SERENA

SERENA®
StarTool® **FDM**
Quick Reference

Serena Proprietary and Confidential Information

General Information

- To cancel without processing, type CANCEL on command line.

- Wildcard characters asterisk (*) and question mark (?) are supported in most search strings and object name parameters.

- *Memgroup* parameter may be a member name, a name range, a name pattern, or a comma-delimited list of *memgroup* parameters.

StarTool Commands

Syntax
```
STARTOOL
{dsn [VOLUME(vser)|VOLSET(vdef)] [SHR|OLD]|
    FILE(ddname) [NUMBER(num)]|
    *}
[ISPMODE|XISPMODE|ISPXEQ command |subcommand |
    MEMLIST memgroup]
```

Example `STARTOOL lib.cntl`

Aliases `PDS, PDSE`

Defaults `ISPMODE` if in an ISPF session, otherwise `XISPMODE`; `SHR`

Required *dsn* or `FILE(ddname)`

StarTool Subcommands

Command	Alias	Description
*		Merge current member group into MEMLIST table
?		Request extended help for error messages
ALIASCHK		Add members associated with alias to MEMLIST
ALL		Add all members in data set to MEMLIST
ALTCMD	ALTC	Repeat a subcommand saved with SETALT
ALTERNAT	ALT	Display alternate view of table for current function
APPLY	APP	Apply line command to all table entries
ATTRIB	A	List or modify member attributes
BLKSIZE	BLK	Display disk track usage for optimal blocking
BROWSE	B	Browse a data set using ISPF
CANCEL	CAN	Cancel pending line commands
CALC	CAL	Floating point calculator (ISPMODE only)
CAX	CAX	List active system catalogs
CHANGE	C	Change from table view to view of data set
CISIZE	CI	Find optimal control interval for VSAM data set
CMDTBL	CMD	Manage ISPF command tables
COMBINE	COMB	Concatenate multiple members, each delimited by ./, into a single member (IEBUPDTE format)
COMMENT	/*	Enter following information as comments

Command	Alias	Description
COMPARE	CO	Display differences between data set members
COMPDIR	COMPD	Create member group sublist based on data set member differences
COMPRESS	COMPR	Compress data sets using IEBCOPY
CONDEND	COND	Conditionally terminate StarTool FDM
CONTROL	CON	Control StarTool FDM global options
COPY	COP	Copy PDS members to new or existing data set
CREATE	CR	Create new data set & clone current attributes
CSECTS	CS	Map module CSECTs interactively (ISPMODE)
DCF	DC	Print hardcopy member listing based on TSO SCRIPT command parameters
DDNAME	DD	List TSO session allocations
DECODE	DEC	Decrypt a member
DEFINE	DEF	Invoke IDCAMS with DEFINE parameter
DELETE	DEL	Delete member from data set
DELINK	DELI	Create object code from a load module
DIRENTRY	DIR	Display a member's directory entry
DISASM	DISA, DAS	Disassemble a load module
DISPLAY	D	List data set membersd
DROP	DR	Terminate an active GO session (ISPMODE only)
DSNAME	DS	Display data set allocation information
DUAL	DUA	Switch to multiline view of current table
DUP		Copy PDS members or sequential files to sequential data set; optionally change FB/VB
EDIT	E	Edit a data set using ISPF
EDITLOG	EL	Edit output from last subcommand (ISPMODE)
EDITTBL	EDITT	Edit table data for current function
EDREC	EDR	Invoke ISPF edit recovery
ENCODE	EDC	Encrypt a member
END	EN	Terminate the current function
EQUATE	EQ	Reset current member list to members in MEMLIST
EXCLUDE	EXC	Drop members from MEMLIST or current table
EXPAND		Add directory blocks & disk space
EXPRESS	EXPR	Execute all entered line commands without pauses between individual commands (ISPMODE only)
F	F	Find a string in current table entries (ISPMODE)
FILTER	FIL	Set selection values for MASK
FIND	FI	Find a string in data set members
FINDMOD	FINDM	Find all copies of an executable system module
FIXPDS	FIX	Modify attributes of current non-VSAM data set
HELP	H	Request panel-level FDM help (ISPMODE only)
GLOBAL	GL	Apply subcommand globally to all members in table
GO	GO	Switch to parallel FDM session (ISPMODE only)
GROUP	GR	Prompt for member group & subcommand
HEX	HEX	Hexadecimal calculator (ISPMODE only)
HISTORY	HI	Display CSECT IDR data for a load module
IDCAMS	IDC	Invoke an IDCAMS command
IF		Conditionally execute subcommands

Command	Alias	Description
INDEX	IN	Display FDM tutorial index
ISPF	ISPF	Stack an ISPF session over FDM session
ISPMODE	ISPM	Invoke full-screen display mode (ISPF-based)
ISPXEQ	ISPX	Invoke FDM in LISTA or LISTV dialog mode
LASTCMDS	LAS	Retrieve last 32 primary commands for edit/reuse
LEFT	LE	Rotate through alternate views of table (ISPMODE)
LIST	LI	List data from a member or data set
LISTA	LA	List data sets allocated to TSO session
LISTC	LC	List data sets from a catalog
LISTF	LF	List data sets from a volume (VTOC)
LISTGRP	LISTG	List member group names
LISTV	LV	List disk volumes & attributes
LLA	LLA	Refresh LLA directory entries
LOG	LO	Select one of 9 ISPMODE session logs
MAP	MA	Map CSECT layouts & rebuild link/edit structures
MASK	MAS	Enter data set or volume mask for function
MCOPY	MC	Invoke extended copy with DSN set by MODEL
MEMBERS	ME	Set members of current member group
MEMLIST	ML	Create reusable member list
MENU	M	Toggle between menu & command line mode, or toggle StarTool & StarWarp primary option menus
MODEL		Create model data set & parameters for use with MCOPY, CREATE, or IDCAMS subcommands
MONTH	MON	Add new/changed members for month to MEMLIST
NORMAL	NOR	Display default view of current table
NUCMAP	NUC	Map system nucleus (ISPMODE only)
OPTIONS	O	Prompt for subcommand options (ISPMODE only)
OUTCOPY	OUTC	Format utility control statements for IEBCOPY
OUTPUT	OUT	Output current table to printer or data set
PATTERN	P	List members whose names match a pattern
PBROWSE	PB	Browse data in PEDIT
PEDIT	PE	Invoke PEDIT parallel editor
PEND		Check pending line commands & select next one
PGMDOC	PGM	List module descriptions from program table
PLIST	PL	Manage personal list of data sets
PRINT	PR	Print hardcopy listing
PROFMAN	PRO	Manage any saved table
PVIEW	PV	Edit data in PEDIT VIEW mode
QUIT	Q	Immediately exit FDM
READOBJ	READ	Disassemble object code (multiple object decks)
RECALL	R	Display the previous subcommand
RELEASE	REL	Release excess disk space using FIXPDS
RENAME	REN	Change member name
REPLACE	REPL	Replace a search string in data set members
REPRO	REPR	Create backup copy of member in same data set
RESTORE	RES	Restore deleted members
RFIND	RF	Repeat previous FIND command
RIGHT	RI	Rotate through alternate views of table (ISPMODE)

Command	Alias	Description
SEEK		Search for member in concatenated data sets
SELC		Selectively copy columns between tables
SEPARATE	SEP	Split member containing ./ separators (IEBUPDTE format) into multiple members
SET	SET	Display panel for SET commands (ISPMODE)
SETALL	SETA	Set combined FDM defaults
SETALT		Save FDM subcommand for repeat use by ALT
SETCOLOR	SETC	Set default screen colors & highlights
SETDSN	SETD	Set default DSN settings
SETKEYS	SETK	Set default PF function key mapping
SETPANEL	SETP	Set default panels
SETSEEK	SETS	Set default member name for SEEK line command
SETSEL		Set default alias by function for SELECT line command
SETUSER	SETU	Set user defaults for primary commands
SMPGEN	SM	Generate SMP/E sysmods
SORT	SO	Sort table by field name
SUBLIST	SUBL	Make member group subset a member group
SUBMIT	SUB	Submit data for background processing
STATUS	ST	Display the status of ISPMODE functions
SUSPEND	SUS	Temporarily suspend ISPMODE & go to line mode
SVCMAP	SVC	Map active SVC routines
TAG		Create member group of MEMLIST entries marked with *TAG* in DATA/MSG field. Otherwise, apply a line command to all table entries so marked.
TODAY	TO	Add members created/changed today to MEMLIST
TRANS		Translate characters from/to hex, decimal, EBCDIC
TSO	T	Invoke a TSO command processor or CLIST
TSOEDIT	TSOE	Edit sequential data set
TSOLIST	TSOL	List sequential data set
USAGE	U	Display data set statistics
UT	UT	Display extended user tool panel (ISPMODE)
VERIFY	V	Search data set members for errors
VMAP	VM	Map disk volume (ISPMODE only)
VSAM		Invoke FDM StarWarp VSAM services
VTOC		List data sets on selected volumes
VUSE	VU	Display disk volume usage statistics
WEEK	WE	Add new/changed members for week to MEMLIST
WHOHAS	WH	List allocated users of a data set
WORKPAD	W	Create reusable tables of commands, DSNs, CLISTs, REXX executables (ISPMODE only)
X	X	Clear table entries relative to cursor position
XALL	XA	Clear all entries in current table
XCOPY	XC	Invoke extended copy option
XMIT		Transmit data set to another user
XREF	XR	List CSECT & EXTERNAL symbol cross-references
ZAP	Z	Directly edit contents of load module

Memgroup Parameter

Commands ABE, ACFCOMP, ATTRIB, BROWSE, COMBINE, COMPDIR,
COPY, DCF, DELETE, DELINK, DIRENTRY, DISASM, DUP,
EDIT, EXCLUDE, FIND, FSE, HISTORY, IF, LIST, MAP,
MEMBERS, MEMLIST, OUTCOPY, PGMDOC, PRINT,
READOBJ, REPLACE, REPRO, REVIEW, SMPGEN, SUBLIST,
SUBMIT, TSOEDIT, TSOLIST, VERIFY, VPRINT, XREF

Memgroup Parameter Syntax

Syntax	Description
*	Use most recently defined member group.
=	Assign all members in MEMLIST to member group.
:	Assign all members in current table to member group.
name	Name of member to include in member group.
(*name1*, *name2*, ...)	List of member names to include in member group, delimited by commas. List must be contained in parentheses and may contain any number of entries.
aa*	Include any member whose name begins with 'aa'. **Note:** Asterisk (*) here is a wildcard that stands for any number of characters. Multiple wildcards may be intermixed with explicit characters in a member name pattern.
aa?	Include any member whose name begins with 'aa' and is followed by any one character. **Note:** Question mark (?) here is a wildcard that stands for any one character. Multiple question wildcards may be intermixed with explicit characters in a member name pattern.
aa/	Include any member whose name contains 'aa' anywhere. **Note:** Slash (/) here is a nonpositional pattern character that marks a required member name segment or pattern. Multiple name segments or patterns may be joined by an intervening slash to indicate a Boolean AND relationship.
mema:*memb*	Range of member names to include, in alphanumeric sort order, where: • *mema* = Starting member name or partial name in range • *memb* = Ending member name or partial name in range **Note:** If mema is omitted, the start of the inclusion range defaults to x'00'. If memb is omitted, all members following mema in the sort order are included.
(*memgroup1*, *memgroup2*, ...)	List of member group parameters in any non-list format, delimited by commas. Commas are treated as Boolean OR to define member inclusion. List must be contained in parentheses and may contain any number of entries. **Note**: A *memgroup* list may not contain nested *memgroup* lists.

Memgroup Examples

For these examples, assume the following members are already defined in a previously used member group, in the current MEMLIST, or in the current LISTC/LISTF/other table:

Memgroup ABLE01, ABLE02, ABLE03

MEMLIST ABLE99, BAKER99, CHARLIE99

Table ABLE, BAKER, CHARLIE, DOG, ECHO, FOXTROT, GEORGIA

Memgroup Parameter	Members Included in New Memgroup
*	ABLE01, ABLE02, ABLE03
=	ABLE99, BAKER99, CHARLIE99
:	ABLE, BAKER, CHARLIE, DOG, ECHO, FOXTROT, GEORGIA
able	ABLE
(able, baker)	ABLE, BAKER
c:d	CHARLIE, DOG
:c	ABLE, BAKER, CHARLIE
c:	CHARLIE, DOG, ECHO, FOXTROT, GEORGIA
a*	ABLE
*a	GEORGIA
a*e	ABLE
a	ABLE, BAKER, CHARLIE, GEORGIA
*a*e*	ABLE, BAKER, CHARLIE
*e*a*	GEORGIA
a?	No members in LISTC have two-character names.
?a	No members in LISTC have two-character names.
?a*	BAKER
*i?	CHARLIE, GEORGIA
a/	ABLE, BAKER, CHARLIE, GEORGIA
/o	DOG, ECHO, FOXTROT, GEORGIA
a/o	GEORGIA
(a/,o/)	ABLE, BAKER, CHARLIE, DOG, ECHO, FOXTROT, GEORGIA
a*e/	ABLE, BAKER, CHARLIE
(a*,e:)	ABLE, ECHO, FOXTROT, GEORGIA
(a,e:)	ECHO, FOXTROT, GEORGIA
(dog, r/)	BAKER, CHARLIE, DOG, GEORGIA
(a:c, o*o/)	ABLE, BAKER, CHARLIE, FOXTROT

ATTRIB Command

Source Members

Syntax   ATTRIB *memgroup*
           [ALIASINFO|**NOALIASINFO**]
           [ALIAS|**NOALIAS**]
           [LASTREAD]
           [ADDSTATS]
           [NONE]
           [ID(*userid*)|USERID(*userid*)]
           [MOD(mm)]
           [VER(vv)]
           [SSI(*hexdata*)|NOSSI]
           [CREATED(yyyy/mm/dd)]
           [MODIFIED(yyyy/mm/dd)]
           [SIZE(nnnnn)|RESIZE]
           [INIT(nnnnn)]
           [MODI(nnnnn)]

Example   ATTRIB *mema*:*memb* ID(*userid*)

Aliases   A, AT, ATT, ATTR, ATTRI

Defaults   Alias members: *memgroup*, ALIASINFO, NOALIAS

           Non-alias members: *memgroup*, NOALIASINFO, NOALIAS

Required   None

Load Members

Syntax   ATTRIB *memgroup*
           [**ALIASINFO**|NOALIASINFO]
           [**ALIAS**|NOALIAS]
           [UNALIAS]
           [**LKEDDATE**|NOLKEDDATE]
           [SHORT]
           [AMODE24|AMODE31|AMODE64|AMODEANY]
           [RMODE24|RMODEANY]
           [AUTH|NOAUTH]
           [DC|NODC]
           [EDIT|NOEDIT]
           [ENTRY(*name*)]
           [EXEC|NOEXEC]
           [LOADONLY|NOLOADONLY]
           [PAGE|NOPAGE]
           [REFR|NOREFR]

```
              [RENT|NORENT]
              [REUS|NOREUS]
              [RLDFIX|NORLDFIX]
              [SSI(hexdata)|NOSSI]
              [NONE]
```

Example	`ATTRIB mema:memb  RENT REUS REFR`
Aliases	`A, AT, ATT, ATTR, ATTRI`
Defaults	*memgroup*, `ALIASINFO, NOALIAS, LKEDDATE`
Required	None

CONTROL Command

Syntax
```
CONTROL
    [ALIASINFO|NOALIASINFO]
    [LKEDDATE|NOLKEDDATE]
    [PROMPT|NOPROMPT]
    [RECOVER|NORECOVER]
    [TRANSLATOR|NOTRANSLATOR]
    [SINGLE|DOUBLE|MULTIPLE|RETAIN(n)]
    [INFO|NOINFO]
    [PUTLINE|NOPUTLINE]
    [COMMAND|NOCOMMAND]
    [SYSOUT (class)
        {DEST(jes_dest_id_or_nodename.userid)|NODEST|
            FORM(jes_form_id)|NOFORM}|
         NOSYSOUT|
         DSNAME(member) {OLD|MOD|NEW|SHR}|
         NODSN]
    [DEFAULTS|IOSTATS|LISTENV|RESTRICTED|TESTABEND|
        TESTMSGS|TESTOUTLOOP|TESTPARSE|TESTREAD|
        TESTSYNTAX]
```

Example	`CONTROL DSNAME(lib.ctrl(mema)) OLD`
Aliases	`C, CO, CON, CONT, CONTR, CONTRO`
Defaults	Always: `ALIASINFO, LKEDDATE, TRANSLATOR, RETAIN(9),` `INFO, PUTLINE, COMMAND`
	TSO: `PROMPT, RECOVER`
	Background: `NOPROMPT, NORECOVER`
Required	None

Data Set List Commands

Syntax   LISTC [somename] [RESET] [PROMPT]

               LISTF [somename] [RESET] [PROMPT]

Example   LISTC

Aliases   LC, LF

Defaults   None

Required   None

LISTC/LISTF Primary Commands

Primary Command	Alias	Function & Syntax
ALTERNAT	ALT	Displays alternate view of table for current function.
APPLY	APP	Applies line command to all table entries & executes. **Syntax:** APPLY *linecmd*
COMPRESS	COMPR	Compresses data sets using IEBCOPY. **Syntax:** COMPRESS [LIST|NOLIST|SUMMARY]
DUAL	DUA	Switches to multiline view of current table.
EDITTBL	EDITT	Edits table data for current function.
ERASE	ER	Deletes the LISTC/LISTF table.
EXPRESS	EXPR	Executes all entered line commands without pauses between individual commands.
F	F	Finds a string in current table entries. **Syntax:** F '*anystring*' [ASIS] [FIRST|LAST|PREV] [PREFIX|SUFFIX|WORD] [ANY|DSNAME|VOLUME|DO|RECFM|CDATE| RDATE]
FIND	FI	Finds a string in data set members (PDS only). **Syntax:** FIND memgroup '*anystring*' [NUM|SNUM|NONUM|LBLOCK|BLOCK| LDUMP|DUMP] [CAPS|ASIS|IGNORE] [WORD|PREFIX|SUFFIX]
GLOBAL	GL	Apply subcommand globally to all members in table. **Syntax:** GLOBAL *anysubcommand* [*anyoperands*]
ID		Changes table ID. **Syntax:** ID *name*
LEFT	LE	Rotates left (back) through alternate views of table.
LISTC	LC	Searches for more data sets from a catalog. **Syntax:** LISTC [*name*] [RESET]
LISTF	LF	Searches for more data sets from a volume (VTOC). **Syntax:** LISTF [*name*] [RESET]
LOAD	LO	Loads data set names from z/OS control blocks. **Syntax:** LOAD APFLST|LNKLST|LPALST [RESET]

Primary Command	Alias	Function & Syntax

LOCATE	L	Positions to line in sorted table based on search string.
		Syntax: `LOCATE data`
		`    PDSNAME|PVOLUME|CDATE|RDATE|TRKSIZE|`
		`    TRKFREE|EXTENTS|BLKSIZE|DSORG|ALLOC`

MERGE	MER	Merges saved LISTC/LISTF table into current table. **Syntax:** `MERGE name [GROUP|SAMPLE] [RESET]`
MODEL		Creates model data set & parameters for use with MCOPY, CREATE, or IDCAMS subcommands.
NORMAL	NOR	Displays default view of current table.
NOSAVE	NOS	Don't save current LISTC/LISTF table to disk.
OPTIONS	O	Prompts for subcommand options.
OUTPUT	OUT	Outputs current table to printer or data set. **Syntax:** `OUTPUT [=c|F(ddname)]`
REFRESH	REF	Refreshes data for all entries in LISTC/LISTF table. Also corrects volume name entries for cataloged data sets.

REMOVE	REM	Trims the LISTC/LISTF table based on string match.
		Syntax: `REMOVE 'anystring'`
		`    [PREFIX|SUFFIX|WORD]`
		`    [NOT]`
		`    [ANYNAME|DSNAME|VOLUME|DO|RECFM|`
		`     CDATE|RDATE]`

REPLACE	REPL	Replaces a search string in data set members (PDS).
		Syntax: `REPLACE memgroup`
		`    'fromstring' 'tostring'`
		`    [NUM|SNUM|NONUM|LBLOCK|BLOCK|`
		`     LDUMP|DUMP]`
		`    [CAPS|ASIS|IGNORE]`
		`    [WORD|PREFIX|SUFFIX]`
		`    [WRITE|NOWRITE]`

RESET	RESET	Clears the DATA/MSG field in all table entries.
RFIND	RF	Repeats previous FIND command.
RIGHT	RI	Rotates right (forward) through alternate views of table.
SAVE	SAVE	Saves copy of table for another FDM session. **Syntax:** `SAVE [name] [REPLACE|NOREPL]`
SEEK		Searches for member in concatenated data sets. **Syntax:** `SEEK member`

SORT	SO	Sorts table by field name.
		Syntax: `SORT [ASCEND|DESCEND]`
		
		`    [DSNAME|VOLUME|CDATE|RDATE|SIZE|FREE|`
		`     EXTENTS|BLKSIZE|TYPE|ALLOC]`

TAG		Creates member group of MEMLIST entries marked with *TAG* in DATA/MSG field. Otherwise, applies a line command to all table entries so marked. **Syntax:** `TAG linecmd`
UT	UT	Displays extended user tool panel.
WHOHAS	WH	Lists allocated users of a data set.

Primary Command	Alias	Function & Syntax
X	X	Clears table entries relative to cursor position. **Syntax:** X [ABOVE|BELOW|ALL]
XALL	XA	Clears all entries in current table.

LISTC/LISTF Line Commands

Line Command	Block Line Command	Function
+		Provide an extension panel for command entry
=	==	Repeat previous line command
6		Switch to data set & execute MEMLIST ALL
A	AA	Change to data set & execute an alternate (user-defined) subcommand from the UT panel
ACAT		Catalog non-VSAM data set using an alternate user catalog from the UT panel
AUNC		Uncatalog a non-VSAM data set using an alternate user catalog from the UT panel
B	BB	Browse data set
C	CC	Change to data set
CAT		Catalog data set.
COPY		Change to data set & invoke COPY
DEL	DDEL	Delete data set
DUP		Change to data set invoke DUP
E	EE	Edit data set
GO	GG	Change to data set using GO processing
HBAC		HBBACK DFHSM command to back up data set
HBDE		HBDEL DFHSM command for data set
HDEL		HDEL DFHSM command for data set
HMIG		HMIG DFHSM command for data set
HML2		HMIG DFHSM command for data set (LEVEL 2)
HREC		HRECALL DFHSM command for data set
HSM		Display DFHSM prompt screen for data set
IDC		Display IDCAMS LISTCAT & output to log
INFO		Display VSAM space use & attributes
K		Kill & clear all following line commands
LC		List & correct catalog entry for data set
LOG	LL	Copy line into log
M		Request line command entry assistance
ML	MM	Add data set members to MEMLIST
MOD		Build MODEL from data set
O	OO	Request line command syntax assistance
PB		PBROWSE the data set
PE		PEDIT the data set
RACF		Request prompt screen for RACF functions
REFR		Refresh statistics for data set
REN		Rename data set

Line Command	Block Line Command	Function
S	SS	Select line (customized by SETSEL; default is C)
SEEK		Change to data set & search for a member
TAG		Mark entry with * TAG * in DATA/MSG field
U	UU	Display disk usage statistics
UNC		Uncatalog data set (invalid for SMS data sets)
UT		Request extended user line command panel
VSAM		Invoke VSAM services
W		Add data set name to WORKPAD
WHO		Check for users of data set with WHOHAS
X	XX	Drop the table line
XMIT		Transmit data set to another user
Z	ZZ	Edit records in load module & zap to disk

Note: DFHSM commands are supported from the UT panel.

FIND Command[1]

Syntax
```
FIND memgroup 'search_string'
[NUM|SNUM|NONUM|LBLOCK|LDUMP|BLOCK|DUMP]
[CAPS|ASIS|IGNORE|PICTURE]
[WORD|PREFIX|SUFFIX]
[OFFSET(hexnum) MODULE({*|fullname|part*})]
[AFTER(num) DO(num) MAXMEMBERS(num)
     COLS(from:to)]
[AND('string2') ACOLS(from:to)
   {ACAPS|AASIS|AIGNORE|APICTURE}]
[OR('string3') OCOLS(from:to)
   {OCAPS|OASIS|OIGNORE|OPICTURE}]
[ORn('string_n') OCOLS(from:to)
   CAPS|OASIS|OIGNORE|OPICTURE}]
[FORMAT(from:to {, from:to, ... |null}]
[SKIPREC(num) MAXIN(num) MAXOUT(num)
     MAXFIND(num)]
[SKIPCOL(num) MAXLEN(num) {FIRST|NOFIRST}]
[DISPLAY]
[THEN({ATTRIB|BROWSE|DIRENTRY|DELETE|EDIT|
     EXCLUDE|FSE|HISTORY|LIST|MAP|MEMBERS|MEMLIST|
     NEWML|PRINT|REVIEW|SUBMIT|SUBLIST|TSOEDIT|
     TSOLIST|VERIFY|VIEW})]
[ELSE({ATTRIB|BROWSE|DIRENTRY|DELETE|EDIT|
     EXCLUDE|FSE|HISTORY|LIST|MAP|MEMBERS|MEMLIST|
     NEWML|PRINT|REVIEW|SUBMIT|SUBLIST|TSOEDIT|
     TSOLIST|VERIFY|VIEW})]
```

```
                [FROMKEY(key)|FROMADDRESS(address)|
                    FROMNUMBER(num)]²
                [TOKEY(key)|TOADDRESS(address)|TONUMBER(num)]²
```

Example   FIND *mema*:*memb* '*search_string*'

Aliases   FI, FIN

Defaults   *memgroup*, NUM, IGNORE, or most recently used LIST/FIND/
REPLACE parameters

Required   None

Notes   [1] In LISTC/LISTF tables, non-partitioned data sets are skipped.
In other tables, do not attempt to search mixed partitioned
and non-partitioned data sets concurrently.

       [2] VSAM data sets only.

FIXPDS Command

Syntax
```
                FIXPDS
                [NEWDSNAME(new.data.set.name)]
                [MODDSNMAME(data.set.to.modify)
                    {MODVOLUME(volume)}]¹
                [ORDER]
                [EXPANDDIR(num_add)|FREEDIR(num_unused)|
                    DIRFREE(percent)|INITDIR(rblks)|RESET(tblks)|
                    RESET¹ {CHECK|NOCHECK}¹]
                [RELEASE¹|RELEXTENT|RELSAVE(trks)|
                    RELFREE(percent)|MAXSPACE]
                [DSCB(offset,verify_hex_data,replace_hex_data)]¹
                [ADDTRK(trks)|ADDCYL(cyls)|ADDFREE(percent)]
                [TRK SPACE(trks)|CYL SPACE(cyls)|
                    BLK SPACE(blks) {ROUND}]¹
                [LRECL({L1|nnnnn})]
                [BLKSIZE({L2|nnnnn})]¹
                [DSORG({PS|PSU|DA|DAU|PO|POU|IS|ISU|VS|VSU})]
                [RECFM({F|FB|FA|FM|FBA|FBM|V|VB|VA|VM|VBA|VBM|
                    U|UA|UM})]
                [OPTCD({W|WC|WCZ|C|CZ|Z})|NOOPTCD]¹
                [ASM|CLIST|CNTL|LOAD|OBJECT]
                [EXPDT(yyyyddd)|RETPD(retain_days)]¹
                [MGMTCLAS(sms_mgmt_class)]¹
                [STORCLAS(sms_storage_class)]¹
```

Example   FIXPDS RELEASE RECFM(FBA)

Aliases	FIX, FIXP, FIXPD
Defaults	BLKSIZE(*previous_value*), LRECL(*previous_value*), NOCHECK, OPTCD(*previous_value*), RECFM(*previous_value*)
Required	None
Notes	[1] PDSE data sets only.

Member List Command

Syntax	MEMLIST *memgroup*
	[**SINCE**|BEFORE]
	[TODAY|YESTERDAY|WEEK|CURRENT|BIWEEK|MONTH|
	QUARTER|HALFYEAR|YEAR|BIYEAR|LAST(*numdays*)|
	DATE(yyyy/mm/dd)]
	[CHANGED(yyyy/mm/dd:yyyy/mm/dd)]
	[CREATED (yyyy/mm/dd:yyyy/mm/dd)]
	[ABOVE(*count1*)]
	[BELOW(*count2*)]
	[RESET|**NORESET**]
	[ALIAS|NOALIAS]
	[AMODE24|AMODE31|AMODE64|AMODEANY|NOAMODE24|
	NOAMODE31|NOAMODE64|NOAMODEANY][1]
	[AUTH|NOAUTH][1]
	[DC|NODC][1]
	[EDIT|NOEDIT][1]
	[EXEC|NOEXEC][1]
	[FLEVEL|NOFLEVEL][1]
	[HASALIAS|NOHASALIAS]
	[ID(*puid*)|NOID|NOTID(*puid*)]
	[LKED(*part1*)][1]
	[**LKEDDATE**|NOLKEDDATE][1]
	[LOADONLY|NOLOADONLY][1]
	[MODULE(**|fullname|part**)][1]
	[NULL|NONULL]
	[ORPHAN|NOORPHAN]
	[OVERLAY|NOOVERLAY][1]
	[PAGE|NOPAGE][1]
	[REFR|NOREFR][1]
	[RENT|NORENT][1]
	[REUS|NOREUS][1]
	[RMODE24|RMODEANY|NORMODE24|NORMODEANY][1]
	[SCTR|NOSCTR][1]
	[SSI(*hexdata*)|SSI|NOSSI|PARTSSI(*hexdata*)]
	[SYSMOD(*partu*)|USERDATA(*partu*)]

```
[TEST|NOTEST]¹
[TRANS(partt)]¹
[TTR(lttr:httr)]
[USERDATA(partu)|SYSMODE(partu)]¹
[USERID(puid)|NOUSERID|NOTUSERID(puid)]
[VSLKED|NOVSLKED]¹
[ZAP(partz)]¹
```

Example	MEMLIST *mema*:*memb*
Aliases	ML, MEML, MEMLI, MEMLIS
Defaults	*memgroup*, NORESET, LKEDDATE, SINCE
Required	None
Notes	¹ Load modules only.

PEDIT Command

Syntax
```
PEDIT member|memgroup
[LOAD¹|NOLOAD²|BLOCK²]
[COPYBOOK³]
[SELECT]
[VIEW]
[AUDIT]
[BACKUP⁴]
[FROMKEY(key)|FROMADDRESS(address)|
    FROMNUMBER(rrn)]⁵
[TOKEY(key)|TOADDRESS(address)|TONUMBER(rrn)]⁵
```

Example	PEDIT
Aliases	PE, PED, PEDI
Defaults	LOAD (NOLOAD for non-KSDS VSAM data sets)
Required	None
Notes	¹ LOAD and REUSE are synonymous.
	² NOLOAD and BLOCK do not allow insertions or deletions.
	³ COPYBOOK and CB are synonymous.
	⁴ BACKUP edits a copy of the data set.
	⁵ Applies to VSAM data sets only.

Interactive PEDIT Parameter Prompts (Options 1, 2, 4)

Screen Prompt	Allowed Values
Type of data set access	`LOAD`, `REUSE`, `NOLOAD`, `BLOCK`, `BACKUP`
Prompt for a copybook	`YES`, `NO`
View mode	`YES`, `NO` (YES disables SAVE subcommand)
Record selection	`YES`, `NO` (Use `NO` with `LOAD` or `BLOCK`)
Audit selection	`YES`, `NO`
Allowed shared access	`YES`, `NO`
`REUSE` option	`YES`, `NO` (YES requires VSAM REUS)

PEDIT Subcommands (PEDIT Command Line)

Subcommand	Alias	Function
ACTIVATE	A	If `COPYBOOK` view is toggled `ON`, activate extended copybook processing and restart edit session.
BOUNDS	BNDS, BOU	Sets column number boundaries for subsequent FIND, CHANGE, and SHIFT subcommands. **Syntax:** `BOUNDS {col1|col1 col2|LIST`[1]`|OFF}` **Defaults:** `OFF` **Notes:** [1]`LIST` shows current boundary columns.
CANCEL	CAN	Exits PEDIT without saving changes.
CAPS		Forces typed alphabetic characters to upper case. **Syntax:** `CAPS {ON|OFF|NOTKEY`[1]`}` **Defaults:** `ON` **Notes:** [1]`NOTKEY` turns on CAPS for all fields except key fields.
CBMAP	CBM	Sets default copybook data set and member name for `COPYBOOK` command and displays that copybook without data. COBOL, PL/I, or Assembler supported. **See also:** `COPYBOOK`, `HIDE`, `SCREEN`, `SHOW`, `VERTICAL`
CHANGE	C	Find and replace character or hexadecimal string. **Syntax:** `CHANGE` *old_string*[1] *new_string*[1] [*col1 col2*] [NEXT|PREV|FIRST|LAST|ALL] [PREFIX[2]|SUFFIX[3]|WORD[4]] [ASIS][5] **Defaults:** NEXT **Notes:** [1]Replacement string must be same length as search string. [2]`PREFIX` finds *old_string* immediately preceding an alphanumeric (A-Z, a-z, 0-9). [3]`SUFFIX` finds *old_string* immediately following an alphanumeric (A-Z, a-z, 0-9). [4]`WORD` finds *old_string* delimited by spaces and/or punctuation. [5]`ASIS` specifies case-sensitive search. **See also:** `FIND`, `RCHANGE`
CLOSE		Exits PEDIT and saves changes. (Same as `END`.)

Subcommand	Alias	Function
COPYBOOK	CB	Toggles between unformatted and copybook-formatted views of data. Optionally invokes extended copybook processing. **Syntax:** COPYBOOK [ON|OFF] [NEW[1] [*member*]|FIRST[2]|NEXT[2]|PREV[2]] **Defaults:** ON if currently OFF, OFF if currently ON, NEW if no default copybook set **Notes:** [1]NEW sets default copybook to *member*. If *member* omitted, prompt panel displays. [2]FIRST, NEXT, and PREV select the first, next, or previous matching extended copybook in the current memlist. **See also:** ACTIVATE, CBMAP, HIDE, SCREEN, SHOW, VERTICAL
CREATE		Creates new partitioned data set (PDS) member and populates it with marked records from PEDIT session. **Syntax:** CREATE [*member*] **See also:** REPLACE
CUT		Copies selected records to clipboard or table. **Syntax:** CUT [*xx*][1] [ADD|REPLACE|DEFAULTS] **Notes:** [1]Two-byte table name in user profile may be specified to store copied records. **See also:** PASTE
DISPLAY	DIS	Displays menu of copybook commands.
END		Exits PEDIT and saves changes. (Same as CLOSE.)
FIND	F	Finds character or hexadecimal string. **Syntax:** FIND *string* [*col1 col2*] [NEXT|PREV|FIRST|LAST|ALL] [PREFIX[1]|SUFFIX[2]|WORD[3]] [ASIS][4] [CHECK][5] [NAME][6] **Defaults:** NEXT **Notes:** [1]PREFIX finds *string* immediately preceding an alphanumeric (A-Z, a-z, 0-9). [2]SUFFIX finds *string* immediately following an alphanumeric (A-Z, a-z, 0-9). [3]WORD finds *string* delimited by spaces and/or punctuation. [4]ASIS specifies case-sensitive search. [5]CHECK validates packed decimal fields. [6]NAME finds copybook field name *string* rather than data value *string*. **See also:** CHANGE, RFIND
HEX		Toggles hexadecimal data display format.

Subcommand	Alias	Function
HIDE		Hides all or selected fields while in copybook or vertical copybook display mode. **Syntax:** HIDE [ALL|*field_name*|*field_pattern*| *field_num*|*field_num1* TO *field_num2*] [GROUP][1] **Defaults:** ALL **Notes:** [1]GROUP hides all selected fields at a given level number (COBOL). **See also:** CBMAP, COPYBOOK, SCREEN, SHOW, VERTICAL
KEY		Positions display at record containing specified key. **Syntax:** KEY '*key_value*'|x'*hex_key_value*'
LOCATE	L	Positions display at specified record number. **Syntax:** LOCATE *record_number*
NEXT	N	Positions display at next *n*th record. **Syntax:** NEXT [*n* SET[1]|MAX] **Defaults:** 1 SET **Notes:** [1]*n* SET sets default ordinal value of next record displayed. For n=1, the "next" record is the first subsequent record; for n=2, the "next" record is the second subsequent record; etc. **See also:** PREVIOUS
OUTPUT	OUT	Outputs the current record in the currently selected display mode (character, hexadecimal, or copybook) to the printer or a data set. **Syntax:** OUTPUT [=c|F(*ddname*)]
PAD		Changes the default pad character and sets the column number where padding terminates. **Syntax:** PAD {*char*|'*c*'|x'*nn*'} *column*
PASTE		Pastes previously CUT records from clipboard or table into active edit session. **Syntax:** PASTE [*xx*][1] [ZERO|KEEP|DEFAULTS] **Notes:** [1]Two-byte table name in user profile may be specified as source of copied records. **See also:** CUT
PREVIOUS	P	Positions display at previous *n*th record. **Syntax:** NEXT [*n* SET[1]|MAX] **Defaults:** 1 SET **Notes:** [1]*n* SET sets the default ordinal value of the previous record displayed. For n=1, the previous record is set to the first prior record; for n=2, the previous record is the second prior record; etc. **See also:** NEXT
RCHANGE	RCH	Repeat previous CHANGE command.
REPLACE	REPL	Replaces existing partitioned data set (PDS) member and populates it with selected records from active PEDIT session. **Syntax:** REPLACE [*member*] **See also:** CREATE
RESET		Clears all pending line commands without executing.
RFIND	RF	Repeat previous FIND command.

Subcommand	Alias	Function
SAVE		Saves changes and continues current session.

SCREEN		Changes data formatting and column headers displayed in copybook view.
		Syntax: `SCREEN`
		`[TYPE|PICTURE|OFFSET|COLUMN|NUMBER]` [1]
		`[DATA|NODATA|HEX]` [2]
		`[KEY|LENGTH]` [3]
		`[LEAD|NOLEAD]`
		`[LEV88|NOLEV88]`
		Defaults: `TYPE`, `DATA`
		Notes: [1]Defines how data type is described and sets header accordingly.
		`TYPE . . .` Length & type, eg 2 PAC[4]
		`PICTURE. .` COBOL PICTURE, eg S99V9
		`OFFSET . .` Byte offset to field, eg 60
		`COLUMN . .` Starting column of field, eg 61
		`NUMBER . .` Field number, eg 4
		[2]Sets data value display to alphanumeric decimal, hexadecimal, or none. If `NODATA` selected, data type is `COLUMN`.
		[3]LENGTH shows physical record length after record number. KEY shows key value after record number (for VSAM KSDS data sets).
		[4]See copybook data type codes, page 23.
		See also: `CBMAP`, `COPYBOOK`, `HIDE`, `SHOW`, `VERTICAL`

SHOW		Shows all or selected fields while in copybook or vertical copybook display mode. **Syntax:** `SHOW [ALL|`*field_name*`|`*field_pattern*`|` *field_num*`|`*field_num1* `TO` *field_num2*`]` `[GROUP]` [1] `[ONLY]` [2] **Defaults:** `ALL` **Notes:** [1]GROUP hides all selected fields at a given level number (COBOL). [2]ONLY restricts displayed values to only those specified in `SHOW` command. **See also:** `CBMAP`, `COPYBOOK`, `SCREEN`, `HIDE`, `VERTICAL`
SORT		Sorts VSAM KSDS data set in ascending order by key. **Syntax:** `SORT`
SUBMIT	SUB	Submits JCL member(s) to JES for background execution. **Syntax:** `SUBMIT` *memgroup* `[`*TSO_SUBMIT_operands*`]`

Subcommand	Alias	Function

VERTICAL	VERT	In copybook mode, toggles between standard single-line headers and multiline headers with rich data descriptions. Optionally invokes new copybook.
		Syntax: `VERTICAL [ON|OFF|NEW`[1]` [`*member*`]]`
		`[NAME|NONAME]`[2]
		`[TYPE|NOTYPE]`[2]
		`[PIC|NOPIC]`[2]
		`[COL|NOCOL]`[2]
		`[NUM|NONUM]`[2]
		`[ALL|DEFAULT|NOHEADER]`[3]
		`[LEV1|NOLEV1]`
		`[LEV88|NOLEV88]`
		`[ONLY]`[4]
		Defaults: `ON` if currently `OFF`, `OFF` if currently `ON`, `NEW` if no default copybook set, `NAME`, `TYPE`, `NOPIC`, `COL`, `NUM`
		Notes: [1]`NEW` sets default copybook to *member*. If *member* omitted, prompt panel displays.
		[2]Turns on data description header line.
		`NAME . . .` Field name, eg PAY-RATE
		`TYPE . . .` Length & type, eg 2 PAC[5]
		`PICTURE. .` COBOL PICTURE, eg S99V9
		`COLUMN . .` Column range, eg (61-62)
		`NUMBER . .` Field number, eg 4
		[3]`ALL` displays all five header lines, `DEFAULT` reverts to default four header lines, and `NOHEADER` removes all header lines.
		[4]`ONLY` restricts displayed values to those specified in `VERTICAL` command.
		[5]See copybook data type codes, page 23.
		See also: CBMAP, COPYBOOK, SCREEN, SHOW, HIDE

PEDIT Line Commands

Line Command	Name	Function
?	HELP	Displays list of PEDIT line commands.
=	SAME	Repeats previous line command.
A	AFTER	Marks line as insertion target for COPY or MOVE line command, with new line to be inserted *after* this marked line.
B	BEFORE	Marks line as insertion target for COPY or MOVE line command, with new line to be inserted *before* this marked line.
C	COPY	Marks one line to be copied to target A or B.
C*n*	COPY *n*	Marks first of *n* lines to be copied to target A or B.
CC	COPY BLOCK	Delimits first and last lines of a block to be copied in a single operation to target A or B.
COLS	COLUMNS	Displays a column number ruler for line.
D	DELETE	Marks one line to be deleted.

Line Command	Name	Function
D*n*	DELETE *n*	Marks first of *n* lines to be deleted.
DD	DELETE BLOCK	Delimits first and last lines of a block to be deleted in a single operation.
I	INSERT	Inserts one new line immediately prior to this marked line. (Line is automatically filled with pad character as specified by PAD subcommand.)
I*n*	INSERT *n*	Inserts *n* new lines immediately prior to this marked line. (Lines are automatically filled with pad character as specified by PAD subcommand.)
M	MOVE	Marks one line to be moved to target A or B.
M*n*	MOVE *n*	Marks first of *n* lines to be moved to target A or B.
MM	MOVE BLOCK	Delimits first and last lines of a block to be moved in a single operation to target A or B.
R	REPEAT	Marks one line to be repeated once.
R*n*	REPEAT *n*	Marks one line to be repeated *n* times (in *n* subsequent new lines).
RR	REPEAT BLOCK	Delimits first and last lines of a block to be repeated once (in one block of duplicate new lines).
RR*n*	REPEAT BLOCK *n*	Delimits first and last lines of a block to be repeated *n* times (in *n* blocks of duplicate new lines).
)	SHIFT RIGHT	Shift line data right one column.
)*n*	SHIFT RIGHT *n*	Shift line data right *n* columns.
))	SHIFT BLOCK RIGHT	Delimits first and last lines of a block to be shifted right one column.
))*n*	SHIFT BLOCK RIGHT *n*	Delimits first and last lines of a block to be shifted right *n* columns.
(	SHIFT LEFT	Shift line data left one column.
(*n*	SHIFT LEFT *n*	Shift line data left *n* columns.
((	SHIFT BLOCK LEFT	Delimits first and last lines of a block to be shifted left one column.
((*n*	SHIFT BLOCK LEFT *n*	Delimits first and last lines of a block to be shifted left *n* columns.

PEDIT Copybook Data Type Codes (Header Line)

Code	Meaning	Code	Meaning
BIN	Binary number	CHR	Alphanumeric character data
BIT	PL/I bit string	GRP	Multifield group item
C-1	Single precision floating point number	NUM	Decimal number
C-2	Double precision floating point number	PAC	Packed decimal number

REPLACE Command[1, 2]

Syntax
```
REPLACE memgroup 'search_string' 'replace_string'
    [NUM|SNUM|NONUM|LBLOCK|LDUMP|BLOCK|DUMP]
    [CAPS|ASIS|IGNORE|PICTURE]
    [STATS|NOSTATS]
    [WRITE|NOWRITE|UPDATE|NOUPDATE]
    [WORD|PREFIX|SUFFIX]
    [OFFSET(hexnum) MODULE({*|fullname|part*})]
    [AFTER(num) DO(num) MAXMEMBERS(num)
        COLS(from:to)]
    [AND('string2') ACOLS(from:to) ACAPS|AASIS|
        AIGNORE|APICTURE]
    [OR('string3') OCOLS(from:to) OCAPS|OASIS|
        OIGNORE|OPICTURE]
    [FORMAT(from:to {, from:to, ... })]
    [SKIPREC(num) MAXIN(num) MAXOUT(num)
        MAXFIND(num)]
    [SKIPCOL(num) MAXLEN(num) {FIRST|NOFIRST}]
    [MEMBERS|MEMLIST|ML|NEWML|SUBLIST]
    [FROMKEY(key)|FROMADDRESS(address)|
        FROMNUMBER(num)][3]
    [TOKEY(key)|TOADDRESS(address)|TONUMBER(num)][3]
```

Example   REPLACE *mema*:*memb* '*string1*' '*string2*'

Aliases   REP, REPL, REPLA, REPLAC

Defaults   *memgroup*, NUM, IGNORE, NOWRITE, STATS, or most recently used LIST/FIND/REPLACE parameters

Required   None

Notes   [1] In LISTC/LISTF tables, non-partitioned data sets are skipped. In other tables, do not attempt to search mixed partitioned and non-partitioned data sets concurrently.

[2] In load modules and VSAM files, search string and replacement string must be of equal length.

[3] VSAM data sets only.

RESTORE Command

Syntax
```
RESTORE member
    [DISPLAY|NODISPLAY]
    [COUNT(#lines_to_display)]
```

```
             [FIND('search_string') {ASIS|IGNORE}]
             [LIKE(member)]
             [MODULE({*|fullname|part*})}]
             [PROMPT|NOPROMPT]
             [REPEAT|NOREPEAT|MEMLIST]
             [STATS|NOSTATS]
             [TTR(start_address)]
```

Example   RESTORE *member* FIND('*mydata*') MEMLIST

Aliases   RES, REST, RESTO, RESTOR

Defaults COUNT(5), DISPLAY, PROMPT, STATS, TTR(0)

Required None

StarBat Option

StarBat performs automated StarTool FDM tasks in batch mode. It is a separately licensed option of StarTool FDM.

Sample JCL

```
//STARBAT1 JOB  (JOB CARD PARAMETERS)
//STEPONE  EXEC PGM=STARBAT, REGION=2048K
//STEPLIB  DD   DSN=STEPLIB, DATA.SET,DISP=SHR
//DD03     DD   DSN=SAMPLE.INPUT.DATA.SET,DISP=SHR
//DD03O    DD   DSN=SAMPLE.OUTPUT.DATA.SET,DISP=SHR
//SYSPRINT DD   SYSOUT=*
//SYSLIST  DD   SYSOUT=*
//SYSTOTAL DD   SYSOUT=*
//SYSIN    DD   *
DD03        COPYALL=(1,0,C'PGM=PROGRAMF',C'PGM=STARBAT'),
            PRINTCHR=100
```

StarBat Functions

Function	Alias	Description
COPYALL	CA	Copy all members from one data set to another, with multiple conditional updates to copied records
COPYMBR	CM	Conditionally copy members based on content
COPYREC	CR	Conditionally copy records based on content
COPYREV	CRR	Copy records from sequential or VSAM data set in reverse order
COPYSOME	CS	Conditionally copy records based on content, with multiple conditional updates to copied records
EXCLUDEREC	XR	Copy all records except those with stated conditions
MULTICOPY	MC	Conditionally copy records to multiple data sets
PRINT	P	Conditionally print records based on content, in alphanumeric format, with record statistics
PRINTALL	PA	Print all records of a member or data set, with multiple conditional updates to printed records
PRINTCHR	PC	Conditionally print records based on content, in alphanumeric format, without record statistics
PRINTCHRALL	PCA	Print all records in alphanumeric format, with multiple conditional updates to printed records
PRINTCHRMBR	PCM	Conditionally print members based on content, in alphanumeric format, without record statistics
PRINTHEX	PH	Conditionally print records based on content, in vertical hexadecimal format, with record statistics
PRINTHEXALL	PHA	Print all records in vertical hexadecimal format, with multiple conditional updates to printed records
PRINTHEXMBR	PHM	Conditionally print members based on content, in vertical hexadecimal format, with record statistics
PRINTMBR	PM	Conditionally print members based on content, in alphanumeric format, with record statistics
PRINTREV	PRR	Print sequential or VSAM data sets in reverse order

Function	Alias	Description
SKIP	S	Move the current record pointer forward *n* records
SKIPREV	SKR	Move the current record pointer backward *n* records
TOTAL	T	Calculate data validation totals
UPDATEALL	UA	Update all records in data set, applying multiple conditional updates
UPDATEMBR	UM	Conditionally update members based on content
UPDATEREC	UR	Conditionally update records based on content

StarBat Parameters

Parameter	Alias	Values & Syntax
ABEND	AB	0 - Issue return code at normal EOJ 1 - Issue U0012 ABEND dump for I/O error (default) 2 - Issue user ABEND at non-zero return code
CHANGE	C	• (*start*, {*length*|0}, *type*'*search_string*', *type*'*new_string*') • (*position*, *operator*, *type*'*value*', *type*'*new_string*')
CHANGEALL	CA	(*start*, {*length*|0}, *type*'*search_string*', *type*'*new_string*')
COPYOVER	CO	YES - Overwrite existing PDS member NO - Don't overwrite existing PDS member
EXCLUDEREC	XR	1 to 999999999
EXPAND	EX	(*start*, {B|C|N|P}, *old_length*, *new_length*)
IF, AND, OR		• (*start*, {*length*|0}, *type*'*search_string*') • (*start*, {*length*|0}, {EQN|EQP|NEN|NEP}) • (*position*, *operator*, *type*'*value*')
MAXRECIN	MRI	1 to 999999999, or 0 for all records
MAXRECOUT	MRO	1 to 999999999, or 0 for all records
MEMBER	M	{*member_name*|(*member1*, *member2*, ...)}
MEMBERS	MS	{ALL|*member_name_mask*|*range_start*:*range_end*}
MOVE	MV	• (*to_position*, {*number_repeats*|*null*} *type*'*string*') • (*to_position*, {*length*|0}, *from_position*)
NEWMBR	NM	New member name
NEWMBRS	NMS	Mask applied to old name(s) to create new name(s)
OPTIONS	OP	LONG - print column scale for each record (default) SHORT - print column scale at top of page JCL - invoke JCL processing MULTI - at EOF, another function rereads data set NOMULTI - normal EOF processing
OVERALL	OA	• (*start*, {*length*|0}, *type*'*search_string*', *type*'*new_string*') • (*from_position*, {*length*|0}, *type*'*search_string*', *to_position*, *type*'*new_string*')
OVERLAY	OL	• (*to_position*, {*number_repeats*|*null*} *type*'*string*') • (*start*, {*length*|0}, *type*'*search_string*', *type*'*new_string*') • (*position*, *operator*, *type*'*value*', *type*'*new_string*') • (*from_position*, {*length*|0}, *type*'*search_string*', *to_position*, *type*'*new_string*') • (*from_position*, *operator*, *type*'*value*', *to_position*, *type*'*new_string*')

Parameter	Alias	Values & Syntax
PADCHAR	PAD	{C'c' | X'xx'}
PRINT	P	1 to 999999999, or 0 for all records
PRINTCHR	PC	1 to 999999999, or 0 for all records
PRINTHEX	PH	1 to 999999999, or 0 for all records
PRINTLPI	PL	{6|8}
RBA		nn - Decimal RBA (VSAM) or RRN (ESDS, KSDS) X'nn' - Hex RBA (VSAM) or RRN (ESDS, KSDS)
RDW		0 - Include RDW in record processing & display (default) 1 - Include RDW in record processing but not display 2 - Omit RDW in record processing but show in display 3 - Omit RDW in both record processing & display
SELECT	S	1 to 9999999999 (nth record)
STARTKEY	SK	{C'cc' | X'xx'}
STOPIF	ST	(*start*, {*length*|0}, *type'search_string*')
SUM		• (*start*, '*description_of_total*') - for packed data • (*start*, *length*, {C|B}, '*description_of_total*') - char/binary
WRITE	W	{*ddname*|(*ddname1*, *ddname2*, ...)}

Note: Braces indicate a choice among alternatives separated by slashes.