IBM

Application System/400™

Programming:
System Reference Summary

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System Reference Summary

Second Edition (September 1989)

This major revision makes obsolete SC21-8104-0. Changes or additions to the text are indicated by a vertical line to the left of the change or addition. See "About This Manual" for a summary of major changes to this edition.

This edition applies to Release 2 Modification Level 0 of the IBM Operating System/400 Licensed Program (Program 5728-SS1) and to all subsequent releases and modifications until otherwise indicated in new editions or technical newsletters.

Changes are periodically made to the information herein; any such changes will be reported in subsequent revisions or technical newsletters.

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About This Manual

This manual is designed as a summary to help the programmer find the information needed without searching through various guides and reference manuals. This manual contains summaries (not usually explanations) of information from manuals describing the AS/400 operating system and licensed programs. More detailed information can be found in the manuals listed under "Related Printed Information."

To use this manual, you should know how to use CL commands and understand the functions of the operating system.

Note: This manual follows the convention that *he* means *he* or *she*.

This manual may refer to products that are announced, but are not yet available.

How This Manual Has Changed

The following major changes were made since the last edition of this manual:

- The Command Matrix Chart has been updated to include new commands.

- Addition of eight new operating system object types.

- Additions to, and library changes of, IBM-supplied objects.

- Addition of new RPG codes.

- Chapter 8, "Character Codes," has been deleted.

Related Online Information

The following online information is available on the AS/400 system. After pressing the Help key on any menu, you can press the Help key a second time to see an explanation of how the online information works, including the index search function. You can press either the Help key or F1 for help.

Help for Displays

You can press the Help key on any display to see information about the display. There are two types of help available:

    Field
    Extended

Field help explains the field on which the cursor is positioned when you press the Help key. For example, it describes the choices available for a prompt. If a system message appears at the bottom of the display, position the cursor on the message and press the Help key to see information about the cause of the message and the appropriate action to take.

Extended help explains the purpose of the display. Extended help appears if you press the Help key when the cursor is outside the areas for which field help is available.

To exit the online information, press F3 (Exit). You return to the display on which you pressed the Help key.

Index Search

Index search allows you to specify words or phrases that identify the information that you want to see. To use index search, press the Help key, then press F11 (Search index). You can also use index search by entering the Start Index Search (STRIDXSCH) command on any command line or by selecting option 2 on the User Support and Education menu.

Help for Control Language Commands

To see prompts for parameters for a control language command, type the command, then press F4 (Prompt) instead of the Enter key. To see extended help for the command, type the command on any command line and press the Help key.

Online Education

AS/400 online education provides training on a wide variety of topics. To use the online education, press F13 (User support) on any system menu to show the User Support menu. Then select the option to use online education.

Question-and-Answer Function

The question-and-answer (Q & A) function provides answers to questions you may have about using the AS/400 system. To use the Q & A function, press F13 (User support) on any system menu to show the User Support menu. Then select the option to use the question-and-answer function. You can also use the question-and-answer function by entering the Start Question and Answer (STRQST) command on any command line.

Related Printed Information

The following describes AS/400 manuals that contain more information about the topics in this manual. You may need to order these manuals. You can also see the *Information Directory*, GC21-9678, which contains a description of all AS/400 manuals.

- *Programming: Command Reference Summary*, SC21-8076

  The *Command Reference Summary* provides the system operator or system administrator with quick information about the organization of the AS/400 commands. This manual contains an alphabetic list of all AS/400 commands and a list, by command, of error messages the programmer can monitor for when writing programs. This information can be found in detail in the *Programming: Control Language Reference*, SBOF-0481.

- *Programming: Control Language Programmer's Guide*, SC21-8077

  The *CL Programmer's Guide* provides the application programmer or programmer with a wide-ranging discussion of AS/400 programming topics, including the following:

  - A general discussion of objects and libraries
  - Control language (CL) programming, controlling flow and communicating between programs, working with objects in CL programs, and creating CL programs
  - Predefined and impromptu messages and message handling
  - How to define and create user-defined commands and menus
  - Application testing, including debug mode, breakpoints, traces, and display functions

- *Programming: Control Language Reference*, SBOF-0481

  The *CL Reference* provides the application programmer with a description of the AS/400 control language (CL) and its commands. Each command description includes a syntax diagram, parameters, default values, keywords, and an example. The information should be used to refer to the control language commands to request functions of the Operating System/400 (5728-SS1) licensed program and of the various languages and utilities.

  This manual is divided into five volumes. Volume 1 provides an overview of the CL commands and describes the syntax coding rules needed to code them. Volumes 2 through 5 describe every control language command, including commands for the system control program, languages, and utilities. The order numbers for these volumes are:

  Volume 1   SC21-9775   (Overview and Syntax)
  Volume 2   SC21-9776   (ADDxxx through CPYxxx)
  Volume 3   SC21-9777   (CRTxxx through DLTxxx)
  Volume 4   SC21-9778   (DLYxxx through RRTxxx)
  Volume 5   SC21-9779   (RSMxxx through WRKxxx)

- *Programming: Cryptographic User's Guide*, SC21-8080

  The *Cryptographic User's Guide* provides the system operator or programmer with a description of the data security capabilities of the AS/400 Cryptographic Support. This manual explains how to use the support and may be used as a reference for programmers.

- *Programming: Data Description Specifications Reference*, SC21-9620

  The *DDS Reference* provides the application programmer with detailed descriptions of the entries and keywords needed to describe database files (both logical and physical) and certain device files (for displays, printers, and ICF) external to the user's programs.

- *Programming: Data Management Guide*, SC21-9658

  The *Data Management Guide* provides the application programmer with information about using files in application programs. A file is the OS/400 object type that provides storage of and access to data in the database, or devices such as display stations and printers, or on another system. This manual includes information on the following topics.

  - Fundamental structure and concepts of data management support on the system
  - Data management support for display stations, printers, tapes, and diskettes, as well as spooling support
  - Overrides and file redirection (temporarily making changes to files when an application program is run)
  - Copying files by using system commands to copy data from one place to another
  - Tailoring a system using double-byte data

- *Programming: Security Concepts and Planning*, SC21-8083

  The *Security Concepts and Planning* manual provides the programmer (or someone who is assigned the responsibilities of a security officer) with information about system security concepts, planning for security, and setting up security on the system. This manual does not describe security for specific licensed programs, languages, and utilities.

This manual tells how system security support can be used to:

- — Protect the system and the data from being used by people who do not have the proper authorization
- — Protect the data from intentional or unintentional damage or destruction
- — Keep security information up-to-date
- — Set up security on the system

- *System/36 to AS/400 Migration Aid User's Guide and Reference*, SC09-1166

  The *System/36 to AS/400 Migration Aid User's Guide/Reference* provides the system operator, application programmer, programmer, or data processing manager with information about using the System/36 to AS/400 Migration Aid to move System/36 items to the AS/400 system using menus and displays, or commands. The manual contains three parts. Part 1 describes how to move System/36 items to tape, diskette or file. Part 2 describes how to restore these items to the AS/400 system. Part 3 provides information for those items that require modification before use on the AS/400 system.

- *System/38 to AS/400 Migration Aid User's Guide and Reference*, SC09-1165

  The *System/38 to AS/400 Migration Aid User's Guide/Reference* provides the system operator, application programmer, programmer, or data processing manager with information about using the System/38 to AS/400 Migration Aid to move System/38 objects to the AS/400 system using menus and displays, or commands. This manual contains three parts. Part 1 describes how to move System/38 objects to tape, diskette, or file. Part 2 describes how to restore these items to the AS/400 system. Part 3 provides information for those objects that require modification before use on the AS/400 system.

- *Programming: Work Management Guide*, SC21-8078

  The *Work Management Guide* provides the programmer with information about how to create a work management environment and how to change it. Other topics include the following.

  - — A description of tuning the system
  - — Collecting performance data including information on record formats and contents of the data being collected
  - — Working with system values to control or change the overall operation of the system
  - — A description of how to gather data to determine who is using the system and what resources they are using

Contents

Chapter 1. Command Matrix Table

The main purpose of this table is to provide you with an index to AS/400[1] functions and the commands that are used to call those functions.

All of the items (Operating System/400[1] (OS/400[1]) objects and other entities) and their abbreviations are listed alphabetically in the left column. Each item entry contains the descriptive name of the command minus the verb that precedes it. The most common verbs (listed across the top) that act on these items are indicated by an X. Verbs used on only a few items are indicated in the rightmost column.

For example, the item library (LIB) can be operated on by several verbs, which as indicated by the Xs are: Create (CRT), Delete (DLT), Display (DSP), Change (CHG), and Work (WRK). Other less common actions are indicated by the verbs in the last column such as Clear (CLR), Copy (CPY), Restore (RST), and Save (SAV). Each of these verb and noun combinations represents an AS/400 CL command (CRTLIB, DLTLIB, DSPLIB, and so on).

CL commands that are not listed in the matrix table include:

- **Cryptographic commands** which are not included in this manual. For information about cryptographic commands, see the *Cryptographic User's Guide*.

- **Migration commands** which are not included in in this manual. For information about migration commands, see either the *System/36 to AS/400 Migration Aid User's Guide/Reference* or the *System/38 to AS/400 Migration Aid User's Guide/Reference*.

- **One-word commands** which are listed below:

```
CALL      DCL       GO        PGM
COMMIT    DO        IF        RETURN
DATA      ELSE      JOB       WAIT
```

Figure 1-1 (Page 1 of 13). Master Command Matrix Table

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Access code (ACC)			X	X	X					
Access code authority (ACCAUT)					X					GRT RVK
Access group (ACCGRP)					X					ANZ
Access path (AP)										(see ENDJRNAP, STRJRNAP)
Accounting code (ACGCDE)						X				
Active jobs (ACTJOB)							X			
Active prestart jobs (ACTPJ)					X					
Activity report (ACTRPT)										PRT
Advanced function printer data (AFPDTA)										PRT
Advanced printer function (APF)								X		
Advanced print writer (APW)								X		

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[1] AS/400, Operating System/400, and OS/400 are trademarks of the International Business Machines Corporation.

Figure 1-1 (Page 2 of 13). Master Command Matrix Table

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Advanced Peer-to-Peer Networking information (APPNINF)					X					
Alert(s) (ALR)							X			
Alert description(s) (ALRD)			X	X		X	X			
Alert table(s) (ALRTBL)	X	X				X	X			
Attention program (ATNPGM)										SET
Authority (AUT)										RST
Authority holder (AUTHLR)	X	X			X					
Authority list entry (AUTLE)			X	X		X				RTV
Authorization list (AUTL)	X	X			X		X			EDT
Authorization list document library objects (AUTLDLO)					X					
Authorization list objects (AUTLOBJ)					X					
Authorized program analysis report (APAR)	X									
Authorized users (AUTUSR)					X					
Auto report program (RPTPGM)	X									(see DLTPGM)
Autostart job entry (AJE)			X	X		X				
Back (BACK)										ROLL
BASIC (BAS)								X		
BASIC program (BASPGM)	X									(see DLTPGM)
Batch job (BCHJOB)									X	TFR
Break message (BRKMSG)										SND
Breakpoint(s) (BKP)			X	X	X					RSM
Business Graphics Utility (BGU)								X		
Character generator utility (CGU)								X		
Changed object (CHGOBJ)										SAV
Chart (CHT)					X					
Chart format(s) (CHTFMT)		X				X				
Class(es) (CLS)	X	X			X	X				
Class-of-service description (COSD)	X	X			X	X	X			
C locale description (CLD)	X									
C locale description source (CLDSRC)										RTV
C program (CPGM)	X									
COBOL debug (mode) (CBLDBG)								X	X	
COBOL program (CBLPGM)	X									(see DLTPGM)
Command (CMD)	X	X			X	X	X			SLT
Command default (CMDDFT)						X				
Command usage (CMDUSG)										PRT
Commitment control (CMTCTL)								X	X	
Communications (CMN)										VFY
Communications device (CMNDEV)										HLD RLS
Communications device entry (CMNDEVE)										

| Figure 1-1 (Page 3 of 13). Master Command Matrix Table |

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Communications entry (CMNE)			X	X		X				
Communications file (CMNF)										(see DLTF)
Component report (CPTRPT)										PRT
Configuration (CFG)										RST VRY
Configuration list (CFGL)	X	X			X	X	X			CPY
Configuration list entries (CFGLE)			X	X						
Configuration source (CFGSRC)										RTV
Configuration status (CFGSTS)							X			RTV
Contact information (CNTINF)							X			
Control (CTL)										TFR
Control language program (CLPGM)	X									DMP (see DLTPGM)
Control language source (CLSRC)										CVT RTV
Controller description (CTLD)		X			X		X			
Controller description for APPC controller (CTLAPPC)	X					X				
Controller description for Async (CTLASC)	X					X				
Controller description for BSC (CTLBSC)	X					X				
Controller description for finance (CTLFNC)	X					X				
Controller description for local work station (CTLLWS)	X					X				
Controller description for network (CTLNET)	X					X				
Controller description for remote work station (CTLRWS)	X					X				
Controller description for SNA Host (CTLHOST)	X					X				
Controller description for retail (CTLRTL)	X					X				
Controller description for tape (CTLTAP)	X					X				
Controller description for virtual controller (CTLVWS)	X					X				
Controller recovery (CTLRCY)									X	RSM
Copy screen (CPYSCN)								X	X	
Cross System Product application (CSPAPP)	X									PRT
Cross System Product map group (CSPMAP)		X								
Cross System Product object(s) (CSPOBJ)					X					
Cross System Product program (CSPPGM)						X				
Cross System Product user message file (CSPMSGF)	X									
Cross System Product table (CSPTBL)		X								

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Cross System Product utilities (CSP)								X		TRC
Current library (CURLIB)						X				
Data (DTA)					X	X				FMT UPD
Data area(s) (DTAARA)	X	X			X	X	X			RTV
Database file (DBF)										ANZ (see CRTLF, CRTPF) OPN OVR POS (see also CRTSRCPF, DLTF)
Database file IDD (DBFIDD)						X				
Database file keys (DBFKEY)										ANZ
Database jobs (DBJOB)										SBM
Database reader (DBRDR)							X			
Database relations (DBR)					X					
Data definition (DTADFN)			X				X			LNK
Data dictionary (DTADCT)	X	X			X	X				
Data File Utility (DFU)							X			
Data File Utility program (DFUPGM)		X					X			
Data queue(s) (DTAQ)	X	X					X			
Date (DAT)										CVT
Disk activity report (DSKRPT)										PRT
Disk status (DSKSTS)						X				
Distributed systems node executive/personal computer (DSNX/PC) distribution queues (DPCQ)						X				
Double-byte character set (DBCS) conversion dictionary (IGCDCT)	X	X			X					EDT
Double-byte character set (DBCS) sort (IGCSRT)		X								CPY
Double-byte character set (DBCS) table (IGCTBL)		X								CHK CPY EDT
Debug (mode) (DBG)					X	X		X	X	
Dedicated service tools password (DSTPWD)						X				
Device (DEV)										
Device addresses (DEVADR)										PRT
Device configuration (DEVCFG)										
Device description (DEVD)		X			X	X				
Device description for APPC (DEVAPPC)	X					X				
Device description for Async (DEVASC)	X					X				
Device description for BSC (DEVBSC)	X					X				
Device description for diskette (DEVDKT)	X					X				
Device description for display (DEVDSP)	X					X				

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Figure   1-1 (Page 5 of 13). Master Command Matrix Table

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Device description for finance (DEVFNC)	X					X				
Device description for intrasystem (DEVINTR)	X					X				
Device description for network (DEVNET)	X					X				
Device description for printer (DEVPRT)	X					X				
Device description for retail (DEVRTL)	X					X				
Device description for Systems Network Architecture (SNA) host (DEVHOST)	X					X				
Device description for SNA upline facility (SNUF) (DEVSNUF)	X					X				
Device description for tape (DEVTAP)	X					X				
Device recovery (DEVRCY)									X	RSM
Device tables (DEVTBL)						X				
Directory (DIR)					X	X				
Directory entry (DIRE)			X	X		X				
Disk data collection (DSKCOL)								X	X	
Diskette (DKT)					X					CHK CLR DUP INZ RNM (see also CPYFRMDKT, CPYTODKT)
Diskette file (DKTF)	X					X				OVR (see DLTF and DSPFD)
Diskette jobs (DKTJOB)										SBM
Diskette label (DKTLBL)		X								(see DSPDKT and INZDKT)
Diskette reader (DKTRDR)								X		(see also Reader)
Diskette report (DKTRPT)										PRT
Diskette writer (DKTWTR)								X		(see also Writer)
Display device entry (DSPDEVE)										
3270 display emulation (EML3270)								X		
Display file (DSPF)	X					X				OVR (see DLTF and DSPFD)
Distributed data management conversation (DDMCNV)										RCL
Distributed data management file (DDMF)	X				X	X	X			(see OVRDBF)
Distribution (DST)		X								QRY RCV SND
Distribution description (DSTD)						X				
Distribution list(s) (DSTL)	X	X			X		X			
Distribution list entry (DSTLE)			X	X						
Distribution log (DSTLOG)					X					
Distribution queue (DSTQ)							X			SND HLD RLS
Distribution services (DSTSRV)					X					CFG
Do (DO)									X	

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Document (DOC) (See also Document Library Object commands)	X				X		X			CHK CPY EDT FIL MRG PAG PRT RPL RTV SND
Document description (DOCD)						X				
Document library (DOCLIB)						X				QRY
Document library object (DLO)		X								DMP RCL RNM RST SAV CHK
Document library object authority (DLOAUT)			X	X	X	X				EDT
Document library object owner (DLOOWN)						X				
Document list (DOCL)		X								
Document print queue (DOCPRTQ)						X				
Duplicate object (DUPOBJ)	X									
Edit description(s) (EDTD)	X	X			X		X			
Education (EDU)							X			
Emulation IGC (ideographic) (EMLIGC)										SND
Emulation output (EMLOUT)										EJT
Error log (ERRLOG)										PRT
File(s) (F)		X					X			CLO CPY DCL RCV SND (see also RSTS36F, SNDRCVF)
File description (FD) (See also DLO commands)					X					
File field description (FFD)					X					
Finance job (FNCJOB)										SBM
Folder (FLR)	X				X		X			(see also RSTS36FLR)
Font management aid (FMA)							X			
Font resource(s) (FNTRSC)	X	X					X			
Form description (FORMD)										MRG
Form definition(s) (FORMDF)	X	X					X			
Forms control table (FCT)	X	X				X	X			
Forms control table entry (FCTE)			X	X		X				
From diskette (FRMDKT)										CPY
From personal computer document (FRMPCD)										CPY
From tape (FRMTAP)										CPY
Graphics data file (GDF)					X					
Graphics symbol set(s) (GSS)	X	X					X			
Group attributes (GRPA)						X				RTV
Group job (GRPJOB)									X	TFR
Hardware products (HDWPRD)						X				
Local hardware (LCLHDW)					X					
Help document (HLPDOC)					X					

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Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
High-level language pointer (HLLPTR)						X				
Intersystem communications file (BSCF)										(see DLTF and DSPFD)
Intersystem communications function (ICF)										TRC
OS/400-ICF file (ICFF)	X					X				OVR
OS/400-ICF program device entry (ICFDEVE)			X	X		X				OVR
Input (INP)									X	
Index search (IDXSCH)							X			
Interactive data definition utility (IDD)							X			
Interactive terminal facility (ITF)							X			
Internal (INT)										TRC
Internal data (INTDTA)										PRT
Job (JOB)					X	X	X		X	BCH DSC DLY DMP HLD RLS RRT SBM TFR TRC
Job abnormal (JOBABN)									X	
Job attributes (JOBA)										RTV
Job description(s) (JOBD)	X	X			X	X	X			
Job internal (JOBINT)										DMP
Job log (JOBLOG)					X					
Job queue (JOBQ)	X	X					X			CLR HLD RLS
Job queue entry (JOBQE)			X	X		X				
Job report (JOBRPT)										PRT
Job trace (JOBTRC)								X	X	PRT
Journal (JRN)	X	X			X	X	X			
Journal attributes (JRNA)						X				
Journal entry (JRNE)										SND RCV RTV
Journal images (JRNIMG)										CMP
Journal menu (JRNMNU)										
Journal receiver(s) (JRNRCV)	X	X					X			
Journal receiver attributes (JRNRCVA)					X					
Journaled changes (JRNCHG)				X						APY
Journaling access path (JRNAP)								X	X	
Journaling physical file changes (JRNPF)								X	X	
Kanji printer function (KPF)								X		
Keyboard map (KBDMAP)					X	X				SET
Library (or libraries) (LIB)	X	X			X	X	X			CLR CPY RST SAV
Library list (LIBL)					X	X				EDT
Libraries using PDM (LIBPDM)						X				
Library list entry (LIBLE)			X	X						

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Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Licensed program (LICPGM)		X								RST SAV
Line (LIN)										ANS
Line description (LIND)		X			X		X			
Line description for Async (LINASC)	X					X				
Line description for BSC (LINBSC)	X					X				
Line description for SDLC (LINSDLC)	X					X				
Line description for TDLC (LINTDLC)	X					X				
Line description for Token-Ring Network (LINTRN)	X					X				
Line description for X.25 (LINX25)	X					X				
Line recovery (LINRCY)									X	RSM
Lock report (LCKRPT)										PRT
Log(ging) (LOG)					X					
Logical file (LF)	X					X				(see DLTF, DSPFD, and OVRDBF)
Logical file member (LFM)			X			X				
Member (M)				X						RNM
Member description (MBRD)										RTV
Members using PDM (MBRPDM)						X				
Menu (MNU)	X	X				X	X			
Menu attributes (MNUA)					X					(see GO)
Message(s) (MSG)				X	X					MON RCV RTV SND
Message description (MSGD)			X	X	X	X	X			
Message file(s) (MSGF)	X	X					X			MRG OVR (see DLTF)
Message file menu (MSGFMNU)	X									
Message queue (MSGQ)	X	X				X	X			CLR
Mode (MOD)								X	X	
Mode description (MODD)	X	X			X	X	X			
Mode status (MODSTS)					X					
Names for SMTP (NAMSMTP)						X				
Network attributes (NETA)					X	X				RTV
Network file (NETF)		X					X			RCV SND
Network job (NETJOB)										SBM
Network job entry (or entries) (NETJOBE)			X	X		X	X			
Network message (NETMSG)										SND
Network spool file (NETSPLF)										SND
Object(s) (OBJ)						X				ALC CHK DLC DMP MOV RNM RST SAV (see also SAVCHGOBJ)
Object authority (OBJAUT)					X					EDT GRT RVK
Objects for Cross System Product (OBJCSP)						X				

Figure 1-1 (Page 9 of 13). Master Command Matrix Table

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Object description (OBJD)					X	X				
Object locks (OBJLCK)							X			
Object owner (OBJOWN)						X				
Objects by owner (OBJOWN)							X			
Objects using PDM (programming development manager) (OBJPDM)							X			
Off (OFF)										SIGN
Office (OFC)								X		
Output queue (OUTQ)	X	X				X	X			CLR HLD RLS
Output queue description (OUTQD)						X				
Overlay(s) (OVL)	X	X				X				
Override (OVR)		X			X					
Override device entry (OVRDEVE)		X								
Page printer writer (PPW)							X			
Page segment(s) (PAGSEG)	X	X					X			
Panel group(s) (PNLGRP)		X					X			
PASCAL program (PASPGM)	X									
Pass-through (PASTHR)								X	X	
Password (PWD)						X				CHK
Performance data (PFRDTA)					X					CVT
Performance monitor (PFRMON)								X	X	
Performance tools (PFRT)							X			
Personal computer command (PCCMD)							X			
Personal computer support (PCS)										INZ
Personal computer support organizer (PCO)							X			
Personal computer support organizer profile (PCOPRF)						X				
Physical file (PF)	X					X				(see DLTF and DSPFD)
Physical file member (PFM)			X		X	X				CLR INZ RGZ
Physical file variable-length member (PFVLM)			X							
PL/I program (PLIPGM)	X									(see DLTPGM)
Pointer (PTR)						X				
Pool report (POLRPT)										PRT
Prestart job (PJ)						X		X	X	
Prestart job entry (PJE)			X	X		X				
Print key (PRTKEY)										EML
Printer (PRT)										VFY
Printer emulation (PRTEML)								X	X	
Printer file (PRTF)	X					X				OVR (see DLTF and DSPFD)
Printer writer (PRTWTR)							X			(see also Writer)
Problem (PRB)		X			X		X			ANZ

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Product information (PRDINF)							X			
Profile (PRF)						X				
Program(s) (PGM)		X	X	X	X	X	X		X	ANZ
Program adopt (PGMADP)					X					
Program information (PGMINF)										EXT SET
Program message (PGMMSG)										SND
Program references (PGMREF)					X					
Program tables (PGMTBL)						X				
Program temporary fix (PTF)			X	X						APY CPY LOD
Program temporary fix order (PTFORD)										SND
Program variable (PGMVAR)					X	X				
Programmer menu (PGMMNU)							X			
Programming development manager (PDM)							X			
Query (or queries) (QRY)		X					X	X		RUN
Query file (QRYF)										OPN
Question (QST)		X					X	X		ANS ASK EDT
Question and answer database (QSTDB)	X	X				X				LOD
Question and answer database for distribution (QSTLOD)	X									
Reader (RDR)							X		X	HLD RLS
Receive (RCV)								X		
Receive files (RCVF)										SND
Record lock (RCDLCK)					X					CHK
Reply (RPY)										SND
Reply list entry (or entries) (RPYLE)			X	X		X	X			
Request (RQS)								X		
Resource report (RSCRPT)										PRT
Resources (RSC)										RCL
Remote command (RMTCMD)										SBM
Remote job entry binary synchronous communications file (RJEBSCF)	X									
Remote job entry communications entry (RJECMNE)			X	X		X				
Remote job entry communications file (RJECMNF)	X									
Remote job entry configuration (RJECFG)	X	X				X				
Remote job entry console (RJECSL)								X		
Remote job entry data (RJEDTA)										CVT
Remote job entry job (RJEJOB)										SBM
Remote job entry reader (RJERDR)								X		CNL
Remote job entry reader entry (RJERDRE)			X	X		X				

Figure 1-1 (Page 10 of 13). Master Command Matrix Table

Figure 1-1 (Page 11 of 13). Master Command Matrix Table

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Remote job entry session (RJESSN)							X	X	X	
Remote job entry writer (RJEWTR)								X		CNL
Remote job entry writer entry (RJEWTRE)			X	X		X				
Remote phase (RMTPHS)										RLS
Report program generator program (RPGPGM)	X									(see DLTPGM)
Routing entry (RTGE)			X	X		X				
Remote Spooling Communications Subsystem (RSCS) and Professional Office System (PROFS[1]) distribution services (RPDS)										CFG
Remote support (RMTSPT)								X	X	
Sampled address monitor (SAM)								X	X	
Sampled address monitor data (SAMDTA)										PRT
Sampled address monitor data collection (SAMCOL)								X	X	
Save file (SAVF)	X				X	X				OVR CLR (see DLTF)
Save file data (SAVFDTA)										SAV
Screen design aid (SDA)						X				
Search index(es) (SCHIDX)		X				X				
Security data (SECDTA)										SAV
Source entry utility (SEU)						X				
Secondary job (SECJOB)										TFR
Service job (SRVJOB)								X	X	
Service request (SRVRQS)										SND
Service status (SRVSTS)					X					
Session description (SSND)	X	X				X	X			
Session maximum (SSNMAX)						X				
Software resources (SFWRSC)					X					
Source file (SRCF)										CPY
Source physical file (SRCPF)	X					X				(see DLTF and DSPFD)
Spelling aid dictionary(ies) (SPADCT)	X	X					X			
Sphere of control (SOC)						X				
Sphere of control status (SOCSTS)					X					
Spooled file (SPLF)		X			X		X			CPY HLD RLS (see also SNDNETSPLF)
Spooled file attributes (SPLFA)						X	X			
Storage (STG)										RCL SAV
Structured Query Language (SQL)								X		
Structured Query Language C (SQLC)	X									
Structured Query Language COBOL (SQLCBL)	X									

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Structured Query Language PL/I (SQLPLI)	X									
Structured Query Language RPG (SQLRPG)	X									
Submitted jobs (SBMJOB)							X			
Subsystem (SBS)							X	X	X	
Subsystem description(s) (SBSD)	X	X			X	X	X			
Subsystem jobs (SBSJOB)							X			
Support network (SPTN)								X		
System (SYS)									X	INZ MDL PWRDWN SAV
System activities (SYSACT)						X				
System/36 (S36)					X	X		X	X	
System/36 COBOL (S36CBL)	X									
System/36 file (S36F)										RST SAV
System/36 display file (S36DSPF)	X									
System/36 folder (S36FLR)										RST
System/36 library members (S36LIBM)										RST SAV
System/36 menu (S36MNU)	X									
System/36 message file (S36MSGF)	X									
System/36 message list (S36MSGL)						X				
System/36 program attributes (S36PGMA)						X				EDT
System/36 procedure attributes (S36PRCA)						X		X		EDT
System/36 RPG (S36RPG)	X									
System/36 RPGR (S36RPGR)	X									
System/36 RPT (S36RPT)	X									
System/36 source attributes (S36SRCA)						X				EDT
System library list (SYSLIBL)						X				
System object (SYSOBJ)										DMP
System report (SYSRPT)										PRT
System service tools (SST)								X		
System status (SYSSTS)						X				
System value (SYSVAL)					X	X				RTV
Table(s) (TBL)	X	X				X				
Tape (TAP)					X					CHK DMP INZ VFY (see also CPYFRMTAP, CPYTOTAP)
Tape file (TAPF)	X					X				OVR (see DLTF and DSPFD)
Technical information exchange (TIE)						X				
Technical information exchange file (TIEF)										QRY RCV SND

Figure 1-1 (Page 12 of 13). Master Command Matrix Table

Figure 1-1 (Page 13 of 13). Master Command Matrix Table

Items Affected (abbreviation)	CRT	DLT	ADD	RMV	DSP	CHG	WRK	STR	END	Other Verbs
Technical information exchange session (TIESSN)								X	X	
Text profile (TXTPRF)						X				
To (TO)										GO
To diskette (TODKT)										CPY
To folder (TOFLR)										CVT
To personal computer document (TOPCD)										CPY
To tape (TOTAP)										CPY
Trace (TRC)			X	X	X					DMP
Trace data (TRCDTA)					X					CLR
Transaction report (TNSRPT)				.						PRT
Transmission Control Protocol/Internet Protocol (TCP/IP)										CFG
Transmission Control Protocol/Internet Protocol (TCP/IP) connection (TCPCNN)										VFY
Transmission Control Protocol/Internet Protocol (TCP/IP) File Transfer Protocol (FTP) (TCPFTP)								X		
User authority (USRAUT)										GRT
User jobs (USRJOB)						X				
User message (USRMSG)										SND
User password (USRPWD)										
User permission (USRPMN)					X					GRT RVK
User profile(s) (USRPRF)	X	X			X	X	X			RST RTV
User tables (USRTBL)						X				
Variable (VAR)						X				
Word processing (WP)								X		
Work station entry (WSE)			X	X		X				
Writer (WTR)						X	X		X	HLD RLS

1 PROFS is a registered trademark of the International Business Machines Corporation.

Chapter 2. User Profile Matrix Chart

The following table shows the commands that are specifically authorized for specific user profiles (indicated by an S under the profile name for which they are authorized), and those that are restricted to the security officer only (indicated by an R in the QSECOFR profile column).

Cryptographic commands are shipped with QSECOFR only authority. All other commands not listed are public which means they can be used by all users.

The security officer may wish to use this table to change some of the command authorizations and indicate the changes on the table.

Figure 2-1 (Page 1 of 2). User Profile Names					
Command Name	**QPGMR** (S)	**QSYSOPR** (S)	**QSRV** (S)	**QSRVBAS** (S)	**QSECOFR** (R)
ADDACC					R
ADDNETJOBE					R
ADDRPYLE	S				
ANSQST					R
ANZPRB	S	S	S	S	
APYJRNCHG	S		S		
APYPTF	S	S	S	S	
CFGDSTSRV	S	S			
CHGJRN	S	S	S		
CHGNETA					R
CHGNETJOBE					R
CHGQSTDB					R
CHGPTR			S		
CHGRPYLE	S				
CHGSYSLIBL					R
CHGSYSVAL	S	S	S		
CPYPTF	S	S	S	S	
CRTAPAR	S	S	S	S	
CRTAUTHLR					R
CRTQSTDB					R
CRTQSTLOD					R
DLTLICPGM					R
DLTQST					R
DLTQSTDB					R
DLTPRB	S	S	S	S	
DMPDLO	S	S	S	S	
DMPJOB	S	S	S	S	
DMPJOBINT	S	S	S	S	
DMPOBJ	S	S	S	S	
DMPSYSOBJ	S	S	S	S	
DSPDSTLOG					R
DSPPTF	S	S	S	S	
DSPSRVSTS	S	S	S	S	

Command Name	QPGMR (S)	QSYSOPR (S)	QSRV (S)	QSRVBAS (S)	QSECOFR (R)
EDTQST					R
ENDSRVJOB	S	S	S	S	
ENDJOBABN	S	S	S		
GRTACCAUT					R
HLDCMNDEV	S	S	S	S	R
HLDDSTQ	S	S			
LODPTF	S	S	S	S	
LODQSTDB					R
PRTDOC	S	S	S	S	
PRTERRLOG	S	S	S	S	
PRTINTDTA	S	S	S	S	
RCLSTG	S	S	S	S	
RLSCMNDEV	S	S	S	S	
RLSDSTQ	S	S			
RMVACC					R
RMVJRNCHG	S		S		
RMVNETJOBE					R
RMVPTF	S	S	S	S	
RMVRPYLE	S				
RSTAUT					R
RSTCFG					R
RSTLICPGM					R
RSTUSRPRF					R
SAVLICPGM					R
SBMFNCJOB					R
SNDDSTQ	S	S			
SNDPTFORD					R
SNDSRVRQS					R
STRSST			S		
STRDBG	S		S		
STRSRVJOB	S	S	S	S	
TRCINT	S		S		
TRCJOB	S	S	S	S	
VFYCMN	S	S	S	S	
VFYPRT	S	S	S	S	
VFYTAP	S	S	S	S	
WRKCNTINF					R
WRKDEVTBL					R
WRKDPCQ	S	S			
WRKDSTQ	S	S			
WRKHDWPRD			S	S	
WRKJRN	S	S	S		
WRKPGMTBL					R
WRKPRB	S	S	S	S	
WRKUSRTBL					R

Figure 2-1 (Page 2 of 2). User Profile Names

Chapter 3. Operating System Object Types

The predefined values for the operating system object types are listed below. When an object is created and a library is not specified, the object is usually stored in the QGPL library. The table indicates which library the object is stored in. Some objects cannot be stored in user-provided libraries. These are indicated by N/A in the table below. Libraries must be specified for these objects.

Value	Object Type	Default User Library
*ALRTBL	Alert Table	N/A
*AUTL	Authorization list	N/A
*CFGL	Configuration list	N/A
*CHTFMT	Chart format	N/A
*CLD	C Locale Description	QGPL
*CLS	Class	QGPL
*CMD	Command	QGPL
*COSD	Class-of-service description	N/A
*CSPMAP	Cross System Product Map	N/A
*CSPTBL	Cross System Product Table	N/A
*CTLD	Controller description	N/A
*DEVD	Device description	N/A
*DOC	Document	N/A
*DOCL	Document list	N/A
*DTAARA	Data area	*CURLIB
*DTADCT	Data dictionary	*CURLIB
*DTAQ	Data queue	*CURLIB
*EDTD	Edit description	N/A
*FCT	Forms control table	*CURLIB
*FILE	File	*CURLIB
*FLR	Folder	*CURLIB
*FNTRSC	Font Resource	*CURLIB
*FORMDF	Form Definition	*CURLIB
*GSS	Graphics symbol set	N/A
*IGCDCT	Double-byte character set dictionary	*CURLIB
*IGCSRT	Double-byte character set sort table	N/A
*IGCTBL	Double-byte character set character table	N/A
*JOBD	Job description	*CURLIB
*JOBQ	Job queue	*CURLIB
*JRN	Journal	*CURLIB
*JRNRCV	Journal receiver	*CURLIB
*LIB	Library	N/A
*LIND	Line description	N/A
*MENU	Menu definition	*CURLIB
*MODD	Mode description	N/A
*MSGF	Message file	*CURLIB
*MSGQ	Message queue	*CURLIB
*OUTQ	Output queue	*CURLIB
*OVL	Overlay	*CURLIB
*PAGSEG	Page Segment	*CURLIB
*PGM	Program	*CURLIB
*PNLGRP	Panel group definition	*CURLIB
*PRDDFN	Product definition	*CURLIB
*QRYDFN	Query definition	*CURLIB
*RCT	Reference code translate table	QSYS
*S36	System/36 machine description	N/A
*SBSD	Subsystem description	*CURLIB
*SCHIDX	Information search index	N/A
*SPADCT	Spelling aid dictionary	*CURLIB
*SSND	Session description	*CURLIB

Value	Object Type	Default User Library
*TBL	Table	*CURLIB
*USRPRF	User profile	N/A

Chapter 4. IBM-Supplied Objects

This chapter describes a subset of the objects that IBM includes with the system. Any changes made to IBM-supplied objects should be recorded using a CL program or an input stream of commands to allow the changes to be restored if a new release is installed.

The following tables group the objects by object type. Each table shows the object, the library where the object can be found, and a description of the object.

Class

Object	Library	Description
QBATCH	QGPL	Default batch job class
QCTL	QSYS	Controlling subsystem class
QDIALOCAL	QGPL	Class for DIA local job
QDSNX	QGPL	Class for DSNX subsystem
QFNC	QGPL	Class for FNC subsystem
QINTER	QGPL	Interactive subsystem class
QPGMR	QGPL	Programmer subsystem class
QRJECTL	QRJE	RJE class
QRJERDR	QRJE	RJE class
QRJESSN	QRJE	RJE class
QSNADS	QGPL	SNADS class
QSPL	QGPL	Spooling subsystem class
QSPL2	QGPL	Spooling subsystem class

Note: More information about the above-described objects in the class object type, including object parameters, can be found in the *Work Management Guide*.

Class-of-Service Description

Object	Library	Description
#CONNECT	QSYS	Default
#BATCH	QSYS	Batch communications
#INTER	QSYS	Interactive communications
#BATCHSC	QSYS	Batch communications with required data link security
#INTERSC	QSYS	Interactive communications with required data link security

Controller Description

Object	Library	Description
CTL01	QSYS	System console (created on install)
QESCTL	QSYS	Service Support controller
QTICTL	QSYS	Market Support controller
TAP01	QSYS	First tape controller (created on install)

Note: The work station function support creates virtual controllers for the virtual devices it creates. These are named QVIRCD0001 and QVIRCD9999.

Database Files

Object	Library	Description
QAUOOPT	QGPL	PDM option file
QBASSRC	QGPL	BASIC source file
QCBLSRC	QGPL	COBOL source file
QLBLSRC	QGPL	COBOL source file
QCLSRC	QGPL	CL source file
QCMDSRC	QGPL	Command source file
QDDSSRC	QGPL	DDS source file
QFMTSRC	QGPL	Reformat source file
QPASSRC	QGPL	PASCAL source file
QPLISRC	QGPL	PL/I source file
QRJESRC	QGPL	RJE source file
QRPGSRC	QGPL	RPG source file
QS36PRC	#LIBRARY	System/36 environment procedures (created by migration)
QS36SRC	#LIBRARY	System/36 environment source (created by migration)
QTBLSRC	QGPL	Table source file
QTXTSRC	QGPL	Text source file

Device Description

Object	Library	Description
DSP01	QSYS	System console (created on install)
QESPAP	QSYS	Service Support device
QTIDA	QSYS	Market Support File Exchange device
QTIDA2	QSYS	Market Support File Exchange device
QIADSP	QSYS	Market Support Product Information display
QIAPRT	QSYS	Market Support Product Information printer
QQAHOST	QSYS	Market Support Question and Answer device

Device Files

Object	Library	Description
QDKT	QGPL	Diskette file
QDKTSRC	QGPL	Diskette source file
QPRINT	QGPL	Printer file
QPRINTS	QGPL	Special forms print file
QPRINT2	QGPL	Two-copy print file
QTAPE	QGPL	Tape file
QTAPSRC	QGPL	Tape source file
QICDMF	QSYS	ICF file

Double-Byte Character Set Sort Tables

Object	Library	Description
QCGACTVC	QSYS	Active sort table for Traditional Chinese
QCGACTV	QSYS	Active sort table for Japanese
QCGACTVK	QSYS	Active sort table for Korean
QCGMMSTR	QSYS	Master sort table for Japanese
QCGMSTRC	QSYS	Master sort table for Traditional Chinese.

Double-Byte Character Set Dictionary

Object	Library	Description
QSYSIGCDCT	QSYS	Double-byte character set conversion dictionary

Double-Byte Character Set Files

Object	Library	Description
QCGF2424	QSYS	Double-byte character set 24 x 24 matrix, Japanese
QCGF2424K	QSYS	Double-byte character set 24 x 24 matrix, Korean
QCGF2424C	QSYS	Double-byte character set 24 x 24 matrix, Traditional Chinese
QCGF2424S	QSYS	Double-byte character set 24 x 24 matrix, Simplified Chinese

Double-Byte Character Set Tables

Object	Library	Description
QIGC2424	QSYS	Double-byte character set 24 x 24 matrix, Japanese
QIGC2424K	QSYS	Double-byte character set 24 x 24 matrix, Korean
QIGC2424C	QSYS	Double-byte character set 24 x 24 matrix, Traditional Chinese
QIGC2424S	QSYS	Double-byte character set 24 x 24 matrix, Simplified Chinese
QIGC3232	QSYS	Double-byte character set 32 x 32 matrix, Japanese

Edit Descriptions

Object	Library	Edit Code	Description
QEDIT5	QSYS	5	Edit code similar to B except DR = +
QEDIT6	QSYS	6	Edit code similar to K except * prints as total indication
QEDIT7	QSYS	7	Edit code similar to J except fixed $ prints
QEDIT8	QSYS	8	Edit code similar to J except floating $ prints
QEDIT9	QSYS	9	Edit code for date format

Folders

Object	Description
QDIADOCS	Shell document for DIA indirect users
QWPDOCS	Shell note for office product
QWPnnnn	Shell note for office product (secondary language)
QPRFFLR	Office editor profile document
QPRFnnnn	Office editor profile document (secondary language)
QIWSFLR	PC Support folder
QIWSMRI	PC translation material

Graphic Symbol Sets

Object	Library	Description
ADMxxxxx	QGDDM	Symbol sets

Job Descriptions

Object	Library	Description
QBATCH	QGPL	Job description used by QBATCH subsystem
QCTL	QSYS	Job description used by QCTL subsystem
QDFTJOBD	QGPL	Default job description
QDIA	QGPL	Document interchange transaction program job description
QDSNX	QGPL	DSNX job description
QFNC	QGPL	Finance subsystem job description
QHOSTPRT	QGPL	Host printer job description
QIDUJOBD1	QIDU	Job description used by IDU
QIDUJOBD2	QIDU	Job description used by IDU
QINTER	QGPL	Job description used by QINTER subsystem
QNFTP	QGPL	Object distribution job description
QPFRJOBD	QGPL	Performance monitor job description
QPFRMON	QGPL	Performance monitor job description
QPGMR	QGPL	Job description used by QPGMR subsystem
QSNADS	QGPL	SNADS job description
QOFCJOBD	QOFC	Personal Services batch job description
QOFALRMQ	QOFC	Personal Services alarm job description
QSPLAFPW	QSYS	Error job use job description
QSPLDBR	QGPL	Data base spooling reader job description
QSPLDKTR	QGPL	Diskette spooling reader job description
QSPLDKTW	QGPL	Diskette spooling writer job description
QSPLERROR	QGPL	Advance function print writer job description
QSPLPRTW	QGPL	Printer spooling writer job description
QSTRUPJD	QSYS	Autostart job description
QSYSJOBD	QSYS	Back up job description
QS36MRT	QGPL	System/36 MRT job description

Note: More information about the above-described objects in the job description object type, including object parameters, can be found in the *Work Management Guide.*

Job Queue

Object	Library	Description
QBASE	QGPL	Default job queue for base subsystem
QBATCH	QGPL	Default job queue for batch jobs
QCTL	QSYS	Job queue for controlling subsystem
QFNC	QGPL	Finance subsystem job queue
QINTER	QGPL	Interactive subsystem job queue
QPGMR	QGPL	Programmer subsystem job queue
QSNADS	QGPL	SNADS job queue
QSPL	QGPL	Job queue for readers and writers
QS36EVOKE	QGPL	System/36 EVOKE job queue
QS36MRT	QGPL	System/36 MRT job queue

Note: More information about the above-described objects in the job queue object type, including object parameters, can be found in the *Work Management Guide*.

Journals

Object	Library	Description
QAOSDIAJRN	QUSRSYS	Journal for DIA files
QDSNX	QUSRSYS	Journal for DSNX log
QSNADS	QUSRSYS	Journal for SNADS files
QSXJRN	QUSRSYS	Journal for problem files

Journal Receiver

Object	Library	Description
QAOSDIAC01	QUSRSYS	Journal receiver for DIA files
QAOSDInnnn	QUSRSYS	Journal receiver for DIA files
QDSNX	QUSRSYS	Journal receiver for DSNX log
QDSNXnnnn	QUSRSYS	Journal receiver for DSNX log
QSNADS	QUSRSYS	Journal receiver for SNADS files
QSNADSnnnn	QUSRSYS	Journal receiver for SNADS files
QSXJRNR	QUSRSYS	Journal receiver for problem files
QSXJRNnnnn	QUSRSYS	Journal receiver for problem files

Library

Object	Description
#CGULIB	CGU System/36 environment
#COBLIB	COBOL System/36 environment
#DFULIB	DFU System/36 environment
#DSULIB	DSU System/36 environment
#LIBRARY	User library for System/36 environment
#RPGLIB	RPG System/36 environment
#SDALIB	SDA System/36 environment
#SEULIB	SEU System/36 environment
QAPS	Advanced double-byte character set printer support
QBAS	BASIC
QBGU	BGU
QCBL	COBOL System/38-compatible
QDCT	Spelling aid dictionary
QDOC	Not shipped with system, created at install time
QDSNX	Not shipped with system, created at install time
QGDDM	GDDM
QGPL	General purpose library
QHLPSYS	OS/400 help text
QIDU	System/38 compatibility tools
QIWS	PC Support
QLBL	OS/400 COBOL
QMGU	Migration utility
QPAS	PASCAL
QPDA	Application development tools
QPFR	Performance tools
QPFRDATA	Performance tools data (created by system)
QPLI	PLI
QQRYLIB	Query
QQALIB	Question and Answer library
QRCL	Library for RCLSTG processing
QRECOVERY	Recovery library
QRJE	Communications utilities (created by system)
QRPG	RPG III
QRPLOBJ	Library for REPLACE(*YES) processing
QSPL	Spool library (created by system)
QSQL	SQL
QSRV	Service library (created by system)

Object	Description
QSSP	System/36 environment
QSYS	System library
QS36F	System/36 environment file library (created by system)
QSYS38	System/38 environment system library
QTEMP	Job temporary library (created by system)
QUSRSYS	User system Library

Line Description

Object	Library	Description
QESLINE	QSYS	Service Support line
QTILINE	QSYS	Market Support line

Message Queues

Object	Library	Description
QHST	QSYS	Message queue for system history log
QMGUMSGQ	QMGU	Message queue for migration
QPGMR	QUSRSYS	Message queue for programmer
QSECOFR	QUSRSYS	Message queue for security officer
QSRV	QUSRSYS	User QSRV message queue
QSRVBAS	QUSRSYS	User QSRVBAS message queue
QSYSOPR	QSYS	System operator message queue
QUSER	QUSRSYS	Message queue for user

Mode Descriptions

Object	Library	Description
BLANK	QSYS	Used with #CONNECT (class-of-service)
#BATCH	QSYS	Used with #BATCH (class-of-service)
#INTER	QSYS	Used with #INTER (class-of-service)
#BATCHSC	QSYS	Used with #BATCHSC (class-of-service)
#INTERSC	QSYS	Used with #INTERSC (class-of-service)
LU62	QSYS	Used with Market Support

Output Queue

Object	Library	Description
QDKT	QGPL	Default diskette output queue
QPRINT	QGPL	Default printer output queue
QPRINTS	QGPL	Printer output queue intended for special forms
QPRINT2	QGPL	Printer output queue intended for two-part paper

Programs

Object	Library	Description
QCMDEXC	QSYS	Run CL command
QCMDCHK	QSYS	Syntax check CL command
QCMD	QSYS	Command entry
QCAEXEC	QSYS	Run CL command (System/38 environment)
QCACHECK	QSYS	Syntax check CL command (System/38 environment)
QCL	QSYS	Command entry (System/38 environment)
QCLSCAN	QSYS	Scan for string
QDCXLATE	QSYS	Translation of data
QPGMMENU	QSYS	Programmer menu
QRCVDTAQ	QSYS	Receive from data queue
QSNDDTAQ	QSYS	Send to data queue
QY2FTML	QSYS	File transfer
$xxxxxx	QSYS	System/36 environment has programs that provide System/36 interfaces
SUBRxxx	QSYS	System/36 environment has programs that provide System/36 interfaces

Subsystem Description

Object	Library	Description
QBASE	QSYS	Base subsystem description
QBATCH	QGPL	Batch subsystem description
QCMN	QSYS	Communications subsystem description
QCTL	QSYS	Controlling subsystem description
QDSNX	QGPL	DSNX subsystem description
QFNC	QGPL	Finance subsystem description
QINTER	QSYS	Interactive subsystem description
QPGMR	QSYS	Programmer subsystem description
QSNADS	QSYS	SNADS subsystem description
QSPL	QSYS	Spooling subsystem description
QSYSSBSD	QSYS	Back up subsystem description

Note: More information about the above-described objects in the subsystem description object type, including object parameters, can be found in the *Work Management Guide*.

Spelling Aid Dictionary

Object	Library	Description
DANSK	QDCT	Danish
DEUTSCH	QDCT	German
DSCHWEIZ	QDCT	Swiss German
ESPANA	QDCT	Spanish
FRANCAIS	QDCT	French National
FRA2	QDCT	French Canadian
ISLENSK	QDCT	Icelandic
ITALIANO	QDCT	Italian
LEGAL	QDCT	US Legal
MEDICAL	QDCT	US Medical
NEDERLND	QDCT	Dutch
NORSK	QDCT	Norwegian
PORTUGAL	QDCT	Portuguese
SUOMI	QDCT	Finnish
SVENSK	QDCT	Swedish
UK	QDCT	UK English
US	QDCT	US English

Table

Object	Library	Description
QASCII	QSYS	EBCDIC to ASCII translation table
QEBCDIC	QSYS	ASCII to EBCDIC translation table
QSYSTRNTBL	QSYS	Lowercase to uppercase translation table

Note: In addition to these tables, library QUSRSYS contains a number of code page conversion tables used to convert between code pages and character sets.

User Profile

External profiles:

Object	Library	Description
QDFTOWN	QSYS	Default owner or where owner not found
QPGMR	QSYS	Programmer and batch user profile
QRJE	QSYS	RJE user profile
QSECOFR	QSYS	Security officer user profile
QSRV	QSYS	Service full function
QSRVBAS	QSYS	Service limited function
QSYSOPR	QSYS	System operator user profile
QTSTRQS	QSYS	Used when testing display stations
QUSER	QSYS	Work station user profile

Internal profiles:

Object	Library	Description
QDBSHR	QSYS	Owner of shared data base structures
QDOC	QSYS	Document
QDSNX	QSYS	Distributed systems node executive
QFNC	QSYS	Finance
QGATE	QSYS	PROFS bridge
QRJE	QSYS	RJE user profile
QSNADS	QSYS	SNA distribution services (object distribution)
QSPL	QSYS	Spool
QSPLJOB	QSYS	Spool reader/writers
QSYS	QSYS	Owner of system objects

Chapter 5. System Values

Date and Time System Values

For each system value, this chart provides:

- The initial value specified for the system value when the system is shipped
- A brief description of the value
- The attributes of the value

Note: The *Length* column of this chart includes, for some values, a number that has a space between digits (for example, 5 0). The character(s) to the left of the space indicates the total number of positions the value contains; the character to the right of the space indicates how many of these positions are decimals.

Name	Initial Value	Description	Type	Length
QDATE		System date	Character	5[1] or 6
QYEAR		Year	Character	2
QMONTH		Month of the year (not used for Julian dates)	Character	2
QDAY		Day of the month (day of the year if the system date format is Julian) Day of the month (day of the year if the system date format is Julian)	Character	2 or 3[1]
QLEAPADJ	0	Leap year adjustment	Decimal	(5 0)
QTIME		Time of day	Character	6, 7, 8, or 9[2]
QHOUR		Hour of the day	Character	2
QMINUTE		Minute of the hour	Character	2
QSECOND		Second of the minute	Character	2

[1] For Julian dates
[2] For tenths, hundredths, and thousandths of a second

Editing System Values

Name	Initial Value	Description	Type	Length
QCURSYM	'$'	Currency symbol	Character	1
QDATFMT	MDY	Date format	Character	3
QDATSEP	'/'	Date separator	Character	1
QDECFMT	'b'	Decimal format	Character	1

System Control System Values

Name	Initial Value	Description	Type	Length
QABNORMSW	'0'	Previous end of system indicators. ('0' means previous end was normal. '1' means previous end was abnormal.) Cannot be changed.	Character	1
QAUTOCFG	'1'	Autoconfiguration indicator. ('0' means autoconfiguration is off. '1' means autoconfiguration is on.)	Character	1
QCHRID	'101 37'	Default graphic character set and code page used for displaying or printing data.	Character	20
QCMNRCYLMT	'0 0'	Provides recovery limits for system communications recovery.	Character	20
QCONSOLE	'QCONSOLE'	Console name. Cannot be changed.	Character	10
QCTLSBSD	'QBASE QSYS'	Controlling subsystem name.	Character	20
QDBRCVYWT	'0'	Database recovery indicator. ('0' means do not wait. '1' means wait.)	Character	1
QDEVNAMING	'*NORMAL'	Indicates the device naming convention. ('*NORMAL' means follow AS/400 standards. '*S36' means follow System/36 standards.) '*DEVADR' means derive device name from the device address.	Character	10
QIGC	'0'	Indicates if the DBCS version of the system is installed. ('1' means the DBCS version is installed. '0' means the DBCS version is not installed.) Cannot be changed.	Character	1
QIPLDATTIM	'*NONE'	Date and time to automatically IPL the system.	Character	20
QIPLSTS	'0'	IPL status indicator. ('0' specifies operator panel IPL. '1' specifies auto-IPL after power is restored. '2' specifies start IPL again. '3' specifies auto-IPL at some TIME OF DAY. '4' specifies remote IPL.) Cannot be changed.	Character	1

Name	Initial Value	Description	Type	Length
QIPLTYPE	'0'	Indicates type of IPL to perform. ('0' means unattended IPL. '1' means attended IPL with service displays.)	Character	1
QKBDTYPE	'USB'	Specifies a language character set for the keyboard.	Character	3
QMODEL		System model number. Cannot be changed.	Character	4
QPFRADJ	'1'	Performance adjustment. ('0' means no performance adjustment. '1' means performance adjustment at IPL.)	Character	1
QPRTDEV	'PRT01'	Default printer device description.	Character	10
QPWRDWNLMT	600	Maximum amount of time (in seconds) allowed for PWRDWNSYS *IMMED.	Decimal	(5 0)
QPWRRSTIPL	'0'	Automatic IPL after power restored allowed. ('0' means no auto-IPL after power restored. '1' means auto-IPL after power restored.)	Character	1
QRMTIPL	'0'	Remote power on and IPL indicator. ('0' means remote power on and IPL is not allowed. '1' means remote power on and IPL is allowed.)	Character	1
QSCPFCONS	'1'	IPL console indicator. ('1' means to switch to unattended IPL if console problems occur during IPL. '0' means end system.)	Character	1
QSPCENV	'*NONE'	Indicates default special environment. ('*NONE' means no special environment. '*S36' means System/36 environment.)	Character	10
QSRLNBR		System serial number. Cannot be changed.	Character	8
QSTRPRTWTR	'1'	Indicates if print writers should be started. ('0' means print writers not started. '1' means start print writers.) Cannot be changed.	Character	1
QSTRUPPGM	'QSTRUP QSYS'	Startup program name called from autostart job in the controlling subsystem.	Character	20
QUPSDLYTIM	'*CALC'	Uninterruptible power supply delay time.	Character	20
QUPSMSGQ	'QSYSOPR QSYS'	Message queue for uninterruptible power supply messages.	Character	20
QDSCJOBITV	'240'	Time interval, in minutes, that a job can be disconnected before it ends.	Character	10
QDEVRCYACN	*MSG	Specifies what action to take when an I/O error occurs for the job's requester device.	Character	20

Library List System Values

Name	Initial Value	Description	Type	Length
QSYSLIBL	'QSYS QHLPSYS QUSRSYS'	System part of the library list.	Character	150
QUSRLIBL	'QGPL QTEMP'	User part of the library list.	Character	250

Allocation System Values

Name	Initial Value	Description	Type	Length
QACTJOB	20	Initial number of active jobs to allocate storage for.	Decimal	(5 0)
QADLACTJ	10	Additional number of active jobs to allocate storage for.	Decimal	(5 0)
QADLSPLA	2048	Additional storage for extending spooling control block (bytes).	Decimal	(5 0)
QADLTOTJ	10	Additional total number of jobs to allocate storage for.	Decimal	(5 0)
QJOBMSGQSZ	16	The size used to create job message queues (K bytes).	Decimal	(5 0)
QJOBMSGQTL	24	Maximum reinitialization size of job message queue (K bytes).	Decimal	(5 0)
QJOBSPLA	1536	Initial size of spooling control block for a job (bytes).	Decimal	(5 0)
QTOTJOB	30	Initial total number of jobs to allocate storage for.	Decimal	(5 0)

Message and Logging System Values

Name	Initial Value	Description	Type	Length
QACGLVL	*NONE	Accounting level.	Character	80
QPRTTXT	blanks	Up to 30 characters of text that can be printed at the bottom of the form.	Character	30
QHSTLOGSIZ	5000	Maximum number of records for each version of the history log.	Decimal	(5 0)
QSRVDMP	*DMPUSRJOB	Control for requesting dumps: no jobs, system jobs, user jobs, or all jobs.	Character	10

Storage System Values

Name	Initial Value	Description	Type	Length
QBASACTLVL	6	Activity level of base storage pool.	Decimal	(5 0)
QBASPOOL	500	Minimum size of base storage pool (K bytes).	Zoned	(10 0)
QMAXACTLVL	100	Maximum activity level of the system.	Decimal	(5 0)
QMCHPOOL	1500	Machine storage pool size (K bytes).	Zoned	(10 0)
QTSEPOOL	*NONE	Time slice end pool.	Char	10

Chapter 6. Data Description Specifications

Physical and Logical File Keyword Summary

Notes:

1. The following abbreviations are used in the *Level* column in Figure 6-1:

L	Logical file
P	Physical file
FL	File level
RCD	Record level
JOIN	Join level
FLD	Field level
KFLD	Key field level
S/O FLD	Select/omit field level

2. The following abbreviations are used in the *Group* column in Figure 6-1:

CHK	Validity checking keywords
EDT	Editing keywords
JOIN	Join keywords
MSC	Miscellaneous keywords
PTH	Access path keywords
REF	Naming and referencing keywords
S/O	Select/omit keywords
TXT	Text definition keywords

Figure 6-1 (Page 1 of 5). Physical and Logical File Keyword Informational Listing

Keyword	Values	Function	Level (See Note 1)	Group (See Note 2)
ABSVAL		Causes the sign of the key field to be ignored when sequencing values (use absolute values).	P: KFLD L: KFLD	PTH
ALIAS	(alternative-name)	Provides an alternative name to be used for a field.	P: FLD L: FLD	REF
ALL		Selects or omits all records not meeting the previously specified select/omit rules.	L: S/O FLD	S/O
ALTSEQ	([library-name/] table-name)	Uses the specified alternative collating sequence for key fields.	P: FL L: FL	PTH

Keyword	Values	Function	Level (See Note 1)	Group (See Note 2)
		Figure 6-1 (Page 2 of 5). Physical and Logical File Keyword Informational Listing		
CHECK	(AB, ME, MF, M10, M11, VN, VNE)	CHECK has no effect in physical or logical files. However, if the field you are describing is referenced as an input-capable field at display file creation time, CHECK is duplicated into the display file. In the display file, CHECK tests the validity of data keyed into the input-capable field: • Allow blank (AB) • Mandatory enter (ME) or fill (MF) • IBM Modulus 10 (M10) or 11 (M11) self-check • Validate name (VN) • Validate name extended (VNE)	P: FLD L: FLD	CHK
CMP		See COMP (the preferred spelling).		
COLHDG	('line-1' ['line-2' ['line-3']])	Specifies a column heading for a field (used by query and DFU).	P: FLD L: FLD	TXT
COMP	(EQ, GE, GT, LE, LT, NE, NG, NL value | field name)	*Field level*: COMP has no effect. However, if the field you are describing is referenced by an input-capable field at display file creation time, COMP is duplicated into the display file, where it tests the validity of data keyed into the input-capable field. *Select/omit level*: Selects or omits records retrieved from the physical file(s) on which the logical file(s) is based if they pass the specified test. For COMP, the test is a comparison between the value of the field and the specified value or field.	P: FLD L: FLD L: S/O FLD	CHK S/O
CONCAT	(field-1 field-2 ...)	Concatenates fields from the physical file on which this logical file is based into this logical file field.	L: FLD	REF
DESCEND		Values in a key field are retrieved in descending sequence.	P: KFLD L: KFLD	PTH
DFT	('value' | X'hexadecimal-value' | numeric-value)	Initializes the field to the literal value.	P: FLD	MSC
DIGIT		Only the digit portion (low-order 4 bits) of each byte of the key field is used to build a key value.	P: KFLD L: KFLD	PTH
DYNSLT		Specifies that dynamic select/omit is to be used.	L: FL	PTH

Keyword	Values	Function	Level (See Note 1)	Group (See Note 2)
EDTCDE	(code [* | floating-currency-symbol])	Names the edit code by which field values are to be displayed. EDTCDE does not affect the physical or logical file you are describing, but can be duplicated into display or printer file descriptions when this field is referenced during display or printer file creation.	P: FLD L: FLD	EDT
EDTWRD	('word')	Specifies an edit word that describes the form in which field values are to be displayed. EDTWRD does not affect the physical or logical file you are describing, but can be duplicated into display or printer descriptions when this field is referenced during display or printer file creation.	P: FLD L: FLD	EDT
FCFO		Specifies that records retrieved from the same physical or logical file member and have duplicate key values are retrieved in a first-changed first-out order.	P: FL L: FL	PTH
FIFO		Specifies that records retrieved from the same physical or logical file member and have duplicate key values are retrieved in a first-in first-out order.	P: FL L: FL	PTH
FLTPCN	(*SINGLE | *DOUBLE)	Specifies the precision of a floating-point field.	P: FLD L: FLD	MSC
FORMAT	([library-name/] database-file-name)	Uses a previously described record format.	P: RCD L: RCD	REF
JDFTVAL		Specifies that the system is to provide default values for fields when a join to a secondary file produces no records.	L: FL	JOIN
JDUPSEQ	(sequencing-field-name [*DESCEND])	Specifies the field to use for sequencing records when duplicates are found in secondary files.	L: JOIN	JOIN
JFILE	([library-name/] physical-file-name [.32])	Identifies the physical files containing data to be accessed through the join logical file you are describing.	L: RCD	JOIN
JFLD	(from-field-name to-field-name)	Identifies the join fields in a join specification.	L: JOIN	JOIN
JOIN	(from-file to-file)	Identifies the pair of files joined by a join specification.	L: JOIN	JOIN

Keyword	Values	Function	Level (See Note 1)	Group (See Note 2)
		Figure 6-1 (Page 4 of 5). Physical and Logical File Keyword Informational Listing		
JREF	(file-name | relative-file-number)	Identifies the file to use for a field name if the field name occurs in more than one based-on physical file.	L: FLD	JOIN
LIFO		Records with duplicate key values are processed in a last-in-first-out (LIFO) order.	P: FL L: FL	PTH
NOALTSEQ		The alternative collating sequence is not to be used for the key field.	P: KFLD L: KFLD	PTH
PFILE	([library-name/] database-file-name [.32.])	Names the physical file(s) on which the logical file and logical record format are to be based.	L: RCD	REF
RANGE	(low high)	*Field level*: Tests the validity of data keyed into this field when this field is referenced by a display file. *Select/omit level*: Selects or omits records retrieved from the physical file(s) on which this logical file is based if they pass the specified test. For RANGE, the test is that the value of the field must be greater than or equal to the lower value and less than or equal to the higher value.	P: FLD L: FLD L: S/O FLD	CHK S/O
REF	([library-name/] database-file-name [format-name])	The system refers to the database file for field specifications.	P: FL	REF
REFACCPTH	([library-name/] database-file-name)	Specifies that the keyed-sequence access path of a previously created logical or physical file is to be copied to the file you are creating.	L: FL	PTH
REFFLD	([record-format-name/] referenced-field-name [{*SRC| [library-name/] database-file-name}])	Refers to field specifications from the referenced file. May override REF keyword for this field.	P: FLD	REF
REFSHIFT	(reference-keyboard-shift)	Specifies a keyboard shift when the file is referenced by display file or DFU operation.	P: FLD L: FLD	REF
RENAME	(field-name)	Renames a physical file field name for a logical file record format.	L: FLD	REF
SIGNED		The sign of a field is considered when sequencing values.	P: KFLD L: KFLD	PTH
SST	(field-name starting-position [length])	Specifies a character string which is a subset of an existing character or zoned field.	L: FLD	REF

Keyword	Values	Function	Level (See Note 1)	Group (See Note 2)
TEXT	('description')	Specifies descriptive text for a record format or field.	P: RCD P: FLD L: RCD L: FLD	TXT
TRNTBL	([library-name/] translate-table-name)	On input to your program, the field is translated using the specified translation table.	L: FLD	MSC
UNIQUE		Key values must be unique. (No duplicate key values allowed.)	P: FL L: FL	PTH
UNSIGNED		The field is sequenced as unsigned binary data.	P: KFLD L: KFLD	PTH
VALUES	(value-1 [value-2... [value-100]])	*Field level*: Tests the validity of data entered in this field when this field is referenced by a display file. *Select/omit level*: Selects or omits records retrieved from the physical file(s) on which the logical file(s) is based if they pass the specified test. For VALUES, the test is that the value of the field must be equal to one of the specified values.	P: FLD L: FLD L: S/O FLD	CHK S/O
ZONE		Only the zone portion (high-order 4 bits) of each byte of the key field is used to build a key value.	P: KFLD L: KFLD	PTH

Figure 6-1 (Page 5 of 5). Physical and Logical File Keyword Informational Listing

Physical and Logical File Keywords – Group List

Following are the physical and logical file keywords listed by group.

Access path definition keywords (PTH)

ABSVAL	NOALTSEQ
ALTSEQ	REFACCPTH
DESCEND	SIGNED
DIGIT	UNIQUE
FCFO	UNSIGNED
FIFO	ZONE
LIFO	

Editing keywords (EDT)

EDTCDE	EDTWRD

Join keywords (JOIN)

JDFTVAL	JFLD
JDUPSEQ	JOIN
JFILE	JREF

Miscellaneous keywords (MSC)

DFT	TRNTBL
FLTPCN	

Naming and referencing keywords (REF)

ALIAS	REFFLD
CONCAT	REFSHIFT
FORMAT	RENAME
PFILE	SST
REF	

Select/omit keywords (S/O)

ALL	DYNSLT
CMP	RANGE
COMP	VALUES

Text definition keywords (TXT)

COLHDG	TEXT

Validity checking keywords (CHK)

CHECK	RANGE
CMP	VALUES
COMP	

Physical and Logical File Keywords – Level List

Following are the physical and logical file keywords listed by level.

Figure   6-2. Physical and Logical Keywords Level Listing

Level	Physical Files	Logical Files
File		
	ALTSEQ	ALTSEQ
		DYNSLT
		JDFTVAL
	FCFO	FCFO
	FIFO	FIFO
	LIFO	LIFO
	REF	
		REFACCPTH
	UNIQUE	UNIQUE
Record	FORMAT	FORMAT
		PFILE or JFILE (one required for logical files)
	TEXT	TEXT
Join		JDUPSEQ
		JFLD
		JOIN
Field	ALIAS	ALIAS
	CHECK(AB, ME, MF, M10, M11, VN, VNE)	CHECK(AB, ME, MF, M10, M11, VN, VNE)
	CMP	CMP
	COLHDG	COLHDG
	COMP	COMP
		CONCAT
	DFT	
	EDTCDE	EDTCDE
	EDTWRD	EDTWRD
	FLTPCN	FLTPCN
		JREF
	RANGE	RANGE
	REFFLD	
		RENAME
	REFSHIFT	REFSHIFT
		SST
	TEXT	TEXT
		TRNTBL
	VALUES	VALUES
Key Field	ABSVAL	ABSVAL
	DESCEND	DESCEND
	DIGIT	DIGIT
	NOALTSEQ	NOALTSEQ
	SIGNED	SIGNED
	UNSIGNED	UNSIGNED
	ZONE	ZONE
Select/Omit		ALL
		CMP
		COMP
		RANGE
		VALUES

Display File Keyword Summary

Notes:

1. The following abbreviations are used in the *Level* column in Figure 6-3:

FL	File level
RCD	Record level
HLP	Help level
FLD	Field level

2. The following abbreviations are used in the *Option Indicators* column in Figure 6-3:

O	Optional
R	Required
Blank	Invalid

3. The following abbreviations are used in the *Group* column in Figure 6-3:

CHK	Validity checking keywords
CON	Constant-field keywords
CTL	Processing control keywords
DSP	Display control keywords
EDT	Editing keywords
HLP	Help keywords
KBD	Keyboard control keywords
MSC	Miscellaneous keywords
MSG	Message handling keywords
REF	Naming and referencing keywords
SFL(C)	Subfile control record keywords
SFL(R)	Subfile record keywords
TXT	Text definition keywords

Figure 6-3 (Page 1 of 12). Display File Keyword Informational Listing

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
ALARM		An audible alarm is set on when the record is displayed.	RCD	O	DSP
ALIAS	(alternative-name)	Provides an alternative name to be used for a field.	FLD		REF
ALTHELP	[(CAnn)]	Provides an alternative key to be used as a Help key.	FL		KBD
ALTNAME	('alternative-name')	Provides an alternative name to be used on I/O operations for a record.	RCD		REF
ALTPAGE-DWN	[(CFnn)]	Provides an alternative key to be used as a Page Down key.	FL		KBD
ALTPAGEUP	[(CFnn)]	Provides an alternative key to be used as a Page Up key.	FL		KBD

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
ALWGPH		Allows display of graphics and alphameric characters at the same time.	FL RCD	O O	DSP
ALWROL		Allows program to roll data within an area on the display when displaying this record format.	RCD		DSP
ASSUME		The system assumes that the record is currently on the display when the file is opened.	RCD		MSC
AUTO	(RA [RAB|RAZ]) | (RAB | RAZ)	RA: See CHECK(ER). RAB: See CHECK(RB). RAZ: See CHECK(RZ).			
BLANKS	(response-indicator ['text'])	Used for numeric, input-capable fields. Sets on the response indicator when the field is all blanks on the display.	FLD		MSC
BLINK		When the record is displayed, the cursor blinks.	RCD	O	DSP
BLKFOLD		OS/400 folds the field at the last blank before the end of the line instead of at the actual end of the line.	FLD		DSP
CAnn	[(response-indicator ['text'])]	The function key specified by nn is a command *attention* key.	FL RCD	O O	KBD KBD
CFnn	[(response-indicator ['text'])]	The function key specified by nn is a command *function* key.	FL RCD	O O	KBD KBD
CHANGE	(response-indicator ['text'])	The response indicator is set on when data is changed in the field or in the record.	RCD FLD		CHK CHK
CHECK	(AB)	Allows blank input data to satisfy validity checking requirements for the field.	FL RCD FLD		CHK CHK CHK
CHECK	(ER, FE, LC, RB, RZ)	On the 5250 work station, the following controls are placed on input keying: • End of record (ER) • Field exit check (FE) • Lowercase (LC) • Right-justify, blank fill (RB) • Right-justify, zero-fill (RZ)	FLD	Option indicators are valid for end of record only.	KBD

Figure 6-3 (Page 2 of 12). Display File Keyword Informational Listing

Figure 6-3 (Page 3 of 12). Display File Keyword Informational Listing

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
CHECK	(ME, MF, M10, M11, VN, VNE)	A field value must meet one or more of the following check algorithms to be valid: • Mandatory enter (ME) or fill (MF) • Valid name (VN) • Valid name extended (VNE) • IBM modulus 10 (M10) or 11 (M11) self-check	FLD	Option indicators are valid for mandatory entry only.	CHK
CHECK	(RL)	The cursor moves from right to left within a field.	FL RCD FLD		DSP DSP DSP
CHECK	(RLTB)	The cursor advances between input-capable fields in a right-to-left, top-to-bottom manner.	FL		DSP
CHGINPDFT	[(input-default1 input-default2 . . .)]	Specifies display attributes or check codes for fields in the file or record, or only for this field. Valid parameter values: • Blinking field (BL) • Column separators (CS) • High intensity (HI) • Reverse image (RI) • Underline (UL) • Field exit (FE) • Lowercase (LC) • Mandatory enter (ME) • Mandatory fill (MF)	FL RCD FLD		DSP
CHRID		Character translation is done when the field is processed.	FLD		MSC
CLEAR	[(response-indicator ['text'])]	Your program receives control when the Clear key is pressed.	FL RCD	O O A response indicator must be specified for this keyword to be used by RPG.	KBD KBD

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
CLRL	(*NO | nn | *END)	Clears (erases) nn display lines. If *NO is specified, no display lines are cleared. If *END is specified, all lines from the starting line to the end of the screen are cleared.	RCD		DSP
CMP	See COMP (the preferred spelling).				
COLOR	(GRN | WHT | RED | TRQ | YLW | PNK | BLU)	On color work stations, displays the field with the color you specify: • Green (GRN) • White (WHT) • Red (RED) • Turquoise (TRQ) • Yellow (YLW) • Pink (PNK) • Blue (BLU)	FLD	O	DSP
COMP	(relational-operator value)	A field value must meet the specified comparison test such as *equal to* to be valid. Valid relational operators are (EQ, NE, LT, NL, GT, NG, LE, GE).	FLD		CHK
CSRLOC	(field-name-1 field-name-2)	Your program determines the cursor location by setting the contents of field-name-1 and field-name-2.	RCD	O	DSP
DATE		The job date is displayed in the specified location.	FLD		CON
DFT	('value') | 'value'	The field is initialized to the specified value. (This keyword is also used to describe constant fields.)	FLD		CON
DFTVAL	('value')	The specified value is displayed on the first output operation.	FLD	O	MSC
DLTCHK		The field validity checking keywords are ignored (deleted) when field specifications in a database file are referred to using the reference function.	FLD		REF
DLTEDT		The edit information is ignored (deleted) when field specifications in a database file are referred to using the reference function.	FLD		REF

Figure 6-3 *(Page 4 of 12). Display File Keyword Informational Listing*

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
DSPATR	(attribute [attribute [attribute [...]]])	Displays the field with the attributes you specify: • Column separator (CS) • High intensity (HI) • Underline (UL) • Blink field (BL) • Reverse image (RI) • Protect (PR) • Set modified data tag (MDT) • Nondisplay (ND) • Select by light pen (SP) • Position cursor (PC) • Operator identification (OID)	FLD	Option indicators not used for select by light pen or operator identification.	DSP
DSPMOD	(condition-name)	Indicates that a particular record should be displayed in a specific mode at all times, or a mode decision will be made at processing time.	RCD	O	DSP
DSPSIZ	(*DSw [*DSx]) -or- (lines positions [condition-name-1] [lines positions [condition-name-2]]	Specifies the primary display size and a secondary display size. Valid entries for the parameter value are: *DS3, or 24 x 80 *DS4, or 27 x 132 (w, x = 3 or 4 and w ≠ x).	FL		DSP
DUP	[(response-indicator ['text'])]	Use of the Dup key is allowed.	FLD	O	KBD
EDTCDE	(edit-check-code [* | floating-currency-symbol])	Specifies the edit code by which field values are to be displayed.	FLD		EDT
EDTWRD	('edit-word')	Specifies an edit word that describes the form in which values are to be displayed.	FLD		EDT
ERASE	(record-name-1 [record-name-2... [record-name-20]])	Erases the specified records.	RCD	O	DSP
ERASEINP	[(*MDTON | *ALL)]	*MDTON: Input-capable fields with MDTs set on are returned to their initial values. *ALL: All input-capable fields are returned to their initial values.	RCD	O	DSP
ERRMSG	('message' [response-indicator])	Specifies the message to be displayed on the message line.	FLD	O	MSG

Figure 6-3 (Page 5 of 12). Display File Keyword Informational Listing

Figure 6-3 (Page 6 of 12). Display File Keyword Informational Listing

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
ERRMSGID	(msgid [library-name/] msg-file)	Specifies the message iden- tifier of the message to be displayed on the message line.	FLD	O	MSG
FLTFIXDEC		Displays floating-point values in fixed-point format.	FLD		EDT
FLTPCN	(*SINGLE | *DOUBLE)	Specifies the precision of a floating-point field.	FLD		MSC
FRCDTA		If DFRWRT(*YES) is speci- fied for the file, causes a record to be displayed immediately when an output operation is sent (as if DFRWRT(*NO) were speci- fied for the file).	RCD	O	DSP
GETRETAIN		Leaves all input data on the display.	RCD		DSP
HELP	[(response-indicator ['text'])]	Your program receives control when the Help key is pressed.	FL RCD	O O	KBD KBD
HLPARA	(top-line left-position bottom-line right- position) |(*NONE) | (*RCD)	Defines a rectangular help area on the screen.	HLP	Display size condi- tion name can be used as indicators.	HLP
HLPBDY		Use to partition help specifi- cations into sublists.	HLP	O	HLP
HLPCLR		Use to clear the list of active help specifications.	RCD	O	HLP
HLPDOC	(help-text-label-name document-name folder- name)	Identifies a document to be used as online text informa- tion.	FL HLP	O O	HLP HLP
HLPRCD	(record-format-name [[library-name/] file-name])	Identifies the record format containing the online text information.	FL HLP	O O	HLP HLP
HLPRTN	[(response-indicator['text'])]	Returns control to your program when the Help key is pressed.	FL RCD	O O	HLP HLP
HLPSEQ	(group-name sequence-number)	Describes the sequence of online help information records.	RCD		HLP
HOME	[(response-indicator ['text'])]	Your program receives control when the Home key is pressed and the cursor is already in the home posi- tion.	FL RCD	O O	KBD KBD

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
INDARA		Places option and response indicators in the separate indicator area.	FL		MSC
INDTXT	(indicator 'indicator-text')	Text is associated with the specified indicator for high-level language program documentation.	FL RCD FLD		TXT TXT TXT
INVITE		Used to invite data from a device. Your program receives the data on a later input operation.	FL RCD	O O	CTL CTL
INZINP		Initializes output/input fields.	RCD	O	DSP
INZRCD		The record is written to the display before it is read.	RCD		DSP
KEEP		The display is not erased when the file closes.	RCD		MSC
LOCK		The keyboard is locked in an output operation.	RCD	O	KBD
LOGINP		The input record is copied (logged) to the job log.	RCD		MSC
LOGOUT		The output record is copied (logged) to the job log.	RCD	O	MSC
LOWER		See CHECK(LC) (the pre-ferred spelling).			
MDTOFF	[(*UNPR | *ALL)]	*UNPR: MDTs of fields without DSPATR(PR) are reset on an output operation. *ALL: MDTs of all fields are reset on an output operation.	RCD	O	DSP
MSGCON	(length message-ID [library-name/] message-file-name)	Specifies the message description that contains the text for a constant field.	FLD		CON
MSGID	(msgid [library-name/] msg-file)	Specifies the message identifier of the message containing text for a named field.	FLD		MSG
MSGLOC	(line-number)	Specifies the line on which messages are to be displayed.	FL	Display size condition names can be used as indicators.	MSG
OPENPRT		The printer file is to remain open until the display file is closed.	FL		MSC

Figure 6-3 (Page 7 of 12). Display File Keyword Informational Listing

Figure 6-3 (Page 8 of 12). Display File Keyword Informational Listing

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
OVERLAY		The entire display is not erased before this record is displayed.	RCD	O	DSP
OVRATR		Display attributes of this field are changed on an output operation.	FLD	O	DSP
OVRDTA		Data contents of this field are changed on an output operation.	FLD	O	DSP
PAGEDOWN	[(response-indicator ['text'])]	Your program receives control when the Page Down key is pressed.	FL RCD	O O	KBD KBD
PAGEUP	[(response-indicator ['text'])]	Your program receives control when the Page Up key is pressed.	FL RCD	O O	KBD KBD
PASSRCD	(record-format)	Specifies the record format to be used when unformatted data is passed.	FL		CTL
PRINT	[(response-indicator ['text']) | (*PGM) | [library-name/] printer-file-name)	The Print key can be used to: • Print to the associated device. • Pass control to your program. • Print to the specified printer file.	FL RCD	O A response indicator must be specified for this keyword to be used by COBOL.	KBD
PROTECT		All input-capable fields on the display are changed to output-only fields.	RCD	O	DSP
PUTOVR		Permits the use of OVRATR and OVRDTA keywords.	RCD	O	DSP
PUTRETAIN		A record (at the record format level) or field (at the field level) on the display is retained.	RCD FLD	O O	DSP DSP
RANGE	(low-value high-value)	The field value must be within the range specified.	FLD		CHK
REF	([library-name/] database-file-name [record-format-name])	The system refers to the specified database file for field specifications for this display file.	FL		REF
REFFLD	([record-format-name/] referenced-field-name [{*SRC | [library-name/] database-file-name}])	The system refers to the specified database file (other than the file specified in the REF keyword) for field specifications for this display file.	FLD		REF

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
Figure 6-3 (Page 9 of 12). Display File Keyword Informational Listing					
RETKEY/ RETCMDKEY		Indicates that function keys or command function/attention keys which were enabled on a screen should be kept when the record you are describing is displayed.	RCD		KBD
ROLLDOWN	[(response-indicator ['text'])]	Your program receives control when the Roll Down key is pressed.	FL RCD	O O	KBD KBD
ROLLUP	[(response-indicator ['text'])]	Your program receives control when the Roll Up key is pressed.	FL RCD	O O	KBD KBD
RTNDTA		OS/400 returns the same input data as on the last input operation.	RCD		CTL
SETOF	(response-indicator ['text'])	The specified response indicator is set off on an input operation.	RCD		MSC
SETOFF		See SETOF (the preferred spelling).			
SFL		The record format is a subfile record format.	RCD		SFL(R)
SFLCLR		Allows your program to clear the subfile of all records.	RCD	O	SFL(C)
SFLCTL	(subfile-record-format-name)	Specifies that this record format is to be a subfile control record format.	RCD		SFL(R)
SFLDLT		Enables your program to delete the subfile.	RCD	O	SFL(C)
SFLDROP	(CAnn | CFnn)	Assigns a CF or CA key that the user presses to fold or truncate subfile records requiring more than one display line.	RCD		SFL(C)
SFLDSP		Allows your program to display the subfile when it sends an output operation to the subfile control record format.	RCD	O	SFL(C)
SFLDSPCTL		Allows your program to display the fields in the subfile control record format.	RCD	O	SFL(C)

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
SFLEND		Permits the display of a plus sign (+) in the lower right-hand corner of the display occupied by the subfile. The + indicates the user can roll up the subfile to display more records.	RCD	O	SFL(C)
SFLENTER	(CAnn | CFnn)	Specifies that the Enter key is to be used as a Roll Up key, allowing your program to roll up a subfile one more page. The specified CA or CF key is used as an Enter key.	RCD		SFL(C)
SFLINZ		Initializes all records in the subfile on an output operation to the subfile control record format.	RCD	O	SFL(C)
SFLLIN	(spaces)	Specifies that the subfile is to be displayed as a horizontal subfile having more than one record displayed.	RCD	Display size condition names can be used as indicators.	SFL(C)
SFLMSG	('message-text' [response-indicator])	Specifies message text to be displayed on the message line when the program does an output operation to the subfile control record format.	RCD		SFL(C)
SFLMSGID	(message-identifier [library-name/] message-file)	Identifies a message to be displayed on the message line when the program does an output operation to the subfile control record format.	RCD		SFL(C)
SFLMSGKEY		Allows your program to select a message for display from a program message queue.	FLD		SFL(R)
SFLMSGRCD	(line-number)	Specifies that this is to be a message subfile and that the records displayed when the subfile is displayed are to be messages from a program message queue.	RCD	Display size condition names can be used as indicators.	SFL(C)
SFLNXTCHG		Indicates that there are program-detected keying errors in subfile programs.	RCD	O	SFL(R)

Figure 6-3 (Page 10 of 12). Display File Keyword Informational Listing

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)

Figure 6-3 (Page 11 of 12). Display File Keyword Informational Listing

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
SFLPAG	(number-of-records-to be displayed)	Specifies the number of records in the subfile to be displayed at one time.	RCD	Display size condition names can be used as indicators.	(SFL(C)
SFLPGMQ		Specifies the program message queue to be used to build a message subfile.	FLD		SFL(R)
SFLRCDNBR	[(CURSOR)]	Specifies that the page of the subfile to be displayed is the page containing the record whose relative record number is in this field.	FLD		SFL(C)
SFLRNA		Allows your program to initialize a subfile with no active records.	RCD		SFL(C)
SFLROLVAL		Specifies how many records to roll up or down when the Roll key is pressed.	FLD		SFL(C)
SFLSIZ	(number-of-records-in-subfile)	Specifies the number of records in the subfile.	RCD	Display size condition names can be used as indicators.	SFL(C)
SLNO	(n | *VAR)	Line numbers for all fields in this record format are increased by n or by the value of the field *VAR as set by your program before the record is displayed.	RCD		DSP
TEXT	('description')	Specifies descriptive text for a record format or field.	RCD FLD		TXT TXT
TIME		The system time is displayed in the specified location.	FLD		CON
UNLOCK	[(*ERASE) | (*MDTOFF)] | [(*ERASE *MDTOFF)] | [(*MDTOFF &RBL.*ERASE)]	The keyboard is unlocked after an input operation so that the next record can be entered before the next output operation.	RCD		KBD
USRDFN		The data is a user-defined data stream.	RCD		DSP
USRDSPMGT		Use to specify that all data written to the display should be retained until overwritten or cleared.	FL		DSP

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
VALUES	(value-1 [value-2... [value-100]])	The field value must be one of the values specified.	FLD		CHK
VLDCMDKEY	(response-indicator ['text'])	The response indicator is set on if a valid function key (a key associated with a keyword) is pressed.	FL RCD		KBD KBD

Figure 6-3 (Page 12 of 12). Display File Keyword Informational Listing

Display File Keywords – Group List

Following are the display file keywords listed by group.

Editing keywords (EDT)

EDTCDE   FLTFIXDEC
EDTWRD

Constant-field keywords (CON)

DATE   MSGCON
DFT   TIME

Display control keywords (DSP)

ALARM   FRCDTA
ALWGPH   GETRETAIN
ALWROL   INZINP
BLINK   INZRCD
BLKFOLD   MDTOFF
CHECK(RL or RLTB only)   OVERLAY
CHGINPDFT   OVRATR
CLRL   OVRDTA
COLOR   PROTECT
CSRLOC   PUTOVR
DSPATR   PUTRETAIN
DSPMOD   SLNO
DSPSIZ   USRDFN
ERASE   USRDSPMGT
ERASEINP

Help keywords (HLP)

HLPARA   HLPRCD
HLPBDY   HLPRTN
HLPCLR   HLPSEQ
HLPDOC

Keyboard control keywords (KBD)

ALTHELP   LOWER
ALTPAGEDWN   PAGEDOWN
ALTPAGEUP   PAGEUP
CAnn   PRINT
CFnn   RETKEY
CHECK(ER, FE, LC, RB, RZ)   RETCMDKEY
CHGINPDFT(FE)   ROLLDOWN
CLEAR   ROLLUP
DUP   UNLOCK
HELP   VLDCMDKEY
HOME
LOCK

Message handling keywords (MSG)

ERRMSG   MSGID
ERRMSGID   MSGLOC

Miscellaneous keywords (MSC)

ASSUME	KEEP
BLANKS	LOGINP
CHRID	LOGOUT
DFTVAL	OPENPRT
FLTPCN	SETOF
INDARA	SETOFF

Naming and referencing keywords (REF)

ALIAS	DLTEDT
ALTNAME	REF
DLTCHK	REFFLD

Processing control keywords (CTL)

INVITE	RTNDTA
PASSRCD	

Subfile control record keywords (SFL(C))

SFLCLR	SFLLIN
SFLDLT	SFLMSG
SFLDROP	SFLMSG
SFLDSP	SFLPAG
SFLDSPCTL	SFLRCDNBR
SFLEND	SFLRNA
SFLENTER	SFLROLVAL
SFLINZ	SFLSIZ

Subfile record keywords (SFL(R))

SFL	SFLMSGRCD
SFLCTL	SFLNXTCHG
SFLMSGKEY	SFLPGMQ

Text definition keywords (TXT)

INDTXT	TEXT

Validity checking keywords (CHK)

AUTO	CMP
CHANGE	COMP
CHECK(AB, ER, ME, MF,	RANGE
M10, M11, RB, RZ, VN, VNE)	VALUES
CHGINPDFT(ME, MF)	

Display File Keywords − Level List

Following are the display file keywords listed by level.

File Level

ALTHELP	INDARA
ALTPAGEDWN	INDTXT
ALTPAGEUP	INVITE
ALWGPH	MSGLOC
CAnn	OPENPRT
CFnn	PAGEDOWN
CHECK(AB, RL, RLTB)	PAGEUP
CHGINPDFT	PASSRCD
CLEAR	PRINT
DSPSIZ	REF
HELP	ROLLDOWN
HLPDOC	ROLLUP
HLPRCD	USRDSPMGT
HLPRTN	VLDCMDKEY
HOME	

Record Level

ALARM	PRINT
ALTNAME	PROTECT
ALWGPH	PUTOVR
ALWROL	PUTRETAIN
ASSUME	RETKEY
BLINK	RETCMDKEY
CAnn	ROLLDOWN
CFnn	ROLLUP
CHANGE	RTNDTA
CHGINPDFT	SETOF
CHECK(AB, RL)	SETOFF
CLEAR	SFL
CLRL	SFLCLR
CSRLOC	SFLCTL
DSPMOD	SFLDLT
ERASE	SFLDROP
ERASEINP	SFLDSP
FRCDTA	SFLDSPCTL
GETRETAIN	SFLEND
HELP	SFLENTER
HLPCLR	SFLINZ
HLPRTN	SFLLIN
HLPSEQ	SFLMSG
HOME	SFLMSGID
INDTXT	SFLMSGRCD
INVITE	SFLNXTCHG
INZINP	SFLPAG
INZRCD	SFLRNA
KEEP	SFLSIZ
LOCK	SLNO
LOGINP	TEXT
LOGOUT	UNLOCK
MDTOFF	USRDFN
OVERLAY	VLDCMDKEY
PAGEDOWN	
PAGEUP	

Help Level

HLPARA	HLPDOC
HLPBDY	HLPRCD

Field Level

ALIAS	ERRMSG
AUTO	ERRMSGID
BLANKS	FLTFIXDEC
BLKFOLD	FLTPCN
CHANGE	INDTXT
CHECK(AB, ER, FE, LC,	LOWER
ME, MF, M10, M11, RB,	MSGCON
RL, RZ, VN, VNE)	MSGID
CHGINPDFT	OVRATR
CHRID	OVRDTA
CMP	PUTRETAIN
COLOR	RANGE
COMP	REFFLD
DATE	SFLMSGKEY
DFT	SFLPGMQ
DFTVAL	SFLRCDNBR
DLTCHK	SFLROLVAL
DLTEDT	TEXT
DSPATR	TIME
DUP	VALUES
EDTCDE	
EDTWRD	

Printer File Keyword Summary

Notes:

1. The following abbreviations are used in the *Level* column in Figure 6-4:

   FL   File level
   RCD   Record level
   FLD   Field level

2. The following abbreviations are used in the *Option Indicators* column in Figure 6-4:

   O   Optional
   R   Required
   Blank   Not allowed

3. The following abbreviations are used in the *Group* column in Figure 6-4:

   CON   Constant-field keywords
   EDT   Editing keywords
   GRA   Graphics keywords
   MSC   Miscellaneous keywords
   PRT   Printer control keywords
   REF   Naming and referencing keywords
   TXT   Text definition keywords

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
ALIAS	(alternative-name)	Provides an alternative name to be used for a field.	FLD		REF
BARCODE	(barcode-id height [*HRZ | *VRT] [*HRI | *HRITOP | *NOHRI] [*AST | *NOAST] [check-digit] [unit-width] [wide/narrow ratio])	Prints a named field as a user-specified barcode.	FLD		CON PRT
BLKFOLD		Records are folded at the last blank before the end of the line instead of folded at the actual end of the line.	FLD		PRT
CHRID		Character translation is done when the field is processed.	FLD		MSC
CHRSIZ	(width height)	Expands the width and height of a field or record. At the record level, all fields will be affected, except those with this keyword specified at the field level.	RCD FLD		CON GRA PRT
COLOR	(BLK | BLU | BRN | GRN | PNK | RED | TRQ | YLW)	Specifies the printing color for a field on the 4224 Printer only.	FLD	O	CON GRA PRT
CPI	(10 | 15)	Specifies the horizontal printing density for this record or field: 10: 10 chars/inch 15: 15 chars/inch	RCD FLD	O O	GRA PRT
CVTDTA		Converts character data placed in this field by your program to hexadecimal data.	FLD		GRA
DATE		The job date is printed in the specified location.	FLD		CON
DFNCHR	(X'code-point-1' X'dot-matrix-pattern-1' X'code-point-2' X'dot-matrix-pattern-2' ...X'code-point-50' X'dot-matrix-pattern-50')	Defines up to 50 characters for use only on the 5224 Printer or 5225 Printer.	FL RCD	O O	GRA

Figure 6-4 (Page 1 of 4). Printer File Keyword Informational Listing

Figure 6-4 (Page 2 of 4). Printer File Keyword Informational Listing

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
DFT	('value') (X'hexadecimal-value') 'value' X'hexadecimal-value'	When hexadecimal value is specified, dot matrixes (characters) corresponding to code points identified in the hexadecimal value are printed. (Corre-spondences are usually defined by DFNCHR keyword.)	FLD		CON GRA
DLTEDT		The edit information is ignored when field specifications are referred to using the reference function.	FLD		REF
DRAWER	(1 | 2 | 3 | *E1)	Specifies the drawer from which forms are selected on printers that print on noncon-tinuous forms.	RCD	O	PRT
EDTCDE	(edit-code [* | floating-currency -symbol])	Names the edit code by which field values are to be printed.	FLD		EDT
EDTWRD	('edit-word')	Specifies an edit word that describes the form in which values are to be printed.	FLD		EDT
FLTFIXDEC		Prints floating-point values in fixed-point format.	FLD		EDT
FLTPCN	(*SINGLE | *DOUBLE)	Specifies the preci-sion of a floating-point field.	FLD		MSC
FONT	(numeric-font-identification | graphic-font-name)	Specifies the font ID for printing a field or fields within a record.	RCD FLD	O O	CON PRT
HIGHLIGHT		Indicates to the printer that a field or fields within a record should be highlighted.	RCD FLD	O O	CON PRT
INDARA		Places option indica-tors in the separate indicator area.	FL		MSC
INDTXT	(indicator 'indicator-text')	Specifies text to be associated with an indicator for high-level language program documenta-tion.	FL RCD FLD		TXT TXT TXT

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
Figure 6-4 (Page 3 of 4). Printer File Keyword Informational Listing					
LPI	(4 | 6 | 8 | 9)	Changes lines per inch within a file.	RCD		PRT
MSGCON	(length message-ID [library-name/] message-file-name)	Specifies the message description that contains the text for a constant field.	FLD		CON
PAGNBR		A system-supplied page number is printed in this field (a 4-digit zoned decimal field).	FLD	O	CON
PAGRTT	(0 | 90 | 180 | 270)	Specifies the degree of rotation of the text relative to the way the form is loaded into the printer.	RCD	O	PRT
PRTQLTY	(print-quality)	Varies the print quality within the file.	RCD FLD	O O	CON PRT
REF	([library-name/] database-file-name [record-format-name])	The system refers to field specifications from a referenced database file.	FL		REF
REFFLD	([record-format-name/] referenced-field-name {*SRC [library-name/] database-file-name})	The system refers to field specifications from a database file (other than the file specified in the REF keyword).	FLD		REF
SKIPA	(skip-after-line-number)	Specifies a line to skip to after printing a line (file level), after printing an entire record (record level), or after printing the line containing the field associated with this keyword (field level).	FL RCD FLD	R O O	PRT PRT PRT
SKIPB	(skip-before-line-number)	Specifies the line to skip to before printing the next line of output (file level), or before printing the lines associated with a record (record level), or before printing the line containing the field associated with this keyword (field level).	FL RCD FLD	R O O	PRT PRT PRT

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
Figure 6-4 (Page 4 of 4). Printer File Keyword Informational Listing					
SPACEA	(space-after-value)	Specifies the number of lines to space after printing an entire record (record level) or to space after printing the line containing the field associated with this keyword (field level).	RCD FLD	O O	PRT PRT
SPACEB	(space-before-value)	Specifies the number of lines to space before printing the lines associated with a record (record level) or before printing the line containing the field associated with this keyword (field level).	RCD FLD	O O	PRT PRT
TEXT	('description')	Specifies descriptive text for the record format or field.	RCD FLD		TXT TXT
TIME		The system time is printed in the specified location.	FLD		CON
TRNSPY		Prevents hexadecimal data sent to the printer from being interpreted as SCS commands.	FLD		GRA
UNDER-LINE		The field is underlined.	FLD	O	PRT

Printer File Keywords – Group List

Following are the printer file keywords listed by group.

Constant-field keywords (CON)

BARCODE	HIGHLIGHT
CHRSIZ	MSGCON
COLOR	PAGNBR
DATE	PRTQLTY
DFT	TIME
FONT	

Editing keywords (EDT)

EDTCDE	FLTFIXDEC
EDTWRD	

Graphics keywords (GRA)

CHRSIZ	DFNCHR
COLOR	DFT
CPI	TRNSPY
CVTDTA	

Miscellaneous keywords (MSC)

CHRID	INDARA
FLTPCN	

Naming and referencing keywords (REF)

ALIAS	REF
DLTEDT	REFFLD

Printer control keywords (PRT)

BARCODE	LPI
BLKFOLD	PAGRTT
CHRSIZ	PRTQLTY
COLOR	SKIPA
CPI	SKIPB
DRAWER	SPACEA
FONT	SPACEB
HIGHLIGHT	UNDERLINE

Text description keywords (TXT)

INDTXT	TEXT

Printer File Keywords – Level List

Following are the printer file keywords listed by level.

File Level

DFNCHR	REF
INDARA	SKIPA
INDTXT	SKIPB

Record Level

CHRSIZ
CPI
DFNCHR
DRAWER
FONT
HIGHLIGHT
INDTXT
LPI

PAGRTT
PRTQLTY
SKIPA
SKIPB
SPACEA
SPACEB
TEXT

Field Level

ALIAS
BARCODE
BLKFOLD
CHRID
CHRSIZ
COLOR
CPI
CVTDTA
DATE
DFT
DLTEDT
EDTCDE
EDTWRD
FLTFIXDEC
FLTPCN

FONT
HIGHLIGHT
INDTXT
MSGCON
PAGNBR
PRTQLTY
REFFLD
SKIPA
SKIPB
SPACEA
SPACEB
TEXT
TIME
TRNSPY
UNDERLINE

Intersystem Communications Function File Keyword Summary

Notes:

1. The following abbreviations are used in the *Level* column in Figure 6-5:

FL	File level
RCD	Record level
FLD	Field level

2. The following abbreviations are used in the *Option Indicators* column in Figure 6-5:

O	Optional
R	Required
Blank	Not allowed

3. The following abbreviations are used in the *Group* column in Figure 6-5:

CTL	Processing control keywords
MSC	Miscellaneous keywords
REF	Naming and referencing keywords
TXT	Text definition keywords

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
		Figure 6-5 (Page 1 of 4). ICF File Keyword Informational Listing			
ALIAS	(alternative-name)	Specifies an alternative name for a field.	FLD	O	REF
ALWWRT		Indicates that the program has finished sending.	FL RCD	O O	CTL CTL
CANCEL		Cancels the current chain of data (group of records) that is being sent to the remote program.	FL RCD	O O	CTL CTL
CNLINVITE		Cancels any valid invite operation for which no input has yet been received.	FL RCD	O O	CTL CTL
CONFIRM		Requests that the remote program confirms receiving the data.	FL RCD	O O	CTL CTL
DETACH		Specifies that the program is done sending data and wants to end the transaction.	FL RCD	O O	CTL CTL
ENDGRP		Indicates the end of a group of records.	FL RCD	O O	CTL CTL
EOS		Indicates an end-of-session operation.	FL RCD	O O	CTL CTL
EVOKE	([library-name/] program-name [parameter-1... [parameter-255]])	Starts a program on a remote system.	FL RCD	O O	CTL CTL
FAIL		The function of this keyword depends on the communications type you use.	FL RCD	O O	CTL CTL
FLTPCN	(*SINGLE | *DOUBLE)	Specifies the precision of a floating-point field.	FLD		MSC
FMH		Informs the remote program that a function management header is being sent.	FL RCD	O O	CTL CTL
FMTNAME		Specifies that the record format name is to be sent to the remote program when your program issues an output operation.	FL RCD	O O	REF REF

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
		Figure 6-5 (Page 2 of 4). ICF File Keyword Informational Listing			
FRCDTA		Use to immediately send communications data currently held in the buffer, without waiting for the buffer to become full.	RCD	O	CTL
INDARA		Places option and response indicators in the separate indicator area.	FL		MSC
INDTXT	(indicator 'indicator-text')	Indicates that text is to be associated with an indicator for high-level language program documentation.	FL RCD		TXT TXT
INVITE		Invites the device for a later read.	FL RCD	O O	CTL CTL
NEGRSP	[(&field-name)]	Sends a negative response to the remote program to indicate that your program detected something wrong with the data it received.	FL RCD	O O	CTL CTL
RCVCANCEL	[response-indicator ('text')]	Sets on a response indicator to inform your program that the remote program has sent a CANCEL.	FL RCD		CTL CTL
RCVCONFIRM	(response-indicator ['text'])	Sets on a response indicator if the data received by your program contains a confirmation request from the remote program.	FL RCD		CTL CTL
RCVDETACH	(response-indicator ['text'])	Turn on a response indicator if the data received by your program ends the transaction with the remote program.	FL RCD		CTL CTL
RCVENDGRP	(response-indicator ['text'])	Turn on a response indicator to inform your program of the end of a group of records.	FL RCD		CTL CTL

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
RCVFAIL	(response-indicator ['text'])	Turn on a response indicator when your program determines that the remote program has sent a FAIL.	FL RCD		CTL CTL
RCVFMH	(response-indicator ['text'])	Turn on a response indicator to inform your program that a function management header has been received.	FL RCD		CTL CTL
RCVNEGRSP	(response-indicator ['text'])	Turn on a response indicator to inform your program that the remote program has sent a negative response.	FL RCD		CTL CTL
RCVTRNRND	(response-indicator ['text'])	Turn on a response indicator to inform your program that the remote program or device has stopped sending and has given your program the right to send.	FL RCD		CTL CTL
RECID	(position value)	Enables your program to identify records by record format when your program sends input operations using the name of the file.	RCD		CTL
REF	([library-name/] database-file-name [record-format-name])	The system refers to field specifications from a referenced database file.	FL		REF
REFFLD	([record-format-name/] referenced-field-name [{*SRC [library-name/] database-file-name}])	The system refers to field specifications from a database file (other than the file specified in the REF keyword).	FLD		REF
RQSWRT		Requests permission for your program to send data.	FL RCD	O O	CTL CTL
RSPCONFIRM		Sends a positive response to a received confirm request.	FL RCD	O	CTL

Figure 6-5 (Page 3 of 4). ICF File Keyword Informational Listing

Keyword	Values	Function	Level (See Note 1)	Option Indicators (See Note 2)	Group (See Note 3)
SECURITY	(n reserved-word | 'value' | field-name | &field-name-1[.3.])	Allows security information to be included when your program starts a program on a remote system.	FL RCD	O O	CTL CTL
SUBDEV	(*DC1 | *DC2 | *DC3 | *DC4)	Allows your program to request a specific subdevice (for example, a printer) to which transmitted data should be directed.	FL RCD	O O	CTL CTL
SYNLVL	[(*NONE | *CONFIRM)]	Indicates the level of synchronization your program requires.	FL RCD	O O	CTL CTL
TEXT	('description')	Specifies descriptive text for a record format or a field.	RCD FLD		TXT TXT
TIMER	(HHMMSS | &field-name)	Specifies an interval of time for your program to wait before performing some specified function.	RCD		CTL
VARLEN	(&field-name)	Indicates that the length of the user data is variable and will be specified in the field parameter.	RCD		CTL

Figure 6-5 (Page 4 of 4). ICF File Keyword Informational Listing

ICF File Keywords – Group List

Following are the ICF file keywords listed by group.

Miscellaneous keywords (MSC)

FLTPCN
INDARA

Naming and referencing keywords (REF)

ALIAS   REFFLD
REF

Processing control keywords (CTL)

ALWWRT   RCVCONFIRM
CANCEL   RCVDETACH
CNLINVITE   RCVENDGRP
CONFIRM   RCVFAIL
DETACH   RCVFMH
ENDGRP   RCVNEGRSP
EOS   RCVTRNRND
EVOKE   RECID
FAIL   RQSWRT
FMH   RSPCONFIRM
FMTNAME   SECURITY
FRCDTA   SUBDEV
INVITE   SYNLVL
NEGRSP   TIMER
RCVCANCEL   VARLEN

Text definition keywords (TXT)

INDTXT   TEXT

ICF File Keywords – Level List

Following are the ICF file keywords listed by level.

File Level

ALWWRT	RCVCANCEL
CANCEL	RCVCONFIRM
CNLINVITE	RCVDETACH
CONFIRM	RCVENDGRP
DETACH	RCVFMH
ENDGRP	RCVFAIL
EOS	RCVNEGRSP
EVOKE	RCVTRNRND
FAIL	REF
FMH	RQSWRT
FMTNAME	RSPCONFIRM
INDARA	SECURITY
INDTXT	SUBDEV
INVITE	SYNLVL
NEGRSP	

Record Level

ALWWRT	RCVCANCEL
CANCEL	RCVCONFIRM
CNLINVITE	RCVDETACH
CONFIRM	RCVENDGRP
DETACH	RCVFAIL
ENDGRP	RCVFMH
EOS	RCVNEGRSP
EVOKE	RCVTRNRND
FAIL	RECID
FMH	RQSWRT
FMTNAME	RSPCONFIRM
FRCDTA	SECURITY
INDTXT	SUBDEV
INVITE	SYNLVL
NEGRSP	TIMER
	VARLEN

Field Level

ALIAS	REFFLD
FLTPCN	TEXT

Chapter 7. RPG III

RPG Operation Codes

The following table contains an alphabetical listing of the RPG operation codes:

| Opera-tion Code | Control Level Indi-cators[1] | Condition Indicators[2] | | | | Resulting Indica-tors | | |
| | Positions | | | | | Positions | | |
	7-8	9-17	Factor 1	Factor 2	Result Field	54-55	56-57	58-59
ACQ	O	O	R	R			O: ER	
ADD[3]	O	O	O	R	R	O: +	O: −	O: Z
ANDxx	O		R					
BEGSR	O		R					
BITOF	O	O		R	R			
BITON	O	O		R	R			
CABxx	O	O	R	R	O	O: HI	O: LO	O: EQ
CALL	O	O		R	O		O: ER	O
CASxx	O	O	O	O	R	O: HI	O: LO	O: ER
CHAIN	O	O	R	R	O	R: NR	O: ER	
CLOSE	O	O		R			O: ER	
COMIT	O	O	O				O: ER	
COMP	O	O	R	R		O: HI[4]	O: LO[4]	O: EQ[4]
DEBUG	O	O	O	O	O			
DEFN	O		R	O	R			
DELET	O	O	O	R		O: NR	O: ER	
DIV[3]	O	O	O	R	R	O: +	O: −	O: Z
DO	O	O	O	O	O			
DOUxx	O	O	R	R				
DOWxx	O	O	R	R				
DSPLY	O	O	O	O	O		O: ER	
DUMP	O	O	O					
ELSE	O							
END	O	O[5]		O				
ENDSR			O	O				

Operation Code	Control Level Indicators[1]	Condition Indicators[2]		Factor 1	Factor 2	Result Field	Resulting Indicators		
	Positions						Positions		
	7-8	9-17		Factor 1	Factor 2	Result Field	54-55	56-57	58-59
EXCPT	O	O				O			
EXFMT	O	O			R			O: ER	
EXSR	O	O			R				
FEOD	O	O			R			O: ER	
FORCE	O	O			R				
FREE	O	O			R			O: ER	
GOTO	O	O			R				
IFxx	O	O		R	R				
IN	O	O		O	R			O: ER	
KFLD	O					R			
KLIST	O			R					
LOKUP (Array)	O	O		R	R		O: HI[4]	O: LO[4]	O: EQ[4]
LOKUP (Table)	O	O		R	R	O	O: HI[4]	O: LI[4]	O: EQ[4]
MHHZO	O	O			R	R			
MHLZO	O	O			R	R			
MLHZO	O	O			R	R			
MLLZO	O	O			R	R			
MOVE	O	O			R	R	O: +	O: −	O: ZB
MOVEA	O	O			R	R	O: +	O: −	O: ZB
MOVEL	O	O			R	R	O: +	O: −	O: ZB
MULT[3]	O	O		O	R	R	O: +	O: −	O: Z
MVR	O	O				R	O: +	O: −	O: Z
NEXT	O	O		R	R			O: ER	
OCUR	O	O		O	R	O		O: ER	
OPEN	O	O			R			O: ER	
ORxx	O			R	R				
OUT	O	O		O	R			O: ER	
PARM	O			O	O	R			
PLIST	O			R					
POST	O	O		O	O[6]	O[6]		O: ER	

Operation Code	Control Level Indicators[1]	Condition Indicators[2]				Resulting Indicators		
	Positions					Positions		
	7-8	9-17	Factor 1	Factor 2	Result Field	54-55	56-57	58-59
READ	O	O		R	O		O: ER	R: EOF
READC	O	O		R			O: ER	R: EOF
READE	O	O	R	R	O		O: ER	R: EOF
READP	O	O		R	O		O: ER	R: EOF
REDPE	O	O		R	O		O: ER	R: EOF
REL	O	O	R	R			O: ER	
RETRN	O	O						
ROLBK	O	O					O: ER	
SETGT	O	O	R	R		O: NR	O: ER	
SETLL	O	O	R	R		O: NR	O: ER	O: EQ
SETOF	O	O				O[4]	O[4]	O[4]
SETON	O	O				O[4]	O[4]	O[4]
SHTDN	O	O				R		
SORTA	O	O		R				
SQRT[3]	O	O		R	R			
SUB[3]	O	O	O	R	R	O: +	O: −	O: Z
TAG	O		R					
TESTB	O	O		R	R	O[4]	O[4]	O[4]
TESTN	O	O			R	O[4]	O[4]	O[4]
TESTZ	O	O			R	O[4]	O[4]	O[4]
TIME	O				R			
UNLCK	O	O		R			O: ER	
UPDAT	O	O		R	O		O: ER	
WRITE	O	O		R	O		O: ER	O: EOF
XFOOT[3]	O	O		R	R	O: +	O: −	O: Z
Z-ADD[3]	O	O	O		R	R: +	O: −	O: O: Z

Operation Code	Control Level Indicators[1] Positions 7-8	Condition Indicators[2] Positions 9-17	Factor 1	Factor 2	Result Field	Resulting Indicators Positions 54-55	Resulting Indicators Positions 56-57	Resulting Indicators Positions 58-59
Z-SUB[3]	O	O	O		R	R +	O: −	O: O: Z

[1] Control level indicators (L1 through L9) are valid on all operation codes except in a subroutine. On all subroutine lines, from BEGSR through ENDSR, the only valid entries in positions 7 and 8 are SR, AN, OR, or blanks.

[2] Conditioning indicators are valid only for operation codes that can be run.

[3] Half adjust (position 53) can be specified for this operation.

[4] At least one resulting indicator must be specified in positions 54 through 59.

[5] The END operation code can have a conditioning indicator if it is part of a DO, DOUxx, or DOWxx group, but not if it is part of CASxx or IFxx group.

[6] You must specify factor 2 or the result field. You may specify both.

Fields without entries must be blank.

+ = Plus	EQ = Equal
R = Required	− = Minus
ER = Error	Z = Zero
BOF = Beginning of file	NR = No record found
ZB = Zero or blank	EOF = End of file
O = Optional	

RPG Edit Codes

The following table contains a listing of the RPG edit codes:

Edit Code	Commas	Decimal Point	Sign for Negative Balance				Entry in Position 21 of Control Specification			Zero Suppress
			No Sign	CR	Minus —	Floating Minus —	D or Blank	I	J	
1	Yes	Yes	No sign				.00 or 0	,00 or 0	0,00 or 0	Yes
2	Yes	Yes	No sign				Blanks	Blanks	Blanks	Yes
3		Yes	No sign				.00 or 0	,00 or 0	0,00 or 0	Yes
4		Yes	No sign				Blanks	Blanks	Blanks	Yes
5	9[1]									
A	Yes	Yes		CR			.00 or 0	,00 or 0	0,00 or 0	Yes
B	Yes	Yes		CR			Blanks	Blanks	Blanks	Yes
C		Yes		CR			.00 or 0	,00 or 0	0,00 or 0	Yes
D		Yes		CR			Blanks	Blanks	Blanks	Yes
J	Yes	Yes			—		.00 or 0	,00 or 0	0,00 or 0	Yes
K	Yes	Yes			—		Blanks	Blanks	Blanks	Yes
L		Yes			—		.00 or 0	,00 or 0	0,00 or 0	Yes
M		Yes			—		Blanks	Blanks	Blanks	Yes
N	Yes	Yes				—	.00 or 0	,00 or 0	0,00 or 0	
O	Yes	Yes				—	Blanks	Blanks	Blanks	Yes
P		Yes				—	.00 or 0	,00 or 0	0,00 or 0	
Q		Yes				—	Blanks	Blanks	Blanks	Yes
X[2]										
Y[3]										Yes
Z[4]										Yes

[1] These are the user-defined edit codes.

[2] The X edit code ensures a hex F sign for positive values. Because the system does this for you, normally you do not have to specify this code.

[3] The Y edit code suppresses the far left zero of a date field that is three to six digits long, and it suppresses the two leftmost zeros of a field that is seven positions long. The Y edit code also inserts slashes (/) between the month, day, and year according to the following pattern:
nn/n
nn/nn
nn/nn/n
nn/nn/nn
nnn/nn/nn

[4] The Z edit code removes the sign (plus or minus) from a numeric field and suppresses leading zeros of a numeric field.

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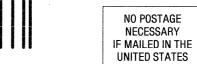**BUSINESS REPLY MAIL**

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