



ASST MANAGER, LMIS

# MAPPER® Software

Level 33R1 Summary

UP-9196.6

## Functions

<i>function</i>	<i>call</i>	<i>what it does</i>
ABORT	<b>MSG WAIT</b>	Terminate MAPPER function in process
ACKNOWLEDGE MESSAGE	OK	Acknowledge a message and removes it from queue
ADD LINES	►]q+[predfl]	Add line/lines
ADD ON*	ADON rt	Append report to displayed report/result
ADD REPORT	AR t	Add new report in specified form type
ADD TO*	ADTO rt	Append displayed data to another report
ALARM	AL D	Send message to as many as 3 stations at predetermined time
ARITHMETIC*	A {-rt }	Do computations using arithmetic expressions
AUXILIARY	AUX	Queue data to auxiliary device
BACKGROUND RUN	BR runm	Start a MAPPER run in background
BATCH START	START	Start batch run
BINARY FIND**	BF [r]t [f] BF -	Split reports, find/display data
BUILD LABEL TABLES	BLT	Put label table definition lines in RCR
CALCULATE*	CAL rt [f]	Do complex computations/conditional evaluations
CALCULATE UPDATE*	CALU rt [f]	Do complex computations/conditional evaluations for update
CALL	CALL	Call another user/station for two-way conversation on display terminals
CHANGE*	CHG [rt];/tgtstr /replstr /o CHG rt f	Change character string to new image
CLEAR LABEL TABLES	CLT	Delete label table definition lines from RCR
COPY	COPY	Copy OS 1100 file/element to another site
CUTTING*	CUT rt	Cut/paste text
DATE*	DATE rt [f]	Do computations on dates
DELETE LINES	►]q -	Delete line/lines
DELETE REPORT	DR	Delete report

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<i>function</i>	<i>call</i>	<i>what it does</i>
DELETE UPDATES***	DEL	Delete lines in result of update function from report
DEVICE	DEV <i>sn</i>	List auxiliary devices/status
DISKETTE	DISK	Read from/write to 5-1/4" diskettes
DISPLAY REPORT	<i>rt</i> [ <i>f,l</i> ] D <i>dnm</i> [ <i>f,l</i> ]	Display report
DISPLAY GRAPHICS	G	Display primitive graphics code on display terminal.
DOWNLINE LOAD	DLL	Downline load UTS 400/40 terminal
DUPLICATE LINES	►]x X[ <i>q</i> ]	Duplicate line/lines
DUPLICATE REPORT	XR <i>rt</i>	Duplicate report
ELEMENT	ELT	Copy MAPPER report to OS 1100 file/element
ELEMENT DELETE	ELT-	Delete OS 1100 file/element
EXTRACT UPDATES***	EXT	Delete lines in result of update function/redisplay result
FIND	F [ <i>r</i> ] <i>t</i> [ <i>f</i> ] F -	Find/display data
FUNCTION	FUN	Display common functions/calls
HELP	HELP, <i>target</i> [, <i>section</i> ]	Provides information on MAPPER capabilities and usage
GENERATE ORGANIZATION CHART	GOC GOC {- <i>rt</i> }	Generate organization chart from commands stored in free-form report.
GRAPHICS SCALER	GS GS {- <i>rt</i> }	Scale, rotate, and optimize primitive graphics code; process expanded syntax.
INDEX*	I <i>qt</i>	Index form type
INDEX USER*	IU [ <i>q</i> ] <i>t</i>	Display first lines of report by type, date, and range
INSERT LINES	►]x I[ <i>q</i>   - <i>ll</i> ]	Insert line/lines
ITERATIVE CALCULATE*	ICAL <i>eqnm</i> [ <i>r</i> ]	Performs complex or conditional calculations using named equation set. Enables user to calculate and try again.
LANGUAGE	LANG <i>n</i>	Display MAPPER system messages in another language
LINE CONTROL	L	Restore control line
LINE ZERO	LZ {- <i>rt</i> }	Display line 0 information
LOCATE †	LOC <i>tgtstr</i> LOC [ <i>rt</i> ];/ <i>tgtstr/o</i> LOC <i>rt f</i>	Locate/display character string
MATCH*	MA	Compare/match/move data
MATCH UPDATE*	MAU	Match data for update
MODE	M { <i>m</i>   <i>dnm</i> } <i>mpw</i>	Select mode
MOVE LINES	►]x M[ <i>l</i> [ <i>q</i>   - <i>ll</i> ]	Move line/lines
NAME	NAME <i>nm</i> [ <i>m,t,r,dpt,usr,fn,upd</i> ]	Enters a report or mode name in Data Directory
PAINT	<b>F2</b> /PNT	Redisplay
PASSWORD	PSW <i>password</i>	Assign/change/clear report passwords; unlock report for updating
PASTING	PASTE [M <i>npw</i> ] <i>rt</i>	Paste text
PHRASE CHANGE*	PC <i>tgstr, replstr</i> , [R <i>n</i> ]	Locate and change a word/sequence of words
PHRASE LOCATE	PL <i>tgstr</i> [ <i>o</i> ]	Locate a word/sequence of words
PRINT	PR	Queue data to system printer
PUNCH	PUNCH	Punch 80-column cards
READ	RPSW	Assign/change/clear read
PASSWORD	{ <i>password</i>   <i>keyword</i> }	protect password/read access locks

function	call	what it does
REFORMAT*	RF	Move columns of data
RELATIONAL DATA BASE INTERFACE	RDI,func [,t ]	Transfers information between RDMS/1100 data base and the MAPPER system.
RELEASE	^	Release display
REMOTE SYMBIONT INTERFACE	RSI	Enter demand mode at MAPPER system terminal
REPLACE	REP	Replace report with displayed report/result
RESULT*	RSLT {-rt }	Create instant result copy of report/result
RESUME	<b>F1</b> /RSM	Resume executing interrupted function
RETRIEVE*	RET R RET [P]	Retrieve MAPPER report. Retrieve OS 1100 file/elements
RUN STATUS*	RS[o,run,sn ]	Reports status of background runs
SAVE*	SV	Holds report or result for later display with RSM
SCHEDULE	SCHEDULE runm,time,date SCHEDULE D	Schedules a MAPPER run for periodic execution or execution at a later time (in background). Displays or deletes runs from schedule.
SEARCH*	S {rt  t } [f] S-	Search for data
SEARCH UPDATE*	SU rt [f] SU-	Search report for update
SEND REPORT*	SEND sn [,Y]	Send report/result to another station
SIGN OFF	X	Release control of display terminal
SIGN ON	]user-id, dept., [password ]	Sign on to MAPPER system terminal
SNOOZE	SNOOZE time	Delay receipt of messages
SOE UPDATE	►changes	Change data between SOE (►) and cursor (▼)
SORT*	SORT rt [f]	Rearrange order of lines of data
SPELLING CHECK	SP word	Check spelling of a word
STATION-TO- STATION MESSAGE*	SS	Send message (up to full screen) to another station
STOP	STOP [,runm,sn ]	Abort execution of a background run
TAPE CASSETTE (DISKETTE)	TCS	Read from/write to cassettes/ diskettes
TERMINAL WIDTH	TW {80   132}	Set display width to 80 or 132 columns
TOTALIZE*	TOT rt [f]	Do arithmetic/move operations
TUTOR	TUTOR	Provides training exercises and examples
TYPE	T	Display available form types in mode
TYPE PASSWORD	TPW tpw,t	Assign/change/clear type passwords; unlocks type for access.
UPDATE***	UPD	Blend lines in results of update function into reports
WORD CHANGE*	WC tgtstr,replstr, [...]	Locate/change words from list
WORD LOCATE	WL tgtstr [...]	Locate words from list

<i>date</i>	date (YYMMDD)
<i>dnm</i>	data name
<i>dpt</i>	department number
<i>eqnm</i>	equation set name
<i>f</i>	format number
<i>fn</i>	function (ADD,CHG,DEL)
<i>func</i>	RDMS function (SELECT, INSERT, DELETE, UPDATE, or HELP)
<i>l</i>	line number
<i>m</i>	mode number
<i>mnm</i>	mode name
<i>mpw</i>	mode password
<i>n</i>	language number
<i>nm</i>	name to be accessed in Data Directory
<i>o</i>	options
<i>predfl</i>	predefined lines defined in RID 0
<i>q</i>	quantity of lines
<i>qt</i>	quantity of lines to index and type
<i>replstr</i>	replacement string
<i>r</i>	RID number
<i>rnm</i>	report name
<i>runm</i>	run name
<i>rt</i>	RID and type (For ARITHMETIC, RID and type having predefined equations; for LIST MERGE, receiving RID and type [issuing report must be on display].)
<i>sn</i>	station number
<i>t</i>	alphabetic form type
<i>tgtstr</i>	target string
<i>time</i>	time (HHMM)
<i>tpw</i>	type password
<i>upd</i>	update data names in the System Directory
<i>usr</i>	user-id
<i>x</i>	how many times to duplicate a line
<i>Y</i>	yes, to acknowledge (The system assumes N if a comma and Y are omitted.)
-	report or result on display
*	creates a result
**	creates a result with N or O option
***	use with update functions: CALU, MAU, and SU as well as LOC or CHG with the OU option specified
†	Creates a result with O option or UPD RESULT with OU

## Word Processing

### CONTROL PARAMETERS

<i>parameter</i>	<i>default</i>	<i>parameter</i>	<i>default</i>
APPENDIX □ *	n/a	PACK □ x	N
BULLET □ n	1	PAGE □ n	1
CONTROL □ _ †	~	PAGEBODY □ n	58
DOCUMENT □ x,y,z, a,b,c †	Y, Y, 1, Y, 0, 0	PAGETOP □ n	0***
EZWP □ x	N	PRINTOFF □ x	N
FOOTER □ x	Y	PRTSPACE □ n	1
FORMAL □ x,y,z, a,b,c †	Y, Y, 1, Y, 0, 0	RELEASE □ x †	N
GLOSSARY □ rt †	n/a	SCREEN □ x †	N
HEADER □ x	Y	SECTION □ *	clear
INDENT □ [-]n	5	SPACE □ x	\
LPP □ n	60 ††	SV □ n †	8
MARGINS □ x	left**	UNADS □ x †	N
NEWHEAD □ x *	N	UNADS □ x,[H] †	N
NOCR □ x †	N	WCLIST □ rt †	n/a
OUTLINE □ *	clear	WORDWRAP □ x	Y
OUTLINE □ Nn		*/	n/a
An nn an		*\	n/a
OUTLINE □ Rn	N1A2n1a3		
An nn an			

- Tab character.
- \* Insert this control parameter in a ~ p line (see the CONTROL CHARACTERS table).
- \*\* The individual control characters ~ l, ~ r, ~ e, ~ f, and ~ c override this control parameter (see the CONTROL CHARACTERS table). Defaults to left as long as you have a tab rack; otherwise, text remains frozen.
- \*\*\* O=center one-page report vertically on page according to either the number of lines per page set for your system, or the value of LPP parameter.
- † Must appear in header.
- †† Or the value set for your MAPPER system.

## CONTROL CHARACTERS

~ A	~ r
~ a	~ t
~ B	~ U
~ b	~ u
~ c	~ V
~ e	~ v
~ f	~ X
~ g, n	~ x
~ H	~ z, n
~ h	~ space †
~ i	~ ~
~ j	~. †
~ m	~/ †
~ N	~/ [n] †
~ n	~ *
~ n	~ - †
~ o	~ =
~ p †	~ &
~ q †	

† Tilde ( ~ ) must be in column 1. Do not enter textual data on these lines.

## COMMANDS

ADJ	MMM (ia)
ADJDOC (doc)	NOCR (ia)
ADJREP (ia)	PC** (ia)
ADJPRT	PG,n
BACKUP (ia)	PR
CHG ;/tgtstr /replstr /*	PREP[x ]
CUT*	PROOF
DGG,x (ia)	PRT[n ]
DOC (doc)	PRT [n \n-n   ,c-n \c-n-c-n ] (ia )
FRONT (doc)	REP (ia)
G,x ** (ia)	RETURN (ia)
GG,x ** (ia)	SEC,n,n...
GGI (ia)	SPword *
GI (ia)	SV,n (ia)
GLOSSARY,rt (ia)	TOC (doc)
HELP	TR[n ]** (ia)
\$INCL\$	UPPER**
INDEX (doc)	WC,x,y,... *
INS[n ]** (ia)	WCL[rt ] (ia)
L*	WCLREP[rt ] (ia)
LOC tgtstr *	WL,x,... *
LOWER**	WLL[rt ] (ia)
MC	

\* From non-interactive word processing, do not enter WP before the command; enter the command as stated.

\*\* After entering these commands, position the cursor in the text where the command is to be executed and transmit.

(doc) For documents.

(ia) Interactive only.



## Options (continued)

option	purpose	function									
		B F N	C A L	D A N	F A N	L M O	S C O	S O C	R C H	T O R	T O R
T	include processed/unprocessed lines in result	X									
Tx	set x to transparent character		X			X					
T	convert time in field to decimal hours and move field			X							
T[(x)]	include last x type line in result (default=tab line)									X	
U	set update lock	X									
U <sup>②</sup>	resume scan beyond lines on display					X					
U[(x)]	search within data unit; include unit in result (default=tab line)									X	
V	process only equations whose result values are calculated from valid data	X									
W	determine day of the week			X							
X	exclude invalid values in minimum, maximum, summary, average operations/functions specified by vertical operators	X									
n	specify n workdays in week			X							
@	find/search for blank characters (spaces)	X			X					X	
/	find/search for slant as data	X			X					X	
=x	change column 1 to x										X
*	omit error flag (*) in subtotalling operations										X
*	flag invalid results with asterisk	X									

① LCH=CHANGE manual function; M option not applicable for manual CHANGE and LOCATE functions.

② Not applicable in MAPPER runs.

③ Option C varies with function.

④ For BFN (BINARY FIND): R x-y only.

## Color Graphics

color*	text	pen stall
black	0	1
red	1	3
green	2	4
yellow	3	5
blue	4	2
magenta	5	7
cyan	6	2
white	7	1
gray	8	1
tan	9	5
aqua	10	8
lime	11	6
violet	12	7
hot pink	13	3
turquoise	14	8
pink	15	3

\* To specify a color for a chart other than a text chart, spell out the word. For example, type RED to specify the color red.

item	pie,bar	line	scatter	target	time line
<i>patterns:</i>					
solid	0	-	-	-	-
45-degree left (\\\\\\)	1	-	-	-	-
45-degree right (////)	2	-	-	-	-
vertical	3	-	-	-	-
horizontal	4	-	-	-	-
vertical and horizontal crosshatch	5	-	-	-	-
45-degree crosshatch	6	-	-	-	-

**Color Graphics (continued)**

item	pie,bar	line	scatter	target	time line
<i>line patterns:</i>					
solid	-	1	-	-	-
short dashes	-	2	-	-	-
dots	-	3	-	-	-
dashes and dots	-	4	-	-	-
very short dashes	-	5	-	-	-
medium dashes	-	6	-	-	-
long dashes	-	7	-	-	-
dash and 2 dots	-	8	-	-	-
widely spaced dots	-	9	-	-	-
<i>marker symbols for scatter charts:</i>					
dot	-	-	1	-	-
plus	-	-	2	-	-
asterisk	-	-	3	-	-
circle	-	-	4	-	-
X	-	-	5	-	-
<i>marker symbols for target charts:</i>					
circle	-	-	-	1	-
triangle	-	-	-	2	-
square	-	-	-	3	-
vertical rectangle	-	-	-	4	-
horizontal rectangle	-	-	-	5	-
diamond	-	-	-	6	-
<i>milestone markers:</i>					
MARK1	-	-	-	-	triangle
MARK2	-	-	-	-	square
MARK3	-	-	-	-	circle
MARK4	-	-	-	-	diamond

**Reserved Words (must be in variables)**

word	content
AETYPE\$	Alphabetic form type of run control report
ATYPE\$	Alphabetic form type of current result
BPORT\$	Run started in the batch port (if BPORT\$ > 0, yes; if BPORT\$ = 0, no)
CHAR\$	Number of characters per line in form type
CPRIV\$	User has coordinator privileges (if CPRIV\$ = 1, yes; if = 0, no)
CRID\$	RID number of calling run control report from external subroutine (from internal subroutine, CRID\$ = 0) [RSR]
CTYPE\$	Numeric form type of calling run control report from subroutine [RSR]
CURH\$	Horizontal character position of cursor
CURV\$	Vertical position of cursor
DATE0\$	Current date in format YMMDD
DATE1\$	Current date in format YYMMDD
DATE2\$	Current date in format DD MMM YY
DATE3\$	Current date in format YDDD
DATE4\$	Current date in format YYDDD
DATE5\$	Current date in format DDMMYY
DATE6\$	Current date in format MM/DD/YY
DATE7\$	Current date in format MONTH DD, YYYY
DATE8\$	Current date in the format MMDDYY
DAY\$	Current day of the week in format DAY (DAY = MON, TUES, WED, etc.)
DEPN\$	User's department sign-on number
DEPT\$	User's department name
DLINE\$	Line number of first nonheld line on display
DLP\$	Number of data lines processed during the run (includes LLPs and all lines processed; compare to IO\$ and LLP\$)
EMODE\$	Mode number of run control report
ERID\$	RID number of run control report



*Reserved Words (continued)*

<i>word</i>	<i>content</i>
ETYPE\$	Numeric form type of run control report
FCC\$	UTS400 Station has FCC (hardware protect) capability
FFTYPE\$	Numeric form type of type A (free-form) reports (if FCC\$ > 0, yes; if FCC\$ = 0, no)
FKEY\$	Function key input [CHD, KEY]
FMT\$	Format of report on display (run must be registered as format sensitive)
ICVAR\$	Input from the control line (no leading tabs required; strings allowed) [CHD]
INMSV\$	Input from function mask on the screen [OUM]
INPUT\$	Input from the screen or from an external source (up to 40 variables allowed; no strings allowed) [OUT, RRN, RUN]
INSTR\$	Input from variables on screen lines (no leading tabs required; strings allowed) [OUT]
INVAR\$	Input from input fields on the screen (up to 40 variables and strings allowed) [OUT]
INVR1\$	Input from input fields on the screen (up to 40 variables and strings allowed) [OUT]
IO\$	Number of storage I/O requests processed during run
LANG\$	User's currently selected language number
LINE\$	Line number of next line to read [RDL, RLN]
LINK\$	Run started from another run via LNK statement (if LINK\$ is nonzero, yes; if LINK\$ = 0, no)
LLP\$	Number of logic lines processed during run
LRRSD\$	Local site identifier
MAPER\$	Current MAPPER software level
MODE\$	Mode number of report or result last processed, or mode number of report or result on display when run started, or 0 if no report or result was processed or on display
MODE1\$	Mode number last referenced by active station
OLINE\$	Next line to write in output area (OLINE\$ - 1 equals the number of lines currently written in the output area)
ORSTAN\$	Originating station number that started background run (if run is not a background run, ORSTAN\$ = 0)
RID\$	RID number of report or result last processed, or RID number of report or result on display when run started, or 0 if no report or result was processed or on display, or -0 for a result <b>NOTE:</b> After an ADR or DUP statement, RID\$ contains the RID number of the new report.
RRSID\$	Remote run site-id
RSLANT\$	Reverse slant character
RUN\$	Name of run executing
SCNH\$	Horizontal screen size of user's terminal
SCNV\$	Vertical screen size of user's terminal
SOE\$	Start Of Entry (SOE) character
SOEH\$	Horizontal character position of SOE character
SOEV\$	Vertical line position of SOE character
STACK\$	Current level number of saved variables [PSH, POP, RMV]
STAT1	Status word one (quantity or status) [BFN, CAL, CAU, DCPY, DCRE, DEV, DIR, DIS, DPUR, ELT, EL-, GOC, GS, IND, LLN, LOK, LZR, MCH, REH, RET, RRN, TCS, TYP, WPR]
STAT1\$	Same as STAT1 [use for IF testing]
STAT2	Status word two (quantity or status) [CAL, CAU, DCPY, DCRE, DEV, DPUR, ELT, EL-, GOC, GS, IND, LLN, LZR, MCH, TCS, WPR]
STAT2\$	Same as STAT2 [use for IF testing]
STAT3	Status word three (quantity or status) [DCPY, DCRE, DEV, DPUR, LZR]
STAT3\$	Same as STAT3 [use for IF testing]
STNUM\$	Station number executing run
TIC\$	Apostrophe character
TIME\$	Current time in format HH:MM:SS
TTYTYPE\$	Code for terminal type from the terminal registration report
TYPE\$	Numeric form type of report or result last processed, or numeric form type of report or result on display when run started, or 0 if no report or result was processed or on display
TYPE1\$	Numeric form type of -1 result
TYPE2\$	Numeric form type of -2 result

**Reserved Words (continued)**

<i>word</i>	<i>content</i>
TYPE3\$	Numeric form type of -3 result
TYPE4\$	Numeric form type of -4 result
USER\$	User-id of user who started run
XERR\$	Message number of error encountered by error routine [RER]
XFUN\$	Last function call before run aborted or erred [RAR, RER]
XLINES\$	Line number in run control report where run aborted or erred [RAR, RER]
XRID\$	RID number of run control report where run aborted or erred [RAR, RER]
XTYPE\$	Numeric form type of run control report where run aborted or erred [RAR, RER]

The reserved word applies only to the functions enclosed in brackets. For example, you can use INMSV\$ only with an OUM statement.

## **Run Control Statements**

@ADD,im,it,ir,rm,rt,rr .  
 @ADR,m,t . (RID\$=new RID number)  
 @ART exp vrslts .  
 @AUX,m,t,r,sn,dev[,dlnos?,f,tabs?,dhdrs?,d1char?,lsp,transp?,unit,sl,spcc] .  
 @BFN,m,t[,r,l,lab] o cc ltyp,p [vrid,vlno] .  
 @BLT,m,t,r[,lab] .  
 @BR[,sn,lab] run[,vld] .  
 @BRK[,m,t,q] .  
 @CAL,m,t,r[,l,q,lab] o cc ltyp,p eq [vrslts] .  
 @CAR .  
 @CAU,m,t,r[,l,q,lab] o cc ltyp,p eq [vrslts] .  
 @CER .  
 @CHD[,m,t,r,rel?] lab .  
 @CHG v vld .  
 @CLK .  
 @CLT,m,t,r[,lab] .  
 @CLV[,stvno,q] .  
 @CMU .  
 @CPY,o ls,lq,lfn[,le,lv] rms[,rmq,rmfn,rme,rmv] rmu,rmd,rmpw[,l] .  
 @CSR .  
 @DAT,m,t,r o cc ltyp,p .  
 @DC eq vrslts .  
 @DCPY[,lab] host,fn,rhost,fn,type[,pos,transl] .  
 @DCRE[,lab] host,fn[,dev,init,gran,maxfz,vol,access] .  
 @DCU .  
 @DEC[,n] v[,v,...v] .  
 @DEF[,o,lab] |setv testv|setv,testv| . (use only one option) .  
 @DEL .  
 @DEV,sn[,dev,unit,lab] .  
 @DFU[,lab] m,t,r[,m,t,r,...m,t,r] .  
 @DIR[,lab] name [vmode,vtype,vrid,vhiridr] .  
 @DIS,m,t[,r,f,lab] code,dev,fn[,ext,tabs?,hdrs?,transp?] .  
 @DLL,m,t,r,trfadr,dev[,proglab] .  
 @DLR,m,t,r[,lab] .  
 @DPUR[,lab] host,fn .  
 @DSG,m,t,r[,display,interim?] .  
 @DSP,m,t,r[,l,tabp,f,interim?,hold,msg80] .  
 @DUP,m,t,r . (RID\$=new RID number)  
 @DVS[,m,t,r] field[,...,field] v[,v,...,v] .  
 @ELT,m,t,r[,lab] qual,fn[,cyc,elt,ver,mapperf?,hdrs?,cs,newcyc?] .  
 @EL-[,lab] qual,fn[,cyc,elt,ver] .  
 @ESR[,q,-q] .  
 @EXT .  
 @FDR,m,t[,r,l,q,lab] o cc ltyp,p vrid,vlno . (use RLN or RDL next)  
 @FMT[,m,t,r] field[,...,field] .  
 @FND,m,t[,r,l,lab] o cc ltyp,p vrid,vlno .  
 @GOC,m,t,r[,lab] ulvl?[notxt?,ige?,igcz?,fxcz?] optmz?[outrslt?,unp? vlinesi, vlineso,vco,vbuffz] .

## Run Statements (continued)

@GS,m,t,r[,lab] maxy[,o,ige?,unp?,aga?,expand?,ighitxt?,outrslt?] sf[,offx,offy]  
Δ angle[,absx,absy vci,vco,vminx,vmidx,vmaxx,vminy,vmidy,vmaxy] .  
@GTO {lab}END|LIN [+ ]n|LIN -n|RPX r { . (± n=number of lines following/  
preceding present line)  
@IDU,m,t[,q,user,stdate,enddate,strid,endrid vrids,vlines,vridst,vhiridt] .  
@IF[,C] val1 op val2 stmt; . (C=case sensitive )  
@INC[,n] v[,v,...v] .  
@IND,m,t,q[,lab] .  
@INS vld substrv .  
@JUV,o v[,v,...v] . (Use one option )  
@KEY .  
@LCH,m,t,r[,l,lab] o cc tgtstr/replstr [,vlines,vrid] .  
@LCV[,lab] o v tgtstr[/replstr vcol,voccs] .  
@LDV[,o] v=vld[,v=vld,...v=vld] . (or LDV,H v=rms or LDV,N v=vld, minmax )  
@LFC v .  
@LFN[,m,t,r,tics?,lab] cc v[,v,...v] .  
@LLN,m,t,r[,lab] vlines .  
@LMG,im,it,ir,rm,rt,rr[,lab] .  
@LNI,m,t,r,lb4[,x],l[,q] .  
@LNK run[,vld] .  
@LNM,m,t,r,lb4[,x],l[,q] .  
@LNX,m,t,r,l,x[,q] .  
@LN+,m,t,r,lb4,q[,predfl] .  
@LN-,m,t,r,l,q .  
@LOC,m,t,r[,l,lab] o cc tgtstr vcol,vlno,vwid .  
@LOG .  
@LOK,m,t,r[,lab] .  
@LSM,msgno[,lab] vmsg .  
@LZR,m,t,r[,lab] vlines,vcpl,vhdrs,vcs,vupds,vdept,vuser,vrpw,vwpw] .  
@MAU,im,it,ir,rm,rt,rr[,lab] o icc iltyp,ip rcc rltyp,rp .  
@MCH,im,it,ir,rm,rt,rr[,lab] o icc iltyp,ip rcc rltyp,rp .  
@MOD,m,t .  
@MSG vld [vresp] .  
@OK[,lab] .  
@OUM,im,it[,ir,if,rm,rt,rr,rf,title] .  
@OUT,m,t,r,l,q,out[,tabp,erase?,interim?,pdq,protect,fxmit?,a/b?,blink?] .  
@PEK[,stvno,q,slv] .  
@POK[,stvno,q,slv] .  
@POP[,stvno,q,slv] .  
@PRT,m,t[,r,dlnos?,f,prtsite,cys,all?,lsp,banner,formsid,hdrs?] .  
@PSH[,stvno,q,slv] .  
@RAR[,m,t,r] lab .  
@RDC,m,t,r[,l,q,ltyp,lab] cc vdata . (place next line in output area )  
@RDL,m,t,r,l[,lab] cc vdata .  
@REH,m,t,r[,lab] .  
@REL .  
@REP[,im,it,ir],rm,rt,rr .  
@RER[,m,t,r] lab .  
@RET,m,t[,lab] qual,fn[,cyc,elt,ver,mapperf?,hdrs?,l,ststr,q] .  
@RFM,im,it,ir,rm,rt,rr o icc iltyp,ip rcc rltyp,rp .  
@RLN[,l,lab] cc vdata . (must follow FDR or RDL statement )  
@RMV[,slv] .  
@RNM[,m,t,r] -n .  
@RPW {,pw1|pw1,pw2|,,pw2} .  
@RRN[,lm,lt,lr,lf,re?] run[,vld] rms,rmu,rmd,rmpw[,msg?,l,rmm,rmpw,rmt,rmf] .  
@RS[,o,run,sn] .  
@RSI[,sitid,tmo] user,pw[,acct,qual,fn,cyc,elt,ver,q] .  
@RSL,m,t,r .  
@RSR[,m,t,r] lab .  
@RTN,rmm,rmt,rmr[,rmf] lm,lmpw,lt[,lf] .  
@RUN run[,vld] . (up to 40 variables )  
@SEN,m,t,r,sn[,sl,ack?,lab] .  
@SFC[,m,t,r] vld .  
@SOR,m,t,r o cc ltyp,p .  
@SQL[,lab] 'syntax' vstat[,vcol,vret,...,vret] .  
@SRH,m,t[,r,l,q,lab] o cc ltyp,p [vlines,vls] .  
@SRU,m,t[,r,l,q,lab] o cc ltyp,p [vlines,vls,vrid] .  
@STR,m,t,r[,runid,acct] .  
@SUB,m,t,r[,lab] o cc ltyp,p vrslts . (place next line in output area )  
@TCS,m,t[,r,f],dev,code[,unit,tach,transp?,tabs?,trk,eot?,EOD,dhdrs?,lsp,sn] .  
@TOT,m,t,r[,lab] o cc ltyp,p [vrslts] .  
@TYP,m,t[,lab] vcpl,vcs,vmfno,vmfno,vnxridt,vhiridt,vlinest] .

@ULK .  
 @UPD .  
 @WAT ms .  
 @WDC,im,it,ir,rm,rt,rr[,l,col,lab] .  
 @WDL,im,it,ir,rm,rt,rr[,l,col,lab] vlno,vcol,vcolnxt .  
 @WPR,m,t,r[,l,lab] wpcmd .  
 @WRL,m,t,r,l[,ntuid?,wpw] cc ltyp,vld .  
 @XCH[,stvnno,q,slv] .  
 @XIT .  
 @XQT[,lab|vld] .

## Field Definitions for Run Statements

a/b?=A, send spaces; B, retain unprotected fields  
 absx=Absolute X rotation value  
 absy=Absolute Y rotation value  
 access=Access type (PUB, PRI)  
 acct=Batch run account number  
 ack?=Automatic acknowledge, Y/N  
 aga?=Assume graphics active, Y/N  
 all?=All reports in (form) type, Y/N  
 angle=Rotation angle  
  
 banner=Banner/printout identification  
 blink?=Change <> to blinkers, Y/N  
  
 cc=Column-character positions  
 code=Mnemonic function code for cassette/diskette operation  
 col=Column number in receiving report  
 cs=Character set  
 cyc=File cycle  
 cys=Number of copies  
  
 dev=Device name or type  
 dhdrs?=Delete headers, Y/N  
 display=Display text, graphics, both (A, Text; G, Graphics; M, Mixed)  
 dlno?=Delete line numbers, Y/N  
 d1char?=Delete first character, Y/N  
  
 elt=Standard OS 1100 element name  
 endate=Ending date  
 endrid=Ending RID number  
 eot?=End of tape, Y/N  
 eq=Equations  
 erase?=Erase screen, Y/N  
 exp=Arithmetic expressions  
 expand?=Handle expanded syntax, Y/N  
 ext=File name extension  
  
 f=Format of report  
 field=Report field  
 fn=File name  
 formsid=Predefined or special forms identification  
 fxcz?=Fixed character size, Y/N  
 fxmit?=Forced transmit, Y/N  
  
 gran=Granularity

hold=Number of lines on display screen to hold  
 host=Host configured in DDP 1100  
 hdrs?=Include headers, Y/N  
  
 icc=Issuing report column-character positions  
 if=Issuing format  
 igcz?=Ignore character size, Y/N  
 ige?=Ignore errors, Y/N  
 ighitx?=Ignore high text, Y/N  
 iltyp=Issuing report line type  
 im=Issue mode  
 init=Initial file allocation size  
 interim?=Interim display, Y/N  
 ip=Issuing report parameters  
 ir=Issuing RID  
 it=Issuing (form) type  
  
 l=Line number in report  
 lab=Label or relative line number to go to  
 lb4=Line number before (start after this line)  
 le=Local element  
 lf=Local format  
 lfn=Local file name  
 lm=Local mode  
 Impw=Local mode password  
 lq=Local qualifier  
 lr=Local RID  
 ls=Local site number  
 lsp=Line spacing  
 lt=Local (form) type  
 ltyp=Line type  
 lv=Local version  
  
 m=Mode number  
 mapperf?=MAPPER format, Y/N  
 maxfz=Maximum file size  
 maxy=Maximum Y value  
 minmax=Minimum-maximum range of number produced  
 ms=Milliseconds  
 msgno=Message number  
 msg?=Display message, Y/N  
 msg80=Message (up to 80 characters)  
  
 n=Number  
 name=Data name to define  
 newcyc?=New file cycle, Y/N  
 notxt?=Eliminate all text, Y/N  
 ntuid?=No time/user-id, Y/N

## Field Definitions (continued)

o=Options  
offx=Offset value for X components  
offy=Offset value for Y components  
op=Operator (relational)  
optmz?=Optimize result, Y/N  
outslt?=Display graphics result on screen, Y/N  
outl=Line on terminal where output begins  
p=Parameters  
pdq=Pushdown quantity (how many lines)  
predfl=Predefined line reference number  
proglab=Program label  
protect=Protected format  
prtsite=Print site  
pw=Password  
q=Quantity (that is, how many)  
qual=Qualifier  
r=RID number  
rcc=Receiving report column-character positions  
re?=Return if error, Y/N  
rel?=Turn over release control to run, Y/N  
replstr=Replacement string  
rf=Receiving format  
rhost=Receiving DDP 1100 host  
rlyp=Receiving report line type  
rm=Receive mode  
rmd=Remote department number  
rme=Remote element  
rmf=Remote format  
rmfn=Remote file name  
rmm=Remote mode  
rmmpw=Remote mode password  
rmpw=Remote (user) password  
rmq=Remote qualifier  
rmr=Remote RID  
rms=Remote site number  
rmt=Remote (form) type  
rmu=Remote user-id  
rmv=Remote version  
rp=Receiving report parameters  
rr=Receiving RID  
rt=Receiving (form) type  
run=Run name  
runid=Run-id (batch)  
setv=Set variable  
sf=Scaling factor  
sitid=Site-id (6-character)  
sl=Station letter  
sn=Station number  
spcc=Special printing control characters  
stdate=Starting date  
stmt=Another run statement  
strid=Starting RID number  
sstr=Starting string  
stvno=Starting variable number  
substrv=Substring of variable (up to 18 characters)  
'syntax'=SQL statement syntax interpreted by RSA 1100  
t=Form type  
tabs?=Tab characters, Y/N  
tabp=Tab position  
tach=Starting tachometer address  
testv=Test variable (or reserved word for W option)  
tics?=Enclose field name in apostrophes, Y/N  
title=Title (up to 12 characters)  
tgtstr=Target string  
tmo=Timeout (number of seconds to wait for response)  
transl=Translate data (TRA, ASC, EBC)  
transp?=Transparent format, Y/N  
trfadr=Transfer address  
trk=Track number  
ulvl?=Upper-level chart, Y/N  
unit=Unit name/-id  
unp?=Unpack result, Y/N  
user=User-id  
v=Variable name  
val=Value  
vbuffz=Variable with buffer size  
vci=Variable with number of input characters scanned  
vco=Variable with number of characters to output  
vcol=Variable with column number  
vcolnxt=Variable with next column number  
vcpl=Variable with number of characters per line  
vcs=Variable with character set  
vdata=Variables with data  
vdept=Variable to hold department number  
ver=OS 1100 element version name  
vhdrs=Variable with number of header lines  
vhiridr=Variable with higher RID number in range  
vhiridt=Variable with highest RID in (form) type  
vld=Variables, literal data, reserved words, or any combination of these (with CHG, includes arithmetic expressions)  
vlines=Variable with number of lines  
vlinesi=Variable with number of input lines scanned  
vlineso=Variable with number of output lines in result  
vlinest=Variable with number of lines in (form) type  
vln=Variable with line number  
vls=Variable with number of lines scanned  
vmaxx=Variable with maximum X value  
vmaxy=Variable with maximum Y value  
vmfn=Variable with MAPER file name (e.g., MAPER1)  
vmfno=Variable with MAPER file number (e.g., 1)  
vmidx=Variable with midpoint X value  
vmidy=Variable with midpoint Y value

*Field Definitions (continued)*

vminx=Variable with minimum X value  
vminy=Variable with minimum Y value  
vmode=Variable with mode number  
vmsg=Variable with message  
vnxridt=Variable with number of next available RID in (form) type  
voccs=Variable with number of occurrences  
vol=Volume-id for removable/system disk pack  
vresp=Variable with operator response (maximum 60 characters)  
vret=Variable with passed/received information (up to 18)  
vrsits=Variables with results  
vrid=Variable with RID number

vrids=Variable with number of RIDs  
vridst=Variable with number of RIDs in (form) type  
vrpw=Variable with read password  
vstat=Variable with error status  
vtype=Variable with alphabetic form type  
vupds=Variable with number of updates  
vuser=Variable with user-id  
vwpw=Variable with write password  
  
wpcmd=Word processing command or "" for interactive WP  
wpw=Write password  
  
x=Number of times