for the User by entering N in the SELECT==> field.

**SPECIAL FUNCTIONS****ISF ACCESS RESTRICTED**

The ISF Access Restricted supplemental security feature is fully implemented within CONSOLE/Master®. For functional description of this indicator see ISF Access Restricted documented under “Global Security Attributes”.

**SPECIAL SECURITY ATTRIBUTE**

The Special Security Attribute is fully implemented within CONSOLE/Master®. For functional description of this indicator see Special Security Attribute as documented under “Global Security Attributes”.





## Chapter 28

---

### Interactive Help

---

ISF provides an interactive HELP facility via standard convention of PF1 or the ISPF HELP command. The HELP/Tutorial mode can be entered from any ISF screen by pressing the PF1 key.

When a message is displayed in the upper right corner, a brief explanation can be displayed by pressing the PF1 key. If the PF1 key is pressed a second time, a tutorial screen is displayed.

If the PF1 key is pressed when there is no message in the upper right corner, then a tutorial screen is displayed immediately.





# INSTALLATION

Release 5.20.1

**Mantissa Corporation®**  
1012 Edenton Street  
Birmingham, Alabama 35242

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# Chapter 29

## OPS/Master® Installation

### Introduction

Preliminary steps may be taken prior to a first-time installation of OPS/Master®, making the process more efficient. The preliminaries are documented below in steps with sub-tasks. Each must be completed in order and documented for proper verification to assure that your first-time install will be correct. Each task has a check box for you to check or initial when the task has been successfully completed.

### STEP 1: Preliminary Setup

<b>Task 1.0</b>	<b>Select a High Level Qualifier (VSMHLQ) for your VSAM files. They will be defined later in the install process. Enter the qualifier in the box below for reference.</b>
---------------------	---

A list of the VSAM files are:

CMMASTER	CONSOLE/Master® Database
CONTROL	OPS/Master® Control File
JMDB	JOB/Master® Data Base
JMJOBQ	JOB/Master® Job Scheduling Queue
JMSCHQ	JOB/Master® Scheduling Work File
JMHIST	JOB/Master® History File
RMLOG	RUN/Master® Log File
RMASR	RUN/Master® Database
SECFILE	Interactive Security File

<b>Task 1.1</b>	<b>Select VOLSER(S) for your VSAM files. Enter selections in box below for any future reference.</b>
---------------------	--


We recommend you use the following DASD configuration guidelines:

<i>File Name</i>	<i>Configuration</i>	<i>Comment</i>
CONTROL	Separate DASD from JMJOBQ/JMDB.	High I/O
JMJOBQ JMDB	Same DASD.	Reserves done dictate these files be set up together.
CMMASTER	OK to put on same pack as JMJOBQ/JMDB.	High activity restricted to rules refresh command.
JMHIST	On different DASD from JMJOBQ/JMDB.	High I/O.
JMSCHQ	Such minimal use this may be put anywhere.	Low I/O. Low activity. Only used for JMSCHED.
RMASTR	Separate DASD from JMJOBQ/JMDB/RMLOG.	Medium I/O.
RMLOG	Separate DASD from JMJOBQ/JMDB/RMASTR.	Medium I/O.
SECFILE	Separate DASD from JMJOBQ/JMDB.	Used in TSO maintenance of the database and online authorization of OPS functions by users.

<b>Task 1.2</b>	<b>Select a High-level Qualifier (HLQ) for non-VSAM files. Enter your selection in box below for future reference.</b>
---------------------	--

--

These non-VSAM files can be preallocated. They include the files in the following table. (See attached OPS/Master® DASD requirements at the end of this chapter).

<i>File Name</i>	<i>Description</i>	<i>Allocated</i>	<i>Initials/Date</i>
JMSUBPDS**	JOB/Master® Submit PDS	In Task 4.0	
JMSTGPDS*	JOB/Master® Staging PDS	In Task 4.0	
JMSUBddd*	JOB/Master® Daily Submit PDS	In Task 4.0	
JMRERUN*	JOB/Master® Rerun PDS	In Task 4.0	
PROCLIB**	OPS/Master® Proclib	In Task 4.0	
DOCLIB	Job Rerun Documentation PDS	In Task 4.0	
INSTLIB	Installation Library contains members necessary for all functions within OPS/Master®.  \$INDEX\$ - This member describes all INSTLIB members	In Task 3.0	
ISPLLIB	Contains the load modules for executing ISPF dialogs for OPS.	In Task 3.0	
ISPMLIB	Contains the OPS ISPF messages.	In Task 3.0	
ISPPLIB	Contains the OPS panels required to execute the ISPF dialogs.	In Task 3.0	
ISPSLIB	Contains OPS file tailoring skeletons used in JCL creation.	In Task 3.0	
LOADLIB	Load Modules for OPS/Master®	In Task 3.0	
* We recommend using the JMSTGPDS, but you have the option to use the seven Daily PDS's (where ddd=MON,TUE,WED,THU,FRI,SAT,SUN). If you choose this option, you must also allocate a JMRERUN PDS to be used in conjunction with JMSUBddd. The PDS blocksize must be equal to the largest blocksize of any dataset in the JMSUBPDS concatenation (the largest should be first).			
**Only allocate if you wish to use a unique library for OPS/Master®. An existing PDS library may be used for the PROCLIB and JMSUBPDS (existing JCL for jobs).			

**Task  
1.3****SITE specific considerations.**

SMF Tracking	OPS uses byte 8 of the user identification field in the SMF common area.	If another product at your site is using byte 8, a zap (JMSMFZAP) is available to assign one of the other 7 bytes or, if all 8 bytes are used, to change one of the four user commarea bytes. If this byte is used (not = x'40') when a job is submitted, it will not be tracked correctly. The JOBQ display will indicate the job is being cancelled or having JCL errors. This can be sporadic depending on values in the USERID. If USERID = 'APDEPT ' the job will track, but if equal to 'SALEDEPT' the job will not track.
Work files	Check site standards for work files on TSO volumes.	A zap is available to change the allocation unit for temp DSN's used under ISPF.

SYSMDUMP	For problem resolution	Preallocate a SYSMDUMP for JOB/Master®, RUN/Master® and CONSOLE/Master®. (After installation is complete, prior to testing, a DD statement will need to be added to each of the startup procs). DCB Params: RECFM=FB LRECL=4160 BLKSIZE=4160																
Resource Management	The following are our major/minor names for a resource manager: <table><tr><td><u>Major Names</u></td><td><u>Minor Names</u></td></tr><tr><td>JMASTR</td><td>JMDB.(36 BYTE QUALIFIER FROM J/M)</td></tr><tr><td>JMASTR</td><td>MINOR.NAME.FOR.TSO.SERIALIZATION</td></tr><tr><td>JMASTR</td><td>JMDB</td></tr><tr><td>CMMASTER</td><td>DATABASE</td></tr><tr><td>RMASTR</td><td>DATABASE</td></tr><tr><td>JMSCHED</td><td>JM SCHEDULE (ENQ/DEQ ONLY)</td></tr><tr><td>OPSENQ</td><td>(8 byte TSoid) (ENQ/DEQ ONLY)</td></tr></table>		<u>Major Names</u>	<u>Minor Names</u>	JMASTR	JMDB.(36 BYTE QUALIFIER FROM J/M)	JMASTR	MINOR.NAME.FOR.TSO.SERIALIZATION	JMASTR	JMDB	CMMASTER	DATABASE	RMASTR	DATABASE	JMSCHED	JM SCHEDULE (ENQ/DEQ ONLY)	OPSENQ	(8 byte TSoid) (ENQ/DEQ ONLY)
<u>Major Names</u>	<u>Minor Names</u>																	
JMASTR	JMDB.(36 BYTE QUALIFIER FROM J/M)																	
JMASTR	MINOR.NAME.FOR.TSO.SERIALIZATION																	
JMASTR	JMDB																	
CMMASTER	DATABASE																	
RMASTR	DATABASE																	
JMSCHED	JM SCHEDULE (ENQ/DEQ ONLY)																	
OPSENQ	(8 byte TSoid) (ENQ/DEQ ONLY)																	
Storage Requirements	JOB/Master®  CONSOLE/Master®	The number of buffers used are specified in the JOB/Master® startup proc. Each buffer will require 1K of dataspace storage. The default and minimum requirement is 61 buffers.  CONSOLE/Master® uses a variable amount of SQA storage to hold the fast path rules (WTOs which do not require notification/processing by the C/M control region, i.e., WTO suppression, route or DESC changes, etc.) Each rule can take from 72 to 128 bytes. The rules are stored in 4K segments.																
COBOL	OPS/Master® uses the L/E environment for COBOL. Applicable JCL samples will have a reference to “hlq.SCEENRUN” in the STEPLIB concatenation. This should be changed to your runtime library. Note, ISPF must also have this library allocated in the ISPLLIB concatenation.																	

<b>Task 1.4</b>	<b>Modify current SYS1.PARMLIB (Members)</b>
-----------------	--



IEAAPFxx	The name of the LOADLIB for OPS/Master® must be in this PARMLIB member. Several members in the LOADLIB must execute authorized. An alternative would be to place the LOADLIB in the dynamic authorization list (See member PROG??). To authorize add the following statement: APF ADD DSNAME=OPS.V521.LOADLIB VOLUME=MAN002. Another alternative is to place an authorization command in the COMMND?? parmlib member: COM='SETPROG APF,ADD,DSNAME=OPS.V521.LOADLIB,VOLUME=MAN002'.
SMFPRMxx	SMF exits to be turned on: IEFUJV IEFUJI IEFACTRT IEFU83 IEFU84  SMF records to be written: 14, 15, 17, 18, 30, 61, 63, 64, 65, 67 Note: Record types 14, 15, 17, 18, 61, 63, 64, 65 and 67 are only required if dataset dependency processing is wanted. Record types 15, 30 and 64 are required if RUN/Master® is to be installed. See the "Dataset Dependency" chapter in Volume 1 of the JOB/Master® Manual for details. In order for J/M to track subsystems, these exits/records must be specified in the SUBSYS parameter if it is specified.  An alternative to using SMFPRMxx would be to add the following statements to PARMLIB member PROG??. /* */ /* DYNAMIC EXIT DEFINITIONS (V 5.2.1 only) */ /* */ EXIT ADD EXITNAME(SYS.IEFUJV),MODNAME(OPSUJV) EXIT ADD EXITNAME(SYS.IEFUJI),MODNAME(OPSUJI) EXIT ADD EXITNAME(SYS.IEFACTRT),MODNAME(OPSACTRT) EXIT ADD EXITNAME(SYS.IEFU83),MODNAME(OPSU85) EXIT ADD EXITNAME(SYS.IEFU84),MODNAME(OPSU85)
DIAGxx	ALLOWUSERKEYCSA option. VSM ALLOWUSERKEYCSA(YES) is required for V 5.2.1. VSM ALLOWUSERKEYCSA(NO) is now valid for V 5.2.1.
IEAIPSxx IEAICSxx	The dispatching priority for the OPS/Master® products should be sufficiently high so as to prevent any possibility of loss of service. The recommendation is to place them in a performance group (P6) under System Resource Manager (SRM) at a dispatching priority equivalent to other critical applications with CONSOLE/Master® first, followed by JOB/Master®, and then RUN/Master®.
IEASYSxx	MAXCAD defines the maximum number of scope=common dataspace. The default is 50. JOB/Master uses one common dataspace.
IEFUSI	IEFUSI is used to limit a dataspace size. JOB/Master uses a dataspace size of 10MB.

If this is done, an IPL can be performed prior to product installation and everything will be ready to test after installation. An IPL can be avoided if the SMF requirements are already in place and by copying the modules from "HLQ.OPS.LOADLIB" to an existing authorized library or dynamically authorizing the LOADLIB.

<b>Check to verify successful completion</b>
--

## OPS/Master® Installation

### Overview

OPS/Master® is easily implemented into your MVS environment.

Mantissa's OPS Release 5.2.1 product is now distributed via files obtained from our FTP site (<ftp.mantissa.com>) or on a CD. The files that comprise this release were created on the z/OS operating system using the XMIT(TSO TRANSMIT) function. There are six files and each file must be FTP'd to your z/OS system and then TSO TRANSMIT RECEIVED to be able to use them in various Tasks to complete the installation process. To make sure the files are usable, they must be uploaded using the binary command (no CRLF or ASCII translation).

Throughout the installation, the following variables are used in JCL and should be replaced to conform to site standards:

DDDDD	Site UNIT name assigned to DASD for output data sets.
VVVVVV	Volume serial number where output data sets will reside.
HLQ	High Level Qualifier used at your installation for OPS/Master® Libraries.
VSMHLQ	High Level Qualifier used at your installation for OPS/Master® VSAM datasets.

## STEP 2: Product Installation

<b>Task 2.0</b>	Preallocate FTP files.
---------------------	------------------------

The z/OS output datasets must be preallocated with an LRECL=80 and record format of fixed. This is very important! The RECEIVE command requires the XMIT files be LRECL=80 and fixed. We used the following attributes for each of the XMIT files when creating them:

LRECL=80 BLKSIZE=3120 RECFM=FB.

The six files are:

- hlq.OPS.V521.INST.XMIT (450 blocks)
- hlq.OPS.V521.ISPL.XMIT (615 blocks)
- hlq.OPS.V521.ISPM.XMIT (60 blocks)
- hlq.OPS.V521.ISPP.XMIT (555 blocks)
- hlq.OPS.V521.ISPS.XMIT (30 blocks)
- hlq.OPS.V521.LOAD.XMIT (1200 blocks)

As an alternative to pre-allocating, append an SMS defined qualifier to the dataset names and let SMS build the datasets.

<b>Task 2.1</b>	Upload OPS system files.
---------------------	--------------------------

The input files can be found in Mantissa's FTP server in the Outgoing\OPS\V521 folder and have a prefix of OPSV521. The "hlq" for the put command might be "DIST".

Put the files to z/OS with the following commands from FTP:

```
bin
put OPSV521.INST 'hlq.OPS.V521.INST.XMIT' (rep
put OPSV521.ISPL 'hlq.OPS.V521.ISPL.XMIT' (rep
put OPSV521.ISPM 'hlq.OPS.V521.ISPM.XMIT' (rep
put OPSV521.ISPP 'hlq.OPS.V521.ISPP.XMIT' (rep
put OPSV521.ISPS 'hlq.OPS.V521.ISPS.XMIT' (rep
put OPSV521.LOAD 'hlq.OPS.V521.LOAD.XMIT' (rep
```

	<b>Check to verify successful completion.</b>
--	---

<b>Task 3.0</b>	Use TSO XMIT RECEIVE to build OPS system files.
---------------------	---

Once the files have been uploaded via FTP, execute the following commands on TSO. Note the UNIT and VOLUME are optional. When prompted for restore parameters, enter the output dataset name (see note) and allocation values shown below.

- RECEIVE INDATASET('hlq.OPS.V521.INST.XMIT'). When prompted by message "INMR906A Enter restore parameters or 'DELETE' or 'END' +", enter:  
da('OPS.V521.INSTLIB') blksize(3120) new unit(unit) volume(volume)
- RECEIVE INDATASET('hlq.OPS.V521.ISPL.XMIT'). When prompted by message "INMR906A Enter restore parameters or 'DELETE' or 'END' +", enter:  
da('OPS.V521.ISPLLIB') blksize(19069) new unit(unit) volume(volume)
- RECEIVE INDATASET('hlq.OPS.V521.ISPM.XMIT'). When prompted by message "INMR906A Enter restore parameters or 'DELETE' or 'END' +", enter:  
da('OPS.V521.ISPMLIB') blksize(3120) new unit(unit) volume(volume)
- RECEIVE INDATASET('hlq.OPS.V521.ISPP.XMIT'). When prompted by message "INMR906A Enter restore parameters or 'DELETE' or 'END' +", enter:  
da('OPS.V521.ISPPLIB') blksize(3120) new unit(unit) volume(volume)
- RECEIVE INDATASET('hlq.OPS.V521.ISPS.XMIT'). When prompted by message "INMR906A Enter restore parameters or 'DELETE' or 'END' +", enter:  
da('OPS.V521.ISPSLIB') blksize(3120) new unit(unit) volume(volume)
- RECEIVE INDATASET('hlq.OPS.V521.LOAD.XMIT'). When prompted by message "INMR906A Enter restore parameters or 'DELETE' or 'END' +", enter:  
da('OPS.V521.LOADLIB') blksize(19069) new unit(unit) volume(volume)



**NOTE:** The dataset names used for the **RECEIVE RESTORE** parameter statements specify 'OPS.V521...' which is changable and should reflect the production names for the datasets at your installation. Please note that all the installation JCL refers to either HLQ... or OPS.V521... in front of the OPS datasets. If you change this value to match your installation standards, the JCL (specifying OPS.V521) will have to be modified. The JCL specifying hlq... will have to be modified regardless.



**NOTE:** The **UNIT()** and **VOLUME()** operands are optional but shown in case your installation puts **RECEIVE** files on work packs by default. If the datasets are pre-allocated then the **blksize**, **new**, **unit**, and **volume** information does not have to be entered.

Once all the data files are successfully transferred and received, you are ready to begin the installation of OPS.

	Check to verify successful completion.
<b>Task 4.0</b>	OPS/Master® PDS's.

hlq.LOADLIB can be used as a STEPLIB library. Be certain to update all execution JCL specifying the appropriate DD statement. The use of STEPLIB statement can be avoided if the modules are moved to a LINKLIST library. Some members are required to run authorized.

Allocate the JOB/Master PDS's using sample member JMALLOC in the hlq.INSTLIB.

	Check to verify successful completion.
--	--

**Task  
5.0****Install OPS Panels.**

Edit your ISPF/PDF panel library (ISPPLIB) updating member ISP@PRIM to include the following statement within the “)BODY” section:

```
% O +OPS - OPS/Master® by Mantissa Corporation
```

Also include the following statement within the “)PROC” section:

```
O,'PANEL(OPSBANNR)'
```

Many installations have modified the native ISPF environments. If this applies at your site, make the above modifications to the panel which OPS/Master® is to be initiated from.

The following panels in the HLQ.ISPPLIB will need to have the default VSHM HLQ (VSMHLQ) modified to reflect the site standard High Level Qualifier for OPS/Master® files:

```
OPSBANNR
```

```
CMBANNER
```

```
RMP000
```

Be sure to key all changes in UPPER CASE.

Specify the OPS ISPLLIB, ISPMLIB, ISPPLIB and ISPSLIB file names in the appropriate ISPF procedure. If your installation would like to use the LIBDEF clists to invoke the OPS/Master® ISPF libraries, refer to member OPSCLIST in the INSTLIB. To invoke this CLIST add to the “)PROC” section of panel ISP@PRIM the following: “O, ‘CMD(%OPSCLIST) NOCHECK’.

**Check to verify successful completion.****Task  
6.0****Allocate and Initialize OPS/Master® Files.**

The following members of the INSTLIB are to be used to allocate and initialize the files. Modify the JCL according to site standards:

OPSVDEF1 - allocates the following VSAM Clusters;

SECFILE - Interactive Security Facility

CONTROL - maintains VSAM sharing support. This database sharing technique is unique to OPS/Master®.

OPSVINIT - initializes the OPS/Master® VSAM clusters.

If you are converting from version 5.2.1, simply change sample job OPSVINIT to use an IDCAMS REPRO backup of the SECFILE 5.2.1 dataset. If this is a new installation, bypass step STEP 3.

	<b>Check to verify successful completion.</b>
--	---

<b>Task 7.0</b>	<b>Allocate and Initialize JOB/Master® Files.</b>
---------------------	---

The following members of the INSTLIB are to be used to allocate and initialize JOB/Master® files. Modify the JCL according to site standards:

JMVDEF1 - allocates the following VSAM Clusters:

JMDB - JOB/Master® database  
 JMJOBQ - JOB/Master® scheduling event queue  
 JMHIST - JOB/Master® history file  
 JMSCHQ - JOB/Master® scheduling work queue file

JMVINIT - initializes the JOB/Master® VSAM Clusters.

### **JMVINIT**

```
STEP01 EXEC PGM=JMINIT
          PARM='Q=X, J=X'
          where X= Y=(Yes)
                  N=(No)
```

This parameter gives the option to initialize one or both files.

```
STEP02 EXEC PGM=IDCAMS
```

Copies the database records from the distribution tape or restores a database from backup (*as in the case of some dasd error that requires a site to initialize and restore on one or both of these files*).

```
STEP03 EXEC PGM=OPSLINIT
```

This step initializes the History File. It seeds records to correspond with space available and creates a special record which holds the total number of records.

### **Considerations for JMVINIT:**

Messages produced:

1. Event file initialization complete.
2. Record seeded NNNNNN.  
 NNNNNN is the number of logical records that can be kept on the history file. This file is self purging, and the oldest records are dropped as the file fills.

MSG IEC0701 203-204 is issued for the JMHIST file, the message should be ignored.



***DO NOT CHANGE the space parameter of the JMHIST cluster to include secondary allocation. Leave the value as zero (0).***

Hint: If JOB/Master® receives a S0C1 upon Startup after the initialization process, review the steps taken and the output. The most likely suspect is an uninitialized JOBQ file. Repeat the process only for the JOBQ, altering the JMVDEF1 and JMVINIT to point *ONLY* to the JOBQ file. When successfully completed, start JOB/Master® again.

Once JMDB is defined, JOB/Master® provides a utility to help you copy data from an existing JMDB. This is useful for building test databases, etc. Refer to the chapter “Batch Functions” in the JOB/Master® manual for more information on using the utility “JMDB-COPY”.

If you are converting from version 5.2.1, simply change sample job JMVINIT to use an IDCAMS REPRO backup of the JMJOBQ and JMDB 5.2.1 datasets. If this is a new installation, bypass step 02. In either case, the JCL is setup to initialize the Job history.

	<b>Check to verify successful completion.</b>
<b>Task 8.0</b>	<b>Allocate and Initialize RUN/Master® files.</b>

The following members of the INSTLIB are to be used to allocate and initialize the files. Modify the JCL according to site standards:

RMVDEF1- allocates the following VSAM Clusters.

RMLOG - RUN/Master® logging file.

RMASTR - RUN/Master® database

RMVINIT - initializes the RUN/Master® VSAM Clusters.

	<b>Check to verify successful completion.</b>
<b>Task 9.0</b>	<b>Allocate and initialize CONSOLE/Master® files.</b>

The following members of the INSTLIB are to be used to allocate and initialize the CONSOLE/Master® files. Modify the JCL according to site standards:

CMVDEF1- allocates the following VSAM Clusters:

CMMASTER - CONSOLE/Master® database

CMVINIT - initializes the CONSOLE/Master® VSAM Clusters.

If you are converting from version 5.2.1, simply change sample job CMVINIT to use an IDCAMS REPRO backup of the CMMASTER 5.2.1 dataset. If this is a new installation, bypass step RESTORC.

	<b>Check to verify successful completion.</b>
--	---

<b>Task 10.0</b>	<b>Modify the procs and make applicable startup procs available to system.</b>
----------------------	--

The following PROC members can be found in “HLQ.INSTLIB”. They should be updated to contain the appropriate file names and any site standards and then be copied into the appropriate PROCLIB if necessary:

<u>Product Name</u>	<u>Procedure Name</u>
OPS/Master®	OPSMATR (See task 12 for specific instructions for this PROC.)
JOB/Master®	JMSCHED JMSHUT JOBMASTR JMDSCM (Optional) JMRESORC (Optional) JMSPSC (Optional) JMEVENT (Optional if used) JMTRACE (Optional if used) JMBPOST (Optional if used) JMSTATUS (Optional if used) JMPURGE (Optional if used) JMTRACE (Optional if used) JOBMASTV (Optional if used)
RUN/Master®	RUNMASTR
CONSOLE/Master®	CONSMSTR CMREPORT

The startup procs are JOBMASTR, RUNMASTR, CONSMSTR and OPSMASTR. Information about the startup procs and the tailorable batch procs can be found in the back of this chapter.

Member JMREPTS in the ISPF skeleton library HLQ.ISPSLIB needs to be modified to use the correct “HLQ.LOADLIB” and “SYS1.SCEERUN” L/E runtime library.

	<b>Check to verify successful completion.</b>
--	---

<b>Task 11.0</b>	<b>Apply PTMs.</b>
----------------------	--------------------



If there are any PTMs to apply do so now. They will be provided on tape, 3.5 diskettes or hard copy printout.

	<b>Check to verify successful completion.</b>
--	---

<b>Task 12.0</b>	<b>Start OPS/Master®.</b>
----------------------	---------------------------

The proc OPSMASTR is used to initialize all run time requirements. This member should be put in your PROCLIB. OPSMASTR will insure that all SUBSYSTEM name entries are built for all OPS/Master® components and all data capture routines are properly installed.

We recommend that the 'S OPSMASTR' command be put in SYS1.PARMLIB(COMMNDxx) with PARM='REFRESH=ALL'. Once initialized, all routines are valid for the life of the IPL.

For the first execution you may enter 'S OPSMASTR' on the system console.



**Failure to start OPSMASTR could result in an S047 abend.**

	<b>Check to verify successful completion of OPSMASTR.</b>
--	---

<b>Task 13.0</b>	<b>Start JOB/Master®, RUN/Master® and CONSOLE/Master®.</b>
----------------------	--

S JOBMASTR\*

S RUNMASTR\*

S CONSMSTR\*

\*Whatever you named your startup proc.

	<b>Check to verify successful startup.</b>
--	--

<b>Task 14.0</b>	<b>Update profiles and set security.</b>
----------------------	--

Refer to chapter 32 for information on how to assign global information for each product.

Refer to chapter 33 for setting up ISPF security.

Also, each new TSO user must complete the profile update to set user PF keys and JCL defaults before using OPS panels.

	<b>Check to verify successful startup.</b>
--	--

<b>Task 15.0</b>	<b>Miscellaneous operational procedures.</b>
----------------------	--

***JOB/Master®***

The JOB/Master® Controller may be deactivated by entering the command Z in the data base creation job tracking session. Because the Z command has such broad implications to an installation running under JOB/Master® control, it has been purposely left off the command menu and it is secured using ISF. The JOB/Master® Controller can also be closed down using the procedure JMSHUT, which has been supplied in the INSTLIB data set. The procedure is activated from the console with an "S" start command, for example:

**S JMSHUT**

When no parms are supplied, the default SUBID is "JM01". To shutdown another JOB/Master® region, enter:

**S JMSHUT,PARM=JM02**

where JM02 is the SUBID assigned to the second control region.

***RUN/Master®***

In order to stop the execution of RUN/Master®, issue the following command:

**P RUNMASTR*****CONSOLE/Master®***

In order to stop the execution of CONSOLE/Master®, issue the following command:

**P CONSMSTR**

<b>Task 16.0</b>	<b>Setting up your system.</b>
----------------------	--------------------------------

Refer to chapter 34 for notes about initially setting up your JOB/Master database calendars.

Refer to chapter 35 for information about how to track jobs.

Refer to chapter 36 for miscellaneous information about JOB/Master's testing modes.

<b>OPS/Master® DASD Requirments and Installation Defaults</b>						
MODULE NAME	FILE NAME	SPACE ALLOC. (CYL)	DIR. BLOCKS REQUIRED	# OF MEMBERS	FILE FORMAT	FUNCTION
SYSTEM						
	INSTLIB	(2,0)	43	59	PDS	System JCL
	LOADLIB	(8,0)	35	67	PDS	Execution Module
	ISPLLIB	(5,0)	35	14	PDS	ISPF Executables
	ISPMLIB	(3,0)	35	16	PDS	ISPF Messages
	ISPLLIB	(6,0)	120	270	PDS	ISPF Panels
	ISPSLIB	(2,0)	35	6	PDS	ISPF JCL Skeleton
OPS/ Master						
	CONTROL	(1,0)				Control
	SECFILE	(3,1)			VSAM	Security
Console/ Master						
	CMMASTER	(10,5)			VSAM	Console DB
Job/ Master						
	JMDB	(50,5)			VSAM	Job DB
	JMJOBQ	(10,5)			VSAM	Scheduling Queue
	JMSCHQ	(10,5)			VSAM	Scheduling work Queue
	JMHIST	(20,0)			VSAM	History File
Run/ Master						
	RMASTR	(50,10)			VSAM	Rerun DB
	RMLOG	(5,0)			VSAM	History File
User Files						
	JMSTGPDS*	User def	User def	User def	PDS	Staging JCL
	DOCLIB	User def	User def	User def	PDS	Job Documentation for JCL/Master
	JCLLIB**	User def	User def	User def	PDS	Master Sub Lib
	PROCLIB**	User def	User def	User def	PDS	OPS Proc Lib
**Allocate these libraries only if you do not want to include OPS members in existing production libraries.						
*JMSTGPDS- Site requirements vary. STGPDS should be large enough to accomodate the JCL for X number of jobs for N number of days.						



# Chapter 30

## JOB/Master® Advanced Functions

### Operating Multiple Control Regions

Multiple JOB/Master®s can be run with each region having its own data base. This facility can be useful if one wishes to have a test version of JOB/Master® for new releases or user testing. Any job can be assigned to the specific JOB/Master® region with the use of an associated character on the job card.

SUBID=XXXX=Y (DEFAULT = JM01=¢)

where:

XXXX is the subsystem ID assigned to this control region.

Y is the job card character which will associate the job with this JOB/Master® region.



*Some procedures have a parameter to be coded for multiple regions. JOB/Master can support up to 4 regions in one ISPF panel structure. The second through fourth system would be identified as JM02, JM03 and JM04. Refer to the following information.*

The following considerations apply when setting up a multiple region environment. The parameters to associate functions with a specific JOB/Master® region is specified as "SUBID" for the subsystem ID associated with the region in the new JOB/Master® control region procedure.

1. Define and initialize files for the new system. All files must be uniquely defined with the exception of the security file and the default submit PDS which can be shared as desired.
2. Create new procedures, specifying the new control region's SUBID, for the following:

JOBMASTR

JMSHUT

**JMSCHED**

3. Create new procedures, specifying the new control region's SUBID, for all batch jobs.

In order to remove extra JOB/Masters from z/OS or change the SMF/ID (moving to a new processor), you must do the following:

1. To remove or inactivate a JOB/Master control region, the control region's PROCs and batch JCL should be removed from production libraries. You must also change all of the panels referring to the subsystem.
2. To remove or change the SMF/ID, you must use the PF command in the tracking panel (LQ function) to disable the old SMF/ID.

## Job Submit User Exit Facility

The JOB/Master® job submit facility allows for a user exit (*JMSUBEXT*) to gain control during job submission. The use of this exit is optional and does not need to be used unless user modifications are to be made to the JCL as it is being submitted to the MVS system.

When JOB/Master® is about to retrieve a job from the submit PDS it first calls the user exit JMSUBEXT, which can take over the JCL retrieval task of the submit function, or modify the JCL being submitted.

Exit JMSUBEXT is loaded when the first job is submitted. If the exit is not in the load library or Linklist dataset, a message is issued by JOB/Master® and the exit will not be called again. Ignore the MODULE NOT FOUND message for JMSUBEXT if you are not using a submit exit.

The exit can be dynamically retried or reloaded by issuing a JOB/Master® submit (S) command under Job Tracking, for a job that is defined to the database with a submit type of E. The E type is not documented in the Job Definition chapter for performance reasons.

At job submission time, JOB/Master® will insert three statements into the submit JCL stream. They are:

```
//*JMUSER
//*JMSECURE
//*JMCPUAFF
```

The statements can be used by the user in the submit exit to assign specific attributes to the job. For example, the *//\*JMSECURE* statement can be used to overlay security information such as Logon ID or password variables.

### SAMPLE EXITS

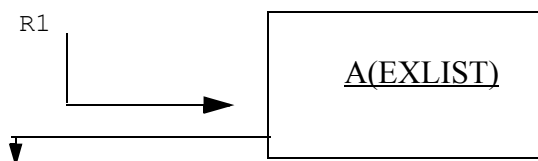
Member JMIES3XT in the INSTLIB dataset is a sample Job Submit exit which will change all *//\*NET* control cards to comment cards. With this exit, JES3 users can phase in jobs under JOB/Master®. When JOB/Master® submits the JCL, job netting is nullified; when JOB/Master® is not used netting is in effect.

Member JMSUBEXT in the INSTLIB dataset is a null job submit exit. It contains an entry and exit coding similar to IEFBR14. It provides the framework for a user-developed job submit exit.

Member JMRACFXT in the INSTLIB dataset is a sample job submit exit that changes all *//\*JMRACF* cards to hold RACF user and password information. With this exit, RACF information can be dynamically added to a job's JOBCARD without having to be held in the submit PDS.

**EXIT PARAMETER LIST**

Upon entry to JMSUBEXT, register 1 (R1) points to a parameter list that contains the address of the submit exit data area:



<i>Exit Parameter List</i>		
<i>Length</i>	<i>Name</i>	<i>Definition</i>
8	UEJOB	PDS member name that contains the job to be submitted. This name may differ from Jobname in entry 5 if an alternate submit name is being used.
80	UERECD	JCL image to be submitted. This field contains blanks on first call to JMSUBEXT.
60	UERUNINS	Run Instructions field as it appears on the JOBMAS-TER Database for the job being submitted.
8	UEDBNAME	Field which contains the Jobname as it is defined on the JOBMAS-TER Database.
8	UERESNAM	Resource Name that was assigned to this job on the Job Definition.
4	UERESYS	SMFID where this job is to be routed based on the Resource Name from the Resource Table.
8	UEUSRID	Field that contains the USERID that last updated the job definition.
8	UETRIGBY	If the job being submitted is a triggered job this is the field that contains the triggering job name.
80	UEMESG	Message area which can be used to indicate action taken by the user exit. If the submit is denied by the exit, then this message will be logged for the job.

**EXIT RETURN CODES**

Upon return from JMSUBEXT, a valid return code is expected in register 15 (R15). The following return codes control the submission processing:

VALUE	ACTION
0	A return code of zero from the first call to exit JMSUBEXT will signal JOB/Master® to read the PDS and pass records to the user exit one by one for inspection. Modification of each record is allowed. <i>The first call is identified by passing to the exit all blanks, instead of JCL image, in entry 2.</i>
4	A return code of 4 from the first call to exit JMSUBEXT sig-

	nals JOB/Master® to call the exit for the submission JCL. The user exit is responsible for passing the JCL images to JOB/Master®. The exit will be called for additional JCL images until a return code of 8 is returned by the exit.
8	This indicates that JCL has been passed to JOB/Master® for this job.
12	<i>On the first call</i> , a return code of 12 signals JOB/Master® not to submit the job, and not to call the exit again for this submission. <i>After the first call</i> , a return code of 12 causes JOB/Master® to cancel the job being submitted on the internal reader.

## Logon and Command Intercept Facility

The Logon and Command Intercept Facility allows a user exit to gain control for the purpose of interfacing JOB/Master® application security with a data center's main security system. The exit will allow the user to bypass ISF security and control access via their own security system. The exit will be invoked at the following points.

1. When an on-line session is initiated.
2. When any JOB/Master® command is executed.
3. By JMSCHED program when a schedule is generated.
4. When JMEVENT program is run.
5. When JMBPOST program is run.

The exit is loaded during session initialization. The library in which the exit can be found is specified on the JOB/Master® SCHEDULING OPTIONS screen in the PDS FOR "JMCMDEXT" LOAD field. If the exit is not found, a message will be issued and the exit will not be activated. If the exit is subsequently installed, the user should terminate the session and reinitiate it in order to activate the exit.

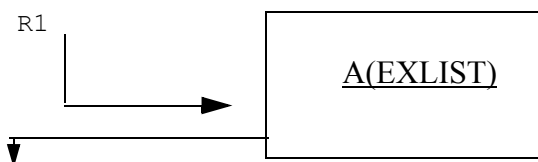
Specification of the library to be used for loading the exit can be made in the JOB/Master® profile. If a library is specified in the profile then only that PDS will be used when loading the exit.

### SAMPLE EXIT

Member JMCMDEXT in the INSTLIB dataset is a sample logon and command exit. It contains an entry and exit coding similar to IEFBR14. It provides the framework for a user-developed logon and command exit. A table of JOB/Master® commands is contained in this exit.

### EXIT PARAMETER LIST

Upon entry to JMCMDEXT, register 1 (R1) points to a parameter list that contains the address of the command exit data area.





<i>Offsets</i>	<i>Type</i>	<i>Length</i>	<i>Description</i>
0	Character	8	USERID issuing command
8	Character	8	Command Being Issued.
16	Character	8	JOBNAME being acted upon, if applicable.
24	Character	1	Current ISF authorization for function: Y=Yes, N=No
25	Character	70	Message area. A message displayed to the user if the command is denied.

### EXIT RETURN CODES

Upon return from JMCMDTEXT there is no required return code, however, register 15 (R15) should contain zeros. The current authorization field is used as the indicator for continued processing. If the value is a “Y” then processing continues for the function; if it is “N” then processing will be denied for the function.

## JOB/Master® History File

### General Information

The History file is a ‘wrap file’ and will overwrite records when file capacity has been reached. JMHIST will notabend or issue a message for space shortage. Your first indication may be when the ‘DL’ command is issued from Job Tracking to display a list of the last 9 executions of a job and ‘garbage’ (i.e., unrelated data or blank spaces) appears in the earlier entries. Running an IDCAMS Print against the JMHIST file will show you where the file began overwriting. With version 5.21 the garbage blank lines have been removed — hence the display may not show all nine entries.

If you are uncertain as to the actual JMHIST file capacity your site will need, you can follow the simple instructions in the “History File Calculation” section on the next pages to make that determination. This will be possible after a few weeks of “production” experience. The maximum number of days retention is 366.



*When the history file is initialized, all records prior to it are lost, unless a restore (JMRESTOR) is done after initialization. Whenever possible it is recommended a JMBACKUP be performed prior to any initialization process.*

### History File Calculation

- On a daily basis (*same time each day*) over a period of ‘X’ days:
  - Check the LAST USED record in JOB/Master® Profile.
  - Deduct that amount from the previous day’s count.
  - Record the difference.

At the end of the time period, the average Records/Day can be determined by summarizing the differences and dividing by ‘X’.

2. In JMVDEF1 (*usually in site install library*):
  - Verify number of cylinders that were allocated to accomodate the History File Capacity (*JOB/Master® Profile*).
  - Divide History File Capacity by number of cylinders for Records/Cylinder.
3. Determine number of days of retention desired. The maximum number of days retention is 366.
4. Multiply the number of days retention by the Average Records/Day.  
(*This is the needed HISTORY FILE CAPACITY*).
5. Divide the needed HISTORY FILE CAPACITY by the number of Records/Cylinder. This will indicate how many cylinders you need to accomodate the History File.

## STEP 1:

Day 1: Last Used Record: 22550	
Day 2: Last Used Record: 25500	Difference: 2950
Day 3: Last Used Record: 28750	Difference: 3250
Day 4: Last Used Record: 31500	Difference: 2750
Day 5: Last Used Record: 33000	Difference: 1500
Day 6: Last Used Record: 35500	Difference: <u>2500</u>
Total number of records 12950	

<u>Total number of records</u>	=	Average Records/Day	<u>12950</u>	=2590
Total number of days			5	

## STEP 2:

JMVDEF1 indicates 20 cylinders was used to create a file to hold 34800 rcords.

<u>History File Capacity</u>	=	Number of Records/Cyl	<u>34800</u>	= 1740
Number of Cyl/JMVDEF1			20	

## STEP 3:

Number of days retention: 40

## STEP 4:

(*Number of days retention*) X (*Average Records/Day*): 40 X 2590 = 103600

## STEP 5:

<u>Needed History File Capacity</u>	=	Total Cylinders Needed	<u>103600</u>	=59.5(60)
Number of Records/Cyl			1740	

### Increasing History File

Once you have determined the necessary capacity, take the following steps to properly increase the JMHIST file:

1. Exec JMBACKUP selecting 'H' to only backup the history file. The JCL for this resides in the INSTLIB. Modify for your site naming standards.
2. Exec JMVDEF1 for the JMHIST file only, increasing the CYL as previously determined in the History file calculation.

3. Exec OPSLINIT (in JMVINIT JCL). This will seed records according to the size of the file.
4. Exec JMRESTOR selecting 'H' for only the history file and reference the backup created in Step 1. This JCL resides in the INSTLIB. Modify for your site naming standards.

*Example: JMVINIT JCL can be found in INSTLIB.*

```
//JMVINIT   JOB      (0000,0001) , 'JOBMASTER' , CLASS=A ,
//                                     MSGCLASS=X
//*-----*
//* REMOVED JMDB AND JMJOBQ INITIALIZATION STEPS*
//*-----*
//STEP03    EXEC     PGM=OPSLINIT
//SYSUDUMP  DD       SYSOUT=*
//OPSLOG    DD       DSN=VSMHLQ.JMHIST,DISP=SHR
```



*This procedure will only increase the space at the end of the file. The current pointer will not change. So, any new data will continue to overlay existing records until the new records are reached.*





# QUICK START

Version 5.20.1

**Mantissa Corporation®**  
**1012 Edenton Street**  
**Birmingham, Alabama 35242**

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## Introduction to QuickStart

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QuickStart is a guide to steps required to fully implement OPS/Master® functions. It answers the question: “So what do I do now that OPS/Master® is installed? By following this guide carefully, you should be able to execute the various OPS/Master® functions with minimum effort.

From this point, we assume that the installation procedures have been followed and completed; that all OPS/Master® products applicable are started. These include JOB/Master®, RUN/Master® and CONSOLE/Master®.





# Chapter 31

## Procs

These procs are in the INSTLIB downloaded during installation and should be copied into the appropriate procedure library for execution:

### OPSMASTR

This procedure sets up the OPS/Master® system environment and installs the SMF front ends. It must be executed before any other OPS/Master® product is started.

#### *OPS/Master® Procedure Parameters*

SYSS=XXXX                      Default OPS1

REFRESH=XXXXXXXX Refresh=ALL

TRACE                          Prints address of locations of exits.

This procedure requires security information to be available to be validated before continuing. Member OPSMASTP in HLQ.INSTLIB contains a sample. This member must be updated with the values included in your installation instructions.

SAMPLE:                      CODE=ASEFDGJK754FG  
COMPANY=MANTISSA CORPORATION

### JOBMASTR

This procedure brings up the JOB/Master® Control Region.



*The dispatching priority for JOB/Master® should be sufficiently high so as to prevent any possibility of loss of service to the JOB/Master® Control Region. The recommended approach is to establish JOB/Master® in a performance Group (PG) under System Resource Manager (SRM) at a dispatching priority equivalent to other critical on-line applications, certainly above batch workload.*

***JOBMASTR Procedure Parameters***

SSYS=XXXX	( <i>Not Required</i> ). This parameter defines the name of the JES subsystem. If omitted the primary subsystem name is used.
TIME=NNN	The time parameter indicates the number of seconds to idle before looking for work on the scheduling queue ( <i>JMJOBQ</i> ). The parameter must be a three (3) digit number. The Scan time is only used if there is not activity in the system. Work is event driven and will start as dependencies and triggers are satisfied.  Default=300
STRT=	This parameter indicates whether JOB/Master® should begin submitting jobs at startup or wait until an “SS” ( <i>start submit</i> ) command is issued. The parameter must be either a Y or N. Set STRT=Y for the first time even if you want to manually start the submit facility. After the first time you would set it to NO.  Default=N
FORC=	If JOB/Master® is cancelled from the system and does not have an opportunity to do resource cleanup, then at the next startup of JOB/Master®, the message “JM00 JOB/Master® ALREADY ACTIVE” may be issued. If JOB/Master® is truly not active, use FORC=Y to initiate resource cleanup and then restart JOB/Master®.  Default=N
SUBID=XXXX=Y	The SUBID=XXXX assigns this JOB/Master® Control Region to a specific subsystem ID other than the default region which is assigned to subsystem ID JM01. ( <i>This parameter allows the running of up to four (4) separate JOB/Master® regions within the same processor</i> ).  The Y represents the tracking character on the job card which will associate the job(s) to this JOB/Master® subsystem.  Default=JM01= ¢ ( <i>cent sign</i> )
LEVEL=	This parameter specifies the high level qualifier for the OPS/Master® files. This qualifier, along with the standard suffix for each file, will be used in allocating the main files.  Default=VSMHLQ (It should be changed to your high level qualifier).
RJT=	This parameter specifies the Remote Job Tracking indicator. Y indicates this Control Region will be tracking a remote system via NJE. N indicates remote tracking is not implemented.  Default=N.
BUFFS=	This parameter specifies the number of Buffers to be allocated for JOB/Master®. A good rule of thumb is one buffer per initiator, + 11 for miscellaneous buffers, + 10 for dataset triggers, + 10 for database access by TSO sessions. If your installation has

more requirements, consider increasing the number of buffers. Each buffer will require 1K of dataspace storage. Previous versions allocated the buffers out of CSA, but now the buffers are allocated out of one dataspace. The number of buffers can be specified larger than the above guidelines without impacting your system.

Default= 061 (*minimum number of buffers*)

### ***Cycle Processing***

The cycle interval, which is used by the scheduler for scanning the JOB/Master® scheduling file for jobs to be submitted, can be user defined rather than using the following default values:

SCHEDULER SUBMIT FACILITY DEFAULT = INACTIVE  
SCHEDULER SUBMIT FACILITY SCAN = 5 MINUTES

The parameters, TIME= and STRT= described above, can alter the default values when initiating the JOB/Master® control region.




---

*The scan time is used only if the system is idle. Under normal circumstances, jobs are started as events are completed. However, if there is no activity, then the scan time interval will cause JOB/Master® to see if any time dependency has been satisfied.*

---

## **JMSCHED**

### ***Schedule Generation Parameters***

The schedule is accomplished via a scheduled operation job. The JOB/Master® control region must be active when this job is run. The scheduling process creates the daily schedule and the scheduling reports. All backlogged jobs are carried over to the new schedule. The batch scheduling job can, itself, be scheduled thus making the daily schedule creation totally automated.

There are two (2) types of scheduling runs.

#### **1. SIMULATION Schedule**

This schedule is used to project what is going to be scheduled on a given day or time. These simulation runs can schedule any number of consecutive days desired. The jobs are not actually placed onto the scheduling queue, but are shown in a report from the job execution. Use of the “GSS” commands in the JOB/Master® tracking panel will provide the necessary selection criteria for these runs.




---

*If you attempt to create a simulation schedule for the current schedule day and the regular jobs have already been scheduled, the jobs will not show on the scheduling reports. They will appear on the Backlog Report.*

---

## 2. ACTUAL Schedule

The actual scheduling runs are completed for a 24 hour period only. They also generate multiple reports showing different sequences of the scheduling process. All jobs having the scheduling criteria for that day(s) will be placed on to the scheduling queue (*JOBQ*). Only one 24 hour period may be scheduled at a time, but you may execute as many 24 hour periods as desired. This is accomplished by allowing JOB/Master® to place the next scheduled date and time into the parameter or by a specific job (*JMSCHED*) being executed and changing the Scheduling dates within the execution JCL of the batch job or altering the selected dates on the ONLINE “GS” commands from the tracking system of JOB/Master®.

### ***Batch Mode***

Batch mode schedule generation consists of the following process:

Verify that the procedures have been installed into your PROCLIB during installation, then execute the following job:

```
//SCHEDED JOB (JOB CARD PARAMETERS)
//STEP1 EXEC JMSCHED,
// STRTTIME=0000, SCHD FROM TIME
// STRTDTE=00000, SCHD FROM DATE
// ENDTIME=0000, SCHD TO TIME
// ENDDTE=00000, SCHD TO DATE
// TYPE=, TYPE OF SCHD RUN
// SUBID=JM01 J/M SUBSYSTEM ID.
// REPTS='YYNNN' SCHD REPORTS
```

Substitution variables are defined below.

STRTTIME=HHMM

STRTTIME is the beginning time which will be used in determining which jobs fall into the period being scheduled. HH = Hour, MM = Minute

STRTDTE=YYDDD

STRTDTE is the beginning date used to determine the starting period being scheduled. YY = Year, DDD = Day (Julian Date)

ENDTIME=HHMM

ENDTIME is the ending time which will be used in determining which job falls into the period being scheduled. HH = Hour, MM = Minute

ENDDTE=YYDDD

ENDDTE is the ending date which will be used in determining which jobs fall into the period being scheduled. YY = Year, DDD = Day (Julian Date)

For Example:

```
STRTTIME=0700
STRTDTE=93100
ENDTIME=0000
ENDDTE=00000
```

will schedule all jobs whose calendar or process keyword criteria fall on 93100 or 93101 with a submit time between 0700 on 93100 and 0694 on 93101. Zero end specifications default 24 hours.

```

STRTTME=0700
STRTDTE=93100
ENDTME=1600
ENDDTE=93100

```

will schedule all jobs whose calendar or process keyword criteria fall on 93100 with a submit time between 0700 and 1600.

```

STRTTME=0700
STRTDTE=93100
ENDTME=0000
ENDATE=93102

```

will schedule all jobs whose calendar or process keyword criteria fall between 0700 on 93100 and 0659 on 93102. (*This multiple day scheduling can be used in simulation scheduling only.*)



***A submit time of zero will always schedule the job on the STRTDTE cycle. To request a STRTTME of 0000, you must specify 0001, since zero will default to the same time as the last cycle.***

TYPE=

BLANK	Run a schedule scanning the entire data base, and also input cards for include/exclude processing.
I	Do not scan the data base. Use only input cards for include/exclude processing.
C	Same as option BLANK, however, only a simulated paper schedule will be produced.
M	Same as option I, however only a simulated paper schedule will be produced.
B	Produce backlog report only, that is, only jobs retained on the schedule.

SUBID=

XXXX	is the subsystem ID, the default is JM01, of the JOB/Master® control region with which this schedule creation will be associated. This ID can be JM01, JM02, JM03 or JM04.
------	--

REPTS=

```

YYNNNN
123456

```

Scheduling reports selected for print out during the scheduling phase. The reports are indicated by the position of the Y or N in the series. Values of these fields within the distribution procedure are “YYNNNN”. These are changeable.

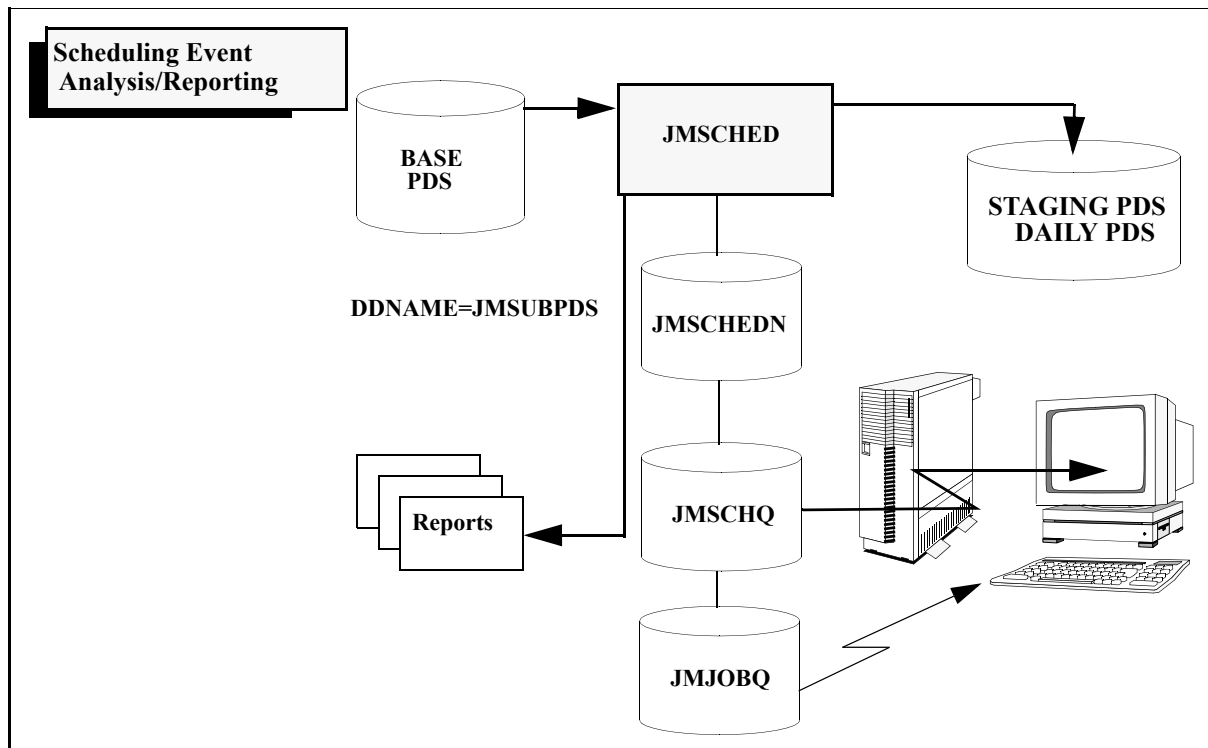
“Y”=Report wanted.

“N”=Report not wanted.



*Reports 1, 2 and 3 cannot be turned off.*

### JOB SCHEDULING



1. **Job Schedule By Date and Time** - This is a listing of the jobs that were scheduled as a result of this run of the JMSCHED JCL.
2. **Jobs Which Are Triggered by This Scheduled Job** - This is a list by triggered job that shows those jobs which trigger the listed job.
3. **Jobs which Require the Scheduled Job as a Predecessor** - This is a list of jobs that require the listed job as a predecessor.
4. **Job Schedule by System and Job** - This is a list of the schedule sorted by system and Job.
5. **Job Schedule by Jobname** - This is a list of the schedule sorted by Jobname only.
6. **Jobs Backlogged by Date and Time** - This is a list of jobs that are backlogged.

### Include/Exclude Parms

JOB/Master® allows the user to both include jobs not normally selected, and/or to exclude jobs normally selected.

The control cards are specified as parameters in the SYSIN DD statement of the scheduling job. The format of the control cards are:

Columns	Value	Description
1-3	JOB SYS	Include a single job Include a system
4	=	Equal sign
5-12	NAME	Eight character name of job or system, padded with blanks
14	I  E	FORCE include the job or system regardless of scheduling criteria  Exclude the job or system
	S	Select the job or system only if it would have normally been selected based on scheduling criteria
16-20		Not currently being used. For future development.



*Jobs scheduled will only appear on the List Queue (LQ) if they have calendars or process keywords in their database definition.*

### JCL date override in JMSCHED

JCL override parms will ensure that the current date is always pulled in when executing JMSCHED. This job must be submitted by JOB/Master®.

```

000001 //SCHEDULE          JOB (0000,0000) , 'TCJN' , CLASS=A ,
000002 //                      MSGCLASS=E , NOTIFY=TCJN
000003 //JOB LIB             DD DSN=OPS . R5 . LOADLIB , DISP=SHR
000004 //STEP1                EXEC      JMSCHED ,
000005 //*JMSYMY
000006 //STRTDTE=' @YDDD , ' STRTTIME=' 0000 '
000007 //*JMSYMN
000008 // ENDDTE=' 00000 ' , ENDTIME=' 0000 ' , TYPE=' I ' , SUBID=' JM01 '
000009 //STEP1 . SYSIN        DD *
000010 SYS=BACKUP             S 00000
000011 SYS=MAINTDLY          S 00000
000012 SYS=CANSYS           S 00000
000013 SYS=JOBMASTR         S 00000
000014 SYS=CYCLE1           S 00000
000015 SYS=PTM880           S 00000
000016 SYS=RMSP1100         S 00000
000017 SYS=RMSP110A         S 00000
000018 SYS=PTM0871          S 00000

```

```
000019 /*
000020 //
```

**Job Schedule Include/Exclude List** - This is a listing of the jobs that have been included that are not normally scheduled or jobs that are normally scheduled and have been excluded from this schedule. These exceptions were the ones in the control cards in the //SYSIN DD statement.

## JMJCLMB

If you intend to use the JCL AVS (*automated variable substitution*) feature, the following JCL should be copied to the proclib. The JCL is sent for both ISPF2.3 and ISPF 3.5 - 4.1. Select the version of ISPF for your site. Modify proc to reflect site naming standards:

### ISPF Version 2.3

```
/*      ISPF VERSION 2.3
/*
/****** N O T E *****
/****** N O T E *****
/*
/*      1. CHG VSMHLQ TO REFLECT HIGH LEVEL QUALIFIER FOR
/*          J/M VSAM FILES
/*
/*      2. CHG HLQ.OPS TO SITE HIGH LEVEL QUALIFIER FOR LOADLIB
/*
/****** N O T E *****
/****** N O T E *****
/****** N O T E *****
/****** N O T E *****
//JMJCLMB JOB (0000,0001),'-- JMJCLMB -- ',CLASS=A,MSGCLASS=E,
//  NOTIFY=P390N
/*
/*      ISPF VERSION 2.3
/*      OPTIONAL PARM      PARM='N,JM01,USERID'
/*      "N" = DO NOT STOP SUBMIT FACILITY DURING THE RESOLVE PROCESS
/*      "Y" = STOP SUBMIT FACILITY DURING THE RESOLVE PROCESS
/*      "T" = ENABLE THE TRACE FUNCTION DURING THE RESOLVE PROCESS
/*
/****** N O T E *****
/*      IF YOU HAVE THE ISP & ISR LOADLIB'S LOCATED IN YOUR LPA
/*      TAKE OUT THE REFERENCE TO THESE LIBRARIES IN THE ISPLLIB
/*      BELOW... THEY ARE NOT NECESSARY AND COULD CAUSE PROBLEMS
/****** N O T E *****
/*-----
//STEP01 EXEC PGM=JMJCLMB,
//      DYNAMNBR=25,REGION=3000K
//STEPLIB DD DSN=HLQ.OPS.LOADLIB,DISP=SHR
/*-----
/*      ALLOCATE OPS/Master® FILES
/*-----
//SECMSTR DD DSN=VSMHLQ.SECFILE,DISP=SHR
//JMDB DD DSN=VSMHLQ.JMDB,DISP=SHR
//JMJOBQ DD DSN=VSMHLQ.JMJOBQ,DISP=SHR
//JMHIST DD DSN=VSMHLQ.JMHIST,DISP=SHR
//CONTROL DD DSN=VSMHLQ.CONTROL,DISP=SHR
/*-----
//ISPPROF DD DSN=&ISPPROF,UNIT=SYSDA,SPACE=(CYL,(1,,5)),
//      DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120)
/*-----
//ISPLIB DD DSN=ISP.V2R3M0.ISPLIB,DISP=SHR      <==== PANELS
//      DD DSN=ISR.V2R3M0.ISRPLIB,DISP=SHR
/*      DD DSN=USER.ISPLIB,DISP=SHR      <==== USER
//      DD DSN=VSMHLQ.ISPLIB,DISP=SHR      <==== OPS
/*-----
//ISPSLIB DD DSN=ISP.V2R3M0.ISPSLIB,DISP=SHR      <==== SKELETONS
//      DD DSN=ISR.V2R3M0.ISRSLIB,DISP=SHR
//      DD DSN=USER.ISPSLIB,DISP=SHR
/*-----
//ISPMLIB DD DSN=ISP.V2R3M0.ISPMLIB,DISP=SHR      <==== MESSAGES
//      DD DSN=ISR.V2R3M0.ISRMLIB,DISP=SHR
```



```

//          DD DSN=VSMHLQ.ISPMLIB,DISP=SHR          <===== OPS
//*-----
//ISPMLIB DD DSN=ISP.V2R3M0.ISPTLIB,DISP=SHR          <===== TABLES
//          DD DSN=ISR.V2R3M0.ISRTLIB,DISP=SHR
//*-----
//ISPLLIB DD DSN=ISP.V2R3M0.ISPLOAD,DISP=SHR          <===== DIALOGS
//          DD DSN=ISR.V2R3M0.ISRLOAD,DISP=SHR
//          DD DSN=VSMHLQ.ISPLLIB,DISP=SHR          <===== OPS
//*-----
//ISPCTL1 DD DSN=&&SPFCTL,UNIT=SYSDA,SPACE=(CYL,(5,1)),
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120)
//ISPLOG DD SYSOUT=*,DCB=(LRECL=121,BLKSIZE=1210,RECFM=FBA)
//SYSTSPRT DD SYSOUT=*
//SYSTSIN DD DSN=&&TMPCTL,UNIT=SYSDA,SPACE=(CYL,(2,1)),
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=3200)
//
//*
//***** N O T E *****
//***** N O T E *****
//***** N O T E *****
//*

```

### ISPF Version 3.5

```

//*      ISPF VERSION 3.5
//*
//***** N O T E *****
//*      1. CHG OPS.PROD TO REFLECT HIGH LEVEL QUALIFIER FOR
//*          J/M VSAM FILES
//*
//*      2. CHG OPS.PROD TO SITE HIGH LEVEL QUALIFIER FOR LOADLIB
//*
//***** N O T E *****
//***** N O T E *****
//***** N O T E *****
//JOBNAME JOB (0000,0001),'-- JMJCMB --',CLASS=A,MSGCLASS=X,
//      NOTIFY=USERID
//*
//*      ISPF VERSION 3.5
//***** N O T E *****
//*      OPTIONAL PARM      PARM='N,JM01,USERID'
//*      "N" = DO NOT STOP SUBMIT FACILITY DURING THE RESOLVE PROCESS
//*      "Y" = STOP SUBMIT FACILITY DURING THE RESOLVE PROCESS
//*      "T" = ENABLE THE TRACE FUNCTION DURING THE RESOLVE PROCESS
//*
//***** N O T E S *****
//*
//*      ISP.V3R5M0.???LPA EXECUTION LIBRARIES NEEDS TO EITHER BE
//*      LINK-LISTED OR PLACED IN THE LPA. THEY CANNOT BE
//*      CONCATENATED WITH THE STEPLIB FOR THE OPS LOADLIB.
//*
//*      IF YOU HAVE THE ISP & ISR LOADLIB'S LOCATED IN YOUR LPA
//*      TAKE OUT THE REFERENCE TO THESE LIBRARIES IN THE ISPLLIB
//*      BELOW... THEY ARE NOT NECESSARY AND COULD CAUSE PROBLEMS
//*
//***** N O T E S *****
//*-----
//STEP01 EXEC PGM=JMJCMB,
//          DYNAMNBR=25,REGION=3000K,PARM='T,JM01,TCJN'
//STEPLIB DD DSN=HLQ.OPS.LOADLIB,DISP=SHR
//*-----
//*      ALLOCATE OPS/Master® FILES
//*-----
//SECMSTR DD DSN=VSMHLQ.SECFILE,DISP=SHR
//JMJOB DD DSN=VSMHLQ.JMJOB,DISP=SHR
//JMJOBQ DD DSN=VSMHLQ.JMJOBQ,DISP=SHR
//JMHIST DD DSN=VSMHLQ.JMHIST,DISP=SHR
//CONTROL DD DSN=VSMHLQ.CONTROL,DISP=SHR
//SYSOUT DD SYSOUT=(,)
//*-----
//ISPPROF DD DSN=&&ISPPROF,UNIT=3380,SPACE=(CYL,(1,,5)),
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120)
//*-----
//ISPLLIB DD DSN=ISP.V3R5M0.ISPPENU,DISP=SHR          <===== PANELS
//          DD DSN=ISR.V3R5M0.ISRPENU,DISP=SHR
//          DD DSN=VSMHLQ.ISPLLIB,DISP=SHR <===== OPS

```

```

//*-----
//ISPSLIB DD DSN=ISP.V3R5M0.ISPSLIB,DISP=SHR <==== SKELETONS
// DD DSN=ISR.V3R5M0.ISRSENU,DISP=SHR
// DD DSN=VSMHLQ.JCLLIB,DISP=SHR <==== OPS
//*-----
//ISPLIB DD DSN=ISP.V3R5M0.ISPMENU,DISP=SHR <==== MESSAGES
// DD DSN=ISR.V3R5M0.ISRMENU,DISP=SHR
// DD DSN=VSMHLQ.ISPLIB,DISP=SHR <==== OPS
//*-----
//ISPLLIB DD DSN=ISP.V3R5M0.ISPLOAD,DISP=SHR <==== DIALOGS
// DD DSN=ISR.V3R5M0.ISRLOAD,DISP=SHR
// DD DSN=VSMHLQ.ISPLLIB,DISP=SHR <==== OPS
//*-----
//ISPTLIB DD DSN=ISR.V3R5M0.ISRTLIB,DISP=SHR <==== TABLES
// DD DSN=ISP.V3R5M0.ISPTENU,DISP=SHR <==== TABLES
//*-----
//ISPCTL1 DD DSN=&&SPFCTL,UNIT=3380,SPACE=(CYL,(5,1)),
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120)
//ISPLOG DD SYSOUT=*,DCB=(LRECL=121,BLKSIZE=1210,RECFM=FBA)
//SYSTSPRT DD SYSOUT=(,)
//SYSTSIN DD DSN=&&TMPCTL,UNIT=3380,SPACE=(CYL,(2,1)),
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=3200)
//***** N O T E *****
//***** N O T E *****
//*

```

### ISPF Version 4.1

```

//* ISPF VERSION 4.1
//*
//***** N O T E *****
//***** N O T E *****
//*
//* 1. CHG VSMHLQ TO REFLECT HIGH LEVEL QUALIFIER FOR
//* J/M VSAM FILES
//*
//* 2. CHG HLQ.OPS TO SITE HIGH LEVEL QUALIFIER FOR LOADLIB
//*
//***** N O T E *****
//***** N O T E *****
//JMJCLMB JOB (0000,0001),'-- MJCLMB -- ',CLASS=A,MSGCLASS=X
//
//* OPTIONAL PARM PARM='N,JM01,USERID'
//* "N" = DO NOT STOP SUBMIT FACILITY DURING THE RESOLVE PROCESS
//* "Y" = STOP SUBMIT FACILITY DURING THE RESOLVE PROCESS
//* "T" = ENABLE THE TRACE FUNCTION DURING THE RESOLVE PROCESS
//*
//* ISPF V4.1 SYS1.SISPLPA EXECUTION LIBRARY
//* NEEDS TO EITHER BE LINK-LISTED
//* OR IN THE LPA. IT CANNOT BE
//* CONCATENATED WITH THE STEPLIB FOR THE OPS LOADLIB.
//*
//* IF YOU HAVE THE SYS1.SISSPLOAD LOADLIB LOCATED IN YOU LPA
//* TAKE OUT THE REFERENCE TO THIS LIBRARY IN THE ISPLLIB
//* BELOW... IT IS NOT NECESSARY AND COULD CAUSE PROBLEMS
//*
//***** N O T E S *****
//*-----
//STEP01 EXEC PGM=JMJCLMB,
// DYNAMNBR=25,REGION=3000K,PARM='T,JM01,USERID'
//STEPLIB DD DSN=HLQ.OPS.LOADLIB,DISP=SHR
//*-----
//* ALLOCATE OPS/Master® FILES
//*-----
//SECMSTR DD DSN=VSMHLQ.SECFILE,DISP=SHR
//JMDB DD DSN=VSMHLQ.JMDB,DISP=SHR
//JMJOBQ DD DSN=VSMHLQ.JMJOBQ,DISP=SHR
//JMHIST DD DSN=VSMHLQ.JMHIST,DISP=SHR
//CONTROL DD DSN=VSMHLQ.CONTROL,DISP=SHR
//SYSOUT DD SYSOUT=(,)
//*-----
//ISPPROF DD DSN=&&ISPPROF,UNIT=3380,SPACE=(CYL,(1,,5)),
// DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120)
//*-----
//ISPLLIB DD DSN=SYS1.SISPPENU,DISP=SHR <==== PANELS

```

```
//          DD DSN=VSMHLQ.ISPPLIB,DISP=SHR          <===== OPS
//*-----
//ISPSLIB DD DSN=SYS1.SISPSENU,DISP=SHR          <===== SKELETONS
//          DD DSN=VSMHLQ.JCLLIB,DISP=SHR          <===== OPS
//*-----
//ISPMLIB DD DSN=SYS1.SISPMENU,DISP=SHR          <===== MESSAGES
//          DD DSN=VSMHLQ.ISPMLIB,DISP=SHR          <===== OPS
//*-----
//ISPLLIB DD DSN=SYS1.SISPLOAD,DISP=SHR          <===== DIALOGS
//          DD DSN=VSMHLQ.ISPLLIB,DISP=SHR          <===== OPS
//*-----
//ISPTLIB DD DSN=SYS1.SISPTENU,DISP=SHR          <===== TABLES
//*-----
//ISPEXEC DD DSN=SYS1.SISPEXEC,DISP=SHR          <===== ISP PROGRAMS
//*-----
//ISPCTL1 DD DSN=&&SPFCTL,UNIT=3380,SPACE=(CYL,(5,1)),
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=3120)
//ISPLOG DD SYSOUT=*,DCB=(LRECL=121,BLKSIZE=1210,RECFM=FBA)
//SYSTSPRT DD SYSOUT=(,)
//SYSTSIN DD DSN=&&TMPCTL,UNIT=3380,SPACE=(CYL,(2,1)),
//          DCB=(RECFM=FB,LRECL=80,BLKSIZE=3200)
```

## CONSMSTR

This procedure brings up the CONSOLE/Master® Control Region.



*The dispatching priority for CONSOLE/Master® should be sufficiently high so as to prevent any possibility of loss of service to the CONSOLE/Master® Control Region. The recommended approach is to establish CONSOLE/Master® in a performance Group (PG) under System Resource Manager (SRM) at a dispatching priority equivalent to other critical on-line applications, certainly above batch workload.*

If you are not going to use the JOB/Master® interface “JOB/Master® ACTION” or “SIGNAL COMPLETE”, comment the DD statements for JMDB and MJOBQ found in the procedure CONSMSTR. Information about the interface can be found in the chapter “Automated Operator” under the section “Extended Console Message Definition”.

## RUNMASTR

This procedure brings up the RUN/Master® Control Region.



*The dispatching priority for RUN/Master® should be sufficiently high so as to prevent any possibility of loss of service to the RUN/Master® Control Region. The recommended approach is to establish RUN/Master® in a performance Group (PG) under System Resource Manager (SRM) at a dispatching priority equivalent to other critical on-line applications, certainly above batch workload.*

As a batch job, place a JOB statement before the following execute statement:

```
//STEP1      EXEC  RUNMASTR, PARM='CHAR=ç'
              PARM Options:
              CHAR=xxxx
```

Where x is the job indicator flag(s) which will be used in the job card. Up to four values can be assigned. If JOB/Master® is installed, one of the characters should be the same as the JOB/Master® character.



## Chapter 32

## Set Profile

## JOB/Master® Primary Menu

When you first enter into JOB/Master®, the Primary Menu is displayed as shown below:

[illegible]

The first logon to JOB/Master® will force the first user to establish a profile. At this point the Default Product record entered in ISF must allow this user to update the profile.

Refer to Chapter 9 in the JOB/Master® section for details on how to setup a profile. Use main menu panel, OPTION P to assign the profile information. This information must be set prior to using any TSO panels for each user.

## **RUN/Master® Profile**

Refer to Chapter 23 in the RUN/Master® section for details on how to setup a profile. Use main menu panel, OPTION P to assign the profile information. This information must be set prior to using any TSO panels for each user.

## **CONSOLE/Master® Profile**

Refer to Chapter 16 in the CONSOLE/Master® section for details on how to setup a profile. Use main menu panel, OPTION P to assign the profile information. This information must be set prior to using any TSO panels for each user.



The ISF Banner Screen is displayed:

```
-----  
Command ==>  
  
Press Enter Key When Ready  
  
-----  
  
          *****  
*****      IIIII      SSSSSSS      FFFFFF  
*****      II         SS        FF  
***         II         SSSS       FFFF  
*** SECURITY ***      II         SS      FF  
***         IIIII     SSSSSSS    FF  
*** SYSTEM ***  
*****  
*****      *****  
*****      **      **  
*****      / \ ***** INTERACTIVE  
*****      ( ) *****  
*****      / \ *****  
*****      | | ***** SECURITY  
*****      | | ***** FACILITY  
*****      | | *****  
*****      _ _ _ _ _  
*****  
  
F1=HELP      F2=SPLIT      F3=END      F4=RETURN      F5=RFINd      F6=RCHANGe  
F7=UP        F8=DOWN       F9=SWAP     F10=LEFT       F11=RIGHT      F12=RETRIEVE  
. . . . .
```

Press <ENTER> here.

## Security Database Maintenance Screen

```

----- Security Data Base Maintenance -----
Option ==>

B or Blank - Browse Security Records
D - Delete a Security Record
E - Edit (Add or Change) Security Record
X - Exit Data Base Maintenance

Security Data Base: OPS.V520

Product ==> (Required if Option "D", or "E" is Selected)
Userid ==>

(If Product and Userid are specified with option "Blank" -
will limit display to the specific Product and Userid)

(If only Product is specified with option "Blank" -
will limit display to the specific Product)

```

ISF has the records seeded during the installation process. If <ENTER> is pressed from this screen, two records will be listed for each of the OPS/Master® products.



```

----- Security Data Base Record Selection --- Row 1 to 18 of 18
Option ==>                                     Scroll ==>CSR
Product      Userid      Last Function
-----
CONSMSTR
B CONSMSTR   $$$$$$$$
CONSMSTR   P390C
CONSMSTR   P390E
CONSMSTR   P390G
CONSMSTR   P390K
CONSMSTR   P390M
CONSMSTR   P390N
CONSMSTR   P390Q
CONSMSTR   P390W
JCLMASTR
JCLMASTR   $$$$$$$$
JOBMASTR
JOBMASTR   $$$$$$$$
RUNMASTR
RUNMASTR   $$$$$$$$
***** Bottom of data *****

```

1. From this screen you can **BROWSE**, **EDIT** or **DELETE** (B, E or D).  
Multiple requests will be handled one record after another until all are processed.
2. The product record with blank spaces in the userid field is known as the **default record**. If no specific userid is defined, the default attributes will apply.
3. The product record with eight (8) dollar signs in the userid field is called the **product limitation record**. Attributes set here will limit the functionality of the product itself.

There are two philosophies regarding establishing security for OPS/Master®:

#### Option 1:

The default record contains all authority necessary and overrides security (*this means security internal to OPS established elsewhere in ISF*). This may be acceptable in a shop where only a few Operations Support people are accessing OPS/Master®. This would eliminate the need to set up individual ids.

#### Option 2:

The default record would be applicable to the majority of the OPS/Master® users, while the Security Administrator would be uniquely defined to ISF as all powerful.

The approach your site takes will determine the next course of action. If using Option 1, only the default record (blank userid) needs to be edited, setting ISF ACCESS RESTRICTED==>N and SPECIAL SECURITY ATTRIBUTE==>Y. Key CONFIRM at the command line and hit <ENTER>.

Option 2 requires the default record first be altered as described above. Once this is done, edit ISF to add the Security Administrator userid, setting the appropriate attributes. Make certain that the above parameters are set exactly as indicated. Key in CONFIRM on the Command line and hit <ENTER>. With the addition of the Security Administrator's id,

the default record can be reset to restrict authority: ISF ACCESS RESTRICTED==>Y and SPECIAL SECURITY ATTRIBUTE==>N. Key in CONFIRM at command line and hit <ENTER>.

In either case, this process must be done for each of the OPS/Master® products:

JOBMASTR  
RUNMASTR  
CONSMSTR  
JCLMASTR

## JOB/Master® Security Panel #1

```

-----| Jobmaster Security Definition For ==> TESTUSER|-----
Command ==>
  Indicate if function or message should be supplied to userid (Y or N):
-----| Jobmaster Data Base Functions |-----
Add:   JOB=> Y SYS=> Y CAL=> Y PKY=> Y N/C=> Y GRP=> Y MSG= Y DSN=> Y
Upd:   JOB=> Y SYS=> Y CAL=> Y PKY=> Y N/C=> Y GRP=> Y MSG= Y DSN=> Y
Del:   JOB=> Y SYS=> Y CAL=> Y PKY=> Y N/C=> Y GRP=> Y MSG= Y DSN=> Y
Browse: JOB=> Y SYS=> Y CAL=> Y PKY=> Y N/C=> Y GRP=> Y MSG= Y DSN=> Y

-----| Jobmaster On-Line Tracking Functions |-----
LQ => Y  AJ => Y  GS => Y  PQ => Y  PS => Y  SS => Y  SJ => Y  DR  => Y
DA => Y  DJ => Y  DL => Y  DD => Y  DT => Y  DH => Y  DF => Y  GSS => Y
DM => Y  DP => Y  DO => Y  DS => Y  ST => Y  RT => Y  UR => Y  RR  => Y
U  => Y  H  => Y  R  => Y  E  => Y  F  => Y  C  => Y  P  => Y  K  => Y
Post ==> Y  MT1 ==> Y  MT2 ==> Y  MT3 ==> Y  MT4 ==> Y  MT5 ==> Y

-----| Special Functions |-----
Allow User Submit PDS ==> Y  Authorized for Schedule/Net ==> *****
MVS Console (Display Authority) ==> Y  (Command Authority) ==> Y
Allow Edit of Crte JCL => Y
Update Profile ==> Y  Jobmaster Shutdown Authority ==> Y
ISF Access Restricted ==> Y  Special Security Attribute ==> Y
  
```

1. Select "JOBMASTER" as the product Name.  
Enter "E" to edit. Enter "Y" to authorize or "N" to restrict.
2. POST = Y will allow the modification of all 5 manual tasks.  
These will post manual task complete.
3. MVS CONSOLE - Allows a user to display and enter console functions.
4. UPDATE PROFILE - May set profile indicators for JOB/Master®.
5. JOB/Master® SHUTDOWN - The user has the authority to shutdown the system using 'Z' as a hot key from job tracking.
6. ISF ACCESS RESTRICTED - N = no restrictions on ISF records.
7. **SPECIAL SECURITY ATTRIBUTE - This user is special. Even the Limitation record does not limit this user.**

## JOB/Master® Security Panel #2

```

-----| JOB/Master® Security Definition For ==> TEAM4 |-----
OPTION ==>

      Indicate if message should be supplied to userid  (Y, N OR A):

----- JOBMASTER MESSAGES: -----
JM01 ==> Y  JM11 ==> Y  JM21 ==> Y  JM31 ==> Y  JM41 ==> Y  JM51 ==> Y
JM02 ==> Y  JM12 ==> Y  JM22 ==> Y  JM32 ==> Y  JM42 ==> Y  JM52 ==> Y
JM03 ==> Y  JM13 ==> Y  JM23 ==> Y  JM33 ==> Y  JM43 ==> Y  JM53 ==> Y
JM04 ==> Y  JM14 ==> Y  JM24 ==> Y  JM34 ==> Y  JM44 ==> Y  JM54 ==> Y
JM05 ==> Y  JM15 ==> Y  JM25 ==> Y  JM35 ==> Y  JM45 ==> Y  JM55 ==> Y
JM06 ==> Y  JM16 ==> Y  JM26 ==> Y  JM36 ==> Y  JM46 ==> Y  JM56 ==> Y
JM07 ==> Y  JM17 ==> Y  JM27 ==> Y  JM37 ==> Y  JM47 ==> Y  JM57 ==> Y
JM08 ==> Y  JM18 ==> Y  JM28 ==> Y  JM38 ==> Y  JM48 ==> Y  JM58 ==> Y
JM09 ==> Y  JM19 ==> Y  JM29 ==> Y  JM39 ==> Y  JM49 ==> Y  JM59 ==> Y
JM10 ==> Y  JM20 ==> Y  JM30 ==> Y  JM40 ==> Y  JM50 ==> Y  JM60 ==> Y

      Note 1: Code "A" is applicable only to the product default record.

F1=HELP      F2=SPLIT      F3=END      F4=RETURN      F5=RFIND      F6=RCHANGE
F7=UP        F8=DOWN      F9=SWAP     F10=LEFT      F11=RIGHT     F12=RETRIEVE
. . . . .

```

1. Press <ENTER> on the previous screen to access this screen.
2. Y in the message field will cause the message to be sent to MVS console.
3. A in the message field means that an "Alert" will be sent. The Alert will remain on the console until deleted by operator.



**MESSAGE POSTING TO SPECIFIC USERID-** The ability to send messages to specific userids will be implemented in the same manner as console messages by setting the Y flag in the individual userid record. This function is currently not active.



**JM39 is critical abend.** We recommend this be turned on: 'Y' or 'A'.

## JCL /Substitution Security Screen

```

-----| JCL/Substitution Security Definition for ==> TESTUSER-----
Option ==>

      Indicate if function should be supplied to Userid (Y OR N):

----- JCL/Master Functions -----
      RESOLVE ==> Y      RESET ==> Y      DISPLAY ==> Y
      LIBRARY ==> Y      OPINS ==> Y      RECOVERY ==> Y
      JCLSCAN ==> Y      E/OPINS==> N

      --- <== Use staging PDS (JMSTGPDS) Y,N
      |
      | Master JCL      ==>
      --> Resolved JCL  ==>
      | Document Data Set ==>
      --> Rerun PDS    ==>

      Use ISPF File Tailoring for symbolic substitution ==>

----- Special Functions -----
      ISF ACCESS RESTRICTED ==> Y      SPECIAL SECURITY ATTRIBUTE ==> Y

```

1. Edit "JCLMASTR".
2. Enter "Y" to authorize: .

RESOLVE	Allow user to resolve JCL scheduled for submission.
LIBRARY	Allow user to edit the Master Submit PDS.
JCLSCAN	This is an exit inside JCL/Master which will allow the use of a JCL scanning module from another software vendor. If implemented, the user may edit JCL, turn control over to the scanning product, and then return to JCL/Master.
RESET	Allow the user ability to remove jobs from the Resolved PDS after symbolic substitution has taken place and repost the JCL Setup flag (MT #5).
OPINS	Allow user access to the doclib which contains operator instructions.
E/OPINS	Allow user edit capability of doclib members for operator instructions.
DISPLAY	Allow user to display the JCL for a job which has been resolved.
RECOVERY	Allow user to edit JCL residing in the JMSTGPDS or JMRERUN PDS.

3. Datasets usage -

- A. STAGING PDS** - Where the scheduled job's JCL is placed - ready for submission. Enter 'Y' if you are using JMSTGPDS.
- B. MASTER JCL** - Where unmodified JCL is taken from for substitution.

- C. **RESOLVE JCL** - Where the modified JCL is placed and readied for submission by JOB/Master® after the substitution has taken place.
  - D. **DOCUMENT DATA SET** - Where free format documentation is stored for browsing or updating online. (OPINS-E/OPINS)
  - E. **RERUN PDS** - Submitted JCL saved here following each submit, if the option is selected at “*Profile*” level.
4. Use ISPF file tailoring
- Specify **Y** to allow use of File Tailoring Symbolic Substitution. See *OPS System Reference Manual* for information on ISPF.
5. Special Functions
- ISF ACCESS RESTRICTED
- Specify **N** to allow user access to security setup.
- SPECIAL SECURITY ATTRIBUTE
- Specify **Y** to allow this user to override the limitation record.

## RUN/Master® Security Screen

```

-----| RUN/Master® Security Definition for ==> TESTUSER|-----
Option ==>

      Indicate if function should be supplied to Userid (Y OR N):

----- Knowledge Base Functions -----
RESTART      RESTART      HISTORY
REVIEW ==> Y  ACTION ==> Y  DISPLAY ==> Y

----- On-line Assist Functions -----
ALTER JCL ==> Y          RERUN SUBMIT ==> Y

Default Rerun PDS ==>
Use JOB/Master®
Staging PDS ==>

----- Special Functions -----
ISF ACCESS RESTRICTED ==> Y    SPECIAL SECURITY ATTRIBUTE ==> Y

```

1. Illustrated here are RUN/Master® functions that are discussed in the OPS/Master® Manual. Set the flag to allow or restrict functions.
2. Edit to reflect name of Rerun PDS.

3. ISF ACCESS RESTRICTED - Remember to use “N” on the first default record added. This will allow you to add user records for this product. After one user record with “N” is added, return to the default record and change accordingly.

## CONSOLE/Master® Security Screen

```

-----| CONSOLE/Master® Security Definition for ==> TESTUSER|-----
Option ==>

      Indicate if function should be supplied to Userid (Y OR N):

----- Automated Operator Functions -----
      BROWSE ==> Y      DELETE ==> Y      ADD/UPDATE ==> Y

----- MVS Console Facility -----
      SELECT ==> Y      DISPLAY ==> Y      COMMAND ==> Y      REPLY ==> Y
                                INITIAL CONSOLE ADDR ==> 700

----- Special Functions -----
      ISF ACCESS RESTRICTED ==> Y      SPECIAL SECURITY ATTRIBUTE ==> Y

```

1. Illustrated here are CONSOLE/Master® data base functions: Browse, Delete, Add/Update. Set the flag to allow or restrict these functions.
2. Select “Allow user to Select the MVS Console” option.
3. COMMAND - Allows the user to enter console commands.
4. DISPLAY - Allows the user to display console buffers.
5. INITIAL CONSOLE ADDR - The console address for commands to apply. “N” at user level will use the default.
6. REPLY - Allows replies to the WTO messages.
7. SELECT - The user may select console ID.

# Chapter 34

---

## JOB/Master® Database set up

---

Before you execute JMSCHED to schedule jobs, two (2) calendars, WORKDYnn and HOLIDYnn (where nn represents the numeric value for the year), must be added to the JOB/Master® database. This must be done even if you have made the decision to specify your own calendars in the job definitions. You need not mark any dates on these two calendars. If no Holiday/exception calendar is specifically referenced in JOB/Master® database definition JMSCHED will default to the HOLIDYnn calendar.

The HOLIDYnn and WORKDYnn calendars will be automatically propagated to the next year (*refer to Calendar Propagation in the JOB/Master® Manual*). If the HOLIDYnn is not appropriate for your site, you can create unique HOLIDAY (*exception*) calendars which will meet your needs. However, you must reference them accordingly in the database and make certain they are properly updated from year to year.

## Creating WORKDYnn/HOLIDYnn

To create the calendars, enter OPS/Master® as described earlier. Enter the JOB/Master® Database by selecting 'D'.

[illegible]

Defining Calendars begins at the JOB/Master® DATA BASE FUNCTIONS screen.

```

----- JOB/Master® DATA BASE FUNCTIONS -----
COMMAND ==>

      ID: JM01      USER = P390K      DATE = 97/09/30 - 97.273      TIME = 12:29
-----

OPTION ==> A      A DD / B ROWSE; / U PD;      / D EL;      / I NQ. D.B. ENTRIES

TYPE ==> C      J OB      / S YSTEM      / P PROCESS KEYWORD DEF.
      C ALENDAR      / N EG/COREQ DEF.      / G ROUP MESSAGE DEF.
      / D ATASET DEF.      / M ESSAGE DEFINITION

NAME ==> WORKDYNN
STEPNAME ==> _____ (STEPNAME (PROC) IF JOBSTEP DEFINITION)
PROC STEPNAME ==> _____ (STEPNAME (PGM=) IF JOBSTEP DEFINITION)

DATA SET NAME ==> _____ (IF TYPE D)

CONFIRM = PF4      CANCEL= PF5      OR TYPE "CANCEL" "CONFIRM" AT COMMAND LINE
F1=HELP      F2=SPLIT      F3=END      F4=CONFIRM      F5=CANCEL      F6=CO
F7=UP      F8=DOWN      F9=SWAP      F10=SHIFT      F11=RIGHT      F12=RETRIEVE
. . . . .

```

A	=	Add
C	=	Calendar
WORKDYnn	=	Name ( <i>Calendar being defined</i> )
nn	=	where nn = yy
<ENTER>		



Upon hitting <ENTER> the following screen will appear:

```

AC ----- JOB/Master® CALENDAR DEFINITION SCREEN -----
COMMAND ==>

-----
CALENDAR NAME  =: WORKDYNN    YEAR => 97    SCHEDULE/NET => *****
DESCRIPTION    =>

    MONTH      => A
    WEEK        => A
    RELDAY      => MO  TU  WE  TH  FR
    ACTDATE     =>

-----
PERIOD START END DATES (MMDD) -----
1. 0000 0000  2. 0000 0000  3. 0000 0000  4. 0000 0000  5. 0000 0000
6. 0000 0000  7. 0000 0000  8. 0000 0000  9. 0000 0000 10. 0000 0000
11. 0000 0000 12. 0000 0000 13. 0000 0000

F1=HELP      F2=SPLIT      F3=END      F4=CONFIRM    F5=CANCEL    F6=CO
F7=UP        F8=DOWN      F9=SWAP    F10=SHIFT    F11=RIGHT    F12=RETRIEVE
. . . . .

```

Fill in the necessary fields: Make certain the YEAR==> is reflecting the appropriate year (i.e., if you are creating for anything other than the current year, this field must be changed).

DESCRIPTION	This field is free form.
MONTH==>	Keying in an 'A' will select 'all' months.
WEEK==>	Keying in an 'A' will select 'all' weeks.
RELDAY/ACTDATE	Select the days appropriate for your site or leave blank and no days/dates will be marked. PF4 to CONFIRM.

Following the same steps, add the HOLIDYnn calendar. PF4 to CONFIRM. See the *OPS Systems Reference Manual* discussion on "Job Database Creation" for more information regarding calendars: creating, updating and propagating.



## Chapter 35

### Job Tracking

The JOBQ record sent with the product is seeded during installation with data that is necessary for successfully bringing up the JMJOBQ. However, the information (SMF-ID, etc.) might not correspond with site standards, so before beginning to use JOB/Master®, enter OPS/Master® by selecting ‘O’, from ISPF Primary Menu; this will give you access to JOB/Master® main menu panel. Select ‘J’ for JOB/Master® region (JM01). Select ‘T’ for Job Tracking.

Once in tracking, perform the following task: key in either PS or SS at the OPTION ==> line of the tracking screen.

This is what you should see appear on your screen:

```

----- Job./Master Local Complex Status-----
Command ==>
-----
Option => PS      SMF-ID =  OSR1  JOB/Master® Control Region ID: JM01
Main   => OSR1    (Submit Facility Default Processor)
-----
Priority:  A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
(A,I)    =>
A ctive will be selected for submit; I nactive will be selected (BLANK=A)
-----
      CPU      Submit      Last JOBQ
      SMF-ID    Status      Scan
      -----
      OSR1      ACTIVE      12:34
-----

F1=HELP      F2=SPLIT      F3=END      F4=CONFIRM      F5=CANCEL      F6=CO
F7=UP        F8=DOWN       F9=SWAP     F10=SHIFT      F11=RIGHT     F12=RETRIEVE
. . . . .

```

At the OPTION==> line key in QUIT and enter the SMF-ID which was sent with the product: SYSB.

```

----- Job./Master Local Complex Status -----
Command ==>
-----
Option => QUIT   SMF-ID =  OSR1  JOB/Master@ Control Region ID: JM01
Main   => SYSC   (Submit Facility Default Processor)
-----
Priority:  A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
(A,I)    =>                                     (Blank=A)
A ctive will be selected for submit; I nactive will be selected
-----
CPU      Submit      Last JOBQ
SMF-ID   Status      Scan
-----
SYSB     STOPPED     15:18
SYSC     ACTIVE      06:57
-----

F1=HELP      F2=SPLIT    F3=END      F4=CONFIRM   F5=CANCEL   F6=CO
F7=UP        F8=DOWN     F9=SWAP    F10=SHIFT   F11=RIGHT   F12=RETRIEVE
. . . . .

```

PF4 to <CONFIRM>

Now, when either an SS or PS are issued, you should only see site specific SMF-ID:

```

----- JOB/Master@ Local Complex Status -----
Command ==>
-----
Option => PS     SMF-ID =  OSR1  JOB/Master@ Control Region ID: JM01
Main   => SYSC   (Submit Facility Default Processor)
-----
Priority:  A B C D E F G H I J K L M N O P Q R S T U V W X Y Z
(A,I)    =>                                     (Blank=A)
A ctive will be selected for submit; I nactive will not be selected
-----
CPU      Submit      Last JOBQ
SMF-ID   Status      Scan
-----
SYSC     ACTIVE      07:00
-----

F1=HELP      F2=SPLIT    F3=END      F4=CONFIRM   F5=CANCEL   F6=CO
F7=UP        F8=DOWN     F9=SWAP    F10=SHIFT   F11=RIGHT   F12=RETRIEVE
. . . . .

```

# Chapter 36

---

## Additional Information

---

### LOOPDRV

LOOPDRV is a utility program developed by Mantissa Corporation and delivered with the product in the INSTLIB. It provides the user with a 'job' which can execute without impacting normal production environment, while, at the same time, testing OPS functionality. This is accomplished by appointing the appropriate LOOPDRV parms and executing the program.

#### *Examples*

##### **EXAMPLE 1:**

```
000210//JOB LIBDD DSN=OPS.R5.LOADLIB,DISP=SHR
000220//STEP1 EXEC PGM=LOOPDRV,PARM='000,0000,005'
      PARM VALUES (example 1) :
      000 = zero CPU time
      0000 = no condition code value
      005 = 5 seconds wall clock time
```

The above example of LOOPDRV executes for 5 seconds of wall clock and issues a condition code of 0 at step termination.

##### **EXAMPLE 2:**

```
000210//JOB LIBDD DSN=OPS.R5.LOADLIB,DISP=SHR
000220//STEP1 EXEC PGM=LOOPDRV,PARM='005,0016,000'
      PARM VALUES (example 2) :
      005 = 5 seconds CPU time
      0016 = condition code of 16
      000 = zero wall clock time
```

The above example of LOOPDRV executes for 5 seconds of CPU time and issue a condition code of 16 at step termination.

**EXAMPLE 3:**

```
000210//JOB LIBDD DSN=OPS.R5.LOADLIB,DISP=SHR
000220//STEP1 EXEC PGM=LOOPDRV,PARM='000,0000,100,A'
      PARM VALUES (example 3) :
      000 = zero CPU time
      0000 = condition code value 0
      100 = 1 minute wall clock time
      A = ABEND U999 at step completion
```

The above example of LOOPDRV executes for 1 minute wall clock time and issue a U999 abend at step completion. The U999 abend is requested by the 'A' after the wall clock parameter.




---

*Use either CPU time or Wall Clock time. Don't use both in the same parm.*

---

**Multiple Step LOOPDRV**

```
000100 //LOOPDRV JOB (,),'MANTISSA/TEST',
000200 //          MSGCLASS=E
000210 //JOB LIB DD DD          DSN=OPS.R5.LOADLIB,DISP=SHR
000220 //STEP1 EXEC PGM=LOOPDRV,PARM='000,0000,100'
000230 //STEP10 EXEC PGM=LOOPDRV,PARM='000,0016,001'
000240 //STEP15 EXEC PGM=LOOPDRV,PARM='000,0000,035'
000250 //STEP20 EXEC PGM=LOOPDRV,PARM='000,0004,010'
```

**When to use LOOPDRV:**

1. Testing a new system
2. Testing new jobs to an application
3. Testing step triggering and condition code checking (REPAIR JOBS)
4. Testing JOB/Master® interaction with CONSOLE/Master® - i.e. JMCN
5. Testing CONSOLE/Master® rules
6. Testing RUN/Master®
7. Any time a dummy job is needed.

## Run Mode Option

The Run Mode option allows the user to schedule jobs according to the readiness of the application. Jobs can be scheduled to actually execute or only simulate execution. There are three possible Run Mode Options:

**PRODUCTION (P)**

Global Record(Profile):	Can be overridden at the System and Job level.
System Record:	Can be overridden at the Job level.
Job Record:	Will place job onto LQ and actually run JCL.

**When To Use PRODUCTION:**

Once JOB/Master® has been installed and system testing completed, the Global Record in the Profile should be changed to production mode so jobs may begin executing. From that point forward (*taking into consideration site standards and change control procedures*) the majority of the jobs in the system will be executed.

***CHECK (C)***

Global Record(Profile): Cannot be overridden at the System and Job level.

System Record: Cannot be overridden at the Job level.

Job Record: Will place job onto LQ but will simulate execution.

**When To Use CHECK:**

Check mode is most often used to test a job or system and its interaction with JOB/Master® functions. Scheduling criteria can be defined to the JOB/Master® database before the programs are ready when the system or job is put in check mode. Check mode only simulates the job execution, as none of the execution JCL actually gets moved to the JMSTGPDS or is called at submit time. This technique gives an opportunity to make certain everything is working properly, jobs are scheduling, predecessor relationships are met, triggers are working etc. BEFORE all jobs are moved into production.

***SELECT (S)***

Global Record(Profile): N/A

System Record: Will default to check mode unless overridden at the Job level.

Job Record: Will default to check mode unless included on LQ prior to submit.

**When To Use SELECT:**

During the last phase of testing, some jobs in a new or modified application stream may not be ready to execute regularly in production. Also, User Departments may have a series of jobs that may or may not need to be executed that night and they do not know before the schedule is run. Jobs in select mode will be placed on the JOBQ, but will default to executing in check mode, unless the job is included from the LQ prior to submission. Jobs in Select Mode will actually have JCL moved to JMSTGPDS.




---

***Select mode should NOT be used indiscriminately because of overhead and storage issues in processing the JOBQ.***

---

## Select Mode On The List Queue

As described in the Job Tracking section, an additional field has been added on the LQ screen. The M ==> field reflects the mode in which a job has been defined to run: P, S, or C.

```

(LQ) ----- JOB/Master@ Scheduling Queue ----- Row 1 from 14
Command ==>                                     Scroll = Page

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 98/09/29 98.272 Time= 10:12 -----
S | Job |T|Date|Time| C u r r e n t   S t a t u s |M ST|Alt.Def
-----
-- SELECT01 98272 0800 * SELECT MODE /ENTER I TO RUN JOB S C
I- SELECT02 98272 0802 * SELECT MODE /ENTER I TO RUN JOB S C
-- SELECT03 98272 0805 *INCLUDED TO RUN BY ---> P390K S P
-- SELECT04 98272 0808 * SELECT MODE /ENTER I TO RUN JOB S C
-- SELECT05 98272 0810 * SELECT MODE /ENTER I TO RUN JOB S C
-- SELECT12 98272 0845 J03364 IN EXECUTION SID -> OSR1 P E
X- SELECT13 98272 0845 DYNAMICALLY ADDED TO SCHEDULE P P
-- SELECT14 98272 0845 J03366 SUBMITTED TO JES INPUT QUEUE P Q
-- SELECT15 98272 0845 J03367 SUBMITTED TO JES INPUT QUEUE P Q
-- SELECT21 98272 0845 * IN CHECK MODE, NOT SUBMITTED C D
-- SELECT22 98272 0845 * IN CHECK MODE, NOT SUBMITTED C D
-- SELECT23 98272 0845 * IN CHECK MODE, NOT SUBMITTED C D
-- SELECT24 98272 0845 * IN CHECK MODE, NOT SUBMITTED C D
-- SELECT25 98272 0845 * IN CHECK MODE, NOT SUBMITTED C D
***** Bottom of data *****

F1=HELP      F2=SPLIT      F3=END      F4=CONFIRM      F5=CANCEL      F6=CO
F7=UP        F8=DOWN      F9=SWAP     F10=SHIFT     F11=RIGHT    F12=RETRIEVE

```

To include/exclude those jobs defined as select mode, before the job goes into execution, take the cursor to the line in the S column of the LQ which corresponds with the job to be changed. Enter one of the following values:

I=**I**NCLUDE Include this job in production cycle; at submit time call the JCL from staging PDS or the user library.

X=**E**XCLUDE Exclude this job from running in production; only simulate. May be used for jobs which are flagged as select mode, and having once been changed to include, now must be altered back to exclude. (*This feature can also be utilized to exclude a job on the LQ in production mode*).

Press <ENTER>.

- The M(mode) ==> field represents the mode defined for each job.
- Initially, the ST (status) ==> field represents the default for the mode (*i.e., the default status for Select mode is Check status*). Now, however, the ST ==> field reflects the current execution status.
- Note that the CURRENT STATUS ==> field reflects the changes made (*SELECT04, SELECT05 and SELECT13*) as described below:

SELECT04 No action is required to run this job in **c**heck status.

SELECT05 S mode has been flagged to include; to run in **p**roduction status; to actually execute the JCL.



SELECT13

P mode has now been altered to exclude; to run in check status; to simulate.

After the changes, the LQ screen will look like this:

```

(LQ) ----- JOB/Master® Scheduling Queue ----- Row 1 from 14
Command ==>                                     Scroll = Page

Set=> Job= ----- Sys= ----- Date= ----- AB - MT - EX - DC - OP -
<<(Shift)----- Date= 97/09/29 98.272 Time= 10:12 -----
S | Job | T|Date |Time| C u r r e n t S t a t u s |M ST|Alt.Def.
-----
-- SELECT01 98272 0800 * SELECT MODE /ENTER I TO RUN JOB S C
-- SELECT02 98272 0802 *INCLUDED TO RUN BY ---> P390K S P
-- SELECT03 98272 0805 *INCLUDED TO RUN BY ---> P390K S P
-- SELECT04 98272 0808 * SELECT MODE /ENTER I TO RUN JOB S C
-- SELECT05 98272 0810 * SELECT MODE /ENTER I TO RUN JOB S C
-- SELECT12 98272 0845 J03364 IN EXECUTION SID -> OSR1 P E
-- SELECT13 98272 0845 *EXCLUDED TO SIMULATE BY ---> P390K P P
-- SELECT14 98272 0845 J03366 SUBMITTED TO JES INPUT QUEUE P Q
-- SELECT15 98272 0845 J03367 SUBMITTED TO JES INPUT QUEUE P Q
-- SELECT21 98272 0845 * IN CHECK MODE, NOT SUBMITTED C D
-- SELECT22 98272 0845 * IN CHECK MODE, NOT SUBMITTED C D
-- SELECT23 98272 0845 * IN CHECK MODE, NOT SUBMITTED C D
-- SELECT24 98272 0845 * IN CHECK MODE, NOT SUBMITTED C D
-- SELECT25 98272 0845 * IN CHECK MODE, NOT SUBMITTED C D
***** Bottom of data *****

F1=HELP      F2=SPLIT      F3=END      F4=CONFIRM      F5=CANCEL      F6=CO
F7=UP        F8=DOWN       F9=SWAP     F10=SHIFT     F11=RIGHT    F12=RETRIEVE

```

Jobs in select or check mode will indicate that the JCL was not submitted and the ST ==> field will change to a status of D to indicate that the LQ record will be deleted.



**Once the job(s) have entered the JES input queue and/or gone into execution; it is TOO LATE to make the change to include or exclude.**





# MESSAGES & CODES

Release 5.20.1

**Mantissa Corporation®**  
1012 Edenton Street  
Birmingham, Alabama 35242

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# Chapter 37

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## JOB/Master® Region Messages

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This section contains messages which are prefixed with the characters “JM”. These messages pertain to JOB/Master® software product. Messages from other components of OPS/Master® Base software which are issued on behalf of JOB/Master® are prefixed with other than characters “JM” and are therefore documented in other sections of this manual.

### Descriptions

#### JMCN dbname COMMAND REQUEST FOR desc.

**Description:** A database definition identified as a console command, SUBMIT TYPE (C), has been initiated. The message is sent to the console and can be used to trigger other events.

dbname = database entry name

desc. = description field from the database definition

**Action:** None

#### JMIA JOBMASER CONTROL REGION SHUTDOWN

**Description:** The control region has been shutdown through the online tracking system, or by the JMSHUT procedure.

**Action:** None

#### JMIB GETMAIN FAILED FOR CSA STORAGE

**Description:** Common storage could not be acquired.

**Action:** Determine if CSA has been fragmented and enough storage is not available or all CSA storage has been used. In the latest version, OPS only uses less than 1K of storage. Restart JOB/Master® when enough CSA is available.

**JMIC “JMV TAMS” COULD NOT BE ATTACHED**

**Description:** JM0V tried to attach program JMV TAMS but could not.

**Action:** Verify that JMV TAMS is in the load lib where JMBV is being executed from.

**JMID JOB/Master® DETECTED ITS SUBTASK WAS CANCELLED**

**Description:** JOB/Master® detected that its Dataset Triggering subtask ‘JMD-SNMON’ was cancelled. JOB/Master® will attempt to reattach it.

**Action:** Determine the reason the subtask was cancelled. The most likely reason is that a security product did not like the subtask accessing a dataset that was specified as containing data etc. JOB/Master® needs access to all datasets to validate.

**JMIE JOB/Master® RESTARTED ITS SUBTASK 10 TIMES**

**Description:** JOB/Master® restarted its subtask ten (10) times.

**Action:** Determine the reason JOB/Master®’s subtask cannot remain up!  
Note: This may prevent JOB/Master® from stopping normally. If so, use force.

**JMIN CONTROL REGION INITIALIZATION COMPLETE V#.#.#**

**Description:** Initialization of scheduling files has been completed.

PTMS APPLIED => xxxxxxxxxxxxxxxx xxxxx ...

Any PTMS which have been applied to the base release will be listed by x. This message will be found in the History File Message Log.

**Action:** None. Information may be required by Mantissa support assistance.

**JMI0 JOBMAS TER CONTROL REGION ACTIVE V#.R#.M#**

**Description:** The control region is active. This message precedes the initialization of scheduling files.

**Action:** None.

**JMI1 ssss SUBSYSTEM ENTRY NOT FOUND**

**Description:** The subsystem entry for ssss could not be located.

**Action:** Make sure that OPSMASTR has been run before starting up JOB/Master.

**JMI2 x PARM FIELD ERROR CORRECT AND RESTART**

**Description:** The startup parameter identified by x is invalid.

**Action:** Check the control region startup parameters for valid values and correct those in error. Restart the control region.

**JMI3 JOBMASTER LOADLIB NOT IN APF LIST**

**Description:** The library from which JOB/Master® has been loaded is not an authorized library.

**Action:** The library must be in the linklist or authorized through the IEAAPFxx member of SYS1.PARMLIB. Insure that the VOLSER of the entry in IEAAPFxx is the volume on which the executing library resides.

**JMI4 JOBMASTER ALREADY ACTIVE ON THIS PROCESSOR**

**Description:** JOB/Master® being started for a subsystem id, JM01 through JM04, which is already initialized.

**Action:** Verify that the control region is not executing. Restart the region with the FORC=Y parameter. This will free the resources assigned to the subsystem and reinitialize resources.

**JMI5 UNRECOVERABLE ERROR - JOBMASTER - TERMINATING**

**Description:** An abend condition has been detected. JOB/Master® will issue a standard U999 abend and terminate after releasing its resources.

**Action:** Determine the cause of the abend and if correctable restart JOB/Master®.

**JMI6 JOBMASTER TRIAL EXPIRED - PROCESSING TERMINATED**

**Description:** The JOB/Master® trial period has expired.

**Action:** If additional time is required, call your sales representative.

**JMI7 JOBMASTER RESOURCE CLEANUP INITIATED**

**Description:** JOB/Master® has been terminated and will attempt to release its' acquired resources.

**Action:** None

**JMI8 JOBMASTER RESOURCE CLEANUP COMPLETED**

**Description:** The resources for this control region have been released.

**Action:** None

**JMI9 FREEMAIN UNSUCCESSFUL FOR CSA STORAGE**

**Description:** The resources for the common storage area could not be freed. Probably some other system abend has corrupted storage control blocks.

**Action:** See Message JMIB.

**JMI10W \*\* WARNING \*\* - OPS WILL EXPIRE ON MM/DD/YY**

**Description:** This is a warning message to let users know the OPS product is scheduled to expire on the date shown in the message.

**Action:** Contact Mantissa Product Support to arrange for a new password.

**JMI11 \*\* OPS HAS EXPIRED \*\***

**Description:** This is a error message to let users know the OPS product key is no longer valid.

**Action:** Contact Mantissa Product Support ASAP for a new password ASAP to enable the product to initialize.

**JMI12 \*\* UNRELATED SECURITY CODE \*\***

**Description:** This is a error message to let users know the OPS product key as entered is invalid. This could be caused by entry error (please use cut and paste for accuracy), the wrong key was used (accidental use of one of our other product keys) or too many codes were provided in the parameter member (a maximum of 5 CODE= statements are supported).

**Action:** Verify the key(s) that were used and if unable to determine the error, contact Mantissa Product Support for assistance.

**JMI13 \*\* INVALID SECURITY CODE \*\***

**Description:** This is a error message to let users know the OPS product key as entered is invalid. This could be caused by entry error (please use cut and paste for accuracy), the wrong key was used (accidental use of one of our other product keys) or the COMPANY= parameter does not match the value in the key.

**Action:** Verify the key(s) that were used and if unable to determine the error, contact Mantissa Product Support for assistance.

**JMI14 \*\* INVALID CPU-ID \*\***

**Description:** This is a error message to let users know the OPS product key as entered is invalid. This could be caused by entry error (please use cut and paste for accuracy), the wrong key was used (accidental use of one of our other product keys) or the machine's CPU ID does not match one of the CPU ID's generated in one of the codes were provided in the parameter member (a maximum of 5 CODE= statements are supported).

**Action:** Verify the key(s) that were used and if unable to determine the error, contact Mantissa Product Support for assistance.

**JMRD JOBMASTR(xxxx) CONTROLLER NOT ACTIVE**

**Description:** The JMRD message is sent by a subroutine that passes a unit of work over to subsystem xxxx (i.e., JM01) to be processed. The subroutine found the subsystem entry in the subsystem control table but when it was ready to move the data, the pointer to our global buffers was cleared. This is usually the case when Job/Master is shutdown.

**Action:** Make sure that Job/Master is up and retry the task which gave the error.

**JMSC SYNC ERROR**

**Description:** The JMSC message is sent by JMSCHED2 when starting up to inform us it couldn't dynamically allocate the files. The reason JMSCHED2 couldn't is because it couldn't find the high-level qualifiers stored in the CSA buffers chained off of the subsystem control table.



The only way this could happen is that Job/Master is down.

**Action:** Make sure that Job/Master is up and retry the task which gave the error.

### **JMSUBMIT-01 INTERNAL ERROR - PARAM FIELD**

**Description:** The information passed from the control region was corrupted.

**Action:** Stop and restart JOB/Master when able and retry. If this error reoccurs, contact Mantissa Product Support.

### **JMSUBMIT-02 INTERNAL ERROR - INVALID SUBMIT TYPE**

**Description:** The information passed from the control region was corrupted.

**Action:** Stop and restart JOB/Master when able and retry. If this error reoccurs, contact Mantissa Product Support.

### **JMSUBMIT-03 RC/Reason code from WLM query routine ==> cccccccc ssssssss <==**

**Description:** Return code(cccccccc) and reason code(sssssss) from the WLM query routine describes the error when trying to determine where to submit the job. If RC=4, routine will use what's available and submit the JOB to least used. If RC greater than 4, then JOB/Master will revert to using the \*/JOBPARM SYSAFF=(.....) JCL statement.

### **JMSUBMIT-04 MASTER CONSOLE NOT FOUND - MVS**

**Description:** The MVS master console was not found.

**Action:** Stop and restart JOB/Master when able and retry. If this error reoccurs, contact Mantissa Product Support.

### **JMSUBMIT-05 CANNOT DETERMINE OPERATING SYSTEM**

**Description:** JOB/Master cannot determine what operating system it is running on.

**Action:** Contact Mantissa Product Support.

### **JMSUBMIT-06 JMSUBEXT NOT FOUND, EXIT NOT ACTIVE**

**Description:** JMSUBEXT was not found in the hlq.LOADLIB used by JOB/Master.

**Action:** Make sure the OPS hlq.LOADLIB was available and the member JMSUBEXT exists.

### **JMSUBMIT-07 INVALID RETURN CODE FROM USER EXIT - (EXIT DISABLED)**

**Description:** JMSUBEXT returned an invalid return code.

**Action:** Make sure the changes made to the exit do not violate the required parameters or use the original distributed copy of JMSUBEXT that simply returns without doing anything.

**JMSUBMIT-08      \*\*\*\*\* ERROR ON INTRDR1 \*\*\*\*\***

**Description:** Internal error in the JES internal reader routine.

**Action:** Check with your systems programmer to evaluate what is wrong and retry.

**JMSUBMIT-09      \*\*\*\*\* JOB # NOT FOUND ON INTRDR1 \*\*\*\*\***

**Description:** The job JOB/Master just submitted was not found in JES when JOB/Master tried to retrieve the JOB number.

**Action:** Check with your systems programmer to evaluate what is wrong and retry.

**JMSUBMIT-10      SUBMIT CANCELLED BY USER EXIT**

**Description:** Your user exit JMSUBEXT determined this job did not meet some criteria established by you operations staff.

**Action:** Check with your operations staff to evaluate what is wrong, correct the error and retry.

**JM00 CONTROL RECORD NOT LOCATED FOR ddname**

**Description:** The file, identified by ddname, has no control record.

**Action:**

1. Verify that the file was correctly initialized.
2. If the file was initialized properly at installation.
3. Verify that the file has not been overwritten.
4. Inspect to see that there are no hardware errors.

**JM01 jobname number EXTERNAL JOB, MATCH ON JOBQ, NOT PROCESSED EXTERNAL SUBMIT FLAG = N**

**Description:** The job has entered the system with an identifying JOB/Master® character in col. 71 of the jobcard. The job was found on the JOBQ and the JOB/Master® database, and the EXTERNAL SUBMIT flag for this job on the database was set to “N”. The job will be tracked. However, the job on the schedule queue, (JOBQ), will remain as the scheduled job for processing.

**Action:** If the job is to be tracked as the scheduled job update the Database definition in the External Submit Field, by changing it to a “Y”.

**JM02 JOB/STEP jobname/procstep.step FAILED completion**

**Description:** The job or job step failed. The completion code was not a valid completion code for this job or job step according to the jobs database definition.

j = jobname

p = procstep name

s = step name (pgm= exec card)

**Action:** No JOB/Master® action required.

1. The job can be resubmitted for completion after the error has been corrected.
2. Keep “K” the Job (*Force completion - allows all triggered jobs from this job to begin submission*).
3. Cancel “C” the job (*Cancel the job and allow all triggered jobs to begin submission*).
4. Purge “P” the job (*Purge without allowing the triggered jobs to begin submission*).

**JM03 jobname number SUBMITTED BY function FROM ddname  
ALTERNATE DEF.= dbname MVS JOBNAME = mvsnname  
USER PDS = pdsname**

**Description:** The job was submitted by the scheduling system.

jobname	=	jobname
number	=	job number
function	=	who initiated the submit
ddname	=	DD name of PDS from which JCL was taken
dbname	=	alternate definition name if applicable
mvsnname	=	name of job in the jobcard if not the same as the scheduled name.
pdsname	=	user PDS name if applicable.

**Action:** None

**JM04 JOB/STEP jobname/procstep.step NOT DEFINED TO JOB/  
Master® DATA BASE**

**Description:** The job is running under JOB/Master® control, but there is no entry in the database for the job step.

jobname	=	jobname
procstep	=	procstep name
step	=	step name (pgm = exec card)

**Action:** Define the job step(s) to the database if desired.

**JM05 MANUAL TASK FOR x NEEDS TO BE COMPLETED**

**Description:** This message is the default message sent for a job which is assigned a manual task and no specific message was defined for the job.

**Action:** If a custom message is desired, make a message entry for the jobs database definition.

**JM06 MVS START COMMAND ISSUED FOR task**

**Description:** Task has been started by an MVS start command. The job definition is defined with a submit type of S on the database.

**Action:** None

**JM07 jjjjjjjj NOT STARTED PREDECESSOR -> pppp NOT COMPLETED**

**Description:** Job jjjjjjjj was ready to be submitted but was held because job pppp has not completed.

**Action:** Complete the predecessor and job will begin else force Submit "F" the job (*This should be the last alternative and care should be taken not to destroy the scheduling integrity*).

**JM09 jobname NOT SUBMITTED --> reason.**

**Description:** The jobname was not submitted. The reason is identified.

**Action:** Informative message only.

**JM11 jobname HAS HAD DSN CONTENTION RESOLVED FOR x X...**

**Description:** Jobname was found waiting on datasets. The jobs in contention for the dataset, defined by x were set as negative dependencies for jobname.

**Action:** None The database has been updated for negative dependencies for these two jobs.

**JM12 jobname DSN CONTENTION CANNOT BE RESOLVED FOR x,x...**

**Description:** An attempt was made to update the negative dependency list on the database. The list already exceeds 48 jobs and could not be completed.

**Action:** This job has no more negative dependencies available. Review the entire job criteria and find optional criteria to use. A negative/corequisite definition may be necessary.

**JM16 jobname/procstep.step IN type msg**

**Description:** The processing of the job or job step is the following.

type=	Check mode
	single mode
	/**JMNOEXEC or /**JMCHECK
msg=	dependencies bypassed submit simulated

**Action:** No action necessary unless a change in the running status is required. Update the database for the processing flag or type flag.

**JM17 TRIGGERED JOB jobname NOT SUBMITTED, CALENDAR DAY ddd FOR reason**

**Description:** The job was not submitted for the schedule date ddd because of the reason listed.

<u>reason</u>	
not matched=	The schedule day was not on the calendar associated with the jobs definition.
holiday match=	The schedule day matched a day on the exception calendar associated with the jobs definition.

**Action:**

1. None
2. If desired, change the calendar.

**JM18 TRIGGERED JOB jobname NOT SUBMITTED, reason ddd NOT SCHEDULED**

**Description:** The jobname was not submitted for the scheduled day ddd because of the reason listed.

Reason

DAY

Explanation

The job had a process keyword definition but it was not on the JOBQ.

EXCLUDED FOR DAYThe job was excluded by use of an exclude option during schedule creation.

EXCLUDED DUE TO----- msg -----

**Action:** None

**JM20 jobname date time CANCELLED FROM SCHEDULE DUE TO DEADLINE REQUEST**

**Description:** The job for the schedule date and time was removed from the JOBQ because of the deadline cancel option.

**Action:** None

**JM21 EVENT COMPLETION TRIGGERED FOR JOB/STEP job-name/procstep.step**

**Description:** The job jobstep has been scheduled for processing by the JMEVENT function.

**Action:** None

**JM22 JOB jobname NOT DEFINED TO JOB/Master® DATA BASE**

**Description:** The job has not been defined to the JOB/Master® database.

**Action:** If desired, define the job to the database and then continue with the requested operation.

**JM23 command ISSUED BY user FOR jobname date time manual tasks**

**Description:** The JOB/Master® command was initiated by the user for the jobname with the schedule date and time shown.

**Action:** None

**JM26 JOB/Master®(subsys) LOCKED OUT ON PROCESSOR smfid**

**Description:** In a multi-cpu environment, the control region, on this processor, has not detected any activity from the JOB/Master® region identified by subsys on the processor smfid.

**Action:**

1. Determine if the region is active (*Tracking ST*).
2. Issue a PS for that smfid.
3. If the region is active determine if the cpu is locked or stopped.
4. Activate or unlock the cpu in question.

**JM27 jobname DEPENDENT JOB NOT SUBMITTED DUE TO PREVIOUS CANCEL COMMAND**

**Description:** The job identified by jobname, which had been cancelled from the JOBQ, has been cancelled again. The second cancel will remove the job from the JOBQ without submitting trigger jobs.

**Action:** None

**JM29 jobname NOT TRIGGERED. NOT DEFINED TO DATA BASE**

**Description:** Jobname was triggered by a completing job or step. The global profile option specifies that undefined jobs should not be triggered.

**Action:** Review the job, and Define to the database if desired.

**JM30 jobname msg....**

**Description:** Informational message for jobname.

**Action:** None

**JM31 jobname \* WAITING ON NEGATIVE DEPENDENCY == > negative**

**Description:** Jobname cannot be submitted because the negative dependency, defined on the database for jobname, is active. The job identified by negative is either in the MVS input Q or executing.

**Action:** Wait until the Completion of the negative job. If desired, Force "F" the job (*Caution... "F" should be used with care*)

**JM32 jobname \* NEEDS TAPE DRIVES mmmmS = n mmmmS = n**

**Description:** Jobname cannot be submitted because the number of mmmm tape drives are not available, and the global profile option specifies that tape drive dependencies should be verified. The number of drives required are determined by each execution of the job. "mmm" represents the model number (i.e. 3480).

**Action:** Review the job and determine if the job actually needs the number of tape drives specified (*Job Step Level*). You may Force "F" the job to submit (*The job may get a waiting for devices in JES*). If the profile is set to allow update of tape drives, then the tape drive fields will be updated upon job completion.

**JM33 jobname NOT DEFINED AS TRIGGER JOB. NOT SUBMITTED ALTERNATE DEF. = altname**

**Description:** The jobname was triggered. The trigger job field on the database was not set to Y, indicating that this is a triggered job. If the job is an alternate definition, the alternate name is displayed.

**Action:** Review the job to see if the job is a triggered job. If yes, update the database field Triggered Job to a “Y”.

**JM35 jobname TRIGGERED BY trjob ALTERNATE DEF. = altjob**

**Description:** Jobname was triggered by the job trjob. If the triggered job is an alternate definition it is identified by altjob.

**Action:** None

**JM36 jobname SETUP = xxxxx SINGLE MODE = s PDS MEMBER = member ALT = altjob PDS = pdsname PREDECESSORS = j1,j2**

**Description:** The jobname was dynamically added to the schedule queue. The values entered for the job are identified in the message.

SETUP	=	manual task values
SINGLE MODE	=	single mode option
PDS MEMBER	=	alternate submit member name
ALT	=	alternate definition name
PDS	=	user submit pds
PREDECESSORS	=	additional predecessor jobs

**JM37 user ISSUED COMMAND cmd**

**Description:** The MVS cmd has been issued by user through the console function.

**Action:** None

**JM38 RESOURCE func res BY “JMRESORC” REQUEST**

**Description:** The batch interface was used to attach or detach the JOB/Master® resource.

func=	ATTACH, or DETACH
res=	The name of the RESOURCE.

**Action:** None

**JM39 \*\* CRITICAL \*\* JOB/STEP job/procstep.step FAILED comp**

**Description:** The job or job step failed for the completion reason identified by comp. This message is the same as JM02, but can be used for those jobs which are considered critical. This message can be highlighted so that the failure does not go unnoticed.

**Action:** None

**JM40 INTERNAL ERROR UNKNOWN CODE; CODE = code**

**Description:** A request has been made to the control region. The requested function code is invalid and cannot be determined.

**Action:** Review the Request and correct any errors Contact JOB/Master® support at Mantissa Corp.

**JM41 REQUEST FAILED file STATUS 1 = code1 S2 = code2 MSG =message ENTRY = entryname**

**Description:** The requested function for the file was not successful. Additional information, if applicable, is represented by file return code1 and code2. If a message has been returned it is displayed for the record being accessed and is identified by entryname.

**Action:** None

**JM42 DSN TRIGGER ACTIVATED FOR DSN = dsname FROM TASK = j xxxx**

**Description:** The DSN event for dsname was produced from task j. Any additional message is given in xxxx. Any jobs identified to be triggered by the dataset definition will be triggered.

**Action:** None

**JM43 NO DS TRIGGER FOR d xxxx....**

**Description:** The DSN event for dataset d will not be processed due to the reason identified by xxxx.

**Action:** None

**JM44 INVALID CPU-ID FOR JOB/Master® EXECUTION JOB/Master TRIAL DATE HAS EXPIRED**

**Action:** Call Mantissa Support. The CPU ID for the computer you are running on does not match, or a new expiration date will need to be assigned.

**JM44 WARNING - JOB xxxxxxxx msg**

**Description:** There was a problem detected in the dynamic tape processing.

**Action:**

1. IF xxxxxxxx = \*MVS\* and msg = USES MORE THAN 5 TAPE then call Mantissa Product Support to adjust the tape model table if you are unable to delete the unused tape models in your system.
2. IF xxxxxxxx = jobname and msg = TAPE MODEL # NUMBER NOT FOUND then correct the model number # (1 or 2) in the job definition.

Currently Mantissa's master tape group table has 5 models. They are 3420, 3423, 3480, 3490 and 3590.

**JM45 UPDATE TO D/B**

**Description:** This message is a Problem determination message used in JOB/Master® to Log Before and After updates to the data base.



**JM46 \*\*\*NOTICE\*\*\* JOB/Master® NEEDS MORE BUFFERS**

**Description:** One of the data collection modules couldn't find a free buffer to pass the information to the JOB/Master® control region.

**Action:** Increase the number of buffers by adding/modifying the parm "BUFFS" in the startup JCL for JOB/Master®. See installation guide for more information about the parm.



# Chapter 38

## JOB/Master® Online Messages

The standard short message (first line) is displayed for the error. If PF1 is entered, the longer form of the message (second+ line) is displayed.

### Descriptions

**IS... xxxxx msg**  
**ERROR RETURNED FROM ISPF FILE TAILORING FUNCTION**

**Description:** ISPF file tailoring option has been selected and an ISPF error, identified by xxxxx msg, has been returned from ISPF.

**Action:** Correct the error.

**JM105 NO AUTHORITY(PFK1)**  
**User YOU ARE NOT AUTHORIZED TO PERFORM THIS FUNCTION**

**Description:** A command has been entered for which user is not authorized. The ISF definition is set to N for the command.

**Action:** Contact your System Security Group.

**JM106 ALLOC-E(PFK1)**  
**DS:dsn - member CANNOT BE ALLOCATED**

**Description:** The dataset, dsn, and member could not be allocated for the selected function.

**Action:** Insure the dataset is not exclusively held by another task.

**JM109 OPINS UNAVAILABLE  
DS:dsn - member CANNOT BE ALLOCATED**

**Description:** The dataset, dsn, and member could not allocated for the documentation dataset.

**Action:** Insure the dataset is not exclusively held by another task.

**JM202 jobname SUBMISSION RESET  
jobname - SYMBOL PDS MEMBER DELETED AND “JCL  
SETUP” RE-POSTED**

**Description:** The job was selected for RESET processing. The jcl member was deleted from the staging or resolved pds, and the manual task for jcl setup has been reset to Y.

**Action:** None

**JM203 jobname NOT FOUND  
jobname - NOT FOUND IN dsn**

**Description:** The job was not found in the dsn for the selected function.

**Action:**

1. Verify the DSN is the correct dsn.
2. Verify the jobname is consistent with the DSN Jobname.
3. Verify the concatenation of the libraries being used.
4. Verify the Interactive Security Facility (ISF) library name to be used.

**JM204 MASTER PDS I/O ERROR  
AN I/O HAS OCCURED IN dsn**

**Description:** An I/O error has occurred in the Master PDS identified by dsn.

**Action:** Contact your technical support personnel.

**JM205 SYMBOL PDS I/O ERROR  
AN I/O HAS OCCURED IN THE SYMBOL JCL DATASET**

**Description:** An I/O error has occurred in the Resolved PDS identified by dsn.

**Action:** Contact your local Technical Support Group.

**JM206 RERUN PDS I/O ERROR  
AN I/O HAS OCCURED IN THE RERUN JCL DATASET**

**Description:** An I/O error has occurred in the Rerun PDS identified by dsn.

**Action:** Contact your local Technical Support Group.

**JM207HELP PDS I/O ERROR  
AN I/O HAS OCCURED IN THE HELP DATASET**

**Description:** An I/O error has occurred in the Help/Document PDS identified by dsn.

**Action:** Check for hardware errors.

**JM208 DSN CONFLICT  
MASTER JCL AND RESOLVED JCL PDS MAY NOT BE  
THE SAME**

**Description:** The output of jcl substitution, the RESOLVED PDS, cannot be the same PDS as the input, the MASTER PDS.

**Action:** See the Installation Guide for information on the setup of PDS datasets.

**JM209 DSN ERROR  
FOR STAGING, RESOLVED PDS AND RERUN PDS MUST  
BE THE SAME**

**Description:** The STAGING PDS, if used, is also used as the RERUN PDS. JCL is archived in this PDS for user specified days.

**Action:** Make certain the fields for the STAGING, RESOLVED, and RERUN PDS libraries are the same.

**JM200A OPEN ERROR  
FOR dd, FILE COULD NOT BE OPENED. INSURE ALLO-  
CATION**

**Description:** The file for dd name could not be opened.

**Action:** Determine if the file exists and can be allocated. Allocate the file and restart.

**JM200B MEMBER ERROR  
jcl member OR A )IM MEMBER COULD NOT BE FOUND  
IN ISPSLIB**

**Description:** ISPF file tailoring has been selected to perform symbolic substitution through JCL/Master and an ISPSLIB member could not be found.

**Action:** Correct the JCL skeleton or fix the JOB/Master® member name or place the JCL skeleton in the ISPSLIB DD or add the JCL PDS to the ISPSLIB concatenation.

**JM200C JMSCANEX ERROR  
“JMSCANEX” MODULE NOT FOUND, MODULE NOT IN**

**LOADLIB LIST**

**Description:** JCL scan has been selected and the user written module JMSCANEX cannot be loaded.

**Action:** None

**JM200D JCLSCAN COMPLETE  
“JMSCANEX” HAS COMPLETED THE JCLSCAN FUNCTION, END TO TERMINATE’**

**Description:** The JCLSCAN has been completed for the job.

**Action:** To terminate the function and return to the normal screen press end.

**JM200F USER CANCEL**

**xxx.....**

**Description:** JCL/Master symbolic substitution has been selected and a custom user defined panel is being used. The user panel has set the variable MJCLERR to a non blank value specifying that the substitution function should be terminated in error.

**Action:** Refer to the panel selected and verify the error condition.

**JM200G I/O ERROR  
ERROR HAS OCCURRED IN THE RESOLVED PDS dsn**

**Description:** There has been an I/O error in the RESOLVED JCL PDS.

**Action:** Verify the file for no continued I/O errors. Check for Hardware Error Conditions.

**JM301 jobname NOT FOUND  
jobname - COULD NOT BE LOCATED IN THE JOBMAS-  
TER RERUN DATASET**

**Description:** The job named could not be located in the JOB/Master® RERUN PDS.

**Action:**

1. Verify the Jobname as a JOB/Master® defined Job.
2. Verify the job was scheduled on the date & time requested.

**JM302 jobname NOT FOUND  
jobname - COULD NOT BE FOUND IN dsn**

**Description:** The job named could not be located in the Dataset indicated.

**Action:**

1. Verify the dataset name and the Jobname.
2. Verify the database is correctly calling for the job

from this dataset.

3. Verify the Interactive Security Facility (ISF) for JCL/MASTER is calling for this DSN as the base or User library.

**JM303 jobname OPINS MISSING  
jobname - OPINS COULD NOT BE FOUND IN dsn**

**Description:** The Operations instructions for the job named can not be located in the dataset indicated.

**Action:**

1. Verify that the indicated dataset contains the jobname.
2. Verify the dataset is being called correctly from the ISF facility for JCL/MASTER.

**JM304 UNAVAILABLE  
dsn NOT FOUND OR COULD NOT BE ALLOCATED**

**Description:** The dataset can not be located.

**Action:**

1. Verify the dataset name is a cataloged dataset.
2. Verify the dataset has been entered correctly within the job or the database definition.

**JM307 jobname NOT SCHEDULED  
jobname - NOT ON THE JOBMASER SCHEDULE - JOB  
RESET IGNORED**

**Description:** RESET has been selected for jobname but the job was not found on the schedule queue.

**Action:**

1. Add the job to the schedule. *Either Dynamically or via a Generate Schedule.*
2. Let the job submit according to the criteria or Force submit the job.

**JM308 PARM ERROR  
MANUAL TASK FOR JCL SETUP NOT POSTED ON JOB  
QUEUE**

**Description:** RESOLVE has been selected for a job and the function could not be performed.

**Action:**

1. Set the Manual Task flag for JCL setup for the job required to a Y.
2. Retry the resolve function.

**JM309 CONTROL ERROR  
JOB/Master® CONTROL REGION(subsys) NOT ACTIVE**

**Description:** JOB/Master® access was selected for subsys, but the control region was not active.

**Action:** Activate the requested control region and retry.

**JM401 jobname - EMPTY MEMBER  
jobname - dsn PDS MEMBER IS EMPTY**

**Description:** There is no data in the PDS member of the dsn for the jobname.

**Action:** 1. Verify the member and the dataset.  
2. Restart the function.

**JM403 ENTER VALUE  
ALL VALUES MUST BE RESOLVED BEFORE SUBSTITU-  
TION CAN BE PERFORMED**

**Description:** A value must be entered for all symbols in order to complete the resolve process.

**Action:** Make sure all symbols have a value.

**JM404 SUBSTITUTION COMPLETE  
jobname - SYMBOLIC SUBSTITUTION AND “JCL SETUP”  
FLAGGED AS COMPLETE**

**Description:** The JCL substitution for the requested job has been completed.

**Action:** None

**JM405 jobname - MISSING JCL  
jobname - CONTAINS NO JCL “JOB CARD” - CALL SUP-  
PORT GROUP**

**Description:** RESOLVE has been selected for the jobname. The jcl member does not contain a JOB card.

**Action:** Repair the job and resubmit.

**JM406 (V)ALUE ERROR  
“(V)” - TYPE SYMBOL(S) WILL NOT LOGICALLY FIT  
INTO THE OUTPUT RECORD**

**Description:** A symbolic variable has been entered which does not fit into remainder of the JCL record. (*The symbolic is too long for a single card*).

**Action:** Repair the Job JCL in question. Resolve the job again.

**JM407 symbolic - KEYWORD ERROR  
SYMBOL NAME LENGTH IS > 8 CHARACTERS (NO  
DELIMITER)**

**Description:** The symbolic variable in the jcl record is greater than 8 characters. Insure that delimiter is not missing.

**Action:** Repair the JCL. Resolve the job again.



**JM408 INTERNAL ERROR  
TABLE ERROR PERFORMING SYMBOLIC SUBSTITUTION**

- Description:** Symbolic substitution failed. A variable in the JCL can no longer be found.
- Action:**
1. Verify the job JCL for the presence of the variable.
  2. Resolve the job again.

**JM409 jobname - JCL ERROR  
jobname - "JCL" CARD CONTAINS SYMBOL KEYWORD  
WHICH STARTS IN OR SPANS COLUMN 70**

- Description:** A symbolic has been added to the job JCL which has made the JCL card exceed the column 70 limit.
- Action:**
1. Divide the JCL card into two (2) cards or shorten the symbolic desired.
  2. Resolve the job again.

**JMER001A SUBSYSTEM ENTRY NOT FOUND  
SUBIN NOT FOUND IN THE SUBSYSTEM TABLE - START  
JOB/Master®**

- Description:** Access has been selected but OPS/Master® and JOB/Master® has not been started.
- Action:** Start the OPS/Master® procedure, then activate the JOB/Master® Region.

**JMER001B ISPF ERROR service  
msg**

- Description:** The ISPF error identified by msgid and msg has occurred.
- Action:** Refer to the ISPF Message Manual.

**JMER001C REQUEST FAILED  
msg**

- Description:** The requested function failed. The error is identified by msg.
- Action:** Correct the indicated error.

**JMER002A JOBMASTER NOT ACTIVE  
THE JOBMASTER = (subsys) CONTROL REGION IS NOT  
ACTIVE**

- Description:** Access has been selected but JOB/Master® has not been started.
- Action:** Activate the JOB/Master® Region.

**JMER003A CONTROL RECORD ERROR  
THE JOB/Master (SUBSYS) CONTROL RECORD WAS NOT  
FOUND**

**Description:** The JOB/Master® control record could not be retrieved.

**Action:** 1. Verify that JOB/Master® has not been shutdown.  
2. If the region is active contact Mantissa Support.

**JMER003B PROFILE ERROR  
PROFILE NOT FOUND. ENTER PROFILE AND CONFIRM  
PFKS**

**Description:** An ISPF profile entry for JM01 has not been created.

**Action:** Incorrect application ID &ZAPPLID.  
Make sure the NEWAPPL(JM01) value was not changed in panel JMENBANR.

**JMER004A OPEN ERROR  
“JMBROWS” INTERNAL ERROR, FILE NOT AVAILABLE**

**Description:** The ISPF list datasets could not be accessed.

**Action:** Be sure that the required ISPF datasets are available to your ISPF session.

**JMER005A AUTHORIZATION  
reason**

**Description:** The requested function has been denied by the user command exit. The reason is displayed.

**Action:** Check with your Security Administration Group for JOB/Master®.

**JMER006A NOT AUTHORIZED BY ISF  
USER NOT AUTHORIZED for xxxxx FUNCTION**

**Description:** Function xxxxx is not authorized for this user in the ISF default or user record.

**Action:** Check with your Security Administration Group.

**JMER008A JOBNETWORK ERROR  
user CAN ONLY ACCESS JOBS FOR SCHEDULE/NET  
\*\*\*\*\*/jobnet**

**Description:** The user ISF record specifies the job network name which can be accessed by this user. Only jobs associated with jobnet and job definitions containing a job/network id of \*\*\*\*\* can be accessed.

**Action:** Contact your local Security Administration Group.

**JMER009A INVALID OPTION  
option OPTION UNKNOWN INVALID REQUEST**

**Description:** An invalid option was specified.

**Action:** Re-enter a correct option for this panel.

**JMER009B INVALID KEYWORD  
PROCESS KEYWORD kwd INVALID, RE-ENTER**

**Description:** A process keyword is invalid. The invalid keyword is listed.

**Action:** Re-enter a valid keyword. Create a definition for the keyword desired.

**JMER009C optn ALREADY EXISTS  
entry ALREADY DEFINED TO DB**

**Description:** The option selected for the entry cannot be performed, the entry already exists on the database.

**Action:** Use another entry for the option desired.

**JMER009D NO DB TABLE  
DATA BASE "INQ" MUST BE IN PROCESS FOR  
EXTENDED COPY**

**Description:** A copy function has been selected without an entry name, (*extended copy*), but the session is not being processed from INQ.

**Action:** Select I (*INQ*) from the main menu in order to be able to select from the db list. Retry the copy command.

**JMER009I SYNTAX ERROR  
COMMAND MUST SPECIFY PROPER DATA BASE ENTRY  
NAME**

**Description:** An appropriate entry name must be specified for the function requested.

**Action:** Use the correct command and retry.

**JMER009J ILLOGICAL ADD  
STEP CANNOT BE ADDED IF JOB RECORD DOES NOT  
EXIST**

**Description:** You have attempted to define a Step record without a Job record already defined.

**Action:**

1. Verify the Job name you are entering.
2. Define the Job to the database.
3. Retry the definition of the step.

**JMER009K panel PANEL ERROR**

**msg**

**Description:** An ISPF panel error has occurred. The error is identified by msg.

**Action:** Perform the corrective action required in the ISPF message.

**JMER009L hhmm - hhmm INVALID TIME  
TIMES MUST BE IN THE RANGE 00-23 HOURS AND 00-59  
MINUTES**

**Description:** You have attempted to use a time range outside of the boundaries listed.

**Action:** Correct the entry and retry.

**JMER009R INVALID CONSOLE  
CONSOLE cid IS AN INVALID TYPE OR NOT AVAILABLE**

**Description:** The console address cid is not valid.

**Action:** Enter a valid device address. Console addresses can be verified by issuing an MVS D C command.

**JMER009S INVALID STATUS  
JOB NOT IN PROPER STATUS FOR THIS ACTION,  
IGNORED**

**Description:** An improper function was selected for the job, such as KEEP for a job which is not abended.

**Action:** None

**JMER009U REQUEST DENIED**

**Description:** Only one JOB/Master® session is permitted.

**Action:** None

**JMIM001A CMD EXIT NOT ACTIVE  
“JMCMDTEXT” NOT FOUND IN LOAD LIBRARY, EXIT  
INACTIVE**

**Description:** A user command exit has been specified, but the exit could not be loaded from the library.

**Action:** Insure that the module is in the library specified.

**JMIM001B ENTRY NOT FOUND**

**Description:** The entry requested was not found on the database.

**Action:** Verify the entry is correct. Add the entry to the database.

**JMIM001C ENTRY NOT FOUND**

**COPY FAILED ENTRY NOT FOUND ON DATA BASE.**

**Description:** The entry entered to be copied was not on the database.

**Action:** Verify the entry name is correct.

**JMIM001E MUTUALLY EXCLUSIVE  
ACTUAL DATES CANNOT BE SPECIFIED WITH WEEKS  
OR RELDAYS**

**Description:** When defining calendars, only actual days, or relative days can be specified. Both cannot be used in the same definition.

**Action:** Correct the definition and CONFIRM.

**JMIM001F optn SUCCESSFUL**

**Description:** The selected option was completed successfully.

**Action:** None

**JMIM001G COPY CANCELLED**

**Description:** The selected copy function was cancelled. The entry will not be copied.

**Action:** None

**JMIM001K CRTE GENERATED**

**Description:** The generate schedule function has been confirmed.

**Action:** The JCL can now be submitted, using the SUB command.

**JMIM001L ENTER CAN/CONFIRM  
YOU MUST ENTER "CANCEL" OR "CONFIRM" TO END  
THIS FUNCTION**

**Description:** You have requested an action within the JOB/Master® system.

**Action:** Enter either CONFIRM or CANCEL.

**JMIM001M optn CANCELLED  
THE optn FUNCTION WAS ENDED WITH THE "CANCEL"  
COMMAND**

**Description:** The operation requested has been cancelled with no alterations being made to any field.

**Action:** None

**JMIM001N MSG RETURNED PF1**

**msg...**

**Description:** An informational message has been returned from the control region.

**Action:** Hit PF1 for additional information.

**JMIM006B CALENDAR NAME ERR.  
calendar EXISTS AS A PROCESS KEYWORD DEFINITION**

**Description:** The calendar specified on the job definition exists as a process keyword definition.

**Action:** This is an informational message only. Do not use the same name for a calendar name and a Process Keyword Name.

**JMIM006C pkywrđ NAME ERR.  
pkywrđ EXISTS AS A CALENDAR DEFINITION**

**Description:** The process keyword specified on the job definition exists as a calendar definition.

**Action:** This is an informational message only. Do not use the same name for a calendar name and a Process Keyword Name.

**JMIM006D CALENDAR NAME  
calendar DOES NOT EXIST ON THE DATABASE**

**Description:** The calendar specified on the job definition does not exist.

**Action:** This is an informational message only. Do not use the same name for a calendar name and a Process Keyword Name.

**JMIM006E PKYWRD NAME  
pkywrđ DOES NOT EXIST ON THE DATABASE**

**Description:** The process keyword specified on the job definition does not exist.

**Action:** This is an informational message only.

# Chapter 39

## JOB/Master® Remote Tracking Support Messages

### Descriptions

#### JMV01I REQUEST TO CONNECT ssssssss TO=> pppppppp

**Description:** The secondary location, ssssssss, has requested connection to the main or primary location, pppppppp.

**Action:** None

#### JMV02I ssssssss ACTIVATED TO pppppppp

**Description:** The request to connect the secondary session, ssssssss, to the main location, pppppppp, has been successfully completed.

**Action:** None

#### JMV03I VTAM SESSION CLOSED

**Description:** This VTAM session has been closed.

**Action:** None

#### JMV04I VTAM CLOSE FORCED

**Description:** This session has been forced to complete due to operator or VTAM function. A VARY INACT command may have been issued.

**Action:**

1. Verify the reason the session was closed.
2. Vary the session active.

#### JMV05I xxxxxxxx JM/RJT SUPPORT ACTIVE

**Description:** The JOB/Master® main, primary, session has been activated and is ready to receive connection from any secondary loca-

tions.

**Action:** None

### **JMV06IAN OPS/RJT SESSION HAS BEEN TERMINATED**

**Description:** A secondary location has had the JOB/Master® session terminated either by choice, or, an error has occurred.

**Action:** Restart the RJT task at the secondary location. The connection will be re-established when the secondary location restarts the RJT task.

### **JMV07Ixxxxxxx CONNECTION ACCEPTED**

**Description:** The secondary location, xxxxxxxx, has been accepted for communication and job status information will be processed on behalf of the remote site.

**Action:** None

### **JMV08IREQ=rq; R0=nn; FDBK=nnnn; SENSE=ssssssss**

**Description:** A VTAM request, rq, has failed. The return code from register zero is displayed along with the feed back code and sense data from the RPL.

**Action:**

1. Determine the reason for failure.
2. Re-issue the VTAM request.

### **JMV09IPRIMARY SESSION NOT ACTIVE JM/RJT ENDED**

**Description:** The request to connect to the main or primary session has been rejected because the main session is not active.

**Action:**

1. Verify JOB/Master® is active at the primary location.
2. If not active - Activate.
3. If active, verify the PARM RJT=Y is present.

### **JMV10IPRIMARY OPS/RJT SESSION ENDED**

**Description:** The primary, or main, session has ended. The session is terminated.

**Action:**

1. Restart JOB/Master® at primary location.
2. Restart this session when the primary session is restarted.

### **JMV11IOPEN FAILED TO VTAM - JM/RJT INACTIVE**

**Description:** The primary, or main, session could not be opened. The communication session is not available.

**Action:**

1. Determine that the APPL name is defined to VTAM.
2. Verify that the stepname on the execute card matches the VTAM APPL name.



3. Correct the problem and restart JOB/Master®.

**JMV12IOPEN TO VTAM APPL FAILED JM/RJT ENDED**

**Description:** The secondary session could not be opened. The remote tracking function is terminated.

- Action:**
1. Determine that the APPL name is defined to VTAM.
  2. Verify that the stepname on the execute card matches the VTAM APPL name.
  3. Correct and restart the RJT task.



# Chapter 40

## RUN/Master® Messages

This section contains messages which are prefixed with the characters “RM”. These messages pertain to RUN/Master® software product. Messages from other components of OPS/Master® Base software which are issued on behalf of RUN/Master® are prefixed with other than characters “RM” and are therefore documented in other sections of this manual.

### Descriptions

<b>RMCR000A</b>	RUN/Master® LOADLIB not in APF list.
<b>RMCR000E</b>	Unable to establish ESTAE.
<b>RMCR000I</b>	RUN/Master® initialization complete.
<b>RMCR000S</b>	RUN/Master® Subsystem table RM01 not found. The startup procedure for OPS/Master® must be run before starting RUN/Master®.
<b>Action:</b>	Run the OPS/Master® procedure before trying to start RUN/Master®.
<b>RMCR000X</b>	Disastrous error in RUN/Master®.
<b>RMCR000Y</b>	RUN/Master® resource cleanup initiated.
<b>RMCR001S</b>	Stop requested.
<b>RMCR005S</b>	SYSEVENT DONTSWAP unsuccessful.
<b>RMDB003E</b>	No JRJB entries left.
<b>RMDB004W</b>	Job not found - will be ignored.
<b>RMDB005E</b>	No space left for JCL entries
<b>RMDB006W</b>	Incomplete set of JCL.
<b>RMDB007W</b>	BAD JCL CARD JOB=XXXXXXXXX.

<b>Action:</b>	Review the Jobs JCL.
<b>RMDB008E</b>	JCL test does not match code.
<b>RMDB009E</b>	GETMAIN error can not proceed.
<b>RMDB010W</b>	Invalid record passed from RM00.
<b>RMDB011W</b>	Invalid JCL type passed from RM00.
<b>RMDB012E</b>	Reader time is invalid
<b>RMDB013I</b>	Duplicate Job Cards.
<b>RMDB014E</b>	JCL error encountered with EXEC.
<b>RMDB015E</b>	Internal text table out of space.
<b>RMDB016E</b>	Bad database ADD return code.
<b>RMDB017E</b>	JCL error encountered with PROC.
<b>RMCR009R</b>	Unexpected RC 12 from wait task.
<b>RMDE014E</b>	JCL ERROR ENCOUNTERED WITH EXEC.
<b>Action:</b>	Verify EXEC statement on the JCL.
<b>RMDB015E</b>	Internal text table out of space.
<b>Action:</b>	Call Mantissa Support. Ask for Special User PTM to “expand the text table in RUN/Master®. No record of profile for this USERID.
<b>RMDB016E</b>	Bad database add.
<b>RMDB017E</b>	JCL ERROR ENCOUNTERED WITH PROC.
<b>Action:</b>	Check proc being called. Correct error.
<b>RTM000P</b>	PROFILE NOT FOUND. No record of profile for this USERID.
<b>RTM003B</b>	NO APPLICATION. Incorrect application ID &ZAPPLID. Make sure the NEWAPPL(RM01) value was not changed in panel OPS-BANNR.
<b>RTM009B</b>	CONFIRM REQUEST. To confirm update, enter CONFIRM on command line.

# Chapter 41

## OPS/Master® Messages

This section contains messages for the OPS/Master® Base software as well as other related software products. Messages issued under an ISPF dialog consist of three parts:

1. The MESSAGE ID refers to the ISPF message number as it exists in the ISPM-LIB data set.
2. The SHORT MESSAGE is the message which is displayed by the dialog in the upper right corner of the dialog panel.
3. The LONG MESSAGE refers to the message which is displayed on the third line of an ISPF panel whenever a HELP command (usually PF1 key) is issued following the display of a SHORT MESSAGE.

In the following messages, symbolic parameters (keywords which are prefixed with an ampersand (&)) will be filled in during execution.

This section contains messages which are prefixed with the characters “OMC”. These messages originate in Control Region Assist component of OPS/Master® Base software and are issued on behalf of various software products.

### Descriptions

<b>OMCR000A</b>	Control region LOADLIB not in APF list
<b>OMCR000E</b>	Unable to establish ESTAE
<b>OMCR000P</b>	PARM field contains invalid option
<b>OMCR000S</b>	Unidentified subsystem name
<b>OMCR000U</b>	Unidentified JCL PARM option or console REQUEST
<b>OMCR001F</b>	Modify request contains invalid parameters
<b>OMCR001S</b>	STATUS = XXXXXXXXX where XXXXXXXXX is the specific keyword which represents the status of the Control Region or

of the specific option. The keywords are associated with the following meanings:

- ACT/INACT - The Control Region is ACTIVE/INACTIVE.
- CHAR = YYYY - the YYYY can be one (1) to four (4) default control characters associated with and having specific meaning for a given software product. Presently this convention is used to identify jobs which will execute under RUN/Master® control.
- SYS = YYYY - the YYYY identifies the four character Subsystem name assigned to the Control Region.

**OMCR005L** Modify command length error

**OMCR009R** Unexpected return code from wait task

This section contains messages which are prefixed with the characters “OPD”. These messages originate in OPS/Master® dynamic allocation components and are issued on behalf of various software products.

**OPDA000** ? SEE SVC99 ERROR  
Undetermined error from SVC 99 function - check ERROR/INFO fields.

**OPDA001** INVALID CHOICE  
Characters used are not within the allowable choices for the field.

**OPDA002** BLKSIZE UNAVAILABLE  
Space request in blocks failed to provide BLKSIZE.

**OPDA003** DSNNAME UNAVAILABLE  
Either VOL or DCB reference to DSNNAME which was not provided.

**OPDA004** GREATER THAN 59  
Allocation request for more than the limit of 59 units.

**OPDA005** REQUISITE KEY MISS.  
Requisite data not provided - e.g. DSNNAME is a requisite for MEMBER.

**OPDA006** MUTUAL EXC KEY USED  
Mutually exclusive or conflicting data specified.

**OPDA204** REAL STORAGE UNAVAIL  
Real storage unavailable.

**OPDA210** DATA SET UNAVAILABLE  
Requested data set unavailable - allocated to another job.

**OPDA214** UNIT UNAVAILABLE  
Unit not available or all internal readers allocated.

**OPDA218** VOLUME NOT MOUNTED  
Specified volume not mounted, user does not have mounting authority.

**OPDA220** VOLUME UNAVAILABLE

	Requested volume not available.
<b>OPDA224</b>	NO ELIGIBLE DEVTYPE Eligible device types do not contain enough units.
<b>OPDA228</b>	UNIT/VOL IN USE Specified volume or unit in use by system.
<b>OPDA230</b>	RES VOL ON REQ UNIT Permanently resident or reserved volume on required unit.
<b>OPDA234</b>	MORE THAN 1 DEV REQ More than one device required for a request for a specific unit.
<b>OPDA238</b>	TIOT FULL Space unavailable in task INPUT OUTPUT TBLE (TIOT).
<b>OPDA240</b>	REQ DEV IS A CONSOLE Requested device is a console.
<b>OPDA244</b>	TP DEV UNAVAILABLE Telecommunication device not accessible.
<b>OPDA250</b>	SYSBSYS RESOURCE U/A Subsystem resource not available.
<b>OPDA254</b>	COND ENQ RES. U/A The TIOT resource is unavailable and user requested conditional ENQ.
<b>OPDA258</b>	NOT ENOUGH UNITS Insufficient number of non-restricted units to satisfy the request.
<b>OPDA260</b>	UNIT STATUS NOT MET Unit does not meet specified status requirements.
<b>OPDA264</b>	INVAL. REQ FOR UNIT Invalid request due to current unit status.
<b>OPDA268</b>	TAPE DEVICE BROKEN Tape device is broken.
<b>OPDA358</b>	DISP OVERRIDE INVAL Overriding disposition of delete is invalid for a data set allocated as SHR.
<b>OPDA360</b>	INVALID KEY IN TU Invalid key specified in text unit.
<b>OPDA364</b>	FILE RESTRICTED Restricted name specified as DDNAME or associated with REQ. DSNAME.
<b>OPDA368</b>	UNAUTHORIZED USER Authorized function requested by unauthorized user.
<b>OPDA374</b>	INVALID # IN TU Invalid # specified in text unit.

<b>OPDA378</b>	DUPLICATE KEY IN TU Duplicate key specified in text unit.
<b>OPDA380</b>	MUTUAL EXC KEY Mutually exclusive key specified.
<b>OPDA384</b>	MUTUAL INC KEY N/A Mutually inclusive key not specified.
<b>OPDA388</b>	REQ KEY NOT USED Required key not specified.
<b>OPDA390</b>	GDG NAME TOO LARGE GDG name specified with relative generation number exceeds 35 chars.
<b>OPDA394</b>	INCOMPAT STAT/GDG Status and relative generation number are incompatible.
<b>OPDA398</b>	VOL SEQ TOO LARGE Volume sequence number exceeds the number of volumes.
<b>OPDA410</b>	DDNAME UNAVAILABLE Specified DDNAME unavailable.
<b>OPDA420</b>	DATA SET IS OPEN Specified DDNAME or DSNAME associated with an open data set.
<b>OPDA424</b>	DECONCAT INTO DUP DD De-concatenation would result in duplicate DDNAMES.
<b>OPDA434</b>	DDN CONVERT/NON-PERM DDNAME is associated with a convertible or non-perm alloc resource.
<b>OPDA438</b>	DDNAME NOT FOUND Specified DDNAME not found.
<b>OPDA440</b>	DSNAME NOT FOUND Specified DSNAME not found.
<b>OPDA444</b>	REL REQ # NOT FOUND Relative entry number specified in info retrieve request not found.
<b>OPDA448</b>	DS ALREADY EXISTS Request for a new data set failed, the data set already exists.
<b>OPDA450</b>	MAX ALLOC EXCEEDED Request would exceed the limit of 1635 concurrent allocations.
<b>OPDA454</b>	NO DDN FOR DCB REF DDNAME in DCB reference not found.
<b>OPDA458</b>	NO DSN FOR DCB/VOL DSNAME in DCB or VOL reference is a GDG group name.
<b>OPDA460</b>	DSN/MEMBER VS DDN Specified DSNAME or MEMBER is not associated with spec-



	ified DDNAME.
<b>OPDA464</b>	DSN IS PRIV CATALOG Specified DSNNAME to be deallocated is a private catalog.
<b>OPDA468</b>	CAT ALLOC/OPEN ERR Error while allocating or opening a private catalog.
<b>OPDA470</b>	USER UNAUTHORIZED User unauthorized for job entry subsystem request.
<b>OPDA474</b>	SELECT OPT DEV ERR Error while attempting to select optimum device.
<b>OPDA478</b>	UNABLE TO PROCESS Unable to process job entry subsystem request.
<b>OPDA480</b>	MAX UNITS EXCEEDED The number of units needed to satisfy the request exceeds the limit.
<b>OPDA484</b>	DENIED BY OPERATOR Request denied by operator.
<b>OPDA488</b>	PATTERN DSCB U/A GDG pattern DSCB not mounted.
<b>OPDA490</b>	ALLOC ASSIGN ERR Error changing allocation assignments.
<b>OPDA494</b>	ERROR ON OS CVOL Error processing OS CVOL.
<b>OPDA498</b>	MSS VOLUME UNAVAIL MSS virtual volume not accessible.
<b>OPDM017X</b>	DS NOT CATALOGED Locate error, see data management for return code, RC=&RC.
<b>OPDM020C</b>	EXCLUSIVE DS UNAVAIL Request for exclusive use of a shared data set cannot be honored.
<b>OPDM021C</b>	INVALID UNITNAME Unit name specified is undefined.
<b>OPDM022C</b>	INELIGIBLE/RES UNIT Volume mounted on ineligible permanently resident or reserved unit.
<b>OPDM023C</b>	CATALOG NOT MOUNTED Required catalog not mounted, user does not have mount authority.
<b>OPDM024C</b>	OS MANAGED RESOURCE Operating-system-managed resource was unavailable to the subsystem.
<b>OPDM025C</b>	DEVICE IS BOXED Requested device is boxed and cannot be accessed.

<b>OPDM035C</b>	INVALID PARM IN TU Invalid PARM specified in text unit.
<b>OPDM036C</b>	INVALID PARAM LIST Invalid parameter list format.
<b>OPDM037C</b>	INVALID LEN IN TU Invalid LEN specified in text unit.
<b>OPDM038C</b>	DUPLICATE DDNAMES Duplicate DDNAMES specified.
<b>OPDM039C</b>	INCMPAT DEVTPE/VOL Device type and volume are incompatible.
<b>OPDM043C</b>	NOT ENOUGH RESOURCES The system could not de-allocate enough resources to meet limit.
<b>OPDM044C</b>	DISP NOT HONORED Request made for a data set with DISP of delete, req. not honored.
<b>OPDM045C</b>	DSN IS PERM-CONCAT Specified DSN to be deallocated is a member of PERM-CONCAT group.
<b>OPDM046C</b>	RMT NOT DEF TO JES Remote work station not defined to job entry subsystem.
<b>OPDM047C</b>	UNABLE TO ESTAE Unable to establish ESTAE environment.
<b>OPDM047X</b>	DADSM ALLOCATE ERROR DADSM allocate error, see info reason code.
<b>OPDM048C</b>	PATTERN DSCB UNAVAIL GDG pattern DSCB not found.
<b>OPDM049C</b>	MSS VOLUME UNAVAIL MSS virtual volume not defined.
<b>OPDM057X</b>	CATALOG ERROR Catalog error, RC=&RC, see data management for return code.
<b>OPDM067X</b>	OBTAIN ERROR Obtain error, RC=&RC, see data management for return code.
<b>OPDM077X</b>	SUBSYSTEM ERROR Subsystem error, see both error and info reason codes.
<b>OPDM087X</b>	*MSTJCL* ERROR Scheduler JCL facility error.
<b>OPDM300</b>	SUBSYS INVAL PARAM Subsystem detected an invalid parameter.
<b>OPDM304</b>	UNABLE TO PROTECT Unable to protect data set/volume because of conflicting key-word.

<b>OPDM400</b>	MSVGP NOT DEFINED Specified MSVGP name not defined.
<b>OPDM402</b>	SUBSYS NOT WORKING Subsystem is not operational.
<b>OPDM404</b>	SUBSYS REQ ERROR Subsystem request in error.
<b>OPDM408</b>	KEY NOT SUPPORTED Subsystem does not support allocation via key DALSSNM.
<b>OPDM410</b>	SUBSYS UNKNOWN Subsystem does not exist.
<b>OPDM412</b>	MSS VOL SELECT ERROR MSS volume select error.
<b>OPDM414</b>	RACF NOT ACTIVE Protect request not processed. RACF not in system or not active.
<b>OPDM418</b>	MSS NOT INITIALIZED MSS not initialized for allocation.
<b>OPDM420</b>	USER UNKNOWN TO RACF Protect request failed, user not defined to RACF.
<b>OPDM422</b>	BAD REF TO OUTPUT Invalid reference to an output JCL statement.
<b>OPDM424</b>	VOL=REF EXCEEDS LIM Request for VOL=REF to a DSNAME that exceeded 972 referbacks.
<b>OPDM428</b>	RC0 FROM ALLOC/JFCB R15=0 from ALLOC or JFCB routines but SIOT RC not set, check EDT.



# Chapter 42

## CONSOLE/Master® Messages

This section contains messages which are prefixed with the characters “CM”. These messages pertain to CONSOLE/Master® software product. Messages with the CMC prefix originate in the CONSOLE/Master® Controller.

### Descriptions

<b>CMCR000I</b>	CONSOLE/Master® initialization complete
<b>CMCR000O</b>	OPEN ERROR Unable to open PARMLIB data set.
<b>CMCR000P</b>	PARM field contains invalid option
<b>CMCR000R</b>	CONSOLE/MASTER refresh complete
<b>CMCR000S</b>	CONSOLE/Master® subsystem name table (CM01) not found.
<b>Action:</b>	Run OPSMASTR proc before trying to start CONSOLE/Master®.
<b>CMCR000X</b>	Disastrous error in CONSOLE/Master®
<b>CMCR000Y</b>	CONSOLE/Master® resource cleanup initiated
<b>CMCR001F</b>	Modify request invalid parameters
<b>CMCR001S</b>	Stop requested
<b>CMCR002C</b>	Initial command stream processing completed.
<b>CMCR002I</b>	Initial command stream processing initiated.
<b>CMCR005L</b>	Modify CMD length error
<b>CMCR009R</b>	Unexpected RC 12 from wait task
<b>Description:</b>	A rule has been recognized which has a wait and the rule can not be satisfied at this time.

<b>CMCR100E</b>	THE PERSISTANT STORE TABLE HAS BEEN CORRUPTED
<b>Description:</b>	CONSOLE/Master® has been abended.
<b>Action:</b>	See if you can determine what overlayed table in area around the R2 value. Abend out dump was produced. See what is overlaying storage.
<b>CMCR101E</b>	THE PSV TABLE EXPANSION GETMAIN FAILED.
<b>Description:</b>	CONSOLE/Master® has been abended.
<b>Action:</b>	Determine who is using your SQA storage.
<b>CMCR102E</b>	THE PSV TABLE EXPANSION FREEMAIN FAILED.
<b>Description:</b>	CONSOLE/Master® has been abended.
<b>Action:</b>	Determine who is freeing your SQA storage.
<b>CMCR200T</b>	TASK CONTROL TABLE IS FULL. NOTIFY CONSOLE/Master® SUPPORT.
	CONSOLE/Master® has several tasks queued up for processing. There are replies and commands that have been prefixed with a wait parameter. If this message is received contact Mantissa technical support for further instructions.
<b>CMCR200W</b>	UNABLE TO STOP. WAITING ON nnnn TASKS TO COMPLETE; ESTIMATED COMPLETION TIME= MIN TO MAX SECONDS.
	CONSOLE/Master® has several tasks queued up for processing. There are replies and commands that have been prefixed with a wait parameter. nnnn signifies the number of tasks queued up. min signifies the minimum wait time and max signifies the maximum wait time for the queue to clean. You must retry the stop command after the maximum interval has passed.
This section contains messages which are prefixed with the characters "CMT". These messages pertain to the CONSOLE/Master® software product. Messages with the CMT prefix originate in the CONSOLE/Master® online dialogs.	
<b>CMTE000C</b>	More than 512K of CSA required for saving all rules
<b>CMTE000E</b>	No rules found on data base
<b>CMTE000R</b>	more than 4MB required for saving all rules
<b>CMTE001L</b>	Invalid syntax within following record - bypassed
<b>CMTM000K</b>	INVALID KEY FORMAT Data entered as part of user key has invalid key format.
<b>CMTM000N</b>	ERROR WITH TEXT Format error with command or reply text.
<b>CMTM000P</b>	PROFILE NOT FOUND No record of profile for this USERID.

<b>CMTM001J</b>	JOB/Master® NOT FOUND JOB/Master® record not read for values.
<b>CMTM003B</b>	NO APPLICATION Incorrect application ID &ZAPPLID. Make sure the NEWAPPL(CM01) value was not changed in panel OPSBANNR.
<b>CMTM009B</b>	CONFIRM REQUEST To confirm update, enter CONFIRM on command line.





# Chapter 43

## ISPF Short Messages

In the following messages, symbolic parameters (keywords that are prefixed with an ampersand (&)) will be filled in during execution.

The MESSAGE ID refers to the ISPF message number as it exists in the ISPMLIB data set. The SHORT MESSAGE is the message that is displayed by the dialog in the upper right corner of the dialog screen. LONG MESSAGE refers to the message that is displayed on the third line of an ISPF screen whenever a PF1 key is pressed following the display of a SHORT MESSAGE.

### Descriptions

<b>INFO002D</b>	CONFIRM DELETE Press enter to confirm end command to delete.
<b>INFO009A</b>	RECORD ADDED Record add was successful.
<b>INFO009D</b>	RECORD DELETED Record delete was successful.
<b>INFO009R</b>	RECORD REPLACED Record update was successful.

This section contains messages which are prefixed with the characters “MIS”. These messages originate in miscellaneous OPS/Master® Base software components and are issued on behalf of various software products.

<b>MISC000</b>	UNAUTHORIZED You are not authorized for this option or command.
<b>MISC001A</b>	INVALID/MISSING ARGUMENT Command syntax requires one argument.
<b>MISC001C</b>	INVALID COMMAND

	“&ZCMD” is an invalid command. RC=&RC.
<b>MISC001M</b>	MULTIPLE REQUESTS Multiple requests (command and select) are not handled.
<b>MISC001O</b>	INVALID OPTION Selected option is invalid for this function.
<b>MISC002D</b>	DISPLAY UNSUCCESSFUL Display of &PANEL panel was not successful, RC=&RC.
<b>MISC019</b>	SERVICE=&SERVICE RC=&RC Unexpected return code from ISPF &SERVICE service, RC=&RC.

This section contains messages which are prefixed with the characters “VSA”. These messages originate in OPS/Master® Base software (*VSAM Driver*) component and are issued on behalf of various software products.

<b>VSAM000F</b>	UNEXPECTED FEEDBACK Unexpected feedback; CODE=&CODE, DD=&DDNAME, FDBK=&FDBK. RC=&RC.
<b>VSAM000N</b>	RECORD NOT FOUND No record on file for key; DD=&D.
<b>VSAM000F</b>	UNEXPECTED Unexpected feedback; FEEDBACK CODE=&CODE, DD=&DDNAME, FDBK=&FDBK. RC=&RC.
<b>VSAM000N</b>	RECORD NOT FOUND No record on file for key; DD=&DDNAME.

This section contains messages which are prefixed with the characters “VSR”. These messages originate in OPS/Master® Base software (Reserve/Release) component and are issued on behalf of various software products.

<b>VSRE001</b>	RESERVE/RELEASE - parm field
<b>VSRE002</b>	RESERVE/RELEASE - file not found
<b>VSRE003</b>	RESERVE/RELEASE - invalid function

# Chapter 44

## Security Messages

This section contains messages which are prefixed with the characters “SEC”. These messages originate in the Interactive Security Facility component of OPS/Master® Base software and are issued on behalf of various software products.

### Descriptions

<b>SECU000A</b>	UNAUTHORIZED OPT/CMD You are not authorized for this option or command.
<b>SECU009A</b>	UNAUTHORIZED FUNCTION You are not authorized for this function.
<b>SECU009C</b>	NO LIMITATION REC Limitation record (\$\$\$\$\$\$) for product &PRODUCT not found.
<b>SECU009D</b>	NO DEFAULT REC Default record for product &PRODUCT not found.
<b>SECU009P</b>	UNKNOWN PRODUCT Product &PRODUCT unknown - please check spelling.
<b>SECU009U</b>	NO USERID RECORD Product or function requires USERID records - access denied.





# APPENDICES

Version 5.20.1

**Mantissa Corporation®**  
**1012 Edenton Street**  
**Birmingham, Alabama 35242**

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# Appendix A

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## Glossary

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### ACTUAL CALENDAR

An actual calendar is a calendar created using the actual date to indicate which days are to be used for processing days.

### ACTUAL DAY

An actual day is the exact calendar date used with in a calendar.

### ALT NAME

An alternate name to be used in place of the job being defined. (Used for alternate scheduling criteria requirements where the jobname must remain the same).

### BASE CALENDAR

The default calendar used to schedule a job (*i.e.*, *WRKDY##*)

### CALENDAR

A calendar definition tells JOB/Master® which are valid run days for the job being defined.

### CLASS

The class will be used in a future release in order to specify a processing class different from the class designated on the JOBCARD.

### CONDITION ZERO CODE

The standard return code used to indicate a successful completion of a job.

### COPY

The COPY command is used to transfer non-job specific information from one defined job to another. (Think of it as a template).

### COPYALL

The COPYALL command is used to copy all essential fields from one defined job to another. All fields which are not specifically unique to the job being defined are copied.

#### COPYPER

The COPYPER command is used to copy the period dates from one defined calendar to another.

#### CO - REQ DEPENDENCIES

A definition dependency used to indicate that a job must only run when this job is in execution.

#### DEADLINE CANCEL

A field used to specify if a job isn't submitted by a specific time then the job will be cancelled from the scheduling queue.

#### DO NOT SCHEDULE AFTER

The scheduling of a job, system, or function will not take place after a specific date.

#### DO NOT SCHEDULE BEFORE

The scheduling of a job, system, or function will not take place prior to a specific date.

#### DYNAMIC REPAIR

When a job is defined to the system, a repair job can be defined. If the job being defined abnormally terminates then the repair job will be submitted for processing.

#### EXCEPTION CALENDAR

An exception calendar tells JOB/Master® which days are not valid run days.

#### EXTERNAL SUBMIT

An external submit is a job which is not submitted by the scheduling system but is tracked by JOB/Master®.

#### INCLUDE/EXCLUDE

The include/exclude parms used within the scheduling process provide a method to selectively schedule jobs and/or systems without having to have an entire days schedule built.

#### JOB

A job is a set of Job Control Language (JCL) statements containing one JOB statement and one or more EXEC statements.

#### JOB FAIL CONTACT

This is the User ID of the contact if a JOB fails.

#### JOB HISTORY

Job history is maintained via the tracking menu for audit trails, refer back, and problem resolution functions.



**JOB SUBMISSION**

Job submission is the process used by JOB/Master® to submit jobs from the scheduling queue to the JES processing queue.

**JOB TRACKING**

Job tracking is the function used by JOB/Master® to monitor the events of all activities associated with jobs and systems throughout their processing cycle.

**KEYWORD**

A keyword is a relative term used to define a set of conditions which pertain to the scheduling of a job. Keywords that use workday relationships require calendars. All other keywords are relative in nature and require no calendars.

**KEYWORD DEFINITION**

A keyword definition is a group of processing conditions used to define under what situations a job or group of jobs are to run. Many jobs can utilize the same keyword definitions.

**LAST UPDATED BY**

A field used at the JOB level definition, to indicate the last user to update this job.

**LIB. TYPE**

The library type will be used to specify whether the job being defined has its JCL in a PDS, Librarian file, or a PANVALET file.

**LITERAL CHARACTER**

Literal characters are the characters used when calendars are displayed indicating the days of the week. They are selected on the profile screen as part of the global options.

**LOOPDRV**

LOOPDRV is a Mantissa supplied program which creates a controlled looping condition for testing the scheduling schemes defined without having to run the **actual programs**.

**SCHEDULE/NETWORK**

A schedule/network is a group of logically controlled jobs or systems which have a requirement for secured control. This function is designed to facilitate and secure the decentralized scheduling requirements of an organization.

**MESSAGE DEFINITION GROUP**

This a message task definition used to define a specific group of messages which can be utilized by many jobs to generate messages concerning jobs.

**NEGATIVE DEPENDENCIES**

A definition used to indicate that a job can not run concurrently with this job.

**NON-PROCESS**

Non-process keywords are mnemonics selected by the user to define a set of processing criteria for not scheduling jobs or systems.

**NON-TRIGGERED**

A non-triggered job is one which is submitted from the JOB scheduling queue based on time or event criteria

**OP CD**

An OP CD is the operation code used during a conditional check to determine if the condition is Equal, Less Than, Greater Than, Not Equal, or abended conditions.

**OPEN for INPUT**

A dataset has been opened for input. Any scheduling conditions linked to this dataset and condition will be activated.

**OPEN for INPUT and CONTAINS DATA**

A dataset has been opened for input and contains any data. Any scheduling conditions linked to this dataset and condition will be activated.

**OPEN for OUTPUT**

A dataset has been opened for output. Any scheduling conditions linked to this dataset and condition will be activated.

**PDS MEMBER**

A PDS member is a member name used to identify a set of JCL located within a PDS library and used by the scheduling system.

**PERIOD DATES**

Period dates are those calendar dates which do not fall on the standard physical calendar months. These dates are used most frequently with "FISCAL" accounting periods.

**PROCESS KEYWORDS**

Process keywords are any mnemonics selected by the user to define a set of processing criteria for the scheduling of jobs or systems.

**PREDECESSOR**

A predecessor refers to a job that must successfully complete before the next job can be submitted.

**RELATIVE CALENDAR**

A relative calendar is a calendar created using the relative days required to indicate which days are to be used for processing days.

**RELATIVE DAY**

A relative day is a calendar day not a specific date (MON, TUE, WED, THU, FRI, SAT, SUN).

**RENAMED**

A dataset has been renamed. Any scheduling conditions linked to this dataset and condition will be activated.

**REPAIR JOB**

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Glossary

A Repair Job is used to describe a job submitted if a failure occurs on the job or jobstep.

**RESOURCE NAME**

The resource name is an arbitrary name used to define a set of resource(s) either real or virtual which can be attached to or detached from a processor for selective control over a schedule.

**SCRATCHED**

A dataset is scratched. Any scheduling conditions linked to this dataset and condition will be activated.

**SEND TYPE**

A group of codes used to define in what circumstances a manual task message is to be sent to the appropriate User ID(s).

**SIMULATION**

A simulation is a schedule which is run and report(s) generated which simulate how an actual schedule would be built and which jobs and systems would be added to the scheduling queue.

**SUBMISSION DEPENDENCIES**

Submission dependancies are criteria that must be satisfied before the job being defined can be submitted.

**SUBMIT TYPE**

The submit type is the method of submission to be used when this job is selected for submission to the JES queue for processing.

**SYMBOLIC DATA**

Symbolic data is characters used to represent other characters or character strings within JCL or data strings of a job, or dataset.

**SYSTEM NAME**

A system name is an application system of which the job is a part.

**TRIGGERED BY**

A field used at the JOB level definition, to indicate the last job that triggered this job.

**TRIGGERED JOB**

A triggered job is one which is submitted based on the completion of another job or jobstep.

**VERIFYING DATA**

Data within the first record of a sequential file will be compared against a specific character string. If the character string matches the data within the file, any scheduling events defined for this dataset will be activated.

**VSAM DEFINE**

A VSAM dataset has been defined. Any scheduling events associated with this function will be activated.

#### VSAM DELETE

A VSAM dataset has been deleted. Any scheduling events associated with this function will be activated.

#### VSAM UPDATE

A VSAM dataset has been updated. Any scheduling events associated with this function will be activated.

# INDEXED REFERENCES

## Symbols

# 228  
\$GLOBAL\$ 217  
% 228  
&UPANEL 223  
//\*JMCKECK 30  
//\*JMCPAUFF 440  
//\*JMJCLE 227  
//\*JMJCLN 227  
//\*JMJCLY 227  
//\*JMNOEXC 30  
//\*JMSECURE 440  
//\*JMSYME 227  
//\*JMSYMN 227  
//\*JMSYMY 227  
//\*JMUSER 440  
//JMERR1 230  
//JMERR2 230  
//JMERR3 230  
? 228  
@ 228  
¢ 47, 132

## A

AB 149  
AB - Abended jobs 145  
abends 60  
ACT 372  
Activate Submit Facility(SS) 178  
Actual Calendars 89  
ACTUAL Schedule 116, 457  
Add a Job to the schedule queue(AJ) 171  
Advanced Functions 439  
AJ 136, 171  
Alternate Job 54  
APF authorized 24, 368, 402  
Appendix 545  
APPL 443  
Audit Trail 217, 392  
Authority to perform a function 407  
Auto Help 210, 213  
Auto Restart Mode 396  
Automated Operator  
    Data Base Creation and Maintenance 339  
    WTO/WTOR Processor 339

Automatic Schedule Creation 121  
Automatic Variable Substitution 225  
AVS 225  
AVS Audit Log 226

## B

Backing Up Files  
    RUN/Master® 403  
Backing up files  
    CONSOLE/Master® 369  
Backup  
    CMBACKUP 369  
    RMBACKUP 403  
Batch Functions 279  
Batch mode schedule generation 117, 458  
binary search routine 114  
BPAM 23  
BROWSE  
    Console message definition 352  
BSAM 23  
BUFFS= parameter 456

## C

C 154  
Calendar 60  
Calendar Definition Screen 84  
Calendar Display/Update 87  
Cancel Specific Job (C) 154  
Cent sign 47  
check mode 51, 73, 101, 491  
CL Setup 237  
CMBACKUP 369  
CMREPORT 362  
CMRESTOR 369  
CO 187  
Column 71 47, 378  
COMMAND 345  
Command Scheduling 61, 66  
Complex variables 346  
condition code = 0022 163  
Condition Code Testing 60  
CONSMSTR procedure 335  
Console facility 353  
Console message definition  
    ADD 343

Extended 350  
UPDATE 352  
Console message table 341  
CONSOLE/Master®  
    Components 335  
    Global Status 372  
    Help facility 337  
    Overview 333  
    Starting the Control Region 335  
    Stopping the Control Region 335, 437  
CONSOLE/Master® Security 418  
Controlling Execution Through JCL 30  
COPY 64, 81  
COPYALL 64, 81  
CSA buffers 456  
Cycle interval 457  
Cycle Processing 122

## D

DA 192  
DAILY PDS 138  
Daily PDS's 133  
Data Base  
    ISF 408  
    JOB/Master® 61  
Data Base Detail Reports 239  
Data Base Index 63  
Data base session  
    CONSOLE/Master® 340  
Data Replacement 216  
Dataset Contention 33  
Dataset contention 33  
Dataset Contention User Exit 33  
Dataset Definition Panel 108  
Dataset Dependency 107  
Dataset Triggers 108  
Dataset Type - VSAM or sequential 109  
Date Substitution 227  
DC 153  
DC - Jobs awaiting Deadline Cancel 145  
DD 194  
Default Control Records 216, 219  
DEFAULT PDS 133  
DEFAULT SUBMIT PDS 138  
Default Values 216  
DELETE

## OPS/Master®System Reference Manual

Console Message Definition 352  
 DEPENDENCY OPTIONS 68  
 DF 190  
 DH 184  
 Dispatching priority  
     JOB/Master® 455, 466  
 Display 184, 209  
 Display control region Settings(ST) 183  
 Display Detail statistics(DD) 194  
 Display job Failure contact(DF) 190  
 Display job Manual task messages(DM)  
     191  
 Display job run data / log messages  
     from(DH) 184  
 Display jobs Output processing info(DO)  
     196  
 Display jobs Predecessor function(DP) 188  
 Display jobs Run instruction data(DR) 198  
 Display run data(DL) 193  
 Display Scheduling Criteria of a Job (DS)  
     170  
 Display Triggered jobs(DT) 189  
 DL 193  
 DM 191  
 DO 196  
 DP 188  
 DR 198  
 DS 170  
 DSN 228  
 DT 189  
 Dynamic Job Submission 140  
 Dynamic Repair 140  
 Dynamically Added Jobs 121, 136

**E**

E 155  
 E / OPINS 214  
 ENDDTE= parameter 117, 458  
 ENDTME= parameter 117, 458  
 Error Code 230  
 Errors 497  
 event options for sequential datasets 110  
 event options for VSAM clusters 111  
 EX - Jobs in Execution 145  
 Exception Calendar 60  
 EXCLUDE 168

exclude 52, 492  
 Exclude a Job from Production (X) 168  
 Execution 335  
 Exit Parameter List 441, 442  
 Exit Return Codes 443  
 Exits  
     Dataset Contention Exit 33  
     JCL Scan Interface Exit 215  
     Job Submit User Exit 440  
     Logon and Command Intercept Facility 442  
 External Submits 132  
 Externally Submitted Jobs 32

**F**

F 157  
 Fast Path Message Processing 371  
 File Tailoring 224  
 FLC 228  
 FLS 228  
 FORC= parameter 456  
 FORCE 54  
 Force Release a Job from the Schedule (F) 157  
 Force Submitting a Job 139

**G**

Generate Schedule creation JCL(GS) 172  
 Generate Simulation Schedule(GSS) 174  
 Generic 63, 109, 184  
 Global Option Settings 233  
 Global Security Attributes 408  
 Global Substitution Variables 220  
 Global variables 346  
 Glossary 545  
 GS 120, 172  
 GSS 116, 174, 457

**H**

H 159  
 HELP  
     ISF 421  
     JOB/Master® 40  
     RUN/Master® 380  
 Help  
     CONSOLE/Master® 337  
 HLQ/HLQ.OPS 279

HOLD 159  
Hold a Job from Being Submitted (H) 159  
Hold System(HOLD) 199

**I**

I 160  
INACT 372  
Inactivate Submit Facility(PS) 176  
INCLUDE 160  
include 52, 492  
Include a Job Into Production Cycle (I) 160  
Initial Command Stream 372  
Initiate Resource Table processing(RT) 181  
Interactive Security Facility (ISF) 407  
Invoke MVS Console Facility(CO) 187  
ISF 407  
    CONSOLE/Master® Security 418  
    HELP 421  
    JOB/Master® Security 412  
    product names 411  
    RUN/Master® Security 416  
    Symbolic Substitution Security 415  
ISF ACCESS RESTRICTED 409

**J**

JCL Override 227  
JCL Replacement 216  
JCL SCAN 215  
JCL Scan Interface Exit 215  
JCL SETUP 225  
JCL Setup Flag 218  
JES commands 355  
JM05 78  
JM26 177  
JMBACKUP 280, 448, 462  
JMBPOST 282  
JMCLEAN 285  
JMCMDTEXT 442  
JMCN 61  
JMDB 462  
JMDBCOPY 286  
JMDSCM 33  
JMDSEXIT 33  
JMDSNRPT 247  
JMEVENT 57

JMHIST 462  
JMJCLMB 225, 463  
JMJES3XT 440  
JMJOBQ 462  
JMJOBRPT 247  
JMO5 414  
JMPURGE 283  
JMRACFXT 440  
JMRESORC 284  
JMRESTOR 285, 448, 462  
JMSCANEX 215  
JMSCHED 124, 133, 172, 457  
JMSHUT 280, 437  
JMSSCPSC 281  
JMSTATUS 282  
JMSTGPDS 133, 415  
JMSUBEXT 440  
JMSUBPDS 133  
JMTRACE 281  
Job 59  
Job Database Creation 59  
Job Definition Screen 1 64  
Job Definition Screen 2 72  
Job Definition Screen 3 73  
Job Definition Screen 4 77  
Job Definition Screen 5 79  
Job Definition Screens 61  
Job Dependencies 54  
Job Fail 60  
Job Level 42  
Job Step Definition Screen 81  
Job Submission 131  
Job Submit User Exit Facility 440  
Job Tracking 141  
Job Triggering 29  
JOB/Master®  
    HELP 40  
    Security 35  
    Stopping the Control Region 436  
JOB/Master®  
    Cycle Processing 457  
    Resource cleanup 456  
JOB/Master® Installation 439  
JOB/Master® Interface 372  
JOB/Master® Region Messages 497  
JOB/Master® Security 412  
JOBMAST 48



## OPS/Master® System Reference Manual

JOBMASTER procedures 456  
JOBMASTR 455  
JOBMST1 48  
JOBMST2 48  
JOBMST3 48  
JOBMST4 48

**K**

K 162  
Keep a Job which has Failed (K) 162  
Keyword 60  
keyword overflow 222  
keyword resolution 216  
Knowledge Base 377  
KNOWLEDGE BASE FUNCTIONS 417

**L**

LEVEL= parameter 456  
Library 212  
Library Management Facility 132  
List Abended/Failed Jobs (AB) 149  
List Executing Jobs (EX) 151  
List Jobs on the Schedule Queue(LQ) 145  
List Jobs Waiting on Deadline Cancel (DC)  
153  
List Jobs Waiting on Manual Tasks (MT)  
150  
List Jobs Waiting on Output Processing  
(OP) 152  
logical day 472  
Logon and Command Intercept Facility 442  
LOOPDRV 55  
LQ 145

**M**

MAN. TASK1 - 5 237  
Manual Task #5 202, 215  
Manual task flags 237  
manual task flags 282  
Manual Task Intervention 202  
Manual Task Message Definition 104  
Master Console ID 187  
MEM 228  
Message Group 98  
Messages

CONSOLE/Master® 535  
ISPF Short 539  
JOB/Master® Online 509  
JOB/Master® Region 497  
JOB/Master® Remote Tracking Support 521  
OPS/MASTER 527  
RUN/Master® 525  
Security 541

MT 150

MT - Jobs awaiting Manual Task 145  
MT#5 224  
MT#5 - JCL SETUP 202  
Multi-line Messages 348  
Multiple Control Regions 439  
MVS 23, 368, 401

**N**

Negative Co-Requisite Dependency 96  
NJE 443  
NJE support 447  
Non-Triggered Job 60  
NOTIFY 48

**O**

ONC 228  
On-line Assist Functions 381  
Online Assist JCL Processing 387  
ONS 228  
OP 152  
OP - Jobs awaiting Output Posting 145  
OPINS 213  
OPS/MASTER Messages 527  
Output posting 152  
Overflow of Card Images 221  
Overview  
CONSOLE/Master® 333  
RUN/Master® 377

**P**

P 163  
Persistent Store Processing 349  
PF keys  
CONSOLE/Master® 359  
JOB/Master® 232  
RUN/Master® 395

physical day 95, 117, 235, 472  
Post 351  
PQ 175  
Predecessor 60  
predecessor jobs 69  
Process Keyword Definition Screen 91  
Process Keyword Table 93  
Process keywords/calendars 117  
PRODUCT DEFAULT RECORD 408  
PRODUCT LIMITATION RECORD 408  
production mode 51, 73, 101, 491  
Profile  
    CONSOLE/Master® 357  
    JOB/Master® 231  
    RUN/Master® 393  
PS 176  
PS stop the submit facility 131  
Purge a Job from the Schedule Queue (P)  
    163  
Purge the entire schedule Queue(PQ) 175

## Q

QSAM 23, 368, 401

## R

R 164  
RACF 440  
Recovery 210  
    CMRESTOR 369  
    RMRESTOR 403  
recovery instructions 213, 214  
REFRESH Function 371  
Relative Calendars 89  
Release a Job from Hold Status (R) 164  
Release System(REL) 199  
Remote Job Tracking 199  
Remote job tracking indicator 456  
Repair Job 59  
REPLY 345  
Report Facility  
    CONSOLE/Master® 361  
    JOB/Master® 239  
    RUN/Master® 399  
Reports  
    Data Base Reporting by Selection 247

    Data Base XREF Reports 244  
    History Recap Reports 246  
    REPTS= parameter 119, 459  
    REQUIRE ZERO C.C. 234  
    Rerun or Restart a Job (E) 155  
    Rerun Reason Codes 397  
    Reset 208  
    RESOLVE 136  
    Resolve 206  
    Resource cleanup 456  
    Resource Routing 139  
    Resource routing 181  
    Resource Table 181  
    Restoring Files  
        RUN/Master® 403  
    Restoring files  
        CONSOLE/Master® 369  
    RJT= parameter 444, 456  
    RMBACKUP 403  
    RMRESTOR 403  
    RT 181  
    RUN MODE 101, 234  
    Run Mode 51, 73  
    RUN/Master®  
        Audit Trail 392  
        Components 378  
        HELP 380  
        Online Assist Functions 381  
        Online Assist JCL Processing 387  
        Overview 377  
        Starting the Control Region 379  
        Stopping the Control Region 379, 437  
        Submit JCL Screen 391  
        Table of Actions - Postconfirmation 390  
        Table of Original JCL 389  
        Table of Replacement JCL 387  
        Table of Restart Actions 388  
        Table of Restart Jobnames 384  
        Table of Stepnames 385  
    RUN/Master® Security 416  
    RUN-EXIT INS 80  
    RUN-EXIT-INS 48  
    RUNMASTR procedure 379

## S

S 165

## OPS/Master® System Reference Manual

Sample Reports 256  
 Sample System Worksheets 45  
 Schedule control cards 119, 461  
 Schedule Events from Outside JOB/Mas-  
 ter® 57  
 Schedule Exclude 119  
 Schedule Generation Parameters 116  
 Schedule generation parameters 457  
 Schedule Include 119  
 Scheduling Criteria 115  
 Scheduling Flow 34  
 Scheduling Individual Jobs or Systems 120  
 Scheduling Jobs 120  
 scheduling process 133  
 scheduling program 133  
 Scheduling Reports 124  
 select mode 51, 74, 101, 160, 491  
 sequential files 109  
 Set Priority Update Screen(SP) 179  
 Shutdown Procedures - Remote Tracking  
 446  
 Signal complete 351  
 SIMULATION Schedule 116, 457  
 Single Mode 166, 167, 171  
 SMF 50  
 SMF records 112  
 SMF-ID 177, 181  
 SMFID 181, 182  
 SMFPRMxx 443  
 SP 179  
 SPECIAL SECURITY ATTRIBUTE 409  
 splay Active jobs(DA) 192  
 SS 178  
 SS start the submit facility 131  
 SSYS= parameter 456  
 ST 183  
 STAGING PDS 133, 137, 138, 415  
 Started tasks 48  
 Starting and Stopping the Submit Facility  
 131  
 Starting the Control Region  
 RUN/Master® 379  
 Startup Procedure - Remote Tracking 445  
 Statistics 194  
 STATUS 373  
 STC exits 50  
 Step Level 42

Steplevel Dependencies 31  
 Stopping the Control Region  
 CONSOLE/Master® 437  
 JOB/Master® 439  
 RUN/Master® 379  
 RUN/Master® 437  
 STRT= parameter 131, 456  
 STRTDTE= parameter 117, 458  
 STRTTME= parameter 117, 458  
 SUBID= parameter 118, 456, 459  
 Submission Dependencies 60  
 Submit a Job (S) 165  
 Submit Facility 131  
 SUBMIT FAILED message 138  
 Submit JCL Screen 391  
 SUBMIT OPTIONS 68  
 SUBMIT PDS 133  
 Symbol Name Specification 221  
 Symbolic Substitution 201  
 Display 209  
 E / OPINS 214  
 JCL SCAN 215  
 Library 212  
 OPINS 213  
 Recovery 210  
 Reset 208  
 Resolve 206  
 Symbolic Substitution Security 415  
 SYS1.PARMLIB 372, 443  
 SYS1.VTAMLST 443  
 System Definition 100  
 System Worksheets 45

**T**

Table of Actions - Postconfirmation 390  
 Table of Original JCL 389  
 Table of Replacement JCL 387  
 Table of Restart Actions 388  
 Table of Restart Jobnames 384  
 Table of Stepnames 385  
 Tape Drive Exclusion(TE) 180  
 TE 180  
 Technical Specifications  
 CONSOLE/Master® 367  
 JOB/Master® 23  
 RUN/Master® 401

TIME= parameter 456  
tracking character 132  
trigger job 29  
Triggered Job 60  
TSO 202, 225, 407  
TUNIT 279  
Tutorial 287  
TYPE= parameter 118, 459

## U

U 167  
Update a Job on the JOBQ (U) 167  
USER PDS 138  
USER Submit PDS 133  
USERID RECORD 408  
Utilizing Substitution 216

## V

Variable  
    Complex 346  
    Global 346  
    Word 346  
Verifying Data 111  
VSAM 23, 109, 368, 401  
VSMHLQ 279  
VTAM 23, 368, 401, 443

## W

WAIT 345  
Word variables 346  
WORKDAY 70, 91

## X

X 168

## Y

Year End Calendar Propagation 89