7

MNEMONIC INSTRUCTIONS

INTRODUCTION

This chapter lists all the mnemonic commands that are recognized by the DATA 6100. They may be transmitted as part of a message from a remote terminal, or entered at the front panel by using the function keypad in the alpha shift mode.

There are three sections of this chapter following the introduction, subheaded A, B, and C. "A" is the Keyword Summary, which lists all the commands in aphabetical order, with a brief description of each one's function. "B" is the Functional Listing, which divides up the commands into functional categories, alphabetized by category name, each command is also accompanied by a brief description. A list of these category names is provided in this introduction.

"C" is the Command Reference, listing all commands in alphabetical order with some or all of the following information accompanying each command:

a) Category name (See listing of category names in this intro)

b) Product to which command applies:

6100 — refers to the mainframe system

PLUG-IN — refers to any of the plug-ins

610-1/611-1, 620-1, 630-1, 640-1, 650-1/652-1 — refers to specific plug-ins

600 — refers to the four bay plug-in expansion rack

681 — refers to the disk drive

682 — refers to interface accessory, frequently for plotter operations

D1000 — refers to the pre-amplifier

c) Function — what the command does

d) Syntax example — how to enter the command

e) Comments

f) References to related commands

Note on Mnemonic Listings

There are a few listings that appear in the Keyword Summary, Functional Listing, and Command Reference as lower case letters. These are not commands by themselves, but rather are names of procedures which can be performed by entering various combinations of characters and/or commands. Look at the Syntax and Comments headings as guides to setting up these procedures.

Categories of Commands — Chapter 7B

1. Buffer Parameter
2. Buffer Selector
3. Calibration
4. Conditional Pointers
5. Coordinate Value
6. Controls
7. Cursor Parameter
8. Diagnostic
9. Digitizer Control
10. Directory
11. Disk Drive
12. Disk Operations
13. Display Parameter
14. File Operations
15. Function Control
16. Function Procedure
17. GPIB Parameter
18. Help
19. I/O Parameter
20. Input Parameter
21. Internal Program
22. Keyboard
23. Keystroke Program
24. Marker Parameter
25. Mathematics
26. Modifier
27. Named Key
28. Named Key Pair
29. Non-volatile Memory
30. Plotter Parameter
31. Procedure
32. Process Parameter
33. Program Control
34. Program Pointer
35. Real Time Display
36. RS232 Parameter
37. Scalar Function
38. Signal Outputs
39. Timebase Parameter
40. Trigger Parameter

7A

KEYWORD SUMMARY

ADCMOD	SELECTS A/D MODE — LINEAR OR COMPANDED
ADD	ADDS SCALAR/VECTOR VARIABLES AND SENDS RESULT TO VARIABLE OR PORT
AMPOFF	PERFORMS AMPLITUDE AND OFFSET CALIBRATION
AQUM	SELECTS TIMEBASE/TRIGGER ACQUISITION MODE
AQUSRQ	ENABLES/DISABLES THE ON-ACQUISITION-COMPLETE SERVICE REQUEST
AREA	RETURNS AREA OF SPECIFIED RECORD
ARM	ENABLES THE DIGITIZER TO RECOGNIZE TRIGGER EVENT(S)
ARMCPL	SELECTS COUPLING OF EXTERNAL ARM TRIGGER SOURCE
ARMDLY	SELECTS ARM DELAY MODE
ARMLEV	SELECTS THE ARM-TRIGGER LEVEL
ARMSLP	SELECTS THE ARM-TRIGGER SLOPE
ARMSRC	SELECTS THE ARM-TRIGGER SOURCE
AVDONE	CONDITIONAL, POINTS TO PROGRAM LINE IF AVERAGING COMPLETED
AVEGDN	SELECTS AVERAGE-DONE MODE FOR THE MATHPAD AVERAGER
AVEGM	SELECTS MATHPAD AVERAGE UPDATE MODE
AVG	PERFORMS SUMMATION AVERAGE; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
AVGCLR	CLEARS THE PROC AVERAGE BUFFERS
AVGCNT	SELECTS OR RETURNS NUMBER OF PROC AVERAGES
AVGM	ENABLES/DISABLES SPECIFIED PROC AVERAGE BUFFER
AVGTYP	SELECTS THE TYPE OF AVERAGING FOR THE MATHPAD AVERAGE FUNCTION
Autocopy	COPIES SUCCESSIVE RECORDS DIRECTLY TO MEMORY OR DISK
BACKUP	COPIES A:*.* TO B:
BAUD	SELECTS BAUD RATE FOR SPECIFIED PORT
BAY	RETURNS NUMBER OF ACTIVE PLUG-IN BAY IN EXPANSION RACK
BAYn	PUSHES BAYn KEY ON EXPANSION RACK
BL:	CAUSES FUNCTION TO OPERATE WITH RESPECT TO BASELINE LEVEL AS ZERO
BLANK	CLEARS OUT CURRENT DATA, RESTARTS RECORDING
BLEVEL	SETS THE LEVEL OF THE BASELINE FUNCTION MODIFIER
BLINE	ENABLES/DISABLES THE BASELINE DISPLAY
BNAME	RETURNS NAME OF PROCESSED RECORD
BPLOT	CAUSES ONLY THE BASELINE TO BE PLOTTED

BSWEP	SELECTS THE SWEEP NUMBER TO TRANSFER TO SYSTEM FOR ANALYSIS
BTYP	SELECTS TYPE OF BUFFER TRANSFER TO SYSTEM
BUFC	PUSHES BUF-PROC PAIR AND CALLS FRAME MEMORY, CAL TYPE, GATE MENU
BUFCAL	SELECTS TYPE OF CALIBRATION TO BE PERFORMED
BUFCLR	IMMEDIATELY CLEARS THE INPUT BUFFERS (BUF.XX) TO ZERO Y VALUE
BUFLEN	SELECTS SIZE OF FRAME SLICE TO TRANSFER TO SYSTEM (BUF.XX)
BUFM	ENABLES THE GATE, OR FRAME-TO-BUFFER TRANSFER OPERATION
BUFOFF	SELECTS OFFSET OF FRAME SLICE FOR TRANSFER TO SYSTEM (BUF.XX)
BUFR	PUSHES BUFR KEY AND CALLS BUFR MENU
BUFTRG	SELECTS 1 OF 2 TRIGGER SETUPS
BUSADR	SELECTS GPIB ADDRESS
CAL	PUSHES INP-FLTR KEY PAIR AND CALLS CALIBRATION MENU (630)
CAL	PUSHES CAL KEY AND CALLS CALIBRATION MENU (640)
CALAMP	RETURNS VALUE OF AMPLITUDE CALIBRATION
CALCYC	SELECTS CALIBRATION CYCLE
CALFRE	SELECTS FREQUENCY OF TIME CALIBRATOR OUTPUT
CALINP	SELECTS INPUT MODE FOR CALIBRATION SIGNAL
CALINT	SELECTS NORMAL OR INTERNAL INPUT SOURCE FOR CHANNELS 1 AND 3
CALLEV	SELECTS TIME CALIBRATOR OUTPUT AMPLITUDE
CALM	ENABLES/DISABLES CALIBRATION
CALOFF	RETURNS VALUE OF OFFSET CALIBRATION
CALOFX	PERFORMS OFFSET CALIBRATION
CALOUT	SELECTS CALIBRATION SIGNAL AT CAL OUTPUT
CALTYP	SELECTS THE TYPE OF CALIBRATION SIGNAL FOR CAL OUTPUT
CBADR	SELECTS CONTROLLER ADDRESS FOR PASS CONTROL AFTER PLOT
CFREE	RETURNS AMOUNT OF CONTIGUOUS FREE MEMORY
CLKMOD	SELECTS EXTERNAL CLOCK DIVIDER DENOMINATOR
CLR	CLEARS THE TOP LINE ANNOTATION
CLRALL	CLEARS ALL MATHPAD PROCESSING BUFFERS
CLRAQU	CLEARS THE ACQISITION-COMPLETE STATUS BIT IN THE STATUS BYTE
CLRDST	CLEARS THE DISTRIBUTION BUFFER
CLRERR	CLEARS THE ERROR SRQ AND ERROR QUEUE
CLRKEY	CLEARS THE KEYCODE BUFFER AND RESETS THE KEY STATUS BIT
CLRSRQ	CLEARS THE SERVICE REQUEST LINE ON THE GPIB INTERFACE
CLRSUM	CLEARS MATHPAD AVERAGE BUFFER PRIOR TO A NEW ENSEMBLE AVERAGE

CLRTRN	CLEARS ALL TREND RECORDS
CMAX	SETS MAXIMUM VALUE OF WAVEFORM FOR THERMAL TAIL COMPENSATION
CMDDEV	SELECTS THE CURRENT COMMAND DEVICE
CMODE	SELECTS MODE OF THERMAL TAIL COMPENSATION
CNTROL	SELECTS CLOCKING MODE / MASTER OR SLAVE
CNVINP	SELECTS STANDARD/USER-DEFINED KERNEL FOR THE CONVOLUTION FUNCTION
CNVNPT	SELECTS THE LENGTH OF THE STANDARD CONVOLUTION KERNELS
CNVOFF	SELECTS THE NUMBER OF POINTS FOR USER-CONVOLUTION OUTPUT OFFSET
CNVWDW	SELECTS THE SHAPE OF THE SMOOTHING FUNCTION FOR CONVOLUTION
CONFIG	SELECTS TIMEBASE/CHANNEL CONFIGURATION
CONT	PUSHES DIR-PROG PAIR AND CALLS COMMAND DEVICE AND CONTROL MENU
CONV	PERFORMS CONVOLUTION; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
CONVM	SELECTS THE CONVOLUTION CALCULATION MODE
COPY	REPLACES PRIMARY TRACE DATA WITH A COPY OF THE SPECIFIED RECORD
CORINP	SELECTS CORRELATION MODE, AUTO OR CROSS CORRELATION
CORLEN	SELECTS EVALUATION LENGTH FOR CORRELATION
COROFF	SELECTS OFFSET FOR CORRELATION OUTPUT
CORR	PERFORMS CORRELATION; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
CORRM	SELECTS THE CALCULATION MODE OF THE CORRELATION FUNCTION
COUPL1	SELECTS CHANNEL 1 INPUT COUPLING
COUPL2	SELECTS INPUT COUPLING FOR CHANNEL 2
COUPLE	SELECTS INPUT COUPLING
CPKPK	SETS PEAK TO PEAK VALUE OF WAVEFORM FOR THERMAL TAIL COMPENSATION
CR:	PREFIX, LIMITS FUNCTION SOURCE DATA TO THAT WITHIN CURSOR LIMITS
CROSS	ENABLES/DISABLES/SELECTS CROSSHAIR MARKER
CRS	RETURNS TIME OF FIRST ZERO CROSSING AFTER TRIGGER (t = 0)
CURAVG	RETURNS NUMBER OF AVERAGES TAKEN BY THE PROC SUMMATION AVERAGE
CURSOR	ENABLES/DISABLES DISPLAY OF CURSOR
Clear—CPY	A PROCEDURE TO CLEAR THE AUTO-COPY COUNTER
DARM	FREEZES RECORDING AT END OF CURRENT RAW DATA RECORD
DATE	RETURNS CURRENT CALENDAR DATE
DCNTR	RETURNS THE NUMBER OF PASSES SAVED IN THE DISTRIBUTION RECORD

DDIR	PUSHES DISK DIR KEY — PERFORMS THE SAME FUNCTION AS DIR
DEL	DELETE SPECIFIED VARIABLE FROM SYSTEM MEMORY
DELAY	SETS OR FINDS THE PRE- OR POST-TRIGGER DELAY
DIFF	RETURNS THE DERIVATIVE OF THE SPECIFIED RECORD
DIR	PUSHES THE DIR KEY AND CALLS THE DIRECTORY MENU
DIRVOL	DEFINES THE CURRENT VOLUME FOR THE DIRECTORY DISPLAY OR LISTING
DISARM	DISARMS DATA 6100 TO STOP RECORDING, IMPROVES KEY RESPONSE
DISK	PUSHES THE 681 DISK KEY AND CALLS THE DISK MENU
DISP	PUSHES DISP KEY AND CALLS DISP MENU
DIV	DIVIDES ONE SPECIFIED RECORD BY ANOTHER
DLEN	RETURNS/SETS THE DISTRIBUTION LENGTH
DLY	RETURNS THE TIME FROM START-OR-RECORD TO THE FIRST 50% CROSSING
DPLOT	PLOTS ONLY THE DATA, DOES NOT PLOT AXIS
DRIVE	SELECTS CURRENT DRIVE FOR FORMAT AND BACKUP COMMANDS
DSKFMT	FORMATS DISK IN DEFAULT DRIVE
DSPAN	SELECTS THE AMPLITUDE SPAN FOR THE DISTRIBUTION FUNCTION
DSPL	DISPLAYS SPECIFIED VARIABLE OR FUNCTION ON TOP LINE OF DISPLAY
DSPM	SELECTS THE NUMBER AND MODE OF TRACES FOR DISPLAY
DSTD	PERFORMS DISTRIBUTION; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
DUMP	LISTS ALL CONTROLS PARAMETERS, THEIR SUBSCRIPTS AND THEIR VALUES
DUPLEX	SELECTS THE DUPLEX MODE FOR THE SPECIFIED PORT
DUTY	RETURNS THE DUTY CYCLE OF THE SIGNAL IN THE SPECIFIED RECORD
DXFER	PUSHES THE DISK DRIVE XFER KEY AND CALLS XFER MENU
Desc—data	PROCEDURE TO OBTAIN DATA DESCRIPTOR FOR NUMERIC ARRAY
END	RETURNS X CO-ORDINATE OF THE LAST POINT IN THE SPECIFIED RECORD
ENGY	RETURNS THE ENERGY OR Y ^ 2X FOR THE SPECIFIED RECORD
EOIOUT	ENABLES/DISABLES THE ASSERTION OF THE END-OR-IDENTIFY GPIB LINE
ERRM	ENABLES/DISABLES/SPECIFIES ERROR LOGGING MODE AND DEVICE
ERROR	RETURNS OLDEST ERROR CODE FOR THE 15 ELEMENT FIFO ERROR STACK
ERRSRQ	ENABLES/DISABLES THE ERROR SRQ
EXECON	SPECIFIES HOW AN INTERNAL PROGRAM WILL BE RUN

EXPAND	DISPLAYS INDIVIDUAL VARIABLE PARAMETERS IN SYSTEM DIRECTORY
EXPCLR	CLEARS THE PROC EXPONENTIAL AVERAGER
EXPD	PERFORMS EXPONENTIAL DECAY AVERAGE; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
EXPM	ENABLES/DISABLES EXPONENTIAL AVERAGING (PROC)
EXPWGT	SELECTS WEIGHT FOR EXPONENTIAL AVERAGING
EXT	PUSHES TMB-TRIG PAIR AND CALLS BNC OUT, CAL AND HOLDOFF MENUS
FALL	RETURNS THE FALL TIME (90%-10%) WITHIN CURSOR LIMITS
FASTIO	ENABLES DIRECT MEMORY ACCESS FOR DATA ARRAY TRANSFERS
FDEL	DELETES SPECIFIED DISK FILE
FFT	PERFORMS FFT; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
FFTINP	SELECTS THE TYPE OF INPUT FOR FFT OPERATION
FFTM	SELECTS FORWARD/INVERSE/NO FFT MODE FOR FFT CALCULATION
FFTOUT	SELECTS THE TYPE OF OUTPUT FOR FFT OPERATIONS
FFTWDW	SELECTS THE TYPE OF WINDOW USED IN THE FFT CALCUALTION
FIELD	SELECTS CURRENT FIELD FOR USER LABELS
FILTER	SELECTS LOW PASS FILTER IN OR OUT
FLDDLM	SELECTS THE FIELD DELIMITER FOR THE SPECIFIED PORT
FLDLEN	SELECTS THE LENGTH FOR DATA FIELDS
FLTR	PUSHES FLTR KEY AND CALLS FILTER MENU
FLTSEL	SELECTS 1 OF 26 INPUT FILTERS
FMTN	REFORMATS/CLEARS OUT NON-VOLATILE RAM
FORMAT	SELECTS DATA OUTPUT FORMAT FOR I/O OPERATIONS
FREE	RETURNS THE AMOUNT OF FREE MEMORY IN THE CURRENT STORAGE DEVICE
FREQ	RETURNS OR ASSIGNS MEASURED SIGNAL FREQUENCY FOR SPECIFIED RECORD
FRMEND	RETURNS THE TOTAL TIME RECORDED BY THE FRAME MEMORY
FRMLEN	RETURNS TOTAL FRAME LENGTH IN SECONDS PLUS OFFSET
FRMSTR	RETURNS FRAME START POINT FOR SPECIFIED FRAME
FTYPE	SELECTS OR RETURNS THE TYPE OF FILE TO BE SAVED BY THE OPERATOR
GETRIG	SELECTS ACTION PERFORMED BY GPIB GROUP-EXECUTE-TRIGGER
GOSUB	DIRECTS PROGRAM TO SUBROUTINE
GOTO	POINTS TO PROGRAM LINE NUMBER
GPIB	CALLS GPIB MENU
GRID	ENABLES/DISABLES DISPLAY OF GRID (GRATICULE) MARKER
HCYC	RETURNS THE TIME BETWEEN FIRST PAIR OF ZERO-CROSSINGS
HELP	PUSHES HELP KEY, ENTERS HELP MODE

HLDOFF	RETURNS OR SELECTS THE TRIGGER HOLDOFF TIME
HNDSHK	ENABLES/DISABLES CTS/DTR HANDSHAKING FOR RS-232
IFEQ	IF SCALAR VARIABLE EQUALS ZERO, POINTS TO SELECTED PROGRAM LINE NUMBER
IFGE	IF SCALAR VARIABLE IS GREATER THAN OR EQUAL TO ZERO, POINTS TO SELECTED PROGRAM LINE NUMBER
IFGT	IF SCALAR VARIABLE IS GREATER THAN THAN ZERO, POINTS TO SELECTED PROGRAM LINE NUMBER
IFLE	IF SCALAR VARIABLE IS LESS THAN OR EQUAL TO ZERO, POINTS TO SELECETED PROGRAM LINE NUMBER
IFLT	IF SCALAR VARIABLE IS LESS THAN ZERO, POINTS TO SELECTED PROGRAM LINE NUMBER
IFNE	IF SCALAR VARIABLE DOES NOT EQUAL ZERO, POINTS TO SELECTED PROGRAM LINE NUMBER
INP	PUSHES INPUT KEY AND DISPLAYS INPUT MENU ON SCREEN
INPCAL	PUSHES INP/CAL KEY PAIR AND CALLS THERMAL TAIL COMPENSATION MENU
INPCON	SELECTS 620 MODE OF OPERATION WITH D1000 PRE-AMP
INPIGN	FLAGS DATA 6100 TO IGNORE SPECIFIED CHARACTER(S)
INPMOD	SELECTS 1 OF 24 VARIOUS INPUT MODES
INPOFF	SPECIFIES HARDWARE OFFSET FOR USE WITH COMPANDING FEATURE
INPSEL	SELECTS THE CHANNEL FOR ENABLE/DISABLE IN BUFR OR PROC SELECTION
INPSET	SELECTS INPUT CHANNEL
INPUTM	SELECTS SINGLE-ENDED OR DIFFERENTIAL INPUT MODE
INT	PUSHES THE DISP-MARK PAIR AND CALLS INTENSITY AND TOP LINE MENU
INTEN	SELECTS OR DISABLES DISPLAY INTENSITY — CAN INCREASE THROUGHPUT
INTG	INTEGRATES THE SPECIFIED RECORD
IO	PUSHES OPT KEY AND CALLS I/O AND PLOTTER MENUS
KAVG	PERFORMS AVERAGE USING CURRENT TYPE AND PARAMETERS, CREATES RECORD
KCONV	PERFORMS CONVOLUTION USING CURRENT PARAMETERS, CREATES RECORD
KCORR	PERFORMS CORRELATION USING CURRENT PARAMETERS, CREATES RECORD
KDST	PERFORMS DISTRIBUTION USING CURRENT PARAMETERS, CREATES RECORD
KEY	ENTERS OR RETURNS A KEYPRESS CODE
KEYPAD	ENABLES/DISABLES THE FUNCTION KEYPAD
KEYSRQ	ENABLES/DISABLES SRQ GENERATION ON KEYPRESS
KFFT	PERFORMS FFT USING CURRENT PARAMETERS, CREATES RECORD
KUNIT	PERFORMS UNITS CONVERSION USING CURRENT PARAMETERS, CREATES RECORD
LABEL	PERMITS USER-DEFINED LABELS OF SOFT KEY FIELDS

LDIR	SENDS NAMES OF ALL VARIABLES IN DIRECTORY TO THE COMMAND DEVICE
LINDLM	SELECTS THE COMMAND TERMINATOR (AS SENT BY COMPUTER/CMDDEV)
LINE	CALLS LINE (COMMAND AND MESSAGE) FORMAT MENU FOR I/O OPERATIONS
LINEND	SELECTS CHARACTER(S) SENT BY 6100 AS MESSAGE TERMINATOR
LINLEN	SPECIFIES MAXIMUM LINE LENGTH FOR DATA 6100 MESSAGES
LIST	SENDS INTERNAL PROGRAM LISTING TO THE COMMAND DEVICE
LMAX	RETURNS AMPLITUDE OF FIRST PEAK (WHERE SLOPE CHANGES FROM + TO −)
LMIN	RETURNS AMPLITUDE OF FIRST NODE (WHERE SLOPE CHANGES FROM − TO +)
LOAD	RECALLS A D6100 INTERNAL PROGRAM FROM SYSTEM OR DISK
LOCAL	ENABLES CONTROL OF THE DATA 6100 AT THE FRONT PANEL
LOCK	ENABLES LOCK MODE TO PREPARE FOR LOCAL LOCKOUT, GPIB OR RS-232
LOGDEV	ENABLES/DIABLES/SELECTS DEVICE FOR EVENT FLAG AND ERROR LOGGING
LOGX	RETURNS LOG(10) OF SPECIFIED VARIABLE OR RECORD
MANDLY	SELECTS TIMEBASE DELAY IN INCREMENTS OF SAMPLE PERIOD
MARK	PUSHES MARK KEY AND CALLS MARK MENU
MARKER	SELECTS MARKER TYPE FOR MARK MENU MARKER FIELD
MAX	RETURNS THE MAXIMUM AMPLITUDE FOUND IN THE SPECIFIED RECORD
MAXDN	RETURNS OR SELECTS THE MAX ENVELOPE COUNTER MODE
MAXMIN	ENABLES/DISABLES THE MAX AND MIN PROC AVERAGE BUFFERS
MEAN	RETURNS ALGEBRAIC MEAN OF THE SPECIFIED RECORD
MIN	RETURNS THE MINIMUM AMPLITUDE FOUND IN THE SPECIFIED RECORD
MINDN	RETURNS OR SELECTS THE MIN ENVELOPE COUNTER MODE
MINLEN	SELECTS NUMBER OF COUNTS FOR ENVELOPE MODE COUNTER (IF ENABLED)
MSG	CALLS MESSAGE FORMAT MENU
MSGDLM	SELECTS ADDITIONAL DELIMITER CHARACTERS RECOGNIZED BY D6100
MSGEND	SELECTS ADDITIONAL DELIMITER CHARACTERS SENT BY D6100
MUL	RETURNS PRODUCT OF PRIMARY/SECONDARY TRACES OR SPECIFIED RECORDS
MXMCLR	CLEARS THE MAX AND MIN AVERAGE BUFFERS
MXMM	SELECTS MIN/MAX PROCESS (ENVELOPE MODE)
NAVG	SELECTS/RETURNS THE NUMBER OF AVERAGES FOR THE SUMMATION AVERAGE
NCHAN	SELECTS NUMBER OF CHANNELS
NCRS	RETURNS NUMBER OF ZERO-CROSSINGS IN THE SPECIFIED RECORD

NCYC	RETURNS NUMBER OF DUAL ZERO-CROSSINGS (CYCLES) IN THE SPECIFIED RECORD
NEW	ERASES CURRENT INTERNAL PROGRAM
NPTS	SELECTS THE NUMBER OF POINTS FOR A PARTICULAR TIMEBASE
NS:	NON-SCALED, DISABLES AUTO SCALING
NSWP	SELECTS NUMBER OF SWEEPS FOR THE MULTI-SWEEP CAPTURE MODE
NTMB	SELECTS ACTIVE TIMEBASES
NX:	LIMITS PROCESSING TO NEXT OCCURRENCE OF REFERENCED EVENT
OMODE	SELECTS FORMAT FOR DATA IN I/O OPERATIONS
OPT	PUSHES OPT KEY AND CALLS I/O AND PLOTTER MENUS
OUT0	SELECTS SIGNAL AVAILABLE AT OUTPUT BNC 'OUT0' ON REAR PANEL
OUT1	SELECTS SIGNAL AVAILABLE AT OUTPUT BNC 'OUT1' ON REAR PANEL
OUTSRQ	ENABLES/DISABLES THE SRQ WHEN TALK BUFFER (MESSAGE) IS READY
OVSH	RETURNS OVERSHOOT FOR SPECIFIED POSITIVE-GOING EDGE WITHIN RECORD
PADIR	SELECTS DIRECTION FOR ANNOTATION (PLABEL, PPRINT)
PAHIGH	SELECTS HEIGHT OF TEXT FOR ANNOTATION
PALINE	SELECTS LINE TYPE FOR LINE ANNOTATION
PANNC	CALLS PLOTTER ANNOTATION CONTROL MENU
PANNP	CALLS PLOTTER ANNOTATION MENU
PANNTS	SELECTS TYPE OF ANNOTATION FOR SPECIAL PLOTS
PAPEN	SELECTS PEN FOR PLOTTING ANNOTATION
PAREA	CALLS PLOT AREA MENU
PARITY	SELECTS PARITY MODE FOR SPECIFIED SERIAL PORT
PAWIDE	SELECTS WIDTH OF TEXT FOR ANNOTATION
PAXFRM	SELECTS AXIS FRAME ON OR OFF
PAXLBL	SELECTS AXIS LABELING ON OR OFF
PAXLIN	SELECTS PLOTTER AXIS LINE LINE TYPE
PAXLOC	SELECTS INTERSECT LOCATION OF THE AXES
PAXPEN	SELECTS PEN FOR PLOTTING AXIS
PAXTCK	SELECTS TICK MARK INTERVAL FOR AXIS LINES
PBADR	SELECTS PLOTTER GPIB ADDRESS (FOR 6100 CONTROLLER FUNCTION)
PBLBL	LOCATION FOR BASELINE LEVEL LABEL
PBLINE	SELECTS LINE TYPE FOR BASELINE
PBPEN	SELECTS PEN FOR PLOTTING BASELINE
PCEMRK	NOT IMPLEMENTED
PCHKD1	CHECKS THE REFERENCE POINT D1 ON PLOTTER
PCHKD2	CHECKS THE REFERENCE POINT D2 ON PLOTTER
PCLINE	SELECTS LINE TYPE FOR CURSOR
PCLK	ENABLES OR DISABLES PLOTTER TIME STAMP, FROM REAL TIME CLOCK

PCMARK	SELECTS DATA POINT MARKER FOR CURSOR
PCMD	CALLS PLOT COMMAND MENU
PCPEN	SELECTS PEN FOR PLOTTING CURSOR
PDATA	CALLS DATA POINT CONTROL MENU
PDLINE	SELECTS LINE TYPE FOR DATA
PDMARK	SELECTS DATA POINT MARKER FOR EXPANDED SCREEN PLOTS
PDPEN	SELECTS PEN FOR PLOTTING DATA
PDX	DIRECT PEN MOVE TO X CO-ORDINATE
PDY	DIRECT PEN MOVE TO Y CO-ORDINATE
PEND	ENDS PLOT SEQUENCE AND STORES PEN FOR PAPER REMOVAL
PER	RETURNS PERIOD OF THE FIRST CYCLE IN THE SPECIFIED RECORD
PERIOD	SELECTS OR FINDS THE SAMPLE PERIOD FOR THE SPECIFIED TIMEBASE
PERROR	RETURNS LAST PLOTTER ERROR REPORTED
PERSRC	SELECTS OR FINDS THE CLOCK SOURCE FOR A SPECIFIED TIMEBASE
PGMMOD	SELECTS THE EDITOR OR STEP/CONTROL MODE FOR INTERNAL PROGRAMMING
PGMST	RETURNS STATUS OF INTERNAL PROGRAM
PINTF	CALLS PLOTTER INTERFACE MENU
PKPK	RETURNS PEAK-TO-PEAK AMPLITUDE OF THE SPECIFIED RECORD
PLABEL	PERMITS DEFINITION OF STRINGS FOR PLOT ANNOTATION
PLEND	END LOCATION FOR FREE DRAW
PLHIGH	SELECTS HEIGHT OF AXIS UNITS LABEL
PLOT	PLOTS SCREEN IMMEDIATELY
PLOTM	SELECTS MODE OF PLOT FOR SCREEN, WATERFALL OR X VS Y
PLPEN	SELECTS PEN FOR PLOTTING AXIS LABELS
PLSTRT	DEFINE START POINT FOR FREE DRAW
PLSW	RETURNS WIDTH OF + TO − ZERO CROSSING IN SPECIFIED RECORD
PLWIDE	SELECTS WIDTH OF AXIS UNITS LABEL
PMARK	CALLS PLOT MARKER MENU
PMARKS	SELECTS PLOT MARKER IN MARKER FIELD
PMODE	CALLS PLOT MODE MENU
PMODEL	RETURNS MODEL NUMBER OF PLOTTER AT SELECTED INTERFACE
PORT	SELECTS OR FINDS THE CURRENT TARGET PORT FOR PARAMETER CHANGES
PPORT	SELECTS THE CURRENT PLOTTER PORT
PPRINT	CAUSES CURRENT PLABEL TO BE PRINTED
PRBSEL	ENABLES/DISABLES PROBE BUTTON FOR ARM/DISARM
PRESET	PLOTTER RESET COMMAND
PROBE	SELECTS PROBE ATTENUATION FACTOR FOR AMPLITUDE SCALING

PROC	PUSHES PROC KEY AND CALLS PROC MENU
PROG	PUSHES PROG KEY AND CALLS PROG EDITOR AND MENU
PROMPT	SELECTS PROMPT CHARACTER RETURNED BY THE DATA 6100
PROSEL	SELECTS TYPE OF PROCESSING FOR A SPECIFIED TIMEBASE AND CHANNEL
PSETD1	SETS LOWER-LEFT CORNER OF PLOT AREA
PSETD2	SETS UPPER-RIGHT CORNER OF PLOT AREA
PTITLE	PERMITS RE-DEFINITION OF THE DATA LABELS ON PLOT
PTRACE	SELECTS DATA FOR THE PRIMARY TRACE
PTSEL	DEFAULT TRACE SELECTION FOR PLOT OPERATION — READ ONLY
PWCURW	RETURNS THE CURRENT WAVE TO PLOT DURING A WATERFALL
PWNWAV	SELECTS NUMBER OF WAVES IN WATERFALL (Z-AXIS DENSITY)
PWXRAT	SELECTS X RATIO WITH RESPECT TO PLOT AREA FOR WATERFALL WAVES
PWYRAT	SELECTS Y RATIO WITH RESPECT TO PLOT AREA FOR WATERFALL WAVES
PX	RETURNS RATIO OF X USER-DEFINED PLOT AREA TO TOTAL AREA
PXLBL	PERMITS USER DEFINITION OF X-AXIS LABEL FOR SPECIFIED TRACE
PXNPTS	DEFINES NUMBER OF X POINTS TO PLOT IN WATERFALL MODE
PY	RETURNS RATIO OF Y USER-DEFINED PLOT AREA TO TOTAL AREA
PYLBL	PERMITS USER DEFINITION OF Y-AXIS LABEL FOR SPECIFIED TRACE
QBAYn	RETURNS IDENTITY OF PLUG-IN IN BAYn OF EXPANSION RACK
QTMB	RETURNS STATUS FOR THE SPECIFIED TIMEBASE
QTRG	RETURNS CURRENT TRIGGER STATUS
RANGE	SELECTS THE FULL-SCALE RANGE FOR THE SPECIFIED INPUT
RANGE1	SELECTS THE FULL-SCALE RANGE FOR CHANNEL 1
RANGE2	SELECTS THE FULL-SCALE RANGE FOR CHANNEL 2
RCP	RETURNS RECIPROCAL OF SPECIFIED VARIABLE OR RECORD
REC	ENABLES/DISABLES SPECIFIED BUFFER FOR USE BY SYSTEM
RECA	SELECTS CHANNEL ONE OR TWO FOR TIMEBASE A SAMPLE RATE
RECALL	RECALLS DATASETS AND/OR CONTROLS
RECB	SELECTS THE CHANNEL(S) RECORDED USING TIMEBASE B
RECMOD	SELECTS 1 OF 2 SUBMENUS UNDER TIMEBASE KEY
Record—Name	RETURNS NUMERICAL DATA OF EXISTING 6100 RECORD TO REMOTE
RECRNG	SELECTS RANGE OF SCREEN UPDATING IN UPDATING MODE
RECRTE	SELECTS INTERVAL OF SCREEN UPDATING, PER RECORD OR PER POINT
RECSEL	RETURNS BUFFER NAME IN "RECORD" FIELD FOR BUFR AND PROC MENUS

RECSTP	SELECTS STEP COUNT OF PER POINT SCREEN UPDATING
REMLOC	RETURNS THE STATUS OF REMOTE/LOCAL FRONT-PANEL MODE
REMOTE	DISABLES MOST KEYS ON THE DATA 6100 FRONT PANEL
RENUM	RENUMBERS INTERNAL PROGRAM IN STEPS OF 10 STARTING AT 10
RESET	INITIALIZES D6100 TO THE POWER-UP STATE — DATA AND PROGRAMS LOST
RESOLU	SELECTS DEGREE OF BIT RESOLUTION OF WAVEFORM
RET	RETURNS FROM SUBROUTINE TO MAIN PROGRAM
RISE	RETURNS THE RISETIME OF AN RISING EDGE IN THE SPECIFIED RECORD
RMS	RETURNS THE ROOT-MEAN-SQUARE VALUE OF THE SPECIFIED RECORD
RS232	CALLS RS-232 PARAMETERS MENU
RUN	RUNS CURRENT PROGRAM
RUNP	LOADS AND RUNS A SPECIFIED PROGRAM
Rcal—file	PROCEDURE TO RECALL DATA FROM DISK
SAVE	SAVES DATASETS OR CONTROLS TO SYSTEM OR DISK
SAVG	CALLS MATHPAD AVERAGING MENU
SB:	SETS THE BASELINE LEVEL TO THE RESULT OF A SCALAR FUNCTION
SBAYn	EXECUTES CHANGEOVER TO PLUG-IN IN BAYn OF EXPANSION RACK
SC:	SETS START POINT OF CURSOR TO RESULT OF SCALAR FUNCTION
SCLR	CALLS MATH FUNCTION CLEAR MENU
SCONV	CALLS CONVOLUTION MENU
SCORR	CALLS CORRELATION MENU
SDEV	RETURNS THE STANDARD DEVIATION OF THE SPECIFIED RECORD
SDST	CALLS DISTRIBUTION MENU
SE:	SETS END POINT OF CURSOR TO RESULT OF SCALAR FUNCTION
SERSEL	SELECTS OR FINDS THE CURRENT TARGET PORT FOR PARAMETER CHANGES
SFFT	CALLS FFT MENU
SQ	RETURNS SQUARE (X ^ 2) OF SPECIFIED VARIABLE OR RECORD
SQRT	RETURNS SQUARE ROOT (X ^ 0.5) OF SPECIFIED VARIABLE OR RECORD
SRC	IMMEDIATELY SENDS THE DATA FROM THE SPECIFIED TRACE
SRQ	RETURNS THE DECIMAL VALUE OF THE SRQ STATUS BYTE
SSRC	IMMEDIATELY SENDS THE DATA FROM THE SECONDARY TRACE
STL1	RETURNS 1% SETTLING TIME OF A PULSE IN THE SPECIFIED RECORD

STL2	RETURNS .1% SETTLING TIME OF A PULSE IN THE SPECIFIED RECORD
STOP	SETS INTERNAL PROGRAM STATUS TO STOPPED
STOPB	SELECTS THE NUMBER OF STOP BITS FOR THE SPECIFIED SERIAL PORT
STORE	STORES CURRENT PROGRAM TO SYSTEM OR DISK USING SPECIFIED NAME
STRACE	SELECTS DATA FOR THE SECONDARY TRACE
STRND	CALLS TREND MENU
STRT	RETURNS THE STARTING POINT OF THE SPECIFIED TRACE IN X UNITS
SUB	SUBTRACTS ONE SPECIFIED RECORD FROM ANOTHER
SUNIT	CALLS UNITS MENU
SX:	SETS A REFERENCED POINT IN THE PRIMARY TRACE TO CENTER SCREEN
SXFER	CALLS TRANSFER MENU
SYSFIL	SELECTS SYSTEM RECORD FOR USE WITH THE SXFER TRANSFER UTILITIES
Save—file	PROCEDURE TO SAVE A DATA FILE TO DISK
TEST	CALLS TEST ROUTINES FOR MAINTENANCE AND TROUBLESHOOTING
THYST	SETS AMOUNT OF HYSTERESIS IN THE TRIGGER LEVEL
TIME	RETURNS CURRENT TIME OF DAY IN 24 HOUR FORMAT
TLEVA	SETS LEVEL OF TRIGGER SOURCE A WHEN A,B TRIGGER TYPE IS USED
TLEVB	SETS LEVEL OF TRIGGER SOURCE B WHEN A,B TRIGGER TYPE IS USED
TLEVH	SETS TRIGGER LEVEL WHEN EDGE OR EDGE-HYST TRIGER TYPE IS USED
TMB	PUSHES TIMEBASE KEY AND CALLS TIMEBASE MENU
TMBSEL	SELECTS SPECIFIED TIMEBASE AS THE TARGET FOR ANY NEW PARAMETER
TMOD	SELECTS TRIGGER MODE
TOPLIN	SELECTS THE TYPE OF ANNOTATION AVAILABLE AT THE TOP LINE
TR:	DELIMITS OPERATIONS TO THOSE POINTS VISIBLE WITHIN SCREEN EDGES
TRACE	SELECTS CURRENT PRIMARY (ORDER ONLY, NOT POSITION) TRACE FOR MATH
TRCSRC	SELECTS RECORD OR SCALAR FOR DISPLAY IN TRACES 1-4
TRG	TRIGGERS AQUISITION
TRGCPL	PERMITS OR FINDS THE TRIGGER COUPLING FOR THE SPECIFIED SOURCE
TRGLEV	SELECTS OR RETURNS TRIGGER LEVEL
TRGM	SELECTS OR RETURNS TRIGGER MODE (AUTO OR NORMAL)
TRGMOD	SELECTS ARM/RUN MODE FOR THE 630 PLUG-IN
TRGSEL	SELECTS MAIN OR ARM TRIGGER
TRGSLP	RETURNS OR SELECTS TRIGGER SLOPE

TRGSRC	SELECTS OR RETURNS TRIGGER SOURCE FOR SPECIFIED TRIGGER
TRGTYP	SELECTS TYPE OF TRIGGER
TRGUPR	SETS TRIGGER UPPER BOUNDARY FOR IN-BNDS OR OUT-BNDS TRIGGER TYPES
TRIG	PUSHES TRIG KEY AND CALLS TRIGGER MENU
TRLEN	SELECTS THE LENGTH OF A TREND RECORD
TRLOW	SETS TRIGGER LOWER BOUNDARY FOR IN-BNDS OR OUT-BNDS TRIGGER TYPES
TRNDM	SELECTS MODE FOR THE TREND RECORD — FIFO OR STOP
TSLPB	SELECTS TRIGGER SLOPE B FOR A,B TRIGGER TYPES
TSLPH	SELECTS TRIGGER SLOPE FOR EDGE-HYST TRIGGER TYPE
TSRCA	SELECTS TRIGGER SOURCE A FOR A,B TRIGGER TYPES
TSRCB	SELECTS TRIGGER SOURCE B FOR A,B TRIGGER TYPES
TSRCH	SELECTS TRIGGER SOURCE FOR EDGE-HYST, IN-BNDS, OUT-BNDS TYPES
Trans—data	PROCEDURE TO TRANSFER ASCII DATA TO OR FROM THE DATA 6100
UAXIS	SELECTS X OR Y AXIS FOR MODIFICATION BY UNITS FUNCTION
UKEY	ENABLES USER KEY LABELS IF UKEY MODE IS ON, PUSHES OPT/HELP PAIR
UKEYM	ENABLES THE USER KEY MODE
UKFLD	SELECTS THE CURRENT FIELD FOR THE USER-KEY LABEL COMMAND
UKROW	SELECTS THE CURRENT ROW FOR THE USER-KEY LABEL COMMAND
UNLOCK	DISABLES LOCK MODE (IF ENABLED) TO ALLOW FRONT PANEL ACCESS
USHIFT	PERMITS UPPER CASE / LOWER CASE COMMAND ENTRY
UX:	UNSCALES THE HORIZONTAL AXIS DURING A COPY OPERATION
UXOFF	SELECTS THE AMOUNT OF X OFFSET FOR X UNITS CONVERSION
UXSCL	SELECTS THE X SCALING FOR X UNITS CONVERSION
UY:	UNSCALES THE VERTICAL AXIS DURING A COPY OPERATION
UYFSR	SELECTS THE Y FULL SCALE RANGE FOR Y UNITS CONVERSION
UYMLT	SELECTS THE Y MULTIPLIER FOR Y UNITS CONVERSION
UYOFF	SELECTS THE Y OFFSET FOR Y UNITS CONVERSION
VMAX	PERFORMS MAXIMUM AVERAGE; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
VMIN	PERFORMS MINIMUM AVERAGE; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
WAIT	HOLDS COMMAND EXECUTION UNTIL ANY ENABLED SRQ
WAITAQ	SUSPENDS PROGRAM EXECUTION UNTIL ACQUISITION IS COMPLETE
WEXP	SELECTS EXPONENTIAL WEIGHT FOR EXPONENTIAL AVERAGING
X	PUSHES X KEY AND CALLS X MENU
XCROSS	RETURNS CROSSHAIR HORIZONTAL INTERSECTION VALUE

XDELTA	SETS OR RETURNS THE CURSOR WIDTH IN HORIZONTAL UNITS
XDIV	RETURNS HORIZONTAL GRID UNITS PER DIVISION
XEND	SETS OR RETURNS ABSOLUTE TIME VALUE OF END OF CURSOR
XFDIR	SETS TRANSFER DIRECTION FOR THE FILE TRANSFER UTILITIES
XFERN	RETURNS THE NUMBER OF COPIES TO BE AUTO-COPIED
XFILL	SELECTS/DISABLES THE TYPE OF INTERPOLATION BETWEEN SAMPLE POINTS
XFVOL	SELECTS THE VOLUME FOR THE TRANSFER UTILITIES
XLMAX	RETURNS X VALUE AT WHICH THE SLOPE CHANGES FROM + TO − (PEAKS)
XLMIN	RETURNS X VALUE AT WHICH THE SLOPE CHANGES FROM − TO + (NODES)
XMODE	RETURNS THE MODE FOR AUTO-COPY
XMSLP	RETURNS X VALUE OF POINT AT WHICH SLOPE IS MAX ABSOLUTE VALUE
XOFF	SETS OR RETURNS HORIZONTAL DISPLAY OFFSET IN X UNITS
XSCL	SETS OR RETURNS THE X EXPANSION FACTOR FOR THE SPECIFIED TRACE
XSTART	SETS OR RETURNS CURSOR START POSITION
XUNIT	SELECTS OR RETURNS CURRENT X UNIT FOR UNITS CONVERSION
XY	PUSHES X-Y PAIR AND PERMITS BOTH X AND Y POSITION AND SCALING
Y	PUSHES Y KEY AND CALLS Y SCALE AND OFFSET MENU
YCROSS	RETURNS Y VALUE OF CROSSHAIR INTERSECT POINT
YDELTA	RETURNS THE CURSOR DELTA AMPLITUDE IN VERTICAL UNITS
YDIV	RETURNS VERICAL UNITS PER GRID DIVISION
YEND	RETURNS Y ABSOLUTE AMPLITUDE AT END OF CURSOR
YOFF	SETS OR RETURNS Y DISPLAY OFFSET (POSITION)
YSCL	SETS OR RETURNS THE Y EXPANSION FACTOR FOR THE SPECIFIED TRACE
YSTART	RETURNS ABSOLUTE AMPLITUDE OF CURSOR START POINT
YTRACK	ENABLES/DISABLES AUTO-TRACKING FOR OPERATOR MANUAL MEASUREMENT
YUNIT	SELECTS OR RETURNS CURRENT Y UNIT FOR UNITS CONVERSION
ZCENTR	SELECTS CENTER VALUE FOR ZOOM TRANSFORMATION
ZFFT	PERFORMS ZOOM TRANSFORMATION; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
ZWDTH	SELECTS WIDTH VALUE FOR ZOOM TRANSFORMATION FUNCTIONAL LISTING

7B

FUNCTIONAL LISTING

CATEGORY: BUFFER PARAMETER

REC	ENABLES/DISABLES SPECIFIED RECORD (BUFFER) FOR USE BY SYSTEM

CATEGORY: BUFFER SELECTOR

ADCMOD	SELECTS A/D MODE — LINEAR OR COMPANDED
BAY	RETURNS NUMBER OF ACTIVE PLUG-IN BAY IN EXPANSION RACK
BAYn	PUSHES BAYn KEY ON EXPANSION RACK
BSWEP	SELECTS THE SWEEP NUMBER TO TRANSFER TO SYSTEM FOR ANALYSIS
BTYP	SELECTS TYPE OF BUFFER TRANSFER TO SYSTEM
CONFIG	SELECTS TIMEBASE/CHANNEL CONFIGURATION
NCHAN	SELECTS NUMBER OF CHANNELS
QBAYn	RETURNS IDENTITY OF PLUG-IN IN BAYn OF EXPANSION RACK
SBAYn	EXECUTES CHANGEOVER TO PLUG-IN IN BAYn OF EXPANSION RACK

CATEGORY: CALIBRATION

AMPOFF	PERFORMS AMPLITUDE/OFFSET CALIBRATION
CAL	PUSHES INP-FLTR KEY PAIR AND CALLS CALIBRATION MENU (630)
CAL	PUSHES CAL KEY AND CALLS CALIBRATION MENU (640)
CALAMP	RETURNS VALUE OF AMPLITUDE CALIBRATION
CALFRE	SELECTS FREQUENCY OF TIME CALIBRATOR OUTPUT
CALLEV	SELECTS AMPLITUDE OF TIME CALIBRATOR OUTPUT
CALOFF	RETURNS VALUE OF OFFSET CALIBRATION
CALOFX	PERFORMS OFFSET CALIBRATION

CATEGORY: CONDITIONAL POINTERS

AVDONE	IF AVERAGING COMPLETED, POINTS TO PROGRAM LINE NUMBER
IFEQ	IF SCALAR EQUALS ZERO, POINTS TO PROGRAM LINE NUMBER
IFGE	IF SCALAR GREATER THAN OR EQUAL TO ZERO, POINTS TO PROGRAM LINE NUMBER
IFGT	IF SCALAR GREATER THAN ZERO, POINTS TO PROGRAM LINE NUMBER
IFLE	IF SCALAR LESS THAN OR EQUAL TO ZERO, POINTS TO PROGRAM LINE NUMBER
IFLT	IF SCALAR LESS THAN ZERO, POINTS TO PROGRAM LINE NUMBER
IFNE	IF SCALAR NOT EQUAL TO ZERO, POINTS TO PROGRAM LINE NUMBER

CATEGORY: COORDINATE VALUE

END	RETURNS X CO-ORDINATE OF THE LAST POINT IN THE SPECIFIED RECORD

CATEGORY: CONTROLS

DUMP	LISTS ALL CONTROLS PARAMETERS, THEIR SUBSCRIPTS AND THEIR VALUES
RESET	INITIALIZES D6100 TO THE POWER-UP STATE — DATA AND PROGRAMS LOST

CATEGORY: CURSOR PARAMETER

SC:	SETS START POINT OF CURSOR TO RESULT OF SCALAR FUNCTION
SE:	SETS END POINT OF CURSOR TO RESULT OF SCALAR FUNCTION

CATEGORY: DIAGNOSTIC

TEST	CALLS TEST ROUTINES FOR MAINTENANCE AND TROUBLESHOOTING

CATEGORY: DIGITIZER CONTROL

ARM	ENABLES THE DIGITIZER TO RECOGNIZE TRIGGER EVENT(S)
DISARM	DISARMS THE DATA 6100 TO STOP RECORDING, IMPROVES KEY RESPONSE, SAME AS "DARM"

CATEGORY: DIRECTORY

CFREE	RETURNS AMOUNT OF CONTIGUOUS FREE MEMORY
DDIR	PUSHES DISK DIR KEY — PERFORMS THE SAME FUNCTION AS DIR
DEL	DELETE SPECIFIED VARIABLE FROM SYSTEM MEMORY
Desc—data	PROCEDURE TO OBTAIN DATA DESCRIPTOR FOR NUMERIC ARRAY
DIRVOL	DEFINES THE CURRENT VOLUME FOR THE DIRECTORY DISPLAY OR LISTING
EXPAND	DISPLAYS INDIVIDUAL VARIABLE PARAMETERS IN SYSTEM DIRECTORY
FREE	RETURNS THE AMOUNT OF FREE MEMORY IN THE CURRENT STORAGE DEVICE
LDIR	SENDS NAMES OF ALL VARIABLES IN DIRECTORY TO THE COMMAND DEVICE

CATEGORY: DISK DRIVE

BACKUP	COPIES A:*.* TO B:

CATEGORY: DISK OPERATIONS

DRIVE	SELECTS CURRENT DRIVE FOR FORMAT AND BACKUP COMMANDS
DSKFMT	FORMATS DISK IN DEFAULT DRIVE
DXFER	PUSHES THE DISK DRIVE XFER KEY AND CALLS XFER MENU
FDEL	DELETES SPECIFIED DISK FILE
Rcal—file	PROCEDURE TO RECALL DATA FROM DISK
Save—file	PROCEDURE TO SAVE A DATA FILE TO DISK

CATEGORY: DISPLAY PARAMETER

CLR	CLEARS THE TOP LINE ANNOTATION
DSPM	SELECTS THE NUMBER AND MODE OF TRACES FOR DISPLAY
FIELD	SELECTS CURRENT FIELD FOR USER LABELS
INTEN	SELECTS OR DISABLES DISPLAY INTENSITY — CAN INCREASE THROUGHPUT
LABEL	PERMITS USER-DEFINED LABELS OF SOFT KEY FIELDS
PTRACE	SELECTS DATA FOR THE PRIMARY TRACE
STRACE	SELECTS DATA FOR THE SECONDARY TRACE
STRT	RETURNS THE STARTING POINT OF THE SPECIFIED TRACE IN X UNITS
SX:	SETS A REFERENCED POINT IN THE PRIMARY TRACE TO CENTER SCREEN
TOPLIN	SELECTS THE TYPE OF ANNOTATION AVAILABLE AT THE TOP LINE
TRACE	SELECTS CURRENT PRIMARY (ORDER ONLY, NOT POSITION) TRACE FOR MATH
TRCSRC	SELECTS RECORD OR SCALAR FOR DISPLAY IN TRACES 1-4
UKEY	ENABLES USER KEY LABELS IF UKEY MODE IS ON — PUSHES OPT/HELP PAIR
UKEYM	ENABLES THE USER KEY MODE
UKFLD	SELECTS THE CURRENT FIELD FOR THE USER-KEY LABEL COMMAND
UKROW	SELECTS THE CURRENT ROW FOR THE USER-KEY LABEL COMMAND
XFILL	SELECTS/DISABLES THE TYPE OF INTERPOLATION BETWEEN SAMPLE POINTS
XOFF	SETS OR RETURNS HORIZONTAL DISPLAY OFFSET IN X UNITS
XSCL	SETS OR RETURNS THE X EXPANSION FACTOR FOR THE SPECIFIED TRACE
YOFF	SETS OR RETURNS Y DISPLAY OFFSET (POSITION)
YSCL	SETS OR RETURNS THE Y EXPANSION FACTOR FOR THE SPECIFIED TRACE
YTRACK	ENABLES/DISABLES AUTO-TRACKING FOR OPERATOR MANUAL MEASUREMENT

CATEGORY: FILE OPERATIONS

FTYPE	SELECTS OR RETURNS THE TYPE OF FILE TO BE SAVED BY THE OPERATOR
LOAD	RECALLS A D6100 INTERNAL PROGRAM FROM SYSTEM OR DISK
RECALL	RECALLS DATASETS AND/OR CONTROLS
Record—Name	RETURNS NUMERICAL DATA OF EXISTING 6100 RECORD TO REMOTE
SAVE	SAVES DATASETS OR CONTROLS TO SYSTEM OR DISK
STORE	STORES CURRENT PROGRAM TO SYSTEM OR DISK USING SPECIFIED NAME
SXFER	CALLS TRANSFER MENU
SYSFIL	SELECTS SYSTEM RECORD FOR USE WITH THE SXFER TRANSFER UTILITIES
XFDIR	SETS TRANSFER DIRECTION FOR THE FILE TRANSFER UTILITIES
XFERN	RETURNS THE NUMBER OF COPIES TO BE AUTO-COPIED
XFVOL	SELECTS THE VOLUME FOR THE TRANSFER UTILITIES
XMODE	RETURNS THE MODE FOR AUTO-COPY

CATEGORY: FUNCTION CONTROL

CLRSUM	CLEARS AVERAGE BUFFER PRIOR TO A NEW ENSEMBLE AVERAGE (not PROC)

CATEGORY: FUNCTION PROCEDURE

Clear—CPY	A PROCEDURE TO CLEAR THE AUTO-COPY COUNTER

CATEGORY: GPIB PARAMETER

AQUSRQ	ENABLES/DISABLES THE ON-ACQUISITION-COMPLETE SERVICE REQUEST
BUSADR	SELECTS GPIB ADDRESS
CLRSRQ	CLEARS THE SERVICE REQUEST LINE ON THE GPIB INTERFACE
EOIOUT	ENABLES/DISABLES THE ASSERTION OF THE END-OR-IDENTIFY GPIB LINE
ERRSRQ	ENABLES/DISABLES THE ERROR SRQ
GETRIG	SELECTS ACTION PERFORMED BY GPIB GROUP-EXECUTE-TRIGGER
GPIB	CALLS GPIB MENU
KEYSRQ	ENABLES/DISABLES SRQ GENERATION ON KEYPRESS
OUTSRQ	ENABLES/DISABLES THE SRQ WHEN TALK BUFFER (MESSAGE) IS READY

CATEGORY: HELP

HELP	ENTERS HELP MODE

CATEGORY: I/O PARAMETER

CLRAQU	CLEARS THE ACQISITION-COMPLETE STATUS BIT IN THE STATUS BYTE
CLRERR	CLEARS THE ERROR SRQ AND ERROR QUEUE
CLRKEY	CLEARS THE KEYCODE BUFFER AND RESETS THE KEY STATUS BIT
CMDDEV	SELECTS THE CURRENT COMMAND DEVICE
ERRM	ENABLES/DISABLES/SPECIFIES ERROR LOGGING MODE AND DEVICE
ERROR	RETURNS OLDEST ERROR CODE FOR THE 15 ELEMENT FIFO ERROR STACK
FASTIO	ENABLES DIRECT MEMORY ACCESS FOR DATA ARRAY TRANSFERS
FLDDLM	SELECTS THE FIELD DELIMITER FOR THE SPECIFIED PORT
FLDLEN	SELECTS THE LENGTH FOR DATA FIELDS
FORMAT	SELECTS DATA OUTPUT FORMAT FOR I/O OPERATIONS
INPIGN	FLAGS DATA 6100 TO IGNORE SPECIFIED CHARACTER(S)
LINDLM	SELECTS THE COMMAND TERMINATOR (AS SENT BY COMPUTER/CMDDEV)
LINE	CALLS LINE (COMMAND AND MESSAGE) FORMAT MENU FOR I/O OPERATIONS
LINEND	SELECTS CHARACTER(S) SENT BY 6100 AS MESSAGE TERMINATOR
LINLEN	SPECIFIES MAXIMUM LINE LENGTH FOR DATA 6100 MESSAGES
LOCAL	ENABLES CONTROL OF THE DATA 6100 AT THE FRONT PANEL
LOCK	ENABLES LOCK MODE TO PREPARE FOR LOCAL LOCKOUT, GPIB OR RS-232
LOGDEV	ENABLES/DIABLES/SELECTS DEVICE FOR EVENT FLAG AND ERROR LOGGING
MSG	CALLS MESSAGE FORMAT MENU
MSGDLM	SELECTS ADDITIOANL DELIMITER CHARACTERS RECOGNIZED BY D6100
MSGEND	SELECTS ADDITIONAL DELIMITER CHARACTERS SENT BY D6100
OMODE	SELECTS FORMAT FOR DATA IN I/O OPERATIONS
PORT	SELECTS OR FINDS THE CURRENT TARGET PORT FOR PARAMETER CHANGES
PROMPT	SELECTS PROMPT CHARACTER RETURNED BY THE DATA 6100
REMLOC	RETURNS THE STATUS OF REMOTE/LOCAL FRONT-PANEL MODE
REMOTE	DENIES FULL ACCESS TO THE DATA 6100 VIA FRONT PANEL
SRC	IMMEDIATELY SENDS THE DATA FROM THE SPECIFIED TRACE
SRQ	RETURNS THE DECIMAL VALUE OF THE SRQ STATUS BYTE
SSRC	IMMEDIATELY SENDS THE DATA FROM THE SECONDARY TRACE
UNLOCK	DISABLES LOCK MODE (IF ENABLED) TO ALLOW FRONT PANEL ACCESS
USHIFT	PERMITS UPPER CASE / LOWER CASE COMMAND ENTRY
WAIT	HOLDS COMMAND EXECUTION UNTIL ANY ENABLED SRQ

CATEGORY: INPUT PARAMETER

BUFCAL	SELECTS TYPE OF CALIBRATION TO BE PERFORMED
CALCYC	SELECTS CALIBRATION CYCLE
CALINP	SELECTS INPUT MODE FOR CALIBRATION SIGNAL
CALM	ENABLES/DISABLES CALIBRATION
CALOUT	SELECTS CALIBRATION SIGNAL AT CAL OUTPUT
CALTYP	SELECTS THE TYPE OF CALIBRATION SIGNAL FOR CAL OUTPUT
CMAX	SETS MAXIMUM VALUE OF WAVEFORM FOR THERMAL TAIL COMPENSATION
CMODE	SELECTS MODE OF THERMAL TAIL COMPENSATION
COUPL1	SELECTS CHANNEL 1 INPUT COUPLING
COUPL2	SELECTS INPUT COUPLING FOR CHANNEL 2
COUPLE	SELECTS INPUT COUPLING
CPKPK	SETS PEAK TO PEAK VALUE OF WAVEFORM FOR THERMAL TAIL COMPENSATION
DARM	DISARMS DATA 6100 TO STOP RECORDING, IMPROVES KEY RESPONSE, SAME AS "DISARM"
FILTER	SELECTS LOW PASS FILTER IN OR OUT
INPCAL	PUSHES INP/CAL KEY PAIR AND CALLS THERMAL TAIL COMPENSATION MENU
INPCON	SELECTS 620 MODE OF OPERATION WITH D1000 PRE-AMP
INPOFF	SPECIFIES HARDWARE OFFSET FOR USE WITH COMPANDING FEATURE
INPUTM	SELECTS SINGLE-ENDED OR DIFFERENTIAL INPUT MODE
PROBE	SELECTS PROBE ATTENUATION FACTOR FOR AMPLITUDE SCALING
RANGE	SELECTS THE FULL-SCALE RANGE FOR THE SPECIFIED INPUT
RANGE1	SELECTS THE FULL-SCALE RANGE FOR CHANNEL 1
RANGE2	SELECTS THE FULL-SCALE RANGE FOR CHANNEL 2
RECSEL	RETURNS BUFFER NAME IN "RECORD" FIELD FOR BUFR AND PROC MENUS

CATEGORY: INTERNAL PROGRAM

RUN	RUNS CURRENT PROGRAM

CATEGORY: KEYBOARD

KEY	ENTERS OR RETURNS A KEYPRESS CODE
KEYPAD	ENABLES/DISABLES THE FUNCTION KEYPAD

CATEGORY: KEYSTROKE PROGRAM

EXECON	SPECIFIES HOW AN INTERNAL PROGRAM WILL BE RUN
LIST	SENDS INTERNAL PROGRAM LISTING TO THE COMMAND DEVICE
NEW	ERASES CURRENT INTERNAL PROGRAM
PGMMOD	SELECTS THE EDITOR OR STEP/CONTROL MODE FOR INTERNAL PROGRAMMING
PGMST	RETURNS STATUS OF INTERNAL PROGRAM
RENUM	RENUMBERS INTERNAL PROGRAM IN STEPS OF 10 STARTING AT 10
RUNP	LOADS AND RUNS A SPECIFIED PROGRAM
STOP	SETS INTERNAL PROGRAM STATUS TO STOPPED

CATEGORY: MARKER PARAMETER

BLEVEL	SETS THE LEVEL OF THE BASELINE FUNCTION MODIFIER
BLINE	ENABLES/DISABLES THE BASELINE DISPLAY
CROSS	ENABLES/DISABLES/SELECTS CROSSHAIR MARKER
CURSOR	ENABLES/DISABLES DISPLAY OF CURSOR
GRID	ENABLES/DISABLES DISPLAY OF GRID (GRATICULE) MARKER
MARKER	SELECTS MARKER TYPE FOR MARK MENU MARKER FIELD
XCROSS	RETURNS CROSSHAIR HORIZONTAL INTERSECTION VALUE
XDELTA	SETS OR RETURNS THE CURSOR WIDTH IN HORIZONTAL UNITS
XDIV	RETURNS HORIZONTAL GRID UNITS PER DIVISION
XEND	SETS OR RETURNS ABSOLUTE TIME VALUE OF END OF CURSOR
XSTART	SETS OR RETURNS CURSOR START POSITION
YCROSS	RETURNS Y VALUE OF CROSSHAIR INTERSECT POINT
YDELTA	RETURNS THE CURSOR DELTA AMPLITUDE IN VERTICAL UNITS
YDIV	RETURNS VERICAL UNITS PER GRID DIVISION
YEND	RETURNS Y ABSOLUTE AMPLITUDE AT END OF CURSOR
YSTART	RETURNS ABSOLUTE AMPLITUDE OF CURSOR START POINT

CATEGORY: MATHEMATICS

ADD	ADDS SCALAR/VECTOR VARIABLES AND SENDS RESULT TO VARIABLE OR PORT
AREA	RETURNS AREA OF SPECIFIED RECORD
AVEGDN	SELECTS AVERAGE-DONE MODE FOR THE MATHPAD AVERAGER
AVEGM	SELECTS MATHPAD AVERAGE UPDATE MODE
AVG	PERFORMS SUMMATION AVERAGE; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
AVGTYP	SELECTS THE TYPE OF AVERAGING FOR THE MATHPAD AVERAGE FUNCTION
CLRALL	CLEARS ALL MATHPAD PROCESSING BUFFERS
CLRDST	CLEARS THE DISTRIBUTION BUFFER
CLRTRN	CLEARS ALL TREND RECORDS
CNVINP	SELECTS STANDARD/USER-DEFINED KERNEL FOR THE CONVOLUTION FUNCTION
CNVNPT	SELECTS THE LENGTH OF THE STANDARD CONVOLUTION KERNELS
CNVOFF	SELECTS THE NUMBER OF POINTS FOR USER-CONVOLUTION OUTPUT OFFSET
CNVWDW	SELECTS THE SHAPE OF THE SMOOTHING FUNCTION FOR CONVOLUTION
CONV	PERFORMS CONVOLUTION; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
CONVM	SELECTS THE CONVOLUTION CALCULATION MODE
COPY	REPLACES PRIMARY TRACE DATA WITH A COPY OF THE SPECIFIED RECORD
CORINP	SELECTS CORRELATION MODE, AUTO OR CROSS CORRELATION
CORLEN	SELECTS EVALUATION LENGTH FOR CORRELATION
COROFF	SELECTS OFFSET FOR CORRELATION OUTPUT
CORR	PERFORMS CORRELATION; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
CORRM	SELECTS THE CALCULATION MODE OF THE CORRELATION FUNCTION
DCNTR	RETURNS THE NUMBER OF PASSES SAVED IN THE DISTRIBUTION RECORD
DIFF	RETURNS THE DERIVATIVE OF THE SPECIFIED RECORD
DIV	DIVIDES ONE SPECIFIED RECORD FROM ANOTHER
DLEN	RETURNS/SETS THE DISTRIBUTION LENGTH
DSPAN	SELECTS THE AMPLITUDE SPAN FOR THE DISTRIBUTION FUNCTION
DSPL	DISPLAYS SPECIFIED VARIABLE OR FUNCTION ON TOP LINE OF DISPLAY
DSTD	PERFORMS DISTRIBUTION; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
EXPD	PERFORMS EXPONENTIAL DECAY AVERAGE; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE

FFT	PERFORMS FFT; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
FFTINP	SELECTS THE TYPE OF INPUT FOR FFT OPERATION
FFTM	SELECTS FORWARD/INVERSE/NO FFT MODE FOR FFT CALCULATION
FFTOUT	SELECTS THE TYPE OF OUTPUT FOR FFT OPERATIONS
FFTWDW	SELECTS THE TYPE OF WINDOW USED IN THE FFT CALCUALTION
INTG	INTEGRATES THE SPECIFIED RECORD
KAVG	PERFORMS AVERAGE USING CURRENT TYPE AND PARAMETERS, CREATES RECORD
KCONV	PERFORMS CONVOLUTION USING CURRENT PARAMETERS, CREATES RECORD
KCORR	PERFORMS CORRELATION USING CURRENT PARAMETERS, CREATES RECORD
KDST	PERFORMS DISTRIBUTION USING CURRENT PARAMETERS, CREATES RECORD
KFFT	PERFORMS FFT USING CURRENT PARAMETERS, CREATES RECORD
KUNIT	PERFORMS UNITS CONVERSION USING CURRENT PARAMETERS, CREATES RECORD
LOGX	RETURNS LOG(10) CF SPECIFIED VARIABLE OR RECORD
MAXDN	RETURNS OR SELECTS THE MAX ENVELOPE COUNTER MODE
MAXLEN	SELECTS NUMBER OF COUNTS FOR ENVELOPE MODE COUNTER (IF ENABLED)
MINDN	RETURNS OR SELECTS THE MIN ENVELOPE COUNTER MODE
MINLEN	SELECTS NUMBER OF COUNTS FOR ENVELOPE MODE COUNTER (IF ENABLED)
MUL	RETURNS PRODUCT OF PRIMARY/SECONDARY TRACES OR SPECIFIED RECORDS
NAVG	SELECTS/RETURNS THE NUMBER OF AVERAGES FOR THE SUMMATION AVERAGE
NCRS	RETURNS NUMBER OF ZERO-CROSSINGS IN THE SPECIFIED RECORD
NCYC	RETURNS NUMBER OF DUAL ZERO-CROSSINGS (CYCLES) IN THE SPECIFIED RECORD
RCP	RETURNS RECIPROCAL OF SPECIFIED VARIABLE OR RECORD
SAVG	CALLS AVERAGING MENU
SCLR	CALLS MATH FUNCTION CLEAR MENU
SCONV	CALLS CONVOLUTION MENU
SCORR	CALLS CORRELATION MENU
SDST	CALLS DISTRIBUTION MENU
SFFT	CALLS FFT MENU
SQ	RETURNS SQUARE (X ^ 2) OF SPECIFIED VARIABLE OR RECORD
SQRT	RETURNS SQUARE ROOT (X ^ 0.5) OF SPECIFIED VARIABLE OR RECORD
STRND	CALLS TREND MENU
SUB	SUBTRACTS TWO SPECIFIED RECORDS

SUNIT	CALLS UNITS MENU
TRLEN	SELECTS THE LENGTH OF A TREND RECORD
TRNDM	SELECTS MODE FOR THE TREND RECORD — FIFO OR STOP
UAXIS	SELECTS X OR Y AXIS FOR MODIFICATION BY UNITS FUNCTION
UXOFF	SELECTS THE AMOUNT OF X OFFSET FOR X UNITS CONVERSION
UXSCL	SELECTS THE X SCALING FOR X UNITS CONVERSION
UYFSR	SELECTS THE Y FULL SCALE RANGE FOR Y UNITS CONVERSION
UYMLT	SELECTS THE Y MULTIPLIER FOR Y UNITS CONVERSION
UYOFF	SELECTS THE Y OFFSET FOR Y UNITS CONVERSION
VMAX	PERFORMS MAXIMUM AVERAGE; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
VMIN	PERFORMS MINIMUM AVERAGE; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
WEXP	SELECTS EXPONENTIAL WEIGHT FOR EXPONENTIAL AVERAGING
XUNIT	SELECTS OR RETURNS CURRENT X UNIT FOR UNITS CONVERSION
YUNIT	SELECTS OR RETURNS CURRENT Y UNIT FOR UNITS CONVERSION
ZCENTR	SELECTS CENTER VALUE FOR ZOOM TRANSFORMATION
ZFFT	PERFORMS ZOOM TRANSFORMATION; CREATES RECORD IF SENT IN EQUATION, RETURNS DATA TO REMOTE ONLY IF SENT ALONE
ZWDTH	SELECTS WIDTH VALUE FOR ZOOM TRANSFORMATION

CATEGORY: MODIFIER

BL:	CAUSES FUNCTION TO OPERATED WITH RESPECT TO BASELINE LEVEL AS ZERO
CR:	PREFIX, LIMITS FUNCTION SOURCE DATA TO THAT WITHIN CURSOR LIMITS
NS:	NON-SCALED, DISABLES AUTO SCALING
NX:	LIMITS PROCESSING TO NEXT OCCURRENCE OF REFERENCED EVENT
SB:	SETS THE BASELINE LEVEL TO THE RESULT OF A SCALAR FUNCTION
TR:	DELIMITS OPERATIONS TO THOSE POINTS VISIBLE WITHIN SCREEN EDGES
UX:	UNSCALES THE HORIZONTAL AXIS DURING A COPY OPERATION
UY:	UNSCALES THE VERTICAL AXIS DURING A COPY OPERATION

CATEGORY: NAMED KEY

BUFR	PUSHES BUFR KEY AND CALLS BUFR MENU
DIR	PUSHES THE DIR KEY AND CALLS THE DIRECTORY MENU
DISK	PUSHES THE 681 DISK KEY AND CALLS THE DISK MENU
DISP	PUSHES DISP KEY AND CALLS DISP MENU
FLTR	PUSHES FLTR KEY AND CALLS FILTER MENU
HELP	PUSHES HELP KEY, ENTERS HELP MODE
INP	PUSHES INPUT KEY AND DISPLAYS INPUT MENU ON SCREEN
IO	PUSHES OPT KEY AND CALLS I/O AND PLOTTER MENUS
MARK	PUSHES MARK KEY AND CALLS MARK MENU
OPT	PUSHES OPT KEY AND CALLS I/O AND PLOTTER MENUS
PROC	PUSHES PROC KEY AND CALLS PROC MENU
PROG	PUSHES PROG KEY AND CALLS PROG EDITOR AND MENU
TMB	PUSHES TIMEBASE KEY ANDCALLS TIMEBASE MENU
TRIG	PUSHES TRIG KEY AND CALLS TRIGGER MENU
X	PUSHES X KEY AND CALLS X MENU
Y	PUSHES Y KEY AND CALLS Y SCALE AND OFFSET MENU

CATEGORY: NAMED KEY PAIR

BUFC	PUSHES BUF-PROC PAIR, CALLS FRAME MEMORY, CAL TYPE AND GATE MENU
CONT	PUSHES DIR-PROG PAIR AND CALLS COMMAND DEVICE AND CONTROL MENU
EXT	PUSHES TMB-TRIG PAIR AND CALLS BNC OUT, CAL AND HOLDOFF MENUS
INT	PUSHES THE DISP-MARK PAIR AND CALLS INTENSITY AND TOP LINE MENU
XY	PUSHES X-Y PAIR AND PERMITS BOTH X AND Y POSITION AND SCALING

CATEGORY: NON-VOLATILE MEMORY

FMTN	REFORMATS/CLEARS OUT NON-VOLATILE RAM

CATEGORY: OPTION LIST

610__PERSRC	LIST OF ARGUMENTS FOR 610/611 CLOCK PERIOD SOURCE

CATEGORY: PLOTTER PARAMETER

BPLOT	CAUSES ONLY THE BASELINE TO BE PLOTTED
CBADR	SELECTS CONTROLLER ADDRESS FOR PASS CONTROL AFTER PLOT
DPLOT	PLOTS ONLY THE DATA, DOES NOT PLOT AXIS
PADIR	SELECTS DIRECTION FOR ANNOTATION (PLABEL, PPRINT)
PAHIGH	SELECTS HEIGHT OF TEXT FOR ANNOTATION
PALINE	SELECTS LINE TYPE FOR LINE ANNOTATION
PANNC	CALLS PLOTTER ANNOTATION CONTROL MENU
PANNP	CALLS PLOTTER ANNOTATION MENU
PANNTS	SELECTS TYPE OF ANNOTATION FOR SPECIAL PLOTS
PAPEN	SELECTS PEN FOR PLOTTING ANNOTATION
PAREA	CALLS PLOT AREA MENU
PAWIDE	SELECTS WIDTH OF TEXT FOR ANNOTATION
PAXFRM	SELECTS AXIS FRAME ON OR OFF
PAXLBL	SELECTS AXIS LABELING ON OR OFF
PAXLIN	SELECTS PLOTTER AXIS LINE TYPE
PAXLOC	SELECTS INTERSECT LOCATION OF THE AXES
PAXPEN	SELECTS PEN FOR PLOTTING AXIS
PAXTCK	SELECTS TICK MARK INTERVAL FOR AXIS LINES
PBADR	SELECTS PLOTTER GPIB ADDRESS (FOR 6100 CONTROLLER FUNCTION)
PBLBL	LOCATION FOR BASELINE LEVEL LABEL
PBLINE	SELECTS LINE TYPE FOR BASELINE
PBPEN	SELECTS PEN FOR PLOTTING BASELINE
PCEMRK	NOT IMPLEMENTED
PCHKD1	CHECKS THE REFERENCE POINT D1 ON PLOTTER
PCHKD2	CHECKS THE REFERENCE POINT D2 ON PLOTTER
PCLINE	SELECTS LINE TYPE FOR CURSOR
PCLK	ENABLES OR DISABLES PLOTTER TIME STAMP, FROM REAL TIME CLOCK
PCMARK	SELECTS DATA POINT MARKER FOR CURSOR
PCMD	CALLS PLOT COMMAND MENU
PCPEN	SELECTS PEN FOR PLOTTING CURSOR
PDATA	CALLS DATA POINT CONTROL MENU
PDLINE	SELECTS LINE TYPE FOR DATA
PDMARK	SELECTS DATA POINT MARKER FOR EXPANDED SCREEN PLOTS
PDPEN	SELECTS PEN FOR PLOTTING DATA
PDX	DIRECT PEN MOVE TO X CO-ORDINATE
PDY	DIRECT PEN MOVE TO Y CO-ORDINATE
PEND	ENDS PLOT SEQUENCE AND STORES PEN FOR PAPER REMOVAL
PERROR	RETURNS LAST PLOTTER ERROR REPORTED
PINTF	CALLS PLOTTER INTERFACE MENU
PLABEL	PERMITS DEFINITION OF STRINGS FOR PLOT ANNOTATION
PLEND	END LOCATION FOR FREE DRAW
PLHIGH	SELECTS HEIGHT OF AXIS UNITS LABEL
PLOT	PLOTS SCREEN IMMEDIATELY
PLOTM	SELECTS MODE OF PLOT FOR SCREEN, WATERFALL OR X VS Y

PLPEN	SELECTS PEN FOR PLOTTING AXIS LABELS
PLSTRT	DEFINE START POINT FOR FREE DRAW
PLWIDE	SELECTS WIDTH OF AXIS UNITS LABEL
PMARK	CALLS PLOT MARKER MENU
PMARKS	SELECTS PLOT MARKER IN MARKER FIELD
PMODE	CALLS PLOT MODE MENU
PMODEL	RETURNS MODEL NUMBER OF PLOTTER AT SELECTED INTERFACE
PPORT	SELECTS THE CURRENT PLOTTER PORT
PPRINT	CAUSES CURRENT PLABEL TO BE PRINTED
PRESET	PLOTTER RESET COMMAND
PSETD1	SETS LOWER-LEFT CORNER OF PLOT AREA
PSETD2	SETS UPPER-RIGHT CORNER OF PLOT AREA
PTITLE	PERMITS RE-DEFINITION OF THE DATA LABELS ON PLOT
PTSEL	NON-OPERATING COMMAND INCLUDED FOR COMPLETENESS ONLY
PWCURW	RETURNS THE CURRENT WAVE TO PLOT DURING A WATERFALL
PWNWAV	SELECTS NUMBER OF WAVES IN WATERFALL (Z-AXIS DENSITY)
PWXRAT	SELECTS X RATIO WITH RESPECT TO PLOT AREA FOR WATERFALL WAVES
PWYRAT	SELECTS Y RATIO WITH RESPECT TO PLOT AREA FOR WATERFALL WAVES
PX	RETURNS RATIO OF X USER-DEFINED PLOT AREA TO TOTAL AREA
PXLBL	PERMITS USER DEFINITION OF X-AXIS LABEL FOR SPECIFIED TRACE
PXNPTS	DEFINES NUMBER OF X POINTS TO PLOT IN WATERFALL MODE
PY	RETURNS RATIO OF Y USER-DEFINED PLOT AREA TO TOTAL AREA
PYLBL	PERMITS USER DEFINITION OF Y-AXIS LABEL FOR SPECIFIED TRACE

CATEGORY: PROCEDURE

Autocopy	COPIES SUCCESSIVE RECORDS DIRECTLY TO MEMORY OR DISK
Trans_data	PROCEDURE TO TRANSFER ASCII DATA TO OR FROM THE DATA 6100

CATEGORY: PROCESS PARAMETER

AVGCLR	CLEARS THE PROC AVERAGE BUFFERS
AVGCNT	SELECTS OR RETURNS NUMBER OF PROC AVERAGES
AVGM	ENABLES/DISABLES SPECIFIED PROC AVERAGE BUFFER
BNAME	RETURNS NAME OF PROCESSED RECORD
BUFCLR	IMMEDIATELY CLEARS THE INPUT BUFFERS (BUF.XX) TO ZERO Y VALUE
BUFLEN	SELECTS SIZE OF FRAME SLICE TO TRANSFER TO SYSTEM (BUF.XX)
BUFM	ENABLES THE GATE, OR FRAME-TO-BUFFER TRANSFER OPERATION
BUFOFF	SELECTS OFFSET OF FRAME SLICE FOR TRANSFER TO SYSTEM (BUF.XX)
CURAVG	RETURNS THE NUMBER OF AVERAGES TAKEN BY THE PROC SUMMATION AVERAGE
EXPCLR	CLEARS THE PROC EXPONENTIAL AVERAGER
EXPM	ENABLES/DISABLES EXPONENTIAL AVERAGING (PROC)
EXPWGT	SELECTS WEIGHT FOR EXPONENTIAL AVERAGING
INPSEL	SELECTS THE CHANNEL FOR ENABLE/DISABLE IN BUFR OR PROC SELECTION
MAXMIN	ENABLES/DISABLES THE MAX AND MIN AVERAGE BUFFERS
MXMCLR	CLEARS THE MAX AND MIN AVERAGE BUFFERS
MXMM	SELECTS MIN/MAX PROCESS (ENVELOPE MODE)
PROSEL	SELECTS TYPE OF PROCESSING FOR A SPECIFIED TIMEBASE AND CHANNEL

CATEGORY: PROGRAM CONTROL

WAITAQ	SUSPENDS PROGRAM EXECUTION UNTIL ACQUISITION IS COMPLETE

CATEGORY: PROGRAM POINTER

GOTO	POINTS TO SELECTED PROGRAM LINE NUMBER
GOSUB	DIRECTS PROGRAM TO SUBROUTINE
RET	RETURNS FROM SUBROUTINE TO MAIN PROGRAM

CATEGORY: REAL TIME DISPLAY

DATE	RETURNS CURRENT CALENDAR DATE
TIME	RETURNS CURRENT TIME OF DAY

CATEGORY: RS-232 PARAMETER

BAUD	SELECTS BAUD RATE FOR SPECIFIED PORT
DUPLEX	SELECTS THE DUPLEX MODE FOR THE SPECIFIED PORT
HNDSHK	ENABLES/DISABLES CTS/DTR HANDSHAKING FOR RS-232
PARITY	SELECTS PARITY MODE FOR SPECIFIED SERIAL PORT
RS232	CALLS RS-232 PARAMETERS MENU
SERSEL	SELECTS OR FINDS THE CURRENT TARGET PORT FOR PARAMETER CHANGES
STOPB	SELECTS THE NUMBER OF STOP BITS FOR THE SPECIFIED SERIAL PORT

CATEGORY: SCALAR FUNCTION

CRS	RETURNS TIME OF FIRST ZERO CROSSING AFTER TRIGGER (t = 0)
DLY	RETURNS THE TIME FROM START-OR-RECORD TO THE FIRST 50% CROSSING
DUTY	RETURNS THE DUTY CYCLE OF THE SIGNAL IN THE SPECIFIED RECORD
ENGY	RETURNS THE ENERGY OR Y^ 2X FOR THE SPECIFIED RECORD
FALL	RETURNS THE FALL TIME (90%-10%) WITHIN CURSOR LIMITS
FREQ	RETURNS OR ASSIGNS MEASURED SIGNAL FREQUENCY FOR SPECIFIED RECORD
HCYC	RETURNS THE TIME BETWEEN FIRST PAIR OF ZERO-CROSSINGS
LMAX	RETURNS AMPLITUDE OF FIRST PEAK (WHERE SLOPE CHANGES FROM + TO −)
LMIN	RETURNS AMPLITUDE OF FIRST NODE (WHERE SLOPE CHANGES FROM − TO +)
MAX	RETURNS THE MAXIMUM AMPLITUDE FOUND IN THE SPECIFIED RECORD
MEAN	RETURNS ALGEBRAIC MEAN OF THE SPECIFIED RECORD
MIN	RETURNS THE MINIMUM AMPLITUDE FOUND IN THE SPECIFIED RECORD
OVSH	RETURNS OVERSHOOT FOR SPECIFIED POSITIVE-GOING EDGE WITHIN RECORD
PER	RETURNS PERIOD OF THE FIRST CYCLE IN THE SPECIFIED RECORD
PKPK	RETURNS PEAK-TO-PEAK AMPLITUDE OF THE SPECIFIED RECORD
PLSW	RETURNS WIDTH OF A + TO − ZERO CROSSING IN THE SPECIFIED RECORD
RISE	RETURNS THE RISETIME OF AN RISING EDGE IN THE SPECIFIED RECORD
RMS	RETURNS THE ROOT-MEAN-SQUARE VALUE OF THE SPECIFIED RECORD
SDEV	RETURNS THE STANDARD DEVIATION OF THE SPECIFIED RECORD
STL1	RETURNS 1% SETTLING TIME OF A PULSE IN THE SPECIFIED RECORD
STL2	RETURNS .1% SETTLING TIME OF A PULSE IN THE SPECIFIED RECORD
XLMAX	RETURNS THE X VALUE AT WHICH THE SLOPE CHANGES FROM + TO − (PEAKS)
XLMIN	RETURNS THE X VALUE AT WHICH THE SLOPE CHANGES FROM − TO + (NODES)
XMSLP	RETURNS X VALUE OF POINT AT WHICH SLOPE IS MAX ABSOLUTE VALUE

CATEGORY: SIGNAL OUTPUTS

OUT0	SELECTS SIGNAL AVAILABLE AT THE OUTPUT BNC "OUT0" ON REAR PANEL
OUT1	SELECTS SIGNAL AVAILABLE AT THE OUTPUT BNC "OUT1" ON REAR PANEL

CATEGORY: TIMEBASE PARAMETER

AQUM	SELECTS TIMEBASE/TRIGGER ACQUISITION MODE
CLKMOD	SELECTS EXTERNAL CLOCK DIVIDER DENOMINATOR
CNTROL	SELECTS CLOCKING MODE / MASTER OR SLAVE
FRMEND	RETURNS THE TOTAL TIME RECORDED BY THE FRAME MEMORY
FRMLEN	RETURNS TOTAL FRAME LENGTH IN SECONDS PLUS OFFSET
FRMSTR	RETURNS FRAME START POINT FOR SPECIFIED FRAME
MANDLY	SELECTS TIMEBASE DELAY IN INCREMENTS OF SAMPLE PERIOD
NPTS	SELECTS THE NUMBER OF POINTS FOR A PARTICULAR TIMEBASE
NTMB	SELECTS ACTIVE TIMEBASES
PERIOD	SELECTS OR FINDS THE SAMPLE PERIOD FOR THE SPECIFIED TIMEBASE
PERSRC	SELECTS OR FINDS THE CLOCK SOURCE FOR A SPECIFIED TIMEBASE
QTMB	RETURNS STATUS FOR THE SPECIFIED TIMEBASE
RECA	SELECTS CHANNEL ONE OR TWO FOR TIMEBASE A SAMPLE RATE
RECB	SELECTS THE CHANNEL(S) RECORDED USING TIMEBASE B
TMBSEL	SELECTS THE SPECIFIED TIMEBASE AS THE TARGET FOR ANY NEW PARAMETER

CATEGORY: TRIGGER PARAMETER

ARMCPL	SELECTS COUPLING OF EXTERNAL ARM TRIGGER SOURCE
ARMDLY	SELECTS ARM DELAY MODE
ARMLEV	SELECTS THE ARM-TRIGGER LEVEL
ARMSLP	SELECTS THE ARM-TRIGGER SLOPE
ARMSRC	SELECTS THE ARM-TRIGGER SOURCE
DELAY	SETS OR FINDS THE PRE- OR POST-TRIGGER DELAY
HLDOFF	RETURNS OR SELECTS THE TRIGGER HOLDOFF TIME
NSWP	SELECTS NUMBER OF SWEEPS FOR THE MULTI-SWEEP CAPTURE MODE
QTRG	RETURNS CURRENT TRIGGER STATUS
THYST	SETS AMMOUNT OF HYSTERESIS IN THE TRIGGER LEVEL
TLEVA	SETS LEVEL OF TRIGGER SOURCE A WHEN A,B TRIGGER TYPE IS USED
TLEVB	SETS LEVEL OF TRIGGER SOURCE B WHEN A,B TRIGGER TYPE IS USED
TLEVH	SETS TRIGGER LEVEL WHEN EDGE OR EDGE-HYST TRIGGER TYPE IS USED
TMOD	SETS TRIGGER MODE
TRG	TRIGGERS ACQUISITION
TRGCPL	PERMITS OR FINDS THE TRIGGER COUPLING FOR THE SPECIFIED SOURCE
TRGLEV	RETURNS OR SELECTS TRIGGER LEVEL
TRGM	SELECTS OR RETURNS TRIGGER MODE (AUTO OR NORMAL)
TRGMOD	SELECTS ARM/RUN MODE FOR THE 630 PLUG-IN
TRGSEL	SELECTS MAIN OR ARM TRIGGER
TRGSLP	RETURNS OR SELECTS TRIGGER SLOPE
TRGSRC	SELECTS OR RETURNS TRIGGER SOURCE FOR SPECIFIED TRIGGER
TRGTYP	SELECTS TYPE OF TRIGGER
TRGUPR	SETS UPPER TRIGGER BOUNDARY FOR IN-BNDS OR OUT-BNDS
TRLOW	SETS LOWER TRIGGER BOUNDARY FOR IN-BNDS OR OUT-BNDS
TSLPA	SELECTS TRIGGER SLOPE A FOR A,B TRIGGER TYPE
TSLPB	SELECTS TRIGGER SLOPE B FOR A,B TRIGGER TYPE
TSLPH	SELECTS TRIGGER SLOPE FOR EDGE-HYST
TSRCA	SELECTS TRIGGER SOURCE A FOR A,B TRIGGER TYPE
TSRCB	SELECTS TRIGGER SOURCE B FOR A,B TRIGGER TYPE
TSRCH	SELECTS TRIGGER SOURCE FOR EDGE-HYST, IN-BNDS, OUT-BNDS

7C

COMMAND REFERENCE

Command: ADCMOD **Category:** BUFFER SELECTOR **Product:** 630

Function: SELECTS A/D MODE — LINEAR OR COMPANDED

Syntax: ADCMOD[=M]

Comments: WHERE M IS THE MODE, AN INTEGER NUMBER REPRESENTING THE POSITION OF THE SELECTION IN A LIST:

1 LINEAR 9B
2 CMPRSS 12B
3 LINEAR 10B
4 CMPRSS 11B

References: REC

Command: ADD **Category:** MATHEMATICS **Product:** 6100

Function: ADDS SCALAR/VECTOR VARIABLES AND SENDS RESULT TO VARIABLE OR PORT

Syntax: [D=]ADD[(V1[,V2])]

Comments: WHERE D IS THE DESTINATION VARIABLE OR PORT AND V1 AND V2 ARE SOURCE DATA VARIABLE NAMES — IF D IS OMITTED, RESULTANT DATA IS SENT TO THE COMMAND DEVICE — IF V1 AND V2 ARE OMITTED, THE PRIMARY AND SECONDARY TRACE DATA ARE ADDED — IF V2 IS OMITTED, V1 IS ADDED TO THE PRIMARY TRACE MAY OPERATE ON SCALAR, VECTOR OR MIXED VARIABLES

EXAMPLE: SER0:=CR:ADD(XX,YY) RETURNS THE SUM OF XX AND YY

References: SUB MUL DIV

Command: AMPOFF **Category:** CALIBRATION **Product:** 640

Function: EXECUTES AMPLITUDE/OFFSET CALIBRATION

Syntax: AMPOFF

Comments: SEE 640 MANUAL

References: CAL

Command: AQUM **Category:** TRIGGER PARAMETER **Product:** 620

Function: SELECTS TIMEBASE/TRIGGER ACQUISITION MODE

Syntax: AQUM[= M]

Comments: WHERE M IS THE MODE:

1 TRG□TMB
2 TMB□TRG

Command: AQUSRQ **Category:** GPIB PARAMETER **Product:** 6100

Function: ENABLES/DISABLES THE ON-ACQUISITION-COMPLETE SERVICE REQUEST

Syntax: AQUSRQ[= S]

Comments: WHERE S IS THE AQUSRQ STATUS: 1 OFF, 2 ON

References: SRQ KEYSRQ OUTSRQ ERRSRQ CLRSRQ CLRKEY CLRERR KEY ERR

Command: AREA **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS AREA OF SPECIFIED RECORD

Syntax: AREA[(V)]

Comments: RETURNS THE AREA OF VECTOR VARIABLE V — IF V IS OMITTED, AREA RETURNS THE AREA OF THE PRIMARY TRACE

References: ENGY INTG

Command: ARM **Category:** DIGITIZER CONTROL **Product:** PLUG-IN

Function: ENABLES THE DIGITIZER TO RECOGNIZE TRIGGER EVENT(S)

Syntax: ARM

Comments: THE DIGITIZER IS STOPPED UNTIL ARM IS PRESSED OR SENT — WHEN ARMED THE D6100 BEGINS TO RECORD — WHEN TRIGGERED THE D6100 STOPS RECORDING DEPENDING UPON THE AMOUNT OF PRE-TRIGGER OR POST-TRIGGER SPECIFIED

THE DEFAULT IS AUTO-ARM, SIMILAR TO AN ORDINARY DIGITAL SCOPE — IF A TRIGGER IS SEEN THE DATA WILL BE DISPLAYED STABLY ON-SCREEN — IF NO TRIGGER IS SEEN THERE WILL BE AN AUTOMATIC TRIGGER TO AID SIGNAL IDENTIFICATION

References: DARM TRGM TRGSEL

Command: ARMCPL **Category:** TRIGGER PARAMETER **Product:** 630
Function: SELECTS COUPLING OF EXTERNAL ARM TRIGGER SOURCE
Syntax: ARMCPL[= M]
Comments: WHERE M IS THE MODE: 1 DC 2 AC
References: ARMSLP ARMLEV ARMSRC

Command: ARMDLY **Category:** TRIGGER PARAMETER **Product:** 650
Function: SELECTS ARM DELAY MODE
Syntax: ARMDLY[= M]
Comments: WHERE M IS THE MODE: 1 NONE, 2 PRE-RECORD, 3 MANUAL

Command: ARMLEV **Category:** TRIGGER PARAMETER **Product:** 630
Function: SELECTS THE ARM-TRIGGER LEVEL
Syntax: ARMLEV[= L]
Comments: WHERE L IS THE LEVEL IN VOLTS — RANGE NOT TO EXCEED FULL-SCALE
REMEMBER THAT THE RANGE WILL INCREASE IF THE PROBE FACTOR HAS BEEN INCREASED
ARMLEV = −0.090 WILL SET THE ARM-TRIGGER LEVEL TO 90 mV
References: ARMSRC ARMCPL ARMSLP

Command: ARMSLP **Category:** TRIGGER PARAMETER **Product:** 630
Function: SELECTS THE ARM-TRIGGER SLOPE
Syntax: ARMSLP[= S]
Comments: WHERE L IS THE SLOPE: 1 +, 2 −
ARMSLP = 2 WILL SET THE ARM-TRIGGER SLOPE TO NEGATIVE SLOPE
References: ARMSRC ARMCPL ARMLEV

Command: ARMSRC **Category:** TRIGGER PARAMETER **Product:** 630

Function: SELECTS THE ARM-TRIGGER SOURCE

Syntax: ARMSRC[= S]

Comments: WHERE L IS THE SOURCE 1 NONE, 2 CH 1, 3 CH 2, 4, LINE, 5 EXT TRIG, 6 LOGIC TRG

ARMTRG = 4 WILL SET THE ARM-TRIGGER SOURCE TO LINE

References: ARMSLP ARMCPL ARMLEV

Command: AVEGDN **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS AVERAGE-DONE MODE FOR THE MATHPAD AVERAGER

Syntax: AVEGDN[= M]

Comments: WHERE M IS THE MODE: 1 STOP, 2 RESTART

IF AVERAGING RESTARTS, THE DATA IN THE AVERAGE BUFFER IS LOST.
NOTE THAT AVEGDN APPLIES TO THE KEYPAD AVERAGER AND NOT PROC

References: AVEGM NAVG CLRSUM KAVG AVGTYP

Command: AVEGM **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS AVERAGE UPDATE MODE

Syntax: AVEGM[= M]

Comments: WHERE M IS THE MODE: 1 LIVE (AUTO-SCALES, PRESERVING RESOLUTION FOR SMALL PEAK-TO-PEAK AVERAGE VALUES), 2 DISP AT N (WAITS UNTIL COMPLETION TO DISPLAY DATA, AUTO-SCALED), 3 LIVE-CONST (USES THE SAME SCALING AS THE ORIGINAL, RAW DATA)

References: AVEGDN AVGTYP NAVG

Command: AVG **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS CURRENT AVERAGE BUFFER OR SPECIFIES AVERAGING PARAMETERS

Syntax: AVG or <name> = AVG(a,b,c,d,e)

Comments: PARAMETERS ARE OFFSET BY – 1 FROM THE AVERAGE PARAMETERS' INDICES. THE PARAMETERS ARE: a, INPUT RECORD; b, TEMPORARY BUFFER USED IN CALCULATION; c, # SWEEPS SELECTED; d, # SWEEPS COMPLETED; e ENCOMPASSES BOTH AVG MODE AND AVG DONE PARAMETERS IN ONE ARGUMENT. IF THE AVG(PARAMETERS) OPTION IS USED, A KEYSTROKE PROGRAM IS ASSUMED. AVG SENT ALONE WILL CALCULATE THE SUMMATION AVERAGE AND RETURN TO THE COMMAND DEVICE A STRING OF REAL NUMBERS. USED IN AN EQUATION, PERFORMS OPERATION AND CREATES RECORD UNDER <name>.

References: AVEGDN AVEGM AVGTYP CLRSUM

Command: AVGCLR **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: CLEARS THE PROC AVERAGE BUFFERS

Syntax: AVGCLR

Comments: CLEARS ALL ENABLED AVERAGE BUFFERS IMMEDIATELY. ANY ENABLED BUFFERS WILL BE RESET TO ZERO AVERAGES AND ANY DATA WILL BE LOST.

References: CURAVG AVGCNT AVGM

Command: AVGCNT **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: SELECTS OR RETURNS N FOR PROC AVERAGE

Syntax: AVGCNT[(T[,C])][= N]

Comments: WHERE T IS THE TIMEBASE (1 OR 2), C IS THE CHANNEL NUMBER AND N IS THE NUMBER OF AVERAGES TO BE TAKEN BEFORE THE BUFFER IS DISPLAYED

IF C IS OMITTED, AVGCNT OPERATES ON THE CURRENT INPUT AND SPECIFIED TIMEBASE

AVGCNT 2 4 = 64 WILL SET THE NUMBER OF AVERAGES FOR AVG.B4 TO 64 (611)

References: INPSEL TMBSEL AVGCNT AVGCLR CURAVG EXPM AVGM

Command: AVGM **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: ENABLES/DISABLES SPECIFIED PROC AVERAGE BUFFER

Syntax: AVGM[(T[,C])][= S]

Comments: WHERE T IS THE TIMEBASE, C IS THE CHANNEL AND S IS THE STATUS: 1 — OFF, 2 — ON, 3 — HOLD

References: INPSEL TMBSEL AVGCNT CURAVG REC AVGCLR

Command: AVGTYP **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE TYPE OF AVERAGING FOR THE AVERAGE FUNCTION

Syntax: AVGTYP[= T]

Comments: WHERE T IS THE TYPE: 1 SUM, 2 EXP DECAY, 3 MAX, 4 MIN

References: NAVG AVEGM AVEGDN

Command: Autocopy Category: PROCEDURE **Product:** 6100

Function: COPIES SUCCESSIVE RECORDS DIRECTLY TO MEMORY OR DISK

Syntax: LL NAME = COPY(SR,DR,NN)

Comments: THIS LINE, IF OCCURING IN AN INTERNAL PROGRAM WILL CAUSE SUCCESSIVE RECORDS TO AUTOMATICALLY BE STORED IN THE SYSTEM MEMORY OR ON TO DISK; THE RECORDS WILL BE SEQUENTIALLY NAMED FOR IDENTIFICATION; A USER-DEFINED NAME WILL BE APPENDED INCREMENTALLY TESTX1, TESTX2 ETC.

LL = LINE NUMBER NAME = DEST REC OR DEVICE SR = SOURCE DR = DESTINATION
NN = COPY LIMIT

EXAMPLE: 10 A:TEST = COPY(BUF.A1,TEST,92) COPIES AUTO-INCREMENTED FILES TO DISK

References: COPY Variable

Command: BACKUP **Category:** DISK DRIVE **Product:** 681

Function: COPIES A:*.* TO B:

Syntax: BACKUP

Comments: BACKUP COPIES MAY NOT BE USED TO MAKE ADDITIONAL COPIES

Command: BAUD **Category:** RS-232 PARAMETER **Product:** 682

Function: SELECTS BAUD RATE FOR SPECIFIED PORT

Syntax: BAUD[P][= R]

Comments: WHERE R IS AN INDEX TO A LIST OF RATES: 1 110, 2 300, 3 600, 4 1200, 5 2400, 6 4800, 7 9600

IF P IS OMITTED, THE BAUD COMMAND OPERATES ON THE CURRENT SERSEL PORT

References: SERSEL PARITY STOPB DUPLEX

Command: BAY **Category:** BUFFER SELECTOR **Product:** 600

Function: RETURNS NUMBER OF ACTIVE PLUG-IN BAY IN EXPANSION RACK

Syntax: BAY

Comments: THE RESPONSE WILL BE AN INTEGER, 0 — 4. A "2" WOULD MEAN THAT BAY #2 IS ACTIVE. A "0" WOULD MEAN THAT NO BAY IS CURRENTLY ACTIVE.

References: BAYn QBAYn SBAYn

Command: BAYn **Category:** BUFFER SELECTOR **Product:** 600

Function: PUSHES THE BAYn KEY ON THE EXPANSION RACK

Syntax: BAY[n], WHERE [n] IS AN INTEGER, 0 — 4

Comments: SENT ONCE, THIS COMMAND WILL DISPLAY ON THE 6000/6000A/6100 SCREEN THE IDENTITY OF THE PLUG-IN IN BAYn WITH AN ADVISEMENT THAT PRESSING THE SAME BAYn KEY AGAIN WILL EFFECT THE CHANGEOVER TO BAYn.

References: BAY QBAYn SBAYn

Command: BL: **Category:** MODIFIER **Product:** 6100

Function: CAUSES FUNCTION TO OPERATED WITH RESPECT TO BASELINE LEVEL AS ZERO

Syntax: BL:•FUNCTION□

Comments: NORMALLY, A FUNCTION LIKE FFT WILL ASSUME A ZERO BASELINE (TRUE IF AC COUPLED) IF, HOWEVER, THE RECORD IS COPIED RELATIVE TO A MEAN-VALUE BASELINE OR A BASELINE-RELATIVE FFT IS PERFORMED, THE DC COMPONENT IS REMOVED — (NOTE: THE BL: MODIFIER IS ALSO USEFUL FOR FREQ/PER AND CROSSING MEASUREMENTS WHEN A DC OFFSET NORMALLY PROHIBITS THESE FUNCTIONS) EITHER SB:MEAN(BUF.A1); BL:COPY(BUF.A1); FFT(AX0) OR SB:MEAN(BUF.A1); BL:FFT(BUF.A1) WILL REMOVE A DC COMPONENT FROM A SPECTRUM

References: CR: TR: NX: SB: BLEVEL

Command: BLEVEL **Category:** MARKER PARAMETER **Product:** 6100

Function: SETS THE LEVEL OF THE BASELINE FUNCTION MODIFIER

Syntax: BLEVEL[T][= Y]

Comments: WHERE T IS THE TRACE NUMBER AND Y IS THE BASELINE LEVEL IN THE UNITS OF THE SPECIFIED TRACE

VERY USEFUL AS A QUERY IN INTERACTIVE SYSTEMS WHERE AN OPERATOR MANUALLY SETS THE BASELINE TO AN EVENT'S AMPLITUDE FOR READING AND LOGGING BY THE SYSTEM MARK; MARKER = 2; BLINE = 2; — SETS UP THE DISPLAY — BLEVEL READS THE LEVEL

References: MARK MARKER BLINE KEYSRQ UKEY LABEL

Command: BLINE **Category:** MARKER PARAMETER **Product:** 6100

Function: ENABLES/DISABLES THE BASELINE DISPLAY

Syntax: BLINE[= S]

Comments: WHERE S IS THE STATUS OF THE BASELINE DISPLAY: 1 OFF, 2 ON

NOTE THAT THE STATUS OF THE BASELINE DISPLAY DOES NOT PROHIBIT ITS USE AS A DELIMITER

References: BLEVEL MARK MARKER BL: SB:

Command: BNAME **Category:** PROCESS PARAMETER **Product:** 650
Function: RETURNS NAME OF PROCESSED RECORD
Syntax: BNAME
Comments: RETURNS THE NAME OF THE RECORD IN FIELD #2 OF THE PROC MENU

Command: BPLOT **Category:** PLOTTER PARAMETER **Product:** 682-X1
Function: CAUSES ONLY THE BASELINE TO BE PLOTTED
Syntax: BPLOT
Comments: BPLOT IS AN IMMEDIATE COMMAND; THE BASELINE WILL BE PLOTTED ONLY
References: BLEVEL DPLOT PBLBL PBLINE PBPEN

Command: BSWEP **Category:** BUFFER SELECTOR **Product:** 650
Function: SELECTS THE SWEEP NUMBER TO TRANSFER TO SYSTEM FOR ANALYSIS
Syntax: BSWEP[= N]
Comments: WHERE N MAY BE ANY INTEGER IN THE RANGE 0-•MAXIMUM NUMBER OF SWEEPS SELECTED□

Command: BTYP **Category:** BUFFER SELECTOR **Product:** 650
Function: SELECTS TYPE OF BUFFER TRANSFER TO SYSTEM
Syntax: BTYP[= T]
Comments: WHERE T IS THE TYPE OF TRANSFER DESIRED: 1 ALL DATA, 2 1 SWEEP, 3 USER-DEFINED

Command: BUFC **Category:** NAMED KEY PAIR **Product:** PLUG-IN

Function: PUSHES BUF-PROC PAIR AND CALLS FRAME MEMORY, CAL TYPE AND GATE MENU

Syntax: BUFC

Comments: THIS IS A USEFUL COMMAND IF THERE IS A NEED TO GET DATA FROM THE FRAME MEMORY WITHOUT FIRST WAITING FOR THE DATA TO BE TRANSFERRED TO THE SYSTEM. FOR EXAMPLE, IF THE DATA WERE CAPTURED FROM A DESTRUCTIVE TEST, IT MAY NOT BE POSSIBLE TO TRANSFER THE DATA AND OPERATE ON IT WHEN MEMORY IS NEAR FULL. USING BUFC, THE SIZE OF BUF.A1 (OR ANOTHER BUFFER) MAY BE DYNAMICALLY DEFINED BY THE OPERATOR; NOT A SIMPLE, NOR EASY COMMAND TO USE.

CALIBRATE SELECTS CALIBRATION TYPE AND GATE MAY FREEZE THE BUF.XX PROCESS

References: RECSEL BUFOFF BUFLEN CALCYC DIR

Command: BUFCAL **Category:** INPUT PARAMETER **Product:** PLUG-IN

Function: SELECTS TYPE OF CALIBRATION TO BE PERFORMED

Syntax: BUFCAL[(T[,C])][= TYP]

Comments: WHERE T IS THE TIMEBASE, C IS THE CHANNEL NUMBER AND TYP IS THE TYPE OF CALIBRATION TO BE PERFORMED EVERY CALCYC: 1 OFF, 2 OFFSET, 3 AMP,OFF

NORMALLY, ONLY THE OFFSET IS CALIBRATED. IN SOME CASES, THE USER MAY WISH TO DISABLE CALIBRATION (TO ADJUST BINARY VALUES TO EVEN POWERS OF 2 ^ N WHERE N IS THE RESOLUTION OF THE DIGITIZER BEING USED (CALIBRATION MAY ADD VALUES OF LESS THAN 2 ^ N FOR ACCURACY) OR THE USER MAY WISH TO CALIBRATE BOTH OFFSET AND AMPLITUDE FOR THE GREATEST ACCURACY AVAILABLE USING A D6100

References: BUFC CALCYC

Command: BUFCLR **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: IMMEDIATELY CLEARS THE INPUT BUFFERS (BUF.XX) TO ZERO Y VALUE

Syntax: BUFCLR

Comments: WHEN BUFC AND THE FRAME-TO-BUFFER TRANSFER TECHNIQUES ARE SUBSEQUENTLY USED, THE DATA MAY BE RE-STORED TO BUF.XX — IN OTHER WORDS, THE FRAME DATA IS NOT CLEARED

References: BUFC BUFLEN BUFOFF

Command: BUFLEN **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: SELECTS SIZE OF FRAME SLICE TO TRANSFER TO SYSTEM (BUF.XX)

Syntax: BUFLEN[(T)[,C])][= N]

Comments: WHERE T IS THE TIMEBASE, C IS THE CHANNEL AND N IS THE NUMBER OF POINTS IN THE SLICE

THE FRAME IS THE FAST MEMORY USED TO CAPTURE THE DATA. A SLICE OF THIS IS TRANSFERRED TO THE SYSTEM MEMORY FOR DISPLAY, TRANSMISSION OR ANALYSIS USING THE NAME BUF.XX. THIS IS A PROTECTED FILE IN THE SYSTEM AND CANNOT BE MODIFIED OR CHANGED IN ANY WAY EXCEPT BY OVERWRITE BY NEW DATA OR BY USE OF THE BUFC MENU. THIS IS A USEFUL, MEMORY-CONSERVING FEATURE, ES. FOR 610/611.

References: BUFOFF BUFC DIR

Command: BUFM **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: ENABLES THE GATE, OR FRAME-TO-BUFFER TRANSFER OPERATION

Syntax: BUFM[(T[,C)][= S]

Comments: WHERE T IS THE TIMEBASE, C IS THE CHANNEL AND S IS THE STATUS OF THE TRANSFER OPERATION: 1 OFF, 2 ON, 3 HOLD

IT IS POSSIBLE TO HOLD THE UPDATING OF A PARTICULAR BUFFER (BUF.XX) WHILE STILL TAKING DATA FOR ANOTHER

References: BUFC BUFOFF BUFLEN

Command: BUFOFF **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: SELECTS OFFSET OF FRAME SLICE FOR TRANSFER TO SYSTEM (BUF.XX)

Syntax: BUFOFF[(T[,C])][= N]

Comments: WHERE T IS THE TIMEBASE, C IS THE CHANNEL AND N IS THE OFFSET IN POINTS FROM THE BEGINNING OF THE FRAME

IF DATA WERE KNOWN TO BE A CERTAIN TIME FROM THE START OF A FRAME, AND THE DATA WERE TO HAVE A CERTAIN LENGTH, THEN THE USE OF BUFLEN, BUFOFF AND GATE MAY BE USED TO FORCE A CERTAIN SLICE OF THE FRAME INTO THE SYSTEM UNDER THE NAME BUF.XX

References: BUFLEN BUFC BUFM

Command: BUFR **Category:** NAMED KEY **Product:** PLUG-IN

Function: PUSHES BUFR KEY AND CALLS BUFR MENU

Syntax: BUFR

Comments: FOR INTERACTIVE SYSTEMS — DO NOT USE THIS COMMAND UNLESS OPERATOR IS FAMILIAR WITH THE D6100 BUFFER SELECTIONS FOR THAT PLUG-IN AND HAS SOME INSIGHT INTO THE APPLICATION. IT IS BEST FOR THE APPLICATION PROGRAM TO SELECT THE CORRECT NUMBER OF RECORDS TO BE USED.

USE THE REC COMMAND TO ENABLE/DISABLE BUFFERS OR KEYCODES WHEN USING BUFR TO DO THIS.

References: REC RECSEL DIR LDIR INPSEL

Command: BUSADR **Category:** GPIB PARAMETER **Product:** 682

Function: SELECTS GPIB ADDRESS

Syntax: BUSADR[= A]

Comments: WHERE A IS AN INTEGER IN THE RANGE 0-31

NOTE: THERE ARE NO SECONDARY ADDRESSES USED BY THE DATA 6100

NOTE: MANY CONTROLLERS USE THE ADDRESS 21

References: EOIOUT GETRIG

Command: CAL **Category:** CALIBRATION **Product:** 630

Function: PUSHES INP-FLTR PAIR AND CALLS CAL MENU

Syntax: CAL

Comments: SEE REFERENCES

References: CALINP CALTYP

Command: CAL **Category:** CALIBRATION **Product:** 640

Function: PUSHES CAL KEY AND CALLS CALIBRATION MENU

Syntax: CAL

Comments: SEE 640 MANUAL

References: CALCYC

Command: CALAMP **Category:** CALIBRATION **Product:** 640
Function: RETURNS VALUE OF AMPLITUDE CALIBRATION
Syntax: CALAMP
Comments: SEE 640 MANUAL
References: CAL

Command: CALCYC **Category:** INPUT PARAMETER **Product:** PLUG-IN
Function: SELECTS CALIBRATION CYCLE
Syntax: CALCYC[= I]
Comments: WHERE I IS THE CALIBRATION INTERVAL
THIS INTERVAL IS PLUG-IN DEPENDENT

Command: CALFRE **Category:** CALIBRATION **Product:** 640
Function: SELECTS FREQUENCY OF TIME CALIBRATOR OUTPUT
Syntax: CALFRE = 1 THROUGH 15
Comments: SEE 640 MANUAL
References: CAL

Command: CALINP **Category:** INPUT PARAMETER **Product:** 630
Function: SELECTS INPUT MODE FOR CALIBRATION SIGNAL
Syntax: CALINP[= S]
Comments: WHERE S IS THE SOURCE FOR THE INPUT: 1 SIGNAL, 2 CALIBRATION SIGNAL
References: CAL

Command: CALINT **Category:** INPUT PARAMETER **Product:** 640
Function: SELECTS SOURCE OF INPUT FOR CHANNELS 1 AND 3
Syntax: CALINT = 1 OR 2 (NORMAL, INTERNAL)
Comments: SEE 640 MANUAL

Command: CALLEV **Category:** CALIBRATION **Product:** 640
Function: SELECTS AMPLITUDE OF TIME CALIBRATOR OUTPUT
Syntax: CALLEV = [N]
Comments: WHERE N IS A REAL NUMBER IN VOLTS FROM 0 TO 2.5 SEE ALSO 640 MANUAL

Command: CALM **Category:** INPUT PARAMETER **Product:** 650
Function: ENABLES/DISABLES CALIBRATION
Syntax: CALM[= S]
Comments: WHERE S IS THE STATUS OF THE CALIBRATION OPERATION: 1 OFF, 2 ON

Command: CALOFF **Category:** CALIBRATION **Product:** 640
Function: RETURNS VALUE OF OFFSET CALIBRATION
Syntax: CALOFF
Comments: SEE 640 MANUAL

Command: CALOFX **Category:** CALIBRATION **Product:** 640
Function: EXECUTES OFFSET ONLY CALIBRATION
Syntax: CALOFX
Comments: SEE 640 MANUAL

Command: CALOUT **Category:** INPUT PARAMETER **Product:** PLUG-IN
Function: SELECTS CALIBRATION SIGNAL AT CAL OUTPUT
Syntax: CALOUT[= M]
Comments: WHERE M = SIGNAL MODE; VARIES WITH PLUG-IN

Command: CALTYP **Category:** INPUT PARAMETER **Product:** 630
Function: SELECTS THE TYPE OF CALIBRATION SIGNAL FOR CAL OUTPUT
Syntax: CALTYP[= T]
Comments: WHERE T IS THE TYPE OF CALIBRATION SIGNAL SELECTED: 1 OFF, 2 CHOP – /0/ + , 3 CAL RAMP, 4 GROUND, 5 (+)FULL-SCALE DC, 6 ZERO, 7 (–)FULL-SCALE DC

Command: CBADR **Category:** PLOTTER PARAMETER **Product:** 682-X1
Function: SELECTS CONTROLLER ADDRESS FOR PASS CONTROL AFTER PLOT
Syntax: CBADR[= A]
Comments: WHERE A IS AN INTEGER NUMBER IN THE RANGE 0-31 SPECIFYING THE ADDRESS OF THE SYSTEM CONTROLLER (USED WITH A GPIB PLOTTER). AT THE COMMAND "PLOT" AN SRQ IS GENERATED BY THE D6100. THE SERVICE ROUTINE SHOULD PASS CONTROL TO THE D6100 THEN LOOP UNTIL CONTROL IS PASSED BACK.

NOTE: THE GPIB IS NOT EASY TO USE WHEN CONTROL MUST BE PASSED FROM ONE CONTROLLER TO ANOTHER. IF YOUR SYSTEM IS ALL GPIB, BE PREPARED TO SPEND SOME TIME CODING A PASS-CONTROL ROUTINE USING THE CONTROLLER'S DOCUMENTATION AND EXAMPLES.

References: PBADR BADR

Command: CFREE **Category:** DIRECTORY **Product:** 6100

Function: RETURNS AMOUNT OF CONTIGUOUS FREE MEMORY

Syntax: CFREE

Comments: IN ORDER TO PERFORM SOME FUNCTIONS, LIKE FFT, THE DATA 6100 REQUIRES SCRATCHPAD MEMORY. CONTIGUOUS MEMORY IS NEEDED TO PERFORM THESE OPERATIONS — ALSO, NEW RECORDS OR COPIES USE CONTIGUOUS MEMORY

References: FREE

Command: CLKMOD **Category:** TIMEBASE PARAMETER **Product:** 630

Function: SELECTS EXTERNAL CLOCK DIVIDER DENOMINATOR

Syntax: CLKMOD[= M]

Comments: WHERE M IS THE DIVIDE MODE: 1 CLK/1, 2 CLK/2, 3 2*CLK/2

Command: CLR **Category:** DISPLAY PARAMETER **Product:** 6100

Function: CLEARS THE TOP LINE ANNOTATION

Syntax: CLR

Comments: CLR MAY BE USED TO CLEAR THE TOP LINE AFTER AN ERROR HAS BEEN REPORTED OR A MEASUREMENT HAS BEEN MADE

References: TOPLIN

Command: CLRALL **Category:** MATHEMATICS **Product:** 6100

Function: CLEARS ALL PROCESSING (MATH) BUFFERS: AVERAGE, TREND, DISTRIBUTION

Syntax: CLRALL

Comments: THIS COMMAND SHOULD BE USED PRIOR TO THE START OF A TEST TO ENSURE CLEAR BUFFERS. THE EFFECT OF CLRALL WILL NOT BE SEEN IF THE BUFFERS CON- TAIN DATA BUT WILL BE SEEN AS SOON AS THE D6100 IS TRIGGERED. THE FIRST BUFFER CONTENTS ARE ONLY THOSE OF THE FIRST ACQUISITION.

NOTE: THE DATA 6100 MUST BE DISARMED PRIOR TO A CLEAR OPERATION OR THE BUFFERS WILL NOT CLEAR.

References: CLRSUM CLRTRN NEW

Command: CLRAQU **Category:** I/O PARAMETER **Product:** 6100

Function: CLEARS THE ACQISITION-COMPLETE STATUS BIT IN THE STATUS BYTE

Syntax: CLRAQU

Comments: THE ACQUISITION BIT (6) INDICATES THAT AN ACQUISITION HAS BEEN MADE. THE SRQ WILL STAY ON UNTIL CLEARED

References: SRQ KEYSRQ ERRSRQ CLRKEY CLRERR CLRSRQ

Command: CLRDST **Category:** MATHEMATICS **Product:** 6100

Function: CLEARS THE DISTRIBUTION BUFFER

Syntax: CLRDST

Comments: IF DISTRIBUTION IS RUNNING IN A PROGRAM, THE BUFFER CONTAINS A CUMULATIVE COUNT OF THE NUMBER OF SAMPLES TAKEN AT A PARTICULAR AMPLITUDE. CLRDST WILL CLEAR THIS BUFFER TO ZERO PRIOR TO TAKING A DISTRIBUTION OF A NEW SET OF DATA

References: CLRSUM

Command: CLRERR **Category:** I/O PARAMETER **Product:** 6100

Function: CLEARS THE ERROR SRQ AND ERROR QUEUE

Syntax: CLRERR

Comments: WHEN ERRORS OCCUR, THEY ARE CODED AND KEPT IN A QUEUE UNTIL READ. THE ERROR QUEUE IS FIFO, THAT IS, THE FIRST ERROR IN IS THE FIRST OUT.

THERE IS ROOM FOR FIFTEEN ERRORS IN THE QUEUE.

IF ONE OR MORE ERRORS IS LEFT IN THE QUEUE, AND IF ERRSRQ IS ON, THEN THE ERROR STATUS BIT WILL REMAIN SET.

References: SRQ ERRSRQ KEYSRQ CLRKEY KEY ERROR

Command: CLRKEY **Category:** I/O PARAMETER **Product:** 6100

Function: CLEARS THE KEYCODE BUFFER AND RESETS THE KEY STATUS BIT

Syntax: CLRKEY

Comments: WHEN A KEY IS PRESSED, A CODE IS PLACED IN THE KEY BUFFER. THE COMMAND KEY READS THIS CODE. CLRKEY WILL CLEAR THE CODE IN THE BUFFER AND RESET (CLEAR) THE KEY STATUS BIT OF THE SRQ STATUS BYTE

References: SRQ OUTSRQ AQUSRQ CLRAQU KEY KEYSRQ ERR ERRSRQ ERROR CLRERR

Command: CLRSRQ **Category:** GPIB PARAMETER **Product:** 6100

Function: CLEARS THE SERVICE REQUEST LINE ON THE GPIB INTERFACE

Syntax: CLRSRQ

Comments: WHEN A SERVICE REQUEST IS GENERATED, THE SRQ LINE WILL STAY ON UNTIL CLEARED. THE CLRSRQ COMMAND WILL CLEAR THE SRQ AND WILL CLEAR. BIT 7 IN THE STATUS BYTE.

References: AQUSRQ OUTSRQ ERRSRQ SRQ CLRKEY CLRERR KEY ERR

Command: CLRSUM **Category:** FUNCTION CONTROL **Product:** 6100

Function: CLEARS AVERAGE BUFFER PRIOR TO A NEW ENSEMBLE AVERAGE (not PROC)

Syntax: COMMAND ONLY

Comments: THIS COMMAND SHOULD BE SENT PRIOR TO ANY NEW SUMMATION AVERAGE.

NOTE: AVERAGING MAY BE DONE ON INPUT DATA USING THE "PROC" FEATURE. THIS COMMAND OPERATES ONLY ON THE VECTOR FUNCTION "AVG" AND ITS N-COUNTER, THE SECOND TO LAST ARGUMENT OF THE "AVG" FUNCTION.

References: AVG CLRMAX CLRMIN

Command: CLRTRN **Category:** MATHEMATICS **Product:** 6100

Function: CLEARS ALL TREND RECORDS

Syntax: CLRTRN

Comments: AS TREND RECORDS ARE BEING WRITTEN, CLRTRN WILL CAUSE THEM TO RESET TO ZERO POINTS (OR TO BEGIN AGAIN FROM ZERO POINTS). THIS COMMAND IS USEFUL WHEN MAKING STATISTICAL MEASUREMENTS FROM TREND RECORDS LIKE DISTRIBUTIONS. ON EVERY NEW ACQUSIITION OF A SET OF TRENDED DATA, A STATISTICAL FUNCTION MAY BE PERFORMED, THEN THE TREND MAY BE CLEARED AND A NEW SET TAKEN.

References: CLRSUM CLR CLRDST

Command: CMAX **Category:** INPUT PARAMETER **Product:** 640

Function: SETS MAXIMUM VALUE OF WAVEFORM FOR THERMAL TAIL COMPENSATION

Syntax: CMAX(n) = -3.0V to $+3.0$V

Comments: WHERE n IS THE SELECTED INPUT CHANNEL NUMBER FROM 1 TO 64

References: CMODE CPKPK INPCAL

Command: CMDDEV **Category:** I/O PARAMETER **Product:** 682

Function: SELECTS THE CURRENT COMMAND DEVICE

Syntax: CMDDEV[= D]

Comments: WHERE D IS THE PORT NUMBER, 1 SER0:, 2 SER1:, 3 GPIB: THIS COMMAND SHOULD, OF COURSE, BE AVOIDED WHERE THERE IS NO CONTROLLER OR OTHER COMMAND DEVICE AVAILABLE AT THE TARGET PORT. WATCH OUT FOR ADDRESSES USING GPIB AND FOR PARAMETERS WHEN USING RS-232!

References: BAUD PARITY STOPB DUPLEX BADR PORT LINDELM FLDDLM

Command: CMODE **Category:** INPUT PARAMETER **Product:** 640

Function: SELECTS MODE OF THERMAL TAIL COMPENSATION

Syntax: CMODE(n) = 1, 2, 3 [OFF, ON-AUTO, ON-USER]

Comments: WHERE n IS THE SELECTED INPUT CHANNEL NUMBER FORM 1 TO 64. SEE ALSO 640 MANUAL.

References: CMAX CPKPK INPCAL

Command: CNTROL **Category:** TIMEBASE PARAMETER **Product:** 630

Function: SELECTS CLOCKING MODE / MASTER OR SLAVE

Syntax: CNTROL[= M]

Comments: WHERE IS IS THE MODE: 1 MASTER, 2 SLAVE

USING THE CLOCK IN AND OUT CONNECTOR PINS AT THE FRONT OF THE 630 PLUG-IN, THE CNTROL COMMAND SELECTS WHETHER A 630 (IF USING TWO OR MORE D6100S) WILL BE THE MASTER CLOCK SOURCE OR WILL USE THE CLOCK OF ANOTHER 630.

References: CLKMOD

Command: CNVINP **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS STANDARD/USER-DEFINED KERNEL FOR THE CONVOLUTION FUNCTION

Syntax: CNVINP[= K]

Comments: WHERE K IS THE KERNEL: 1 KERNEL, 2 USER

THE CONVOLUTION IS A FILTER. IF THE RECORD IN THE SECONDARY TRACE IS A USER ARRAY REPRESENTING AN IMPULSE RESPONSE OF A STANDARD OR SPECIAL FILTER THEN THAT MAY BE USED TO FILTER THE PRIMARY TRACE DATA. IF A SIMPLE SMOOTHING IS DESIRED, THE KERNEL MODE MAY BE SELECTED OFFERING A SELECTION OF STANDARD SMOOTHING KERNELS LIKE BOXCAR (SQUARE), TRIANGULAR AND EXPONENTIAL.

NOTE: THE RANGE OF THE CNVINP ARGUMENT IN THE CONVOLUTION FUNCTION IS 0-1.

References: CONV CONVWDW CONVNPT CNVOFF

Command: CNVNPT **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE LENGTH OF THE STANDARD CONVOLUTION KERNELS

Syntax: CNVNPT[= N]

Comments: WHERE N IS THE NUMBER OF POINTS IN THE SMOOTHING KERNEL

NOTE: THE SQUARE AND TRIANGLE CONVOLUTION KERNELS ASSUME SMOOTHING AND DO NOT FOLLOW THE CLASSICAL CONVOLUTION (WHICH ASSUMES A SYSTEM RESPONSE: A = 0, t 0). THEREFORE, THE OUTPUT OF THE CONVOLUTION USING THE STANDARD KERNELS MAY HAVE NON-ZERO AMPLITUDE AT t 0, OR, IN OTHER WORDS, THE SHAPE OF THE OUTPUT WILL BE SYMMETRICAL ABOUT AN INPUT IMPULSE AND THERE WILL BE NO PHASE SHIFT. THE NET EFFECT OF INCREASING THE NUMBER OF POINTS IS AN INCREASE IN SMOOTHING

References: CNVOFF CNVINP CNVWDW CONV

Command: CNVOFF **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE NUMBER OF POINTS FOR THE USER-CONVOLUTION OUTPUT OFFSET

Syntax: CNVOFF[= N]

Comments: WHERE N IS AN INTEGER NUMBER OF POINTS IN THE RANGE – 32768 – 32767

NOTE: READ THE COMMENTS FOR CNVNPT. THIS COMMAND APPLIES TO THE USER KERNEL AND IS USED FOR DIGITAL FILTERING APPLICATIONS.

NOTE: FOR BEST RESULTS, A KNOWN LIST OF CALCULATED FILTER COEFFICIENTS OR THE DIGITIZED IMPULSE RESPONSE OF AN ACTUAL FILTER SHOULD BE USED FOR A USER KERNEL. THE NUMBER OF OFFSET POINTS TO SELECT WILL BE (MINUS) THE NUMBER OF POINTS IN THE FILTER COEFFICIENT SET (AS SEEN IN THE DIRECTORY, EXPANDED).

References: CONV CNVINP CNVNPT CNVINP

Command: CNVWDW **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE SHAPE OF THE SMOOTHING FUNCTION FOR CONVOLUTION

Syntax: CNVWDW[= W]

Comments: WHERE W IS THE WINDOW: 1 SQUARE, 2 TRIANGLE, 3 RAMP, 4 EXP DECAY

NOTE: USING THESE STANDARD "KERNELS", WHICH CLEARLY COULD NOT BE RECORDED AS ACTUAL FILTER RESPONSES, THE CONVOLUTION IS A CONVENIENT WAY TO "SMOOTH" A RECORDED WAVEFORM. TO SEE THE ACTUAL TRANSFER FUNCTION FOR THESE KERNELS, CREATE A UNIT IMPULSE IN A ZERO-AMPLITUDE RECORD AT ABOUT THE HALFWAY POINT, SELECT A KERNEL AND ENTER, WHEN THE RESULT APPEARS, PRESS "FFT" AND OBSERVE THE SHAPE (NOTE THAT THE UNIT IMPULSE HAS A FLAT SPECTRUM AS AN INPUT)

References: CNVOFF

Command: CONFIG **Category:** BUFFER SELECTOR **Product:** 630

Function: SELECTS TIMEBASE/CHANNEL CONFIGURATION

Syntax: CONFIG[= C]

Comments: WHERE C IS A CONFIGURATION: 1 A1, 2 A1,A2, 3 A1,B1, 4 A1,B2, 5 A2

WHERE A AND B ARE THE TIMEBASES AND 1 AND 2 THE AVAILABLE CHANNELS

References: BUFR ADCMOD CNTROL

Command: CONT **Category:** NAMED KEY PAIR **Product:** 6100

Function: PUSHES DIR-PROG PAIR AND CALLS COMMAND DEVICE AND CONTROL MENU

Syntax: CONT

Comments: IF DATA 6100 IS IN UNLOCKED-REMOTE MODE, PERMITS OPERATOR TO TAKE CONTROL (BY SWITCHING TO LOCAL), IF IN LOCKED-REMOTE, CONTROL CANNOT BE RETURNED VIA FRONT PANEL. THIS REQUIRES SENDING THE UNLOCK OR LOCAL COMMANDS OR RESETTING THE INSTRUMENT VIA THE RS/f COMBINATION.

References: CMDDEV LOGDEV ERRM REMLOC

Command: CONV **Category:** MATHEMATICS **Product:** 6100

Function: PERFORMS CONVOLUTION AND CREATES A RECORD OR RETURNS DATA TO THE COMMAND DEVICE

Syntax: CONV or •name□ = CONV(a,b,c,d,e,f)

Comments: WHERE •name□ IS THE OUTPUT RECORD, a IS THE SOURCE RECORD, b IS THE USER KERNEL IF USED, c IS THE KERNEL TYPE, d IS THE OFFSET, e IS THE # POINTS IN THE KERNEL AND f IS THE CALCULATION MODE. CONV SENT ALONE WILL CALCULATE AND RETURN TO THE COMMAND DEVICE A STRING OF REAL NUMBERS. IN AN EQUATION, THE CALCULATION WILL PRODUCE A RECORD UNDER •name□.

NOTE: THE RANGE OF ARGUMENT'S VALUES IS OFFSET BY − 1 (0 − N-1) (SEE FFT). IF KERNEL (K = 0) IS SELECTED, THE NUMBER OF POINTS, e, IS SPECIFIED; WITH USER KERNEL (K = 1) SELECTED, AN OFFSET MAY BE SPECIFIED BUT THE KERNEL (SPECIFIED AS b) DETERMINES THE LENGTH; f WILL SELECT EITHER 0-EXTEND 0 OR 1-CIRCULAR, WHERE THE DATA WRAPS AROUND THE INPUT RECORD DURING CALCULATION.

References: CNVINP CNVNPT CNVOFF CNVWDW CONVM

Command: CONVM **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE CONVOLUTION CALCULATION MODE

Syntax: CONVM[= M]

Comments: WHERE M IS THE MODE: 1 EXTEND 0, 2 CIRCULAR

IN THE DATA 6100, CONVOLUTION MAY BE PERFORMED ASSUMING A TRANSIENT OR A CONTINUOUS SIGNAL. IF TRANSIENT, THERE IS NO AMPLITUDE PRIOR TO t = 0 IN THE RECORDING; IF CONTINUOUS, IT IS ASSUMED THAT THERE IS AMPLITUDE PRIOR TO t = 0. EXTEND 0 PADS THE BEGINNING AND END OF THE RECORD WITH ZEROS WHERE CIRCULAR PADS THE AREA t < 0 WITH T-N/2 + t DATA AND PADS t > T WITH t0 + t DATA. THE EFFECT OF THESE MODES MAY BE OBSERVED BY SQUARE-CONVOLVING A DC VALUE

References: CONV CNVOFF CNVNPT CNVINP CNVWDW

Command: COPY **Category:** MATHEMATICS **Product:** 6100

Function: REPLACES PRIMARY TRACE DATA WITH A COPY OF THE SPECIFIED RECORD

Syntax: [•DRIVE□:][DR =]COPY(SR[,NC,N,M])

Comments: WHERE •DRIVE□: IS THE DISK DRIVE A: OR B:, DR IS THE DESTINATION RECORD NAME, SR IS THE SOURCE RECORD NAME, NC IS THE NUMBER OF COPIES TO AUTOCOPY, N IS THE COPY COUNTER AND M IS THE MODE, STOP AT N OR RESTART.

NOTE: [DR =]COPY(SR) USED ALONE WILL REPLACE THE DATA IN THE PRIMARY TRACE IN ITS ENTIRETY. THE COPY COMMAND, IF USED IN AN INTERNAL PROGRAM, WILL AUTOCOPY TO THE SYSTEM MEMORY OR TO A DISK DRIVE. NOTE THE AMOUNT OF SPACE IN MEMORY OR ON DISK PRIOR TO USING THIS COMMAND.

References: Assign STORE

Command: CORINP **Category:** MATHEMATICS Product: 6100

Function: SELECTS CORRELATION MODE, AUTO OR CROSS CORRELATION

Syntax: CORINP[= M]

Comments: WHERE M IS THE MODE: 1 AUTO, 2 CROSS

AUTO-CORRELATION OPERATES ON THE DATA IN THE PRIMARY TRACE, WHEREAS CROSS-CORRELATION OPERATES ON THE PRIMARY TRACE AS INPUT AND THE SECONDARY TRACE AS OUTPUT (IN TERMS OF SYSTEM RESPONSE). THE ACTUAL OUTPUT OF THE FUNCTION IS RETURNED TO THE UPPER TRACE IF NO DESTINATION DEVICE/VARIABLE IS SELECTED.

NOTE: CORELLATION OUTPUT IS EVALUATED FOR POSITIVE OFFSET BY DEFAULT; SEE THE COROFF COMMAND TO VIEW OUTPUT PRIOR TO TAU <0.

References: COROFF CORLEN CORRM

Command: CORLEN **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS EVALUATION LENGTH FOR CORRELATION

Syntax: CORLEN[= L]

Comments: WHERE L IS THE EVALUATION LENGTH IN THE RANGE 1 – 30000

IN THE CASE OF AUTO-CORRELATION, WHERE PERIODICITY IS TO BE DETECTED AND MEASURED, THE EVALUATION LENGTH MAY BE SAID TO BAND-LIMIT THE CORRELATION IN THAT, IF THE LENGTH IS LESS THAN THE NUMBER OF POINTS PER CYCLE OF THE FREQUENCY TO BE DETECTED, LESS THAN A FULL CYCLE WILL BE SEEN. IN CROSS CORRELATION, WHERE DELAY IS TO BE MEASURED, SAY, FOR A TRANSIENT ECHO, THE EVALUATION LENGTH MAY CAUSE THE CROSS-CORELATION TO END BEFORE THE ECHO

References: CORINP CORRM COROFF

Command: COROFF **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS OFFSET FOR CORRELATION OUTPUT

Syntax: COROFF[= N]

Comments: WHERE N IS THE NUMBER OF POINTS TO OFFSET IN THE RANGE: – 32768 – 32767

NOTE: THE COROFF COMMAND MAY BE USED TO "MOVE" THE TAU = 0 POINT TO THE RIGHT IF THE PEAK IS AT TAU = 0. IF THIS IS DONE, THE X VALUE AT THE PEAK WILL CONTAIN THE OFFSET; THEREFORE, WHEN USING COROFF AND MEASURING DELAY, BE SURE TO ADD: (OFFSET X SAMPLE PERIOD) TO THE MEASURED DELAY.

References: CORLEN CORRM CORINP

Command: CORR **Category:** MATHEMATICS **Product:** 6100

Function: PERFORMS AUTO/CROSS CORRELATION ON PRIMARY/PRIMARY-SECONDARY TRACE AND CREATES RECORD OR RETURNS DATA TO COMMAND DEVICE

Syntax: CORR or = name> = CORR(a,b,c,d,e,f)

Comments: WHERE <name> IS THE DESTINATION RECORD, a IS THE AUTO/CROSS CORRELATION SOURCE (INPUT CHANNEL), b IS THE CROSS CORRELATION SOURCE (OUTPUT CHANNEL), c IS THE CORRELATION TYPE, d IS THE OFFSET, e IS THE EVALUATION LENGTH AND f IS THE MODE. THE ARGUMENT'S VALUES ARE OFFSET BY – 1, SEE FFT. CORR SENT ALONE WILL CALCULATE AND RETURN TO THE COMMAND DEVICE A STRING OF REAL NUMBERS. IN AN EQUATION, THE CALCULATION WILL PRODUCE A RECORD UNDER <name>.
NOTE: 1) IF THE OFFSET IS USED, ITS TIME VALUE MUST BE SUBTRACTED FROM THE X VALUE OF THE PEAK (DELAY VALUE), (SEE COROFF). 2) USING CIRCULAR MODE MAY CAUSE SOME DISTORTION OF THE OUTPUT WAVEFORM IF THE INPUT WAVEFORM IS A NON-INTEGER NUMBER OF CYCLES (NON-TRANSIENT).

References: CORINP TRCSRC COROFF CORLEN CORRM

Command: CORRM **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE CALCULATION MODE OF THE CORRELATION FUNCTION

Syntax: CORRM[= M]

Comments: WHERE M IS THE MODE: 1 EXTEND 0, 2 CIRCULAR

NOTE: FOR A NON-INTEGER NUMBER OF CYCLES, THE CIRCULAR CALCULATION MODE MAY INTRODUCE UNPREDICTABLE COMPONENTS INTO THE CORRELATION OUTPUT. SEE THE CONVM COMMAND FOR EXPLANATION.

References: COROFF CORLEN CORINP

Command: CPKPK **Category:** INPUT PARAMETER **Product:** 640

Function: SETS PEAK TO PEAK VALUE OF WAVEFORM FOR THERMAL TAIL COMPENSATION

Syntax: CPKPK(n) = 0.0V TO 6.0V

Comments: WHERE n IS THE SELECTED INPUT CHANNEL FORM 1 TO 64. SEE ALSO 640 MANUAL.

References: CMAX CMODE INPCAL

Command: CR: **Category:** MODIFIER **Product:** 6100

Function: PREFIX, FUNCTIONS LIMIT SOURCE DATA TO THAT WITHIN CURSOR LIMITS

Syntax: CR: < COMMAND >

Comments: THE CR: MODIFIER PRECEDES A FUNCTION AND CAUSES THE FUNCTION TO IGNORE THE DATA OUTSIDE THE CURSOR. THE CURSOR DOES NOT HAVE TO BE ON FOR CR: TO OPERATE.

NOTE: FFTs WILL BE TRUNCATED TO THE NEXT LOWEST POWER-OF-TWO NUMBER OF TIME POINTS FROM THE CURSOR XSTART CO-ORDINATE; IF XSCL (X SCALE) IS SET TO 1/N THEN Nth POINTS ARE IGNORED; IF SET TO N, THE N INTERPOLATED (SIN(X)/X or LINEAR) POINTS WILL BE USED IN THE FUNCTION'S CALCULATIONS.

References: XSCL XSTART XDELTA XEND START END

Command: CROSS **Category:** MARKER PARAMETER **Product:** 6100

Function: ENABLES/DISABLES/SELECTS CROSSHAIR MARKER

Syntax: CROSS[= M]

Comments: WHERE M IS THE CROSSHAIR MODE: 1 OFF, 2 CENTER, 3 ORIGIN, 4 TRIGGER

CENTER MODE (IF AUTO-TRACK IS ON AND DISPLAY MODE IS SINGLE) WILL PERMIT THE YCROSS COMMAND TO RETURN THE CROSSHAIR INTERSECT Y VALUE. TRIGGER MODE WILL PERMIT YCROSS TO RETURN THE TRIGGER LEVEL VALUE ONLY.

NOTE: THIS WILL ONLY RETURN THE TRIGGER LEVEL; NOT THE ACTUAL DATA VALUE; THE HORIZONTAL LINE STAYS AT 0 FOR CENTER AND ORIGIN; AT TRIGGER FOR TRIGGER.

References: YCROSS MARK MARKER YTRACK XOFF YOFF

Command: CRS **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS TIME OF FIRST ZERO CROSSING AFTER TRIGGER (t = 0)

Syntax: [V =]CRS[(R)]

Comments: WHERE V MAY BE A DEVICE OR A VARIABLE NAME AND R IS A RECORD NAME. IF R IS OMITTED, CRS RETURNS THE CROSSING TIME FOR THE PRIMARY TRACE FOR DATA LOGGING, SER1: = CRS(BUF.A1) WILL SEND THE CROSSING TIME TO THE DTE PORT, SER1:

CRS RETURNS THE FIRST CROSSING, WHETHER POSITIVE OR NEGATIVE GOING.

NOTE: THE SIGNAL MUST CROSS ZERO; IF THERE IS AN OFFSET, USE BL: MODIFIER.

References: CRSP CRSN BL: MEAN BLEVEL CR:

Command: CURAVG **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: RETURNS THE NUMBER OF AVERAGES TAKEN BY THE PROC SUMMATION AVERAGE

Syntax: CURAVG[(T,C)]

Comments: RETURNS AN INTEGER VALUE REPRESENTING THE NUMBER OF AVERAGES ALREADY TAKEN BY THE PROC AVERAGER — THIS APPLIES TO SUMMATION AVERAGING ONLY. IF T,C (TIMEBASE AND CHANNEL) ARE OMITTED, RETURNS VALUE FOR CURRENT RECORD UPON REACHING THE DESIRED NUMBER OF AVERAGES. THE AVGM = 3 COMMAND MAY BE SENT TO STOP THE AVERAGER SO THAT THE DATA MAY BE EXTRACTED OR ANALYZED.

NOTE: IF THE APPLICATION REQUIRES THAT THE PROCESS STOP UPON REACHING THE SPECIFIED NUMBER OF AVERAGES, USE THE MATH FUNCTION AVEGM AND ITS AVERAGER.

References: AVGM AVEGM AVGCNT NAVG

Command: CURSOR **Category:** MARKER PARAMETER **Product:** 6100

Function: ENABLES/DISABLES DISPLAY OF CURSOR

Syntax: CURSOR[= M]

Comments: WHERE M IS THE MODE: 1 OFF, 2 ON

The CR: MODIFIER WILL STILL OPERATE RELATIVE TO THE CURSOR WHETHER THE CURSOR IS DISPLAYED OR NOT. THE CURSOR MAY BE ENABLED FOR MONITORING OR OPERATOR CONVENIENCE.

References: MARKER XSTART XDELTA XEND START END CR:

Command: Clear—CPY **Category:** FUNCTION PROCEDURE **Product:** 6100

Function: A PROCEDURE TO CLEAR THE AUTO-COPY COUNTER

Syntax: SCLR;KEY = 1044

Comments: CLEARS THE COPY COUNTER TO BEGIN ANOTHER SERIES OF RECORDS AFTER HAVING TRANSFERRED, SAVED, ANALYZED OR DISCARDED THE DATA SAVED BY THE PREVIOUS AUTO-COPY PROCEDURE. SCLR CALLS THE "CLR" MENU AND KEY = 1044 PUSHES THE FIELD 3 KEYPAIR. NOTE: FOR MINIMUM COPY DEAD-TIME (200-500 ms), DELETE ALL SYSTEM FILES; FOR MAXIMUM REPEATABILITY OF DEAD-TIME INTERVALS (APPROX. 400 ms) DO NOT DELETE THE EXISTING FILES

References: CLRSUM XFER COPY Autocopy

Command: DARM **Category:** INPUT PARAMETER *Product:* 6100

Function: FREEZES RECORDING AT END OF CURRENT RAW DATA RECORD

Syntax: COMMAND ONLY

Comments: THE DARM COMMAND WILL PREVENT ADDITIONAL RECORDING PAST THE END OF THE CURRENT RECORDING. IT IS ALSO DESIREABLE TO SEND DARM WHEN PREPARING OPERATIONS THAT WILL USE THE PROCESSOR; THE RE-RECORDING OF A BUFFER MAY OVER-WRITE VALUABLE DATA AND THE ARMING/TRIGGERING OPERATIONS TAKE PRIORITY OVER I/O OPERATIONS, TAKING MORE TIME FOR I/O OPERATIONS

References: QTMB QTRG AQUSRQ ARM HLDOFF

Command: DCNTR **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS THE NUMBER OF PASSES SAVED IN THE DISTRIBUTION RECORD

Syntax: DCNTR[= N]

Comments: WHERE N IS THE NUMBER OF PASSES SAVED TO THE DISTRIBUTION RECORD

NOTE: THIS COMMAND SHOULD BE USED AS A READ-ONLY COMMAND THOUGH IT COULD BE USED TO SET THE VALUE; A QUESTIONABLE ACTION SINCE THE CUMULATIVE VALUES IN THE DISTRIBUTION RECORD ASSUME A STARTING POINT OF ZERO PASSES.

References: DIST

Command: DDIR **Category:** DIRECTORY **Product:** 6100

Function: PUSHES DISK DIR KEY — PERFORMS THE SAME FUNCTION AS DIR

Syntax: DDIR

Comments: INCLUDED FOR COMPLETENESS ONLY, SEE DIR

References: DIR

Command: DEL **Category:** DIRECTORY **Product:** 6100

Function: DELETE SPECIFIED VARIABLE FROM SYSTEM MEMORY

Syntax: DEL <NAME>

Comments: WHERE <NAME> IS THE NAME OF A VARIABLE IN THE SYSTEM DIRECTORY.

References: FDEL DIR

Command: DELAY **Category:** TRIGGER PARAMETER **Product:** PLUG-IN

Function: SETS OR FINDS THE PRE- OR POST-TRIGGER DELAY

Syntax: DELAY[(T)][= d]

Comments: T MAY BE TIMEBASE 1 or 2 (A or B), AND d MAY BE ANY REAL DELAY UP TO THE PLUG-IN DEPENDENT LIMITS; THIS COMMAND TAKES FOR FORMS: 1) DELAY alone is a query and returns d for the current timebase (TMBSEL) 2) DELAY(T) is also a query and returns d for timebase T 3) DELAY = d sets the trigger delay for the current timebase (TMBSEL) 4) DELAY(T) = d sets the trigger delay for timebase T

NOTE: A NEGATIVE NUMBER IS PRE-TRIGGER DELAY

References: TMB TMBSEL DELAY NPTS PERSRC

Command: DIFF **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS THE DERIVATIVE OF THE SPECIFIED RECORD

Syntax: [V =]DIFF[(R)]

Comments: WHERE V IS A DEVICE NAME OR VARIABLE AND R IS A RECORD NAME

EXAMPLE: TO ASSIGN THE DERIVATIVE OF AN ARRAY CALLED X.AA TO THE VARIABLE D; D = DIFF(X.AA).

TO SEND THE DERIVATIVE ARRAY TO THE SERIAL PORT, SER1:; SER1: = DIFF(X.AA) IF V IS OMITTED, THE RESULTANT DERIVATIVE IS SENT TO THE COMMAND DEVICE.
References: INTG

Command: DIR **Category:** NAMED KEY **Product:** 6100

Function: PUSHES THE DIR KEY AND CALLS THE DIRECTORY MENU

Syntax: DIR

Comments: USING DIR WILL DISPLAY THE CURRENT DIRECTORY; USING DIR TWICE IN SUCCESSION WILL CAUSE THE DISK CONTROLS/PROGRAM FILE OPERATIONS MENU TO APPEAR IF A RECORD IS CREATED IN THE SYSTEM OR ON DISK, THE NAME WILL NOT APPEAR IN THE DIRECTORY UNTIL THE DIR KEY OR COMMAND IS RE-ISSUED

References: DIRVOL LDIR

Command: DIRVOL **Category:** DIRECTORY **Product:** 6100

Function: DEFINES THE CURRENT VOLUME FOR THE DIRECTORY DISPLAY OR LISTING

Syntax: DIRVOL[="<VOLUME>:"]

Comments: WHERE VOLUME IS THE CURRENT VOLUME FOR THE DIRECTORY;
SYSTEM A: or B:

NOTE: THE QUOTATION MARKS (DIRVOL="A:") ARE REQUIRED.

References: DIR DDIR

Command: DISARM **Category:** DIGITIZER CONTROL **Product:** PLUG-IN

Function: DISARMS THE DATA 6100 TO STOP RECORDING / MAY IMPROVE KEY RESPONSE

Syntax: DISARM

Comments: THIS COMMAND WILL PERFORM THE SAME ACTION AS THE DARM KEY OR COMMAND.

NOTE THAT KEYBOARD RESPONSE IS IMPROVED SINCE THE PROCESSOR IS FREED FROM RECORDING INTERRUPTS.

References: DARM ARM

Command: DISK **Category:** NAMED KEY **Product:** 681

Function: PUSHES THE 681 DISK KEY AND CALLS THE DISK MENU

Syntax: DISK

Comments: THE DISK MENU OFFERS AN OPERATOR THE OPTIONS OF FORMATTING THE CURRENT DRIVE OR BACKING-UP A: TO B:

NOTE: BACKUP COPIES MAY NOT BE MADE FROM BACKED-UP DISKS; THIS AFFORDS SOME ADDITIONAL SECURITY SINCE FILES MUST BE COPIED ONE-BY-ONE FROM A BACKUP.

References: DSKFMT BACKUP

Command: DISP **Category:** NAMED KEY **Product:** D6100

Function: PUSHES DISP KEY AND CALLS DISP MENU

Syntax: DISP

Comments: USED FOR OPERATOR SELECTION OF DISPLAYED TRACES AND TRACE SOURCES.

References: TRCSRC DSPM

Command: DIV **Category:** MATHEMATICS **Product:** 6100

Function: DIVIDES TWO SPECIFIED RECORDS

Syntax: [V =]DIV[(R1[,R2])]

Comments: WHERE V IS A DEVICE OR VARIABLE NAME AND R1, R2 ARE RECORD NAMES IF R2 IS OMITTED, R1 IS DIVIDED BY THE RECORD IN THE SECONDARY TRACE IF BOTH ARE OMMITTED, THE PRIMARY TRACE DATA IS DIVIDED BY THE SECONDARY TRACE DATA MAY OPERATE ON SCALAR, VECTOR OR MIXED VARIABLES RESLT = DIV(A,B) WILL DIVIDE A BY B AND PLACE THE RESULT IN THE VARIABLE RESLT
References: ADD SUB MUL

Command: DLEN **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS/SETS THE DISTRIBUTION LENGTH

Syntax: DLEN[= N]

Comments: WHERE N IS THE LENGTH OF THE DISTRIBUTION IN BINS. NORMALLY, THE SPAN OF THE DISTRIBUTION X-AXIS IS THE FULL-SCALE RANGE OF THE SOURCE RECORD. THE AMPLITUDE RANGE OF EACH BIN, THEREFORE, IS THE FULL-SCALE RANGE DIVIDED BY THE DISTRIBUTION LENGTH; FOR EXAMPLE, IF A RECORD HAD A FULL-SCALE RANGE OF 102.410 VOLTS AND THE DISTRIBUTION SPAN AND CENTER WERE 1.00000 AND 0.00000 RESPECTIVELY, THEN A DLEN OF 512 BINS WOULD YIELD AN INCREMENT OF ABOUT 200 mV PER BIN; IN GENERAL, AN 8 BIT PLUG-IN SHOULD USE 256, 9 BIT 512 10 BIT 1024, 12 BIT 4096, 14 BIT 16,384; THE LIMIT IS 0-30,000 BINS

References: DSPAN DCNTR

Command: DLY **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE TIME FROM START-OR-RECORD TO THE FIRST 50% CROSSING

Syntax: [V =]DLY[(R)]

Comments: WHERE V IS A DEVICE OR VARIABLE AND R IS THE SOURCE RECORD

DLY DOES NOT TAKE PRE-TRIGGER NOR POST-TRIGGER INTO ACCOUNT NOR DOES IT REQUIRE ZERO-BASELINE TO BE DEFINED. DLY WILL RETURN THE FIRST CROSSING OF THE MIDPOINT OF THE RECORD IN EITHER DIRECTION

NOTE: X UNITS ARE THE SAME AS X UNITS FOR THE SOURCE RECORD

References: CRS CRSP CRSN

Command: DPLOT **Category:** PLOTTER PARAMETER **Product:** 682

Function: PLOTS ONLY THE DATA, DOES NOT PLOT AXIS

Syntax: DPLOT

Comments: THE DPLOT COMMAND ASSUMES AN HP-GL COMPATIBLE PLOTTER (ONE THAT RESPONDS TO "OI;" WITH A MODEL NUMBER) AND WILL IMMEDIATELY PLOT THE DATA VISIBLE ON SCREEN.

IF A SCALE OR GRID IS DESIRED, SEE THE PLOT COMMAND

NOTE: "OI;" IS THE HP-GL IDENTIFY COMMAND THAT THE PLOTTER RESPONDS TO WITH A MODEL NUMBER IF COMPATIBLE.

References: PLOT BPLOT PEND

Command: DRIVE **Category:** DISK OPERATIONS **Product:** 681

Function: SELECTS CURRENT DRIVE FOR FORMAT AND BACKUP COMMANDS

Syntax: DRIVE[=D]

Comments: WHERE D IS THE SELECTED DRIVE: 1 A:, 2 B:

NOTE: THE DRIVE SPECIFICATION MAY ALSO BE INCLUDED AS PART OF THE OPERATION AS IN DSKFMT(2) — FORMATS DISK IN DRIVE B:

References: DSKFMT BACKUP

Command: DSAVE **Category:** DISK OPERATIONS **Product:** 681

Function: PUSHES DISK SAVE KEY — INCLUDED FOR COMPLETENESS ONLY

Syntax: DSAVE

Comments: THE NET EFFECT OF THIS COMMAND IS ONLY THE PRESSING OF THE 681 SAVE KEY — SINCE VERSION 4.00, NEW AND FASTER WAYS OF DISK OPERATION HAVE MADE THIS OPERATION OBSOLETE BUT IT IS INCLUDED HERE FOR COMPLETENESS

USE THE Save—file PROCEDURE TO SAVE VARIABLES

References: Save—file DXFER Rcal—file SAVE RECALL STORE LOAD

Command: DSKFMT **Category:** DISK OPERATIONS **Product:** 681

Function: FORMATS DISK IN DEFAULT DRIVE

Syntax: DSKFMT[<DRIVE>:]

Comments: WHERE <DRIVE>: IS A: OR B: IF <DRIVE>: IS OMITTED, THE DEFAULT DRIVE'S DISK IS FORMATTED

NOTE: AS USUAL, BE SURE THAT THE DISK TO BE FORMATTED IS A SCRATCH OR NEW DISK AND THAT VALUABLE DATA, PROGRAMS OR CONTROLS DO NOT RESIDE ON IT.

THE DATA 6100 DOES NO COURTESY CHECKING BEFORE DELETION OR FORMATTING.

Command: DSPAN **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE AMPLITUDE SPAN FOR THE DISTRIBUTION FUNCTION

Syntax: DSPAN[= R]

Comments: WHERE R IS THE AMPLITUDE SPAN EXPRERSSED AS A RATIO OF FULL SCALE (AS SEEN IN THE EXPANDED DIRECTORY OR RECORD DESCRIPTOR)

FOR EXAMPLE, IF A RECORD WITH A FULL-SCALE OF 1 VOLT IS THE SOURCE DATA FOR THE DISTRIBUTION, THEN A SPAN OF 0.50000 WILL CAUSE THE DISTRIBUTION TO DISPLAY THE RANGE -0.2500 TO 0.2500 ON THE X AXIS.

References: DCNTR DLEN

Command: DSPL **Category:** MATHEMATICS **Product:** 6100

Function: DISPLAYS SPECIFIED VARIABLE OR FUNCTION ON TOP LINE OF DISPLAY

Syntax: DSPL(S)

Comments: WHERE S MAY BE A VARIABLE OR A FUNCTION WHOSE VALUE IS TO BE DISPLAYED FROM A KEYSTROKE PROGRAM.

EXAMPLE: 10 DSPL(CR:RMS(BUF.A1)) WILL DISPLAY THE RMS VALUE OF THE DATA IN BUF.A1 WITHIN CURSOR LIMITS.

NOTE: DSPL MUST BE USED IN KEYSTROKE PROGRAMS TO DISPLAY A VARIABLE ON THE TOP LINE; EX.: 10 DSPL(RMS(A)), NOT 10 RMS(A) — NEVER USED FROM REMOTE.

References: TOPLIN

Command: DSPM **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS THE NUMBER AND MODE OF TRACES FOR DISPLAY

Syntax: DSPM[= M]

Comments: WHERE M IS THE MODE: 1 SINGLE, 2 2 SEPR, 3 2 OVLY, 4 4 SEPR, 5 4 OVLY

NOTE: WHEN IN 4 TRACE MODES, THE PRIMARY TRACE MAY BE CHANGED BY THE TRACE LABEL FIELD USING THE DISP KEY; BE CAREFUL WHEN AN OPERATOR IS PERMITTED ACCESS TO THE KEYBOARD PRIOR TO A CALCULATION.

References: TRACE TRCSRC PTRACE STRACE

Command: DSTD **Category:** MATHEMATICS **Product:** 6100

Function: PERFORMS DISTRIBUTION OF THE SPECIFIED RECORD AND RETURNS DATA TO COMMAND DEVICE OR CREATES RECORD

Syntax: DSTD or <name> = DSTD(a,b,c,d,e,f)

Comments: a IS THE SOURCE RECORD, b IS NOT USED, c IS THE # BINS, d IS NOT USED, e IS THE VALUE OF THE CENTER BIN, f IS THE SPAN OF DISTRIBUTION. DSTD SENT ALONE WILL CALCULATE AND RETURN THE DISTRIBUTION TO THE COMMAND DEVICE AS A STRING OF REAL NUMBERS. IN AN EQUATION, THE CALCULATION WILL PRODUCE A RECORD UNDER <name>.

EXAMPLE: DS5 = DSTD(BUF.A1,,512,0,609.3E-3,937.5E-3)

NOTE: NO MODIFIERS MAY BE USED; IF A DISTRIBUTION OF A PORTION OF A TRACE IS NEEDED, MAKE A COPY OF THE PORTION USING CR: OR TR: <NAME> = <SOURCE> THEN TAKE THE DISTRIBUTION OF THE COPY DSTD(<NAME>).

References: DSPAN DCNTR

Command: DUMP **Category:** CONTROLS **Product:** D6100

Function: LISTS ALL CONTROLS PARAMETERS, THEIR SUBSCRIPTS AND THEIR VALUES

Syntax: DUMP

Comments: A USEFUL COMMAND FOR SET-UP OR REFERENCE, DUMP WILL RETURN MOST OF THE D6100 PARAMETERS AND THEIR STATUS. EACH PARAMETER IS SENT ON A LINE AND THE NUMBER OF RETURNED LINES DEPENDS UPON THE EQUIPMENT INSTALLED

Command: DUPLEX **Category:** RS-232 PARAMETER **Product:** 682

Function: SELECTS THE DUPLEX MODE FOR THE SPECIFIED PORT

Syntax: DUPLEX[(P)][= M]

Comments: WHERE P IS THE PORT NUMBER AND M IS THE MODE: 1 HALF, 2 FULL AND P MAY BE: 1 SER0:, 2 SER1:

NOTE: OMISSION OF THE PORT NUMBER WILL CAUSE THE DUPLEX COMMAND TO CHANGE THE DUPLEX MODE FOR THE CURRENT PORT WHICH MAY OR MAY NOT BE THE COMMAND DEVICE; AVOID THIS BY EITHER SPECIFYING THE PORT OR BY SENDING THE SERSEL COMMAND.

References: SERSEL BAUD HNDSHK STOPB PARITY

Command: DUTY **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE DUTY CYCLE OF THE SIGNAL IN THE SPECIFIED RECORD

Syntax: [V =]DUTY[(R)]

Comments: WHERE V IS A DEVICE OR VARIABLE AND R IS THE RECORD NAME FOR SOURCE DATA.

THE FIRST THREE BASELINE CROSSINGS ARE EXAMINED AND THE PERCENTAGE OF TIME FROM FIRST TO SECOND VS FIRST TO THIRD IS CALCULATED; DUTY WILL OPERATE ONLY ON THE ASSUMPTION OF POSITIVE LOGIC — THREE CROSSINGS ARE NEEDED.

NOTE: IF THE SIGNAL IS OFFSET ABOVE OR BELOW ZERO, THE BL: MODIFIER MUST USED. IF THE DUTY CYCLE OF A BURST IS NEEDED, USE CR: OR TR:

References: MEAN BL: TR: CR:

Command: DXFER **Category:** DISK OPERATIONS **Product:** 681

Function: PUSHES THE DISK DRIVE XFER KEY AND CALLS XFER MENU

Syntax: DXFER

Comments: THIS COMMAND WILL DISPLAY THE TRANSFER MENU; THIS MENU IS AN ALL-PURPOSE, MANUAL TRANSFER CONTROL THAT WILL ENABLE TRANSFER OF DATA TO ANY DISK OR PORT FROM, OR TO, THE SYSTEM — IT IS AN OPERATOR CONVENIENCE BUT NOT AS EASY TO CONTROL FROM REMOTE. FOR REMOTE TRANSFER OF DATA, SEE Save—file Recl—file Trans—data

Command: Desc—data **Category:** DIRECTORY **Product:** 6100

Function: PROCEDURE TO OBTAIN DATA DESCRIPTOR FOR NUMERIC ARRAY

Syntax: <VARIABLE[.VAR]>?

Comments: RETURNS A NINE-FIELD DESCRIPTOR CONTAINING THE: NAME,TYPE,LENGTH,Y UNITS,X UNITS,X OFFSET,X PER POINT,Y OFFSET,Y FULL-SCALE

EXAMPLE: BUF.A1? RETURNS: BUF.A1 @W 512 V S 0 5E-5 0 10.24 NOTE: SEE TEXT UNDER "DATA TRANSFERS" IF BUF.A1 WERE A FLOATING-POINT ARRAY OF 512 POINTS USING VOLTS AND SECONDS AS UNITS, NO X OR Y OFFSETS, A SAMPLE PERIOD OF 50 μS, 5V INPUT SENS. RANGE

References: FORMAT

Command: END **Category:** CO-ORDINATE VALUE **Product:** 6100

Function: RETURNS X CO-ORDINATE OF THE LAST POINT IN THE SPECIFIED RECORD

Syntax: [D =]END[(T)]

Comments: IF, FOR EXAMPLE, THE FREQUENCY-PER-BIN OF AN FFT MUST BE KNOWN, THE END COMMAND COULD BE USED TO CALCULATE THIS. D IS THE DESTINATION DEVICE OR VARIABLE AND T IS THE TRACE NUMBER BB = END(MAGCA1); N = NPTS; N = N/2; FPB = BB/N — FPB IS THE BASEBAND (TOTAL) FRE- QUENCY DIVIDED BY N, THE NUMBER OF POINTS, OVER 2 (THE MAG FFT IS HALF THE LENGTH OF THE SOURCE TIME HISTORY

THE END COMMAND RETURNS THE WIDTH OF THE SPECIFIED RECORD (OR PRIMARY TRACE)

References: XSTART YEND YDELTA STRT Desc—data XEND XDELTA

Command: ENGY **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE ENERGY OR Y ^ 2X FOR THE SPECIFIED RECORD

Syntax: [V =]ENGY[(R)]

Comments: WHERE V IS A VARIABLE NAME AND R IS THE SOURCE RECORD; IF V IS OMITTED, THEN THE ENERGY IS RETURNED TO THE COMMAND DEVICE, IF R IS OMITTED, THEN THE SOURCE DATA IS THE PRIMARY TRACE

USE FORMAT(PORT#) = 3 TO OBTAIN THE UNITS Y ^ 2X:

EXAMPLE: ENGY(A) – RETURNS 100V ^ 2S IF "A" IS A RECORD OF 1 VDC AT 100 POINTS; 1 SECOND PER POINT

References: AREA INTG

Command: EOIOUT **Category:** GPIB PARAMETER **Product:** 682

Function: ENABLES/DISABLES THE ASSERTION OF THE END-OR-IDENTIFY GPIB LINE

Syntax: EOIOUT[= S]

Comments: WHERE S IS THE STATUS OF THE EOI LINE ASSERTION AT EOM (END-OF-MESSAGE): 1 OFF, 2 ON.

NOTE: MOST CONTROLLERS WILL RECOGNIZE THE EOI LINE AS THE END OF A STATEMENT OR MESSAGE...IF THERE IS ANY DOUBT AS TO WHETHER YOUR CONTROLLER RECOGNIZES THIS LINE, ASK YOUR CONTROLLER SUPPORT PEOPLE (IF ANY) OR READ YOUR CONTROLLER MANUAL...IF YOU WISH TO TERMINATE ON OTHER THAN EOI, THE LINEND(3) AND LINDLM(3) COMMANDS DEFINE GPIB TERMINATING CHARACTERS.

References: LINEND LINDLM

Command: ERRM **Category:** I/O PARAMETER **Product:** 682

Function: ENABLES/DISABLES/SPECIFIES ERROR LOGGING MODE AND DEVICE

Syntax: ERRM[= M]

Comments: WHERE M IS THE MODE: 1 IMMEDIATE, 2 ON REQUEST, 3 LOGGED

A MOST USEFUL COMMAND, ERRM PERMITS SYSTEM EVENTS (CALLED ERRORS TO PERMIT THIS FUNCTION) TO BE LOGGED TO A PRINTER, MODEM OR OTHER DEVICE INCLUDING A COMPUTER/CONTROLLER. AVERAGE-DONE, INTERFACE CLEARS AND OTHER ERRORS MAY BE LOGGED TO THE LOG DEVICE (LOGDEV). SEE LOGDEV COMMAND.

References: LOGDEV ERROR ERRSRQ CLRERR SRQ KEYSRQ KEY AQUSRQ

Command: ERROR **Category:** I/O PARAMETER **Product:** 682

Function: RETURNS OLDEST ERROR CODE FOR THE 15 ELEMENT FIFO ERROR STACK

Syntax: ERROR

Comments: THIS IS ANOTHER USEFUL COMMAND WHEN SEVERAL ERRORS ARE EITHER EXPECTED OR THE SYSTEM IS TOO BUSY TO PROCESS ERRORS IN REAL TIME

EXAMPLE: A KEY IS PRESSED THAT ATTEMPTS TO MEASURE FREQUENCY WITHOUT A BASELINE REFERENCE IF THE SIGNAL RIDES ABOVE ZERO VOLTS: AFTER SENDING ERRSRQ = 2 (SEE ERRSRQ), EACH ERROR WILL GENERATE AN SRQ THAT MAY BE HANDLED BY SIMPLY READING ONE TO FIFTEEN ERRORS FROM THE STACK AND STORING THEM UNTIL PROCESSING CAN BE HANDLED (ALSO, THE ERRM COMMAND CAN LOG THE ERRORS TO THE LOGDEV)

References: LOGDEV ERRM ERRSRQ CLRERR

Command: ERRSRQ **Category:** GPIB PARAMETER **Product:** 682

Function: ENABLES/DISABLES THE ERROR SRQ

Syntax: ERRSRQ[= S]

Comments: WHERE S IS THE STATUS: 1 OFF, 2 ON

IF ERRSRQ IS ON, THEN AN SRQ IS ASSERTED AT EVERY ERROR AND STAYS ASSERTED UNTIL THE CLRERR COMMAND IS SENT OR THE ERROR STACK IS EMPTY.

References: AQUSRQ OUTSRQ SRQ CLRSRQ CLRKEY CLRERR KEY ERR

Command: EXECON **Category:** KEYSTROKE PROGRAM **Product:** 6100

Function: SPECIFIES HOW AN INTERNAL PROGRAM WILL BE RUN

Syntax: EXECON[= M]

Comments: WHERE M IS THE MODE: 1 EXECUTE ON RUN/STOP, 2 EXECUTE ON ACQUISITION COMPLETE, 3 EXECUTE ON CHANGE OF CURSOR POSITION — MODE 1 IS IDEAL FOR OPERATING ON QUALIFIED DATA, 2 FOR SINGLE-SHOT OF DATA LOGGING. EXECON = 3 IS IDEAL FOR LOGGING OPERATOR/REMOTE CURSOR MOVEMENT WHILE RECORDING SIGNAL PARAMETERS WITH RESPECT TO THE CURSOR (EXECON = 3).

TRY THIS WITH A 10 SER0: = CR:ENGY STATEMENT WHILE USING A TERMINAL AND MOVING THE CURSOR.

References: CR: XSTART RUN PROG PGMMOD RUNP PGMST

Command: EXPAND **Category:** DIRECTORY **Product:** 6100

Function: DISPLAYS INDIVIDUAL VARIABLE PARAMETERS IN SYSTEM DIRECTORY

Syntax: EXPAND[= M]

Comments: WHERE M IS THE MODE: 1 NORMAL, 2 EXPANDED

TO MANIPULATE THE ARROW IN THE DIRECTORY (EXPAND = 1) OR THE VARIABLE NAME (EXPAND = 2) USE THE KEY = 1001 (UP-ARROW) OR KEY = 1002 (DOWN-ARROW)

References: DIR DDIR Desc—data

Command: EXPCLR **Category:** PROCESS PARAMETER **Product:** 6100

Function: CLEARS THE PROC EXPONENTIAL AVERAGER

Syntax: EXPCLR

Comments: THIS COMMAND WILL RESET THE DATA IN THE EXP.XX RECORD TO ZERO.

NOTE: ONLY THE EXPONENTIAL AVERAGER FOR THE TIMEBASE CHANNEL SELECTED BY TMBSEL AND INPSEL WILL BE CLEARED.

References: TMBSEL INPSEL

Command: EXPD **Category:** MATHEMATICS **Product:** 6100

Function: PERFORMS EXPONENTIAL DECAY AVERAGE AND CREATES RECORD OR RETURNS DATA TO COMMAND DEVICE

Syntax: EXPD or <name> = EXPD(a,b,c,d,e)

Comments: a IS THE NAME OF THE SOURCE RECORD, b IS NAME OF A TEMPORARY BUFFER USED IN CALCULATION, c IS NOT USED, d IS # SWEEPS SELECTED, e IS # SWEEPS COMPLETED.

References: SAVG VMAX VMIN

Command: EXPM **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: ENABLES/DISABLES EXPONENTIAL AVERAGING (PROC)

Syntax: EXPM[(T,C)][= S]

Comments: WHERE T AND C ARE TIMEBASE AND CHANNEL AND S IS THE STATUS: 1 OFF, 2 ON, 3 HOLD

A HOLD WILL STOP THE PROCESS BUT SAVE THE BUFFER CONTENTS FOR ANALYSIS OR TRANSFER

EXPM(2,1) = 3 WILL CAUSE THE BUFFER EXP.B1 TO STOP AVERAGING BUT TO HOLD THE CURRENT AVERAGED DATA

References: AVGM EXPWGT EXPCLR

Command: EXPWGT **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: SELECTS WEIGHT FOR EXPONENTIAL AVERAGING

Syntax: EXPWGT[(T,C)][= N]

Comments: WHERE T,C ARE TIMEBASE AND CHANNEL AND N IS THE DENOMINATOR IN THE EXPONENTIAL WEIGHTING EXPRESSION, 1/N – IF T,C AND N ARE OMITTED, THE WEIGHT N IS RETURNED FOR THE CURRENT TIMEBASE AND CHANNEL

References: EXPM AVGM PROSEL PROC

Command: EXT **Category:** NAMED KEY PAIR **Product:** PLUG-IN

Function: PUSHES TMB-TRIG PAIR AND CALLS BNC OUT, CAL AND HOLDOFF MENUS

Syntax: EXT

Comments: PERMITS OPERATOR SELECTION OF THE BNC OUTPUT SIGNALS AS WELL AS THE CALIBRATION CYCLE AND TRIGGER HOLDOFF.

SYSTEMS PROGRAMMERS: THE CALIBRATION CYCLE WILL AFFECT TIME BETWEEN RECORDS AND THE BNC OUTPUT SIGNALS PROVIDE TIMING SIGNALS FOR SYNCHRONIZATION AND OTHER TASKS.

References: CALCYC INT INTEN TOPLIN OUT0 OUT1

Command: FALL **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE FALL TIME (90%-10%) WITHIN CURSOR LIMITS

Syntax: [V =]FALL[(R)]

Comments: WHERE V IS A VARIABLE AND R IS A RECORD

IF V IS OMITTED, THE FALL TIME IS SENT TO THE COMMAND DEVICE, IF R IS OMITTED THE FALL TIME IS GEVEN FOR THE DATA IN THE PRIMARY TRACE.

NOTE: THE CURSOR MUST DEFINE A SINGLE (FALLING) EDGE.
References: RISE CR: SC: SE: LMAX LMIN

Command: FASTIO **Category:** I/O PARAMETER **Product:** 682

Function: ENABLES DIRECT MEMORY ACCESS FOR DATA ARRAY TRANSFERS

Syntax: FASTIO[= S]

Comments: WHERE S IS THE STATUS: 1 OFF, 2 ON

WHEN FASTIO = ON, THERE IS NO PROCESSOR INVOLVEMENT — DATA IS DIRECTLY TRANSFERRED FROM MEMORY BY THE I/O CARD.

NOTE: THERE WILL BE NO PERCEIVABLE IMPROVEMENT IN SPEED IF A HIGH-SPEED DMA CONTROLLER IS NOT AVAILABLE — THIS CONTROLLER MUST BE ABLE TO TAKE AND SEND DATA AT 200-300 KB/S TO OBSERVE A DIFFERENCE (682-60 I/O ONLY).

References: FORMAT OMODE

Command: FFTM **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS FORWARD/INVERSE/NO FFT MODE FOR FFT CALCULATION

Syntax: FFTM[= M]

Comments: WHERE M IS THE MODE: 1 FORWARD, 2 INVERSE, 3 NO FFT

MODE 3 IS USED WHERE A TRANSFORMATION OF NUMERIC FORMATS ARE NEEDED, FOR EXAMPLE, IF A REAL, IMAG SPECTRUM MUST BE TRANSFORMED TO MAG, PHASE.

References: FFTINP FFTWDW FFTOUT

Command: FFTOUT **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE TYPE OF OUTPUT FOR FFT OPERATIONS

Syntax: FFTOUT[= T]

Comments: WHERE T IS THE TYPE OF FFT OUTPUT: 1 PWR SPECTRUM, 2 PSD, 3 MAG SPECTRUM, 4 MAG, 5 MAG COEFF, 6 REL LOG, 7 ABS LOG, 8 REAL, 9 COMPLEX, 10 POLAR, 11 PWRS, PHASE, 12 PSD, PHASE, 13 MAGS, PHASE, 14 MAG, PHASE, 15 MAGC, PHASE, 16 RLOG, PHASE, 17 ALOG, PHASE, 18 REAL, IMAG

OUTPUT TYPES 1,2,3,4,5,6,7,11,12,13,14,15,16 AND 17 HAVE A LENGTH OF Nt/2 WHERE THE OTHERS HAVE A LENGTH OF Nt, THOSE WITH TWO NAMES SEPARATED BY COMMAS USE TWO RECORDS FOR OUTPUT, AS IN REAL, IMAG OR MAG, PHASE

References: FFTINP FFTWDW FFTM

Command: FFTWDW **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE TYPE OF WINDOW USED IN THE FFT CALCUALTION

Syntax: FFTWDW[= W]

Comments: WHERE W IS THE WINDOW TYPE: 1 NONE, 2 HANNING, 3 HAMMING, 4 COSINE TAPER, 5 TRIANGLE, 6 SINE, 7 SINE ^ 3, 8 HANNING ^ 2

NOTE: A USER-SELECTABLE WINDOW MAY EASILY BE USED IF THE INPUT DATA IS FIRST MULTIPLIED BY A STORED FUNCTION (WEIGHT) ALREADY DEFINED. FOR EXAMPLE, IF THE USER WANTED TO WINDOW THE DATA BY A CERTAIN FUNCTION AS GENERATED BY A COMPUTER, THE SEQUENCE; <NAME> = <LIST-OF-DATA> WILL CAUSE THE SENT LIST TO APPEAR IN THE DIRECTORY UNDER <NAME>, AS IN A = 1,2,3,4,5.5,4,3,2,1

References: FFTINP FFTM FFTOUT

Command: FIELD **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS CURRENT FIELD FOR USER LABELS

Syntax: FIELD[= F]

Comments: WHERE F IS THE FIELD IN THE RANGE 1-5.

NORMALLY, WHEN USER LABELS ARE DEFINED, THE LABEL COMMAND WILL BE USED IN THE SUBSCRIPTED FORM; LABEL(ROW, FIELD) = "LABEL" (SEE LABEL AND ROW COMMANDS) HOWEVER, IF THE SAME FIELD MUST BE WRITTEN TO OFTEN, THEN FIELD WILL PERMIT A NEW CURRENT FIELD TO BE DEFINED.

References: UKEYM UKEY LABEL ROW KEY KEYSRQ CLRKEY

Command: FILTER **Category:** INPUT PARAMETER **Product:** 610/611

Function: SELECTS LOW PASS FILTER IN OR OUT

Syntax: FILTER[(C)][= S]

Comments: WHERE C IS THE CHANNEL, 1 OR 2, AND S IS THE STATUS: 1 OUT, 2 IN

THIS IS ONLY A NOISE FILTER AND NOT AN ANTI-ALIASING FILTER

Command: FLDDLM **Category:** I/O PARAMETER **Product:** 6100

Function: SELECTS THE FIELD DELIMITER FOR THE SPECIFIED PORT

Syntax: FLDDLM[(P)][= D]

Comments: WHERE P IS THE PORT: 1 SER0:, 2 SER1:, 3 GPIB: AND D IS THE DELIMITER: 1 FLD COL, 2 TAB, 3 SPACE, 4 CARRIAGE RETURN, 5 COMMA, 6 SEMI, 7 LF

NOTE: FLD COL (FIELD COLUMN) SHOULD BE USED IN SYSTEMS WHERE THERE MUST BE A FIXED NUMBER OF CHARACTERS IN THE RESPONSE; WITH A FLDLEN OF 10 SELECTED, THE FLD COL FIELD WILL ALWAYS OCCUPY AT LEAST THE FLDLEN NUMBER OF CHARACTERS AND TRAINLING SPACES WILL PAD THE REMAINDER OF THE FIELD.

References: FLDLEN LINLEN LINEND LINDLM PORT

Command: FLDLEN **Category:** I/O PARAMETER **Product:** 682

Function: SELECTS THE LENGTH FOR DATA FIELDS

Syntax: FLDLEN[(P)][= L]

Comments: WHERE P IS THE PORT NUMBER (SEE PORT), AND L IS THE FIELD LENGTH IN NUMERIC PRECISION; NOT THE NUMBER OF CHARACTERS. FOR EXAMPLE, IF A FIELD LENGTH OF 1 IS SELECTED, THE NUMBER −0.4886 WOULD BE SENT −0<FLDDLM> WHERE <FLDDLM> IS THE DELIMITER CHARACTER.

References: FLDDLM LINEND LINDLM PORT

Command: FLTR **Category:** NAMED KEY **Product:** PLUG-IN

Function: PUSHES FLTR KEY AND CALLS FILTER MENU

Syntax: FLTR

Comments: ALLOWS OPERATOR TO SELECT FILTER IN OR OUT

References: FILTER

Command: FLTSEL **Category:** INPUT PARAMETER **Product:** 640

Function: SELECTS 1 OF 26 INPUT FILTERS

Syntax: FLTSEL = 1 THROUGH 26

Comments: SEE 640 MANUAL

Command: FMTN **Category:** NON-VOLATILE MEMORY **Product:** 6100

Function: REFORMATS/CLEARS OUT NON-VOLATILE RAM

Syntax: FMTN

Comments: IMMEDIATE EXECUTION COMMAND — THIS DOES NO COURTESY INQUIRY BEFORE DELETING ENTIRE CONTENTS OF NON-V RAM. USE WITH CARE.

Command: FORMAT **Category:** I/O PARAMETER **Product:** 682

Function: SELECTS DATA OUTPUT FORMAT FOR I/O OPERATIONS

Syntax: FORMAT[(PORT)][= F]

Comments: WHERE F IS THE FORMAT: 1 SCI (– 2E-5, 22.6E12, ETC.), 2 SCI + UNITS (5E-5S, 2.08V, ETC), 3 ENG + UNITS (52 mV, 62785 μS, 220GA, ETC), 4 BINARY

NOTE: IF THE UNITS FUNCTION HAD BEEN USED, THE UNITS FOR THAT RECORD WILL BE SENT WITH THE DATA (ASSUMING FORMAT = 3 HAD BEEN SELECTED).

NOTE: THE BINARY FORMAT IS SENT IN BLOCK FORMAT, THAT IS, A BLOCK OF TWO'S COMPLEMENT (16 BIT) INTEGERS, REGARDLESS OF THE PRECISION OF THE PLUG-IN.

References: PORT

Command: FREE **Category:** DIRECTORY **Product:** 6100

Function: RETURNS THE AMOUNT OF FREE MEMORY IN THE CURRENT STORAGE DEVICE

Syntax: FREE

Comments: THIS IS A QUERY ONLY. IN 'SYSTEM' DIRECTORY, THE FREE COMMAND RETURNS THE AMOUNT OF TOTAL FREE MEMORY, IN A: OR B: DIRECTORIES, THE AMOUNT OF FREE DISK SPACE IS RETURNED.

NOTE:THE FREE COMMAND RETURNS THE NUMBER OF POINTS (2 BYTES EA.) AND NOT THE NUMBER OF BYTES.

References: CFREE

Command: FREQ **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS OR ASSIGNS MEASURED SIGNAL FREQUENCY FOR SPECIFIED RECORD

Syntax: [D =][M]FREQ[(R)]

Comments: WHERE D IS EITHER A DEVICE OR VARIABLE NAME DESTINATION FOR THE VALUE, M IS A MODIFIER OR MODIFIERS AND R IS THE SPECIFIED RECORD.

NOTE: THE FREQ FUNCTION ASSUMES AT LEAST THREE ZERO CROSSINGS AND ZERO AT ZERO VOLTS. IF AN OFFSET IS PRESENT THE BASELINE MODIFIER SHOULD BE USED.

EXAMPLE: SER1: = CR:BL:FREQ(TEST2) WILL RETURN THE FREQUENCY OF THE SIGNAL SEGMENT IN THE RECORD TEST2 BETWEEN CURSOR LIMITS AND BASELINE RELATIVE.

References: PER BL: CR: PERIOD COUPLE

Command: FRMEND **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: RETURNS THE TOTAL TIME RECORDED BY THE FRAME MEMORY

Syntax: FRMEND[T]

Comments: QUERY ONLY. USE IF THERE IS A DIFFERENCE BETWEEN FRAME AND BUFFER LENGTH. THE POSITION OF THE DECIMAL POINT IS A FUNCTION OF THE SAMPLE PERIOD. T IS AN INTEGER FOR THE TIMEBASE: 1 A, 2 B

NOTE: THE FRAME SHOULD NORMALLY BE TRANSPARENT TO THE USER. IN SOME CASES, IT IS POSSIBLE TO EXTRACT A BUFFER MANUALLY FROM THE FRAME, HOWEVER, THIS SHOULD BE AVOIDED EXCEPT WHEN DATA IS NON-REPEATABLE AND MEMORY SPACE IS TOO SHORT FOR A FULL BUFFER.

WARNING: IF T IS OUTSIDE THE RANGE 1-2, A RESET OCCURS.
References: FRMLEN FRMSTR

Command: FRMLEN **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: RETURNS TOTAL FRAME LENGTH IN SECONDS PLUS OFFSET

Syntax: FRMLEN[T]

Comments: THE FRAME IS EITHER SYSTEM OR PLUG-IN MEMORY THAT HAS SPACE LIMITS. IF, AS IN THE CASE OF THE 610/611, THE FRAME IS SYSTEM MEMORY, THEN THE VALUE RETURNED BY FRMLEN DEPENDS UPON THE NUMBER OF POINTS ASSIGNED TO THE BUFFERS. T IS AN INTEGER FOR THE TIMEBASE: 1 A, 2 B THE VALUE OF FRMLEN IS OFTEN REAL, AND THE DECIMAL POINT'S POSITION IS A FUNCTION OF THE TIMEBASE SAMPLE PERIOD

References: FRMEND FRMSTR

Command: FRMSTR **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: RETURNS FRAME START POINT FOR SPECIFIED FRAME

Syntax: FRMSTR[T]

Comments: WHERE T IS AN INTEGER VALUE FOR THE TIMEBASE: 1 A, OR 2 B.

WARNING: IF T IS OUTSIDE THE RANGE 1-2, A RESET WILL OCCUR.

THE NORMAL START POINT IS 0, IF DELAY IS USED, FRMSTR RETURNS A NON-ZERO VALUE RELATIVE TO ZERO AND EQUAL TO THE DELAY.

References: FRMEND FRMLEN

Command: FTYPE **Category:** FILE OPERATIONS **Product:** 6100

Function: SELECTS OR RETURNS THE TYPE OF FILE TO BE SAVED BY THE OPERATOR

Syntax: FTYPE[= T]

Comments: WHERE T IS THE TYPE: 1 PROGRAM, 2 CONTROLS, 3 DATASET

NOTE: A DATASET INCLUDES ALL NON-BUFFER FILES IN THE SYSTEM MEMORY AND IT WILL BE STORED, AND RECALLED, AS A SINGLE FILE. THE ORIGINAL NAMES, HOWEVER WILL BE RESTORED UPON RECALL TO SYSTEM

References: PER BL: CR: PERIOD COUPLE

Command: FRMEND **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: RETURNS THE TOTAL TIME RECORDED BY THE FRAME MEMORY

Syntax: FRMEND[T]

Comments: QUERY ONLY. USE IF THERE IS A DIFFERENCE BETWEEN FRAME AND BUFFER LENGTH. THE POSITION OF THE DECIMAL POINT IS A FUNCTION OF THE SAMPLE PERIOD. T IS AN INTEGER FOR THE TIMEBASE: 1 A, 2 B

NOTE: THE FRAME SHOULD NORMALLY BE TRANSPARENT TO THE USER. IN SOME CASES, IT IS POSSIBLE TO EXTRACT A BUFFER MANUALLY FROM THE FRAME, HOWEVER, THIS SHOULD BE AVOIDED EXCEPT WHEN DATA IS NON-REPEATABLE AND MEMORY SPACE IS TOO SHORT FOR A FULL BUFFER.

WARNING: IF T IS OUTSIDE THE RANGE 1-2, A RESET OCCURS.
References: FRMLEN FRMSTR

Command: FRMLEN **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: RETURNS TOTAL FRAME LENGTH IN SECONDS PLUS OFFSET

Syntax: FRMLEN[T]

Comments: THE FRAME IS EITHER SYSTEM OR PLUG-IN MEMORY THAT HAS SPACE LIMITS. IF, AS IN THE CASE OF THE 610/611, THE FRAME IS SYSTEM MEMORY, THEN THE VALUE RETURNED BY FRMLEN DEPENDS UPON THE NUMBER OF POINTS ASSIGNED TO THE BUFFERS. T IS AN INTEGER FOR THE TIMEBASE: 1 A, 2 B THE VALUE OF FRMLEN IS OFTEN REAL, AND THE DECIMAL POINT'S POSITION IS A FUNCTION OF THE TIMEBASE SAMPLE PERIOD

References: FRMEND FRMSTR

Command: FRMSTR **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: RETURNS FRAME START POINT FOR SPECIFIED FRAME

Syntax: FRMSTR[T]

Comments: WHERE T IS AN INTEGER VALUE FOR THE TIMEBASE: 1 A, OR 2 B.

WARNING: IF T IS OUTSIDE THE RANGE 1-2, A RESET WILL OCCUR.

THE NORMAL START POINT IS 0, IF DELAY IS USED, FRMSTR RETURNS A NON-ZERO VALUE RELATIVE TO ZERO AND EQUAL TO THE DELAY.

References: FRMEND FRMLEN

Command: FTYPE **Category:** FILE OPERATIONS **Product:** 6100

Function: SELECTS OR RETURNS THE TYPE OF FILE TO BE SAVED BY THE OPERATOR

Syntax: FTYPE[= T]

Comments: WHERE T IS THE TYPE: 1 PROGRAM, 2 CONTROLS, 3 DATASET

NOTE: A DATASET INCLUDES ALL NON-BUFFER FILES IN THE SYSTEM MEMORY AND IT WILL BE STORED, AND RECALLED, AS A SINGLE FILE. THE ORIGINAL NAMES, HOWEVER WILL BE RESTORED UPON RECALL TO SYSTEM

References: SAVE RECALL

Command: GETRIG **Category:** GPIB PARAMETER **Product:** 682

Function: SELECTS ACTION PERFORMED BY GPIB GROUP-EXECUTE-TRIGGER

Syntax: GETRIG[= M]

Comments: WHERE M IS THE MODE OF OPERATION: 1 OFF, 2 ARM, 3 TRIGGER, 4 ARM& TRIG.

NOTE: THERE IS A DELAY FROM THE GROUP-EXECUTE-TRIGGER UNTIL THE SPECIFIED ACTION OF ABOUT 100-200 mS.

Command: GPIB **Category:** GPIB PARAMETER **Product:** 682

Function: CALLS GPIB MENU

Syntax: GPIB

Comments: PERMITS OPERATOR SELECTION OF GPIB PARAMETERS; BUS ADDRESS, GET MODE AND EOI STATUS

References: IO BUSADR EOIOUT

Command: GRID **Category:** MARKER PARAMETER **Product:** 6100

Function: ENABLES/DISABLES DISPLAY OF GRID (GRATICULE) MARKER

Syntax: GRID[= S]

Comments: WHERE S IS THE STATUS: 1 OFF, 2 ON

NOTE: WHEN THE X OR Y SCALING IS CHANGED, THE GRID VALUES ARE CHANGED (X/DIV, Y/DIV) BUT THE LABELING (MARKER = 4 DISPLAY VALUES) WILL NOT TRACK THE CHANGES UNTIL THE MARK COMMAND IS SENT, PUSHING THE MARK KEY AND RE-INITIALIZING THE VALUES

THE GRID'S VALUE IS 4 AS IN MARKER = 4, SEE MARKER COMMAND

References: MARK X Y XSCL YSCL MARKER

Command: HCYC **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE TIME BETWEEN FIRST PAIR OF ZERO-CROSSINGS

Syntax: [D =][M]HCYC[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE RECORD.

FOR EXAMPLE, ZZ = CR:BL:HCYC(BUF.A1) RETURNS THE TIME BETWEEN THE FIRST TWO CROSSINGS IN BUF.A1 RELATIVE TO THE BASELINE AND WITHIN CURSOR LIMITS TO THE VARIABLE ZZ

References: PER FREQ PLSW

Command: HLDOFF **Category:** TRIGGER PARAMETER **Product:** PLUG-IN

Function: RETURNS OR SELECTS THE TRIGGER HOLDOFF TIME

Syntax: HLDOFF[= H]

Comments: WHERE H IS AN INTEGER REPRESENTING THE HOLDOFF VALUE 1, NONE; 2, DISPLAY UPDATE ONLY; 3, 1S; 4, 2S; 5, 5S; 6, 10S; 7, 20S; 8, 50S; 9, INFINITE (SINGLE-SHOT), MUST BE RE-ARMED FOR EVERY NEW TRIGGER.

THIS IS A MUST FOR CERTAIN TRENDING OR WATERFALL OPERATIONS SINCE THE TIME-PER-RECORD IS MADE MORE REPEATABLE.

NOTE: ACCOUNT FOR RECORDING, DISPLAY, TOP-LINE AND OTHER DELAYS IN CALCULATING THE TOTAL HOLDOFF — EXPERIMENT! HLDOFF = 7 WILL CAUSE A 610 TO WAIT FOR 20 SECONDS BEFORE THE NEXT TRIGGER.

References: TRGSEL TRGM TRGLEV TRGSRC TOPLIN INT

Command: HNDSHK **Category:** RS-232 PARAMETER **Product:** 682

Function: ENABLES/DISABLES CTS/DTR HANDSHAKING FOR RS-232

Syntax: HNDSHK[P][= S]

Comments: WHERE P IS THE PORT AND S IS THE STATUS: 1 OFF, 2 ON. RS-232 INTERFACES DEFAULT TO A THREE-WIRE INTERFACE. THIS COMMAND MUST BE SENT BEFORE ANY HANDSHAKING WILL BE PERFORMED OR RECOGNIZED.

NOTE: NOTE THAT THE NUMBER OF THE PORT MUST BE REFERENCED IN HNDSHK; SER0: IS PORT 1 AND SER1: IS PORT 2, WHEN S = 1 HANDSHAKING IS OFF, WHEN S = 2 HANDSHAKING IS ON AND WILL NOT TRANSMIT WITHOUT + 10V ON PIN 20(SER0:) OR PIN 5(SER1:) EXAMPLE PORT = 2; HNDSHK = 2 ...or... HNDSHK(2) = 2

References: PORT CMDDEV

Command: INP **Category:** NAMED KEY **Product:** PLUG-IN

Function: PUSHES INPUT KEY AND DISPLAYS INPUT MENU ON SCREEN

Syntax: COMMAND ONLY

Comments: WITH THIS MENU DISPLAYED, THE KEY = N COMMAND CAN BE USED TO SELECT SOFT KEY OPTIONS OR THE OPERATOR CAN SELECT SOFT KEY OPTIONS FROM THE PANEL.

EXAMPLE: INP;KEY = 1002;KEY = 1017 INCREMENTS THE CHANNEL FIELD THROUGH THE OTHER CHANNEL(S) ENABLED BY THE BUF KEY OR REC COMMAND.

NOTE: NUMBER OF DEFAULT CHANNELS AND KEY-CODES MAY BE PLUG-IN DEPENDENT.

References: TMB KEY RECSEL INPSEL REC BUF

Command: INPCAL **Category:** INPUT PARAMETER **Product:** 640

Function: PUSHES INP/CAL KEY PAIR AND CALLS THERMAL TAIL COMPENSATION MENU

Syntax: INPCAL

Comments: SEE ALSO 640 MANUAL

References: CMAX CMODE CPKPK INPSET

Command: INPCON **Category:** INPUT PARAMETER **Product:** D1000

Function: SELECTS 620 MODE OF OPERATION WITH D1000 PRE-AMP

Syntax: INPCON[= S]

Comments: WHERE S IS THE STATUS: 1 620 ONLY, 2 620/D1000

IF THE OPTION 106 IS INSTALLED, THE COMMANDS SENT TO THE 620 WILL APPLY TO THE D1000 ALSO; THIS IS PARTICULARLY USEFUL FOR EXTENDED RANGES OF SENSITIVITY.

References: RANGE1 RANGE2 COUPL1 COUPL2

Command: INPIGN **Category:** I/O PARAMETER **Product:** 682

Function: FLAGS DATA 6100 TO IGNORE SPECIFIED CHARACTER(S)

Syntax: INPIGN[(P)][= C]

Comments: WHERE P IS THE PORT AND C IS THE CHARACTER OR CHARACTERS: 1 LEN ONLY, 2 NULL, 3 LF, 4 CR, 5 COMMA, 6 SEMI

THIS COMMAND IS INCLUDED FOR COMPLETENESS ONLY AND IS NOT REQUIRED FOR NORMAL USE; IT MAY BE HELPFUL IF CERTAIN SYSTEMS SEND NULLS OR OTHER CHARACTERS WITH MESSAGES

References: LINDLM LINEND

Command: INPMOD **Category:** INPUT PARAMETER **Product:** 640

Function: SELECTS 1 OF 24 VARIOUS INPUT MODES

Syntax: INPMOD = 1 THROUGH 24

Comments: SEE 640 MANUAL

Command: INPOFF **Category:** INPUT PARAMETER **Product:** 630

Function: SPECIFIES HARDWARE OFFSET FOR USE WITH COMPANDING FEATURE

Syntax: INPOFF[= V]

Comments: WHERE V IS THE VOLTAGE VALUE TO BE USED AS OFFSET: EXAMPLE,

INPOFF = – 5.66 WILL CENTER THE HIGH-RESOLUTION BAND ABOUT THE – 5.66 VOLT LEVEL

Command: INPSEL **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: SELECTS THE CHANNEL FOR ENABLE/DISABLE IN BUFR OR PROC SELECTION

Syntax: INPSEL[= C]

Comments: WHERE C IS AN OPTIONAL INPUT SPECIFICATION; IF C IS OMITTED, THEN INPSEL RETURNS THE CURRENT INPUT SELECTION

INPSEL = 3;TMBSEL = 2;REC = 2 WILL ENABLE (TURN ON) THE BUFFER BUF.B3 (611)

References: TMBSEL REC RECSEL

Command: INPSET **Category:** INPUT PARAMETER **Product:** 640

Function: SELECTS INPUT SOURCE BY CHANNEL

Syntax: INPSET = 1 THROUGH 64

Comments: SEE 640 MANUAL

Command: INPUTM **Category:** INPUT PARAMETER **Product:** 610/611

Function: SELECTS SINGLE-ENDED OR DIFFERENTIAL INPUT MODE

Syntax: INPUTM[(C)][= M]

Comments: WHERE C IS THE CHANNEL NUMBER (NOT NEEDED BUT INCLUDED HERE FOR COMPLETENESS) AND M IS THE MODE: 1 SINGLE ENDED, 2 DIFFERENTIAL (610) 1 SINGLE ENDED, 2 DIFFERENTIAL 1-2, 3 DIFFERENTIAL 3-4 (611) IF M IS OMITTED, INPUTM RETURNS THE CURRENT MODE

Command: INT **Category:** NAMED KEY PAIR **Product:** 6100

Function: PUSHES THE DISP-MARK PAIR AND CALLS INTENSITY AND TOP LINE MENU

Syntax: INT

Comments: PERMITS AN OPERATOR TO MAKE INTENSITY AND TOP LINE SELECTIONS MANUALLY.

References: INTEN TOPLIN

Command: INTEN **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS OR DISABLES DISPLAY INTENSITY — CAN INCREASE THROUGHPUT

Syntax: INTEN[= I]

Comments: WHERE I IS THE INTENSITY: 1 OFF, 2-15 WHERE 2 IS DIM AND 15, BRIGHT

NOTE: HIGH-THROUGHPUT PROGRAMMERS; WHEN INTENSITY IS OFF, A THROUGHPUT GAIN OF ABOUT 5 mS PER RECORD CAN BE OBTAINED.

References: TOPLIN CALCYC TRGM

Command: INTG **Category:** MATHEMATICS **Product:** 6100

Function: INTEGRATES THE SPECIFIED RECORD

Syntax: [D =][M]INTG[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE RECORD

EXAMPLE: SER0: = CR:BL:INTG(XYZ) — INTEGRATES THE RECORD XYZ USING THE BASELINE AS A ZERO REFERENCE AND INTEGRATING ONLY OVER THE CURSOR LIMITS

References: DIFF

Command: IO **Category:** NAMED KEY **Product:** 6100

Function: PUSHES OPT KEY AND CALLS I/O AND PLOTTER MENUS

Syntax: IO

Comments: PERMITS OPERATOR SELECTION OF I/O AND PLOTTER PARAMETERS. THIS COMMAND IS DUPLICATED BY THE "OPT" COMMAND.

References: RS232 GPIB

Command: KAVG **Category:** MATHEMATICS **Product:** 6100

Function:

Syntax: KAVG

Comments: IF, DURING AN EDITING SESSION, THE KEY MUST BE PRESSED VIA REMOTE, KAVG WILL CAUSE THE CURRENT AVERAGE PARAMETERS TO BE WRITTEN AS A PROGRAM LINE. DURING IMMEDIATE OPERATION, THE COMMAND HAS NO EFFECT ON THE DATA THOUGH A FUNCTION LINE WILL BE WRITTEN AT THE TOP OF THE SCREEN.

References: AVG PROC LIST

Command: KCONV **Category:** MATHEMATICS **Product:** 6100

Function: PERFORMS IMMEDIATE CONVOLUTION AND ASSIGNS NAME TO DATA IN SYSTEM

Syntax: KCONV

Comments: COMMAND ONLY, NO SUBSCRIPT

WILL OPERATE ON DATA IN THE PRIMARY TRACE USING THE CURRENT CONV PARAMETERS AS SELECTED BY THE CONV PARAMETER COMMANDS OR MENU

References: CNVINP CONVM CNVNPT

Command: KCORR **Category:** MATHEMATICS **Product:** 6100

Function: PERFORMS CORRELATION AND ASSIGNS DEFAULT NAME TO DATA IN SYSTEM

Syntax: KCORR

Comments: COMMAND ONLY, NO SUBSCRIPT — EQUIVALENT TO PRESSING CORR KEY

KCORR WILL OPERATE USING THE CURRENT PARAMETERS AS SELECTED IN THE CORR MENU

References: CORR CORINP CORLEN COROFF

Command: KDST **Category:** MATHEMATICS **Product:** 6100

Function: PERFORMS DISTRIBUTION USING CURRENT PARAMETERS AND ASSIGNS NAME

Syntax: KDST

Comments: COMMAND ONLY, NO SUBSCRIPTS. PERFORMS DISTRIBUTION FUNCTION ON DATA IN PRIMARY TRACE AND ASSIGNS NAME TO RESULT IN SYSTEM MEMORY

EQUIVALENT TO PRESSING THE DIST KEY

References: DSTD CLRDST DCNTR DSPAN

Command: KEY **Category:** KEYBOARD **Product:** 6100

Function: ENTERS OR RETURNS A KEYPRESS CODE

Syntax: KEY[=C]

Comments: WHERE C IS THE KEYCODE

REFER TO THE KEYCODE MATRIX FOR KEYCODES

NOTE: THIS IS A USEFUL COMMAND FOR INTERRUPT-DRIVEN SYSTEMS WHERE AN OPERATOR WILL PRESS KEYS BASED UPON USER-DEFINED LABELS; SEE KEYSRQ, CLRKEY

References: KEYSRQ CLRKEY LABEL UKEY UKEYM

Command: KEYPAD **Category:** KEYBOARD **Product:** 6100

Function: ENABLES/DISABLES THE FUNCTION KEYPAD

Syntax: KEYPAD[=S]

Comments: WHERE S IS THE STATUS: 1 OFF, 2 ON

References: KEY CLRKEY KEYSRQ UKEY LABEL UKEYM

Command: KEYSRQ **Category:** GPIB PARAMETER Product: 682

Function: ENABLES/DISABLES SRQ GENERATION ON KEYPRESS

Syntax: KEYSRQ[=S]

Comments: WHERE S IS THE STATUS OF THE KEYSRQ GENERATOR: 1 OFF, 2 ON

IF KEYSRQ IS ON, THEN AN SRQ WILL BE GENRATED WHENEVER A KEY IS PRESSED. AT THAT POINT, THE KEY COMMAND WILL RETURN A CODE REPRESENTING THE KEY LAST PRESSED. SEE KEYCODE MATRIX

NOTE: THIS COMMAND CAN BE USED FOR INTERRUPT-DRIVEN SYSTEMS WITH USER-DEFINED LABELS FOR OPERATOR CONVENIENCE

References: SRQ AQUSRQ OUTSRQ ERRSRQ CLRSRQ CLRKEY CLRERR KEY ERR

Command: KFFT **Category:** MATHEMATICS **Product:** 6100

Function: PERFORMS FFT USING CURRENT PARAMETERS AND ASSIGNS NAME TO SYSTEM

Syntax: KFFT

Comments: KFFT PERFORMS THE SAME FUNCTION THAT FFT DOES IF PRESSED BY AN OPERATOR; THE CURRENT PARAMETERS ARE EXECUTED USING THE PRIMARY[SECONDARY] TRACES AS SOURCE DATA AND ASSIGNS DEFAULT NAMES TO THE RESULT(S)

References: FFTM FFTINP FFTWDW FFTOUT

Command: KUNIT **Category:** MATHEMATICS **Product:** 6100

Function: CONVERTS UNITS USING THE CURRENT PARAMETERS AND ASSIGNS NAME TO SYS

Syntax: KUNIT

Comments: COMMAND ONLY. EQUIVALENT TO PRESSING THE UNITS KEY, KUNIT WILL CONVERT USING THE CURRENT PARAMTERS SELECTED BY THE f/UNIT COMBINATION OR BY THE UNIT PARAMETER COMMANDS, XUNIT, YUNIT, XFSR, YFSR, ETC.

THE RESULT WILL BE A DEFAULT NAME AS IN UNITA1 FOR A CONVERSION OF BUF.A1

References: YFSR XFSR YUNIT XUNIT

Command: LABEL **Category:** DISPLAY PARAMETER **Product:** 6100

Function: PERMITS USER-DEFINED LABELS OF SOFT KEY FIELDS

Syntax: LABEL[(R[,F])][="<LABEL>"]

Comments: WHERE R IS THE ROW, 1 OR 2, F IS THE FIELD, 1-5 AND LABEL IS THE LABEL STRING.

THE STRING LENGTHS ARE LIMITED ONLY BY THE REMAINING SPACE ON SCREEN, HENCE, LONG STRINGS MAY BE ENTERED IN THE FIRST FIELDS. UKEYM MUST BE =2, OR ON, AND UKEY WILL DISPLAY THE LABELS.

References: UKEY UKEYM KEYSRQ KEY UKFLD UKROW

Command: LDIR **Category:** DIRECTORY **Product:** D6100

Function: SENDS NAMES OF ALL VARIABLES IN THE DIRECTORY TO THE COMMAND DEVICE

Syntax: LDIR

Comments: THE VARIABLE NAMES ARE SENT AS THEY APPEAR IN THE DIRECTORY INCLUDING THEIR TYPE AND NUMBER OF POINTS, IF VECTOR, OR THEIR VALUE IF SCALAR

References: DIR DIRVOL

Command: LINDLM **Category:** I/O PARAMETER **Product:** 682

Function: SELECTS THE COMMAND TERMINATOR (AS SENT BY COMPUTER/CMDDEV)

Syntax: LINDLM[(P)][= C]

Comments: WHERE P IS THE PORT; 1 SER0:, 2 SER1:, 3 GPIB: AND C IS THE CHARACTER; 1 LEN ONLY, 2 NULL, 3 LF, 4 CR, 5 COMMA, 6 SEMI

FOR MOST SYSTEMS, ONLY 2, 3, 4, 5 AND 6 WILL PERMIT COMMAND ENTRY.

NOTE: SEE LINLEN, PORT, SERSEL AND LINEND.

References: LINEND LINLEN PORT SERSEL BAUD PARITY STOPB PARITY BUSADR

Command: LINE **Category:** I/O PARAMETER **Product:** 682

Function: CALLS LINE (COMMAND AND MESSAGE) FORMAT MENU FOR I/O OPERATIONS

Syntax: LINE

Comments: DISPLAYS MENU FOR PORT, LINE LENGTH, LINE DELIMITER AND LINEND CHARACTERS

References: LINDLM LINLEN LINEND

Command: LINEND **Category:** I/O PARAMETER **Product:** 6100/682

Function: SELECTS CHARACTER(S) SENT BY 6100 AS MESSAGE TERMINATOR

Syntax: LINEND[(P)][= N]

Comments: P IS THE PORT, 1 (SER0:), 2(SER1:) OR 3(GPIB:); IF P IS OMITTED, N IS RETURNED FOR THE CURRENT PORT — VALUES FOR N: 1 NONE, 2 NULL, 3 SPACE, 4 LINE FEED (LF), 5 CARRIAGE RETURN (CR), 6 CR LF, 7 COMMA, 8 SEMICOLON IF N IS OMITTED, THEN LINEND RETURNS THE CURRENT VALUE THE LINE END CHARACTER IS INTERPRETED BY THE COMPUTER/CONTROLLER AS EOM (END-OF-MESSAGE) — YOU MUST UNDERSTAND WHAT YOUR MACHINE WANTS TO SEE AS EOM; CONSULT YOUR REFERENCE MANUAL OR CALL THE SUPPORT STAFF FOR THAT MACHINE

References: LINDLM MSGEND MSGDLM PROMPT EOIOUT FLDDLM

Command: LINLEN **Category:** I/O PARAMETER **Product:** 682

Function: SPECIFIES MAXIMUM LINE LENGTH FOR DATA 6100 MESSAGES

Syntax: LINLEN[(P)][L]

Comments: WHERE P IS THE PORT, 1, 2 OR 3 AND L IS THE LENGTH, FROM 0-32767. BEYOND 32767 THE IMPROPER VALUE "VARIABLE APPEARS AND IS NOT SUPPORTED.

IF EXPECTED MESSAGES WILL EXCEED THE DEVICE'S LINE LENGTH, USE FIELDS FOR NUMERICS (OR BINARY FORMAT). ERROR MESSAGES WILL NEVER EXCEED 80 CHARACTERS.

References: LINDLM LINEND PORT SERSEL BUSADR PARITY STOPB DUPLEX FLDDLM FLDLEN

Command: LIST **Category:** KEYSTROKE PROGRAM **Product:** D6100

Function: SENDS INTERNAL PROGRAM LISTING TO THE COMMAND DEVICE

Syntax: LIST

Comments: ANY PROGRAM LINES RESIDING IN THE EDITOR WILL BE SENT, LINE-BY-LINE TO THE CMDDEV PORT.

THIS COMMAND MAY BE USED TO SAVE PROGRAMS SINCE THE LINES MAY BE SENT BACK AS RECEIVED. IF A NUMBER, SPACE AND PROGRAM LINE IS SENT AND TERMINATED BY THE LINDLM CHARACTER THE LINE WILL BE "WRITTEN" TO THE EDITOR AND MAY BE EXECUTED JUST AS IF THE PROGRAM WERE WRITTEN IN THE EDITOR

References: EXECON RUN RUNP NEW

Command: LMAX **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS AMPLITUDE OF FIRST PEAK (WHERE SLOPE CHANGES FROM + TO −)

Syntax: [D =][M]LMAX[(R)]

Comments: WHERE D IS A DESTINATION DEVICE OR VARIABLE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA.

THIS IS QUITE USEFUL AS A PEAK OR ANTINODE DETECTOR, PARTICULARLY WHEN USED WITH THE BASELINE AS A THRESHOLD AND/OR CURSOR AS A DELIMITER

NOTE: NX:BL:LMAX WILL RETURN THE NEXT HIGHEST PEAK'S VALUE ABOVE A THRESHOLD SEE XLMAX, XLMIN, LMIN, BL:, NX:, CR:, MAX AND XMAX

References: BL: CR: XLMAX LMIN XLMIN MAX XMAX

Command: LMIN **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS AMPLITUDE OF FIRST NODE (WHERE SLOPE CHANGES FROM − TO +)

Syntax: [D =][M]LMIN[(R)]

Comments: WHERE D IS A DESTINATION DEVICE OR VARIABLE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA.

THIS IS USEFUL AS AN ANTINODE DETECTOR, PARTICULARLY WHEN USED WITH TR:, WITH THE BASELINE (BL:) AS A THRESHOLD AND/OR CURSOR (CR:) AS A DELIMITER

NOTE: NX:BL:LMIN WILL RETURN THE NEXT LOWEST NODE'S VALUE BELOW A THRESHOLD SEE XLMAX, XLMIN, LMIN, BL:, NX:, CR:, MAX AND XMAX

References: BL: CR: XLMAX LMAX XLMIN MAX XMAX

Command: LOAD **Category:** FILE OPERATIONS **Product:** 6100

Function: RECALLS A D6100 INTERNAL PROGRAM FROM SYSTEM OR DISK

Syntax: LOAD["[<DRIVE>:]<NAME>.PGM"]

Comments: WHERE DRIVE IS AN OPTIONAL DRIVE SPECIFICATION, NAME IS THE PROGRAM NAME AND .PGM IS THE REQUIRED EXTENTION; THE QUOTES ARE REQUIRED

References: STORE SAVE RECALL

Command: LOCAL **Category:** I/O PARAMETER **Product:** 682

Function: RETURNS CONTROL OF THE DATA 6100 TO THE OPERATOR

Syntax: LOCAL

Comments: COMMAND ONLY. WILL RETURN FROM REMOTE MODE OR LOCK MODE

NOTE: IN LOCK, THE REMOTE LOCK INDICATOR (CONT MENU) REMAINS ON UNTIL UNLOCK, IN REMOTE (PERMITS DIR-PROG PAIR REMOTE/LOCAL SWITCH), THE LABEL WILL TOGGLE

References: LOCK UNLOCK REMOTE CONT

Command: LOCK **Category:** I/O PARAMETER **Product:** 682

Function: ENABLES LOCK MODE TO PREPARE FOR LOCAL LOCKOUT, GPIB OR RS-232

Syntax: LOCK

Comments: COMMAND ONLY. IF SENT, THE LABEL LOC LOCK OR REM LOCK WILL APPEAR IN THE CONT PAIR (DIR-PROG) MENU UNDER CONTROL.

IF THE NEXT COMMAND IS "REMOTE", THERE IS NOTHING THAT THE OPERATOR CAN DO EXCEPT FOR A WARM BOOT THAT WILL INTERRUPT THE SYSTEM (UNLESS THE KEYSRQ HAS BEEN EXPLICITLY ENABLED). TO EXIT FROM THE LOCK MODE, THE UNLOCK AND/OR LOCAL COMMAND MAY BE USED

References: UNLOCK LOCAL REMOTE RESET KEYSRQ

Command: LOGDEV **Category:** I/O PARAMETER **Product:** 682

Function: ENABLES/DIABLES/SELECTS DEVICE FOR EVENT FLAG AND ERROR LOGGING

Syntax: LOGDEV[="<DEV>:"]

Comments: WHERE "<DEV>:" IS THE DEVICE TO WHICH ERRORS WILL BE LOGGED

NOTE: THE ERRM COMMAND MUST BE USED AND MUST BE SET TO 3 (ERRM=3); THE DEVICE GPIB: CANNOT BE SELECTED DUE TO CONFLICTS AND ADDRESSING, A PRINTER, MODEM OR TERMINAL IS THE MOST LIKELY TARGET DEVICE FOR ERROR LOGGING.

References: ERRM

Command: LOGX **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS LOG(10) OF SPECIFIED VARIABLE OR RECORD

Syntax: [D] = [M]LOGX[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR RECORD, M IS THE MODIFIER OR MODIFIERS AND R IS THE SOURCE RECORD

EXAMPLE: BS10LG = CR:LOGX(MAGCA1) RETURNS THE LOG OF MAGCA1 WITHIN CURSOR LIMITS TO THE VARIABLE BS10LG

References: SQ SQRT RCP

Command: MANDLY **Category:** TIMEBASE PARAMETER **Product:** 650

Function: SELECTS TIMEBASE DELAY IN INCREMENTS OF SAMPLE PERIOD

Syntax: MANDLY[= T]

Comments: WHERE T IS A DELAY FROM – 1 RECORD LENGTH (IN SECONDS) TO 100K SECONDS

References: ARMDLY

Command: MARK **Category:** NAMED KEY **Product:** D6100

Function: PUSHES MARK KEY AND CALLS MARK MENU

Syntax: MARK

Comments: PERMITS OPERATOR SELECTION AND MANIPULATION OF THE MARKERS

References: CURSOR CROSS BLINE BLEVEL GRID

Command: MARKER **Category:** MARKER PARAMETER **Product:** 6100

Function: SELECTS MARKER TYPE FOR MARK MENU MARKER FIELD

Syntax: MARKER[= M]

Comments: WHERE M IS THE MARKER TYPE: 1 CURSOR, 2 BASELINE, 3 CROSSHAIR, 4 GRID

NOTE: IN FOUR-TRACE MODE, THE CROSSHAIR AND GRID MARKERS ARE DISABLED TO REDUCE DISPLAY FLICKER

References: MARK CROSS CURSOR BLINE GRID

Command: MAX **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE MAXIMUM AMPLITUDE FOUND IN THE SPECIFIED RECORD

Syntax: [D =][M]MAX[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR THE MAX VALUE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD

EXAMPLE: MOST = TR:MAX(BUF.A1)
RETURNS THE LARGEST AMPLITUDE FOUND IN BUF.A1 WITHIN THE SCREEN LIMITS

References: MIN LMAX LMIN

Command: MAXDN **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS OR SELECTS THE MAX ENVELOPE COUNTER MODE

Syntax: MAXDN[S]

Comments: WHERE S IS THE STATUS OF THE COUNTER: 1 INFINITE COUNT, 2 STOP AT N

WHEN S = 2, USE MAXLEN TO SELECT THE NUMBER OF COUNTS

References: AVGTYP MAXLEN

Command: MAXLEN **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS NUMBER OF COUNTS FOR ENVELOPE MODE COUNTER (IF ENABLED)

Syntax: MAXLEN[= N]

Comments: WHERE N IS AN INTEGER IN THE RANGE: 0-32767

NOTE: BEFORE MAXLEN WILL OPERATE, MAXDN MUST BE SET TO 2

References: AVGTYP MAXDN

Command: MAXMIN **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: ENABLES/DISABLES THE MAX AND MIN AVERAGE BUFFERS

Syntax: MAXMIN[= S]

Comments: WHERE S IS THE STATUS OF THE BUFFERS: 1 OFF, 2 ON

WHEN MAXMIN = 2 IS SENT, TWO NEW BUFFERS WILL APPEAR IN THE DIRECTORY; MAX.XX AND MIN.XX WHERE XX IS THE DESIGNATION A1, B1, A2 ETC.

INPSEL SELECTS THE CHANNEL FOR MAXMIN (ENVELOPE) ENABLE

References: INPSEL MAXCLR

Command: MEAN **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS ALGEBRAIC MEAN OF THE SPECIFIED RECORD

Syntax: [D =][M]MEAN[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR THE MEAN VALUE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD

EXAMPLE: MNVAL = TR:MEAN(BUF.A1)

RETURNS THE MEAN AMPLITUDE FOUND IN BUF.A1 WITHIN THE SCREEN LIMITS

References: SDEV MAX MIN PKPK

Command: MIN **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE MINIMUM AMPLITUDE FOUND IN THE SPECIFIED RECORD

Syntax: [D =][M]MIN[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR THE MIN VALUE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD

EXAMPLE: LEAST = TR:MIN(BUF.A1)

RETURNS THE SMALLEST AMPLITUDE FOUND IN BUF.A1 WITHIN THE SCREEN LIMITS

References: MAX LMAX LMIN

Command: MINDN **Category:** MATHEMATICS **Product:** 6100
Function: RETURNS OR SELECTS THE MIN ENVELOPE COUNTER MODE
Syntax: MINDN[= S]
Comments: WHERE S IS THE STATUS OF THE COUNTER: 1 INFINITE COUNT, 2 STOP AT N
WHEN S = 2, USE MINLEN TO SELECT THE NUMBER OF COUNTS
References: AVGTYP MINLEN

Command: MINLEN **Category:** MATHEMATICS **Product:** 6100
Function: SELECTS NUMBER OF COUNTS FOR ENVELOPE MODE COUNTER (IF ENABLED)
Syntax: MINLEN[= N]
Comments: WHERE N IS AN INTEGER IN THE RANGE: 0-32767
NOTE: BEFORE MINLEN WILL OPERATE, MINDN MUST BE SET TO 2
References: AVGTYP MINDN

Command: MSG **Category:** I/O PARAMETER **Product:** 682
Function: CALLS MESSAGE FORMAT MENU
Syntax: MSG
Comments: PERMITS OPERATOR SELECTION OF MESSAGE TERMINATORS
NOTE: DO NOT USE THIS MENU, NOR CHANGE ANY OF THE PARAMETERS UNLESS THERE IS A SPECIFIIC REASON: MESSAGE TERMINATORS SIMPLY ADD CHARACTERS TO THE MESSAGE FORMAT AND, THEREFORE, MAKE INTERFACE TROUUBLESHOOTING MORE DIFFICULT.
References: LINDLM FLDDLM LINEND PROMPT

Command: MSGDLM **Category:** I/O PARAMETER **Product:** 682

Function: SELECTS ADDITIOANL DELIMITER CHARACTERS RECOGNIZED BY D6100

Syntax: MSGDLM[(P)][= C]

Comments: WHERE P IS THE PORT AND C IS THE DELIMITER CHARACTER: 1 NONE, 2 ETX, 3 LF, 4 CR, 5 NULL

NOTE: DO NOT USE THIS MENU, NOR CHANGE ANY OF THE PARAMETERS UNLESS THERE IS A SPECIFIIC REASON: MESSAGE TERMINATORS SIMPLY ADD CHARACTERS TO THE MESSAGE FORMAT AND, THEREFORE, MAKE INTERFACE TROUUBLESHOOTING MORE DIFFICULT.

References: MSGEND PROMPT LINDLM LINEND FLDDLM

Command: MSGEND **Category:** I/O PARAMETER **Product:** 682

Function: SELECTS ADDITIONAL DELIMITER CHARACTERS SENT BY D6100

Syntax: MSGEND[(P)][= C]

Comments: WHERE P IS THE PORT AND C IS THE DELIMITER CHARACTER: 1 NONE, 2 ETX, 3 LF, 4 CR, 5 CRLF, 6 NULL

WARNING: DO NOT USE THIS MENU, NOR CHANGE ANY OF THE PARAMETERS UNLESS THERE IS A SPECIFIIC REASON: MESSAGE TERMINATORS SIMPLY ADD CHARACTERS TO THE MESSAGE FORMAT AND, THEREFORE, MAKE INTERFACE TROUUBLESHOOTING MORE DIFFICULT.

References: PROMPT MSGDLM LINDLM LINEND FLDDLM

Command: MUL **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS PRODUCT OF PRIMARY/SECONDARY TRACES OR SPECIFIED RECORDS

Syntax: [D =][M]MUL[(R1[,R2])]

Comments: WHERE D IS A DESTINATION DEVICE OR VARIABLE, M IS A MODIFIER OR MODIFIERS AND R1, R2 ARE SOURCE RECORDS. IF R2 IS OMITTED, R1 REPLACES THE DATA IN THE PRIMARY TRACE; IF R1 AND R2 ARE OMITTED, THE PRIMARY AND SECONDARY TRACES CONTAIN THE SOURCE DATA

EXAMPLE: SER0: = CR:MUL(XX,YY) RETURNS THE PRODUCT OF XX AND YY

References: DIV SUB ADD

Command: MXMCLR **Category:** PROCESS PARAMETER **Product: PLUG-IN**

Function: CLEARS THE MAX AND MIN AVERAGE BUFFERS

Syntax: MXMCLR

Comments: THE EFFECT OF THIS COMMAND CANNOT BE SEEN UNTIL A NEW ACQUISITION IS TAKEN. THE BUFFERS WILL CONTAIN THE OLD DATA UP TO THIS POINT

MAX.XX AND MIN.XX WILL BOTH BE CLEARED BY THIS COMMAND

NOTE: THE INPSEL COMMAND SELECTS THE CHANNEL TO CLEAR

References: MAXMIN INPSEL

Command: MXMM **Category:** PROCESS PARAMETER **Product:** 650

Function: SELECTS MIN/MAX PROCESS (ENVELOPE MODE)

Syntax: MXMM[= S]

Comments: WHERE S IS THE STATUS: 1 OFF, 2 ON, 3 HOLD

Command: NAVG **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS/RETURNS THE NUMBER OF AVERAGES FOR THE SUMMATION AVERAGE

Syntax: NAVG[= N]

Comments: WHERE N IS THE NUMBER OF AVERAGES TO 32767

References: AVEGM AVEGDN AVGTYP

Command: NCHAN **Category:** BUFFER SELECTOR **Product:** 650

Function: SELECTS NUMBER OF CHANNELS

Syntax: NCHAN[= N]

Comments: WHERE N IS AN INTEGER FOR THE CONFIGURATION: 1 CH1, 2 CH 1 AND 4, 3 CH 1,2,3,4

Command: NCRS **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS NUMBER OF ZERO-CROSSINGS IN THE SPECIFIED RECORD

Syntax: [D =][M]NCRS[(R)]

Comments: WHERE D IS A DESTINATION DEVICE OR VARIABLE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA

EXAMPLE: CRSNGS = BL:NCRS(A) RETURNS THE NUMBER OF BASELINE-RELATIVE CROSSINGS TO THE VARIABLE A

References: NCYC

Command: NCYC **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS NUMBER OF DUAL ZERO-CROSSINGS IN THE SPECIFIED RECORD

Syntax: [D =][M]NCYC[(R)]

Comments: WHERE D IS A DESTINATION DEVICE OR VARIABLE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA

EXAMPLE: CYCS = BL:NCYC(A) RETURNS THE NUMBER OF BASELINE-RELATIVE CYCLES TO THE VARIABLE A

References: NCRS

Command: NEW **Category:** KEYSTROKE PROGRAM **Product:** D6100

Function: ERASES CURRENT INTERNAL PROGRAM

Syntax: NEW

Comments: WILL ERASE ANY PROGRAM RESIDENT IN THE EDITOR

IN CASES WHERE LOADING A SMALLER PROGRAM FROM A LARGER ONE IS DESIRED, USE THE RUN COMMAND WITH THE NAME OF THE NEW PROGRAM. NEW, IF USED IN AN INTERNAL PROGRAM WILL CAUSE THE EXISTING PROGRAM TO BE ERASED

References: RUN RUNP LOAD STORE EXECON PRGMOD

Command: NPTS **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: SELECTS THE NUMBER OF POINTS FOR A PARTICULAR TIMEBASE

Syntax: NPTS[(T)][=n]

Comments: T MAY BE 1 or 2 (A or B), AND n MAY BE ANY NUMBER OF POINTS UP TO THE PLUG-IN DEPENDENT LIMITS; THIS COMMAND TAKES FOR FORMS: 1) NPTS alone is a query and returns n for the current timebase (TMBSEL) 2) NPTS(T) is also a query and returns n for timebase T 3) NPTS = n sets the number of points for the current timebase (TMBSEL) 4) NPTS(T) = n sets the number of points for timebase T

References: TMB TMBSEL DELAY PERIOD

Command: NS: **Category:** MODIFIER **Product:** 6100

Function: DISABLES THE AUTO-SCALE FUNCTION

Syntax: NS:<FUNCTION>

Comments: THIS MODIFIER WORKS ONLY WITH 3 VECTOR FUNCTIONS: ADD, SUB, DIFF. THE EFFECT OF NS: IS TO INCREASE THE FULL SCALE RANGE OF THE RESULT OVER THE USUAL AMOUNT EXPECTED WITH AUTO-SCALING.

References: UX: UY:

Command: NSWP **Category:** TRIGGER PARAMETER **Product:** 650

Function: SELECTS NUMBER OF SWEEPS FOR THE MULTI-SWEEP CAPTURE MODE

Syntax: NSWP[= N]

Comments: WHERE N IS THE NUMBER OF SWEEPS

Command: NTMB **Category:** TIMEBASE PARAMETER **Product:** 650

Function: SELECTS ACTIVE TIMEBASES

Syntax: NTMB[= N]

Comments: WHERE N IS THE NUMBER OF TIMEBASES: 1 A, 2 A AND B

Command: NX: **Category:** MODIFIER **Product:** 6100

Function: LIMITS PROCESSING TO NEXT OCCURRENCE OF REFERENCED EVENT

Syntax: NX:<FUNCTION>

Comments: NORMALLY, A FUNCTION OPERATES ON THE FIRST OCCURRENCE OF THE DEFINED EVENT IN THE RECORD OR PORTION. IF NX: IS USED AFTER THE INITIAL PROCESSING, THE NEXT OCCURRENCE IS RETURNED.

FOR EXAMPLE: A = BL:LMAX(MAGCA1) RETURNS THE HIGHEST PEAK IN A SPECTRUM; NX:BL:LMAX WILL RETURN THE NEXT HIGHEST AND SO ON...

References: SC: SE: SX:

Command: OMODE **Category:** I/O PARAMETER **Product:** 682

Function: SELECTS FORMAT FOR DATA IN I/O OPERATIONS

Syntax: OMODE[(P)][= M]

Comments: WHERE M IS THE MODE: 1 DATA ONLY, 2 NAME AND DATA, 3 DESCRIPTOR ONLY 4 DESCRIPTOR AND DATA

SINCE THIS COMMAND (WITH FORMAT = 4) IS USED MOSTLY FOR HIGH-SPEED BINARY DATA TRANSFERS, BE SURE TO RE-SELECT AN ASCII FORMAT (1-3) BEFORE ATTEMPTING NORMAL COMMUNICATIONS AND RETURN OMODE TO 1 OR 2

FOR A BETTER UNDERSTANDING OF OMODE, USE IT WHILE VIEWING A TERMINAL

References: FORMAT FASTIO

Command: OPT **Category:** NAMED KEY **Product:** 6100

Function: PUSHES OPT KEY AND CALLS I/O AND PLOTTER MENUS

Syntax: OPT

Comments: PERMITS OPERATOR SELECTION OF I/O AND PLOTTER PARAMETERS. THIS COMMAND IS DUPLICATED BY THE "IO" COMMAND.

References: PCMD PMARK PMODE PDATA PINTF PANNC PAREA

Command: OUT0 **Category:** SIGNAL OUTPUTS **Product:** 610

Function: SELECTS SIGNAL AVAILABLE AT THE OUTPUT BNC "OUT0" ON REAR PANEL

Syntax: OUT0[= S]

Comments: [S] IS AN INTEGER FROM 1 TO 8, INDICATING THE SIGNAL TYPE DESIRED

TRIGGER, PERIOD A, PERIOD B, GATE A, GATE B, AQUIRING, TRIG ARM, FLAG 0,

1 2 3 4 5 6 7 8

EXPERIMENT WITH THESE SIGNALS USING TRIGGER AS A TRIGGER (– SLOPE) TO VIEW THE TIMING RELATIONSHIPS THAT MAY APPLY. USE TOPLIN, INTEN, CALCYC.

References: OUT1

Command: OUT1 **Category:** SIGNAL OUTPUTS **Product:** 610

Function: SELECTS SIGNAL AVAILABLE AT THE OUTPUT BNC "OUT1" ON REAR PANEL

Syntax: OUT1[= S]

Comments: [S] IS AN INTEGER FROM 1 TO 8, INDICATING THE SIGNAL TYPE DESIRED

TRIGGER, PERIOD A, PERIOD B, GATE A, GATE B, AQUIRING, TRIG ARM, FLAG 0, 1 2 3 4 5 6 7 8

EXPERIMENT WITH THESE SIGNALS USING TRIGGER AS A TRIGGER (– SLOPE) TO VIEW THE TIMING RELATIONSHIPS THAT MAY APPLY. USE TOPLIN, INTEN, CALCYC.

References: OUT0

Command: OUTSRQ **Category:** GPIB PARAMETER **Product:** 682

Function: ENABLES/DISABLES THE SRQ WHEN TALK BUFFER (MESSAGE) IS READY

Syntax: OUTSRQ[= S]

Comments: WHERE S IS THE STATUS: 1 OFF, 2 ON

WHEN OUTSRQ IS ON (2), AND THE DATA 6100 IS READY TO TALK, BIT 7 OF THE STATUS BYTE IS SET AND AN SRQ IS GENERATED

References: SRQ KEYSRQ AQUSRQ ERRSRQ CLRSRQ CLRKEY CLRERR KEY ERR

Command: OVSH **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS OVERSHOOT FOR SPECIFIED POSITIVE-GOING EDGE WITHIN RECORD

Syntax: [D =][M]OVSH[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE, M IS THE MODIFIER AND R IS THE SOURCE RECORD

THE CURSOR (CR:) OR TRACE (TR:) MUST DEFINE A POSITIVE-GOING EDGE

References: STL1 STL2

Command: PADIR **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS DIRECTION FOR ANNOTATION (PLABEL, PPRINT)

Syntax: PADIR[= D]

Comments: WHERE D IS THE DIRECTION: 1 NORTH, 2 EAST, 3 SOUTH, 4 WEST

SEE PDX, PDY, PLABEL, PPRINT

References: PDX PDY PLABEL PPRINT PANNTS

Command: PAHIGH **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS HEIGHT OF TEXT FOR ANNOTATION

Syntax: PAHIGH[= R]

Comments: WHERE R IS A RATIO OF 6.666 TO THE INCH

IF, FOR EXAMPLE, THE ANNOTATION IS TO BE 1/5 INCH HIGH, 6.66 X .2 IS 1.4652

PAHIGH = 1.4652 (OR EQUIV) WILL SET ANNOTATION TEXT TO 1/5 INCH HEIGHT

References: PAWIDE PLHIGH PLWIDE

Command: PALINE **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS LINE TYPE FOR LINE ANNOTATION

Syntax: PALINE[= T]

Comments: WHERE T IS THE LINE TYPE: 1 BLANK, 2 SOLID, 3 TYPE 2, 4 TYPE3, 5 TYPE 4, 6 TYPE 5, 7 TYPE 6, 8 TYPE 7, 9 0 + TRACE#, 10 1 + TRACE#, 11 2 + TRACE#, 12 3 + TRACE#

References: PAPEN

Command: PANNC **Category:** PLOTTER PARAMETER **Product:** 682

Function: CALLS PLOTTER ANNOTATION CONTROL MENU

Syntax: PANNC

Comments: COMMAND ONLY — PERMITS OPERATOR TO CONTROL THE ANNOTATION MANUALLY

References: PCMD PMARK PMODE PDATA PINTF PANNP PAREA OPT

Command: PANNP **Category:** PLOTTER PARAMETER **Product:** 682

Function: CALLS PLOTTER ANNOTATION MENU

Syntax: PANNP

Comments: COMMAND ONLY — PERMITS OPERATOR TO CHANGE THE ANNOTATION PARAMETERS MANUALLY

References: PCMD PMARK PMODE PDATA PINTF PANNC PAREA OPT

Command: PANNTS **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS TYPE OF ANNOTATION FOR SPECIAL PLOTS

Syntax: PANNTS[= T]

Comments: WHERE T IS THE TYPE OF ANNOTATION REQUIRED: 1 TEXT 2 LINE

References: PAPEN PPRINT PLABEL PDX PDY

Command: PAPEN **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS PEN FOR PLOTTING ANNOTATION

Syntax: PAPEN[= P]

Comments: WHERE P IS THE PEN SELECTION: 1 PEN1, 2 PEN2, 3 PEN3, 4 PEN4, 5 PEN5, 6 PEN6, 7 PEN7, 8 PEN8, 9 0 + TRACE#, 10 1 + TRACE#, 11 2 + TRACE#, 12 3 + TRACE#

References: PCPEN PDPEN PBPEN PAXPEN PLPEN

Command: PAREA **Category:** PLOTTER PARAMETER **Product:** 682

Function: CALLS PLOT AREA MENU

Syntax: PAREA

Comments: COMMAND ONLY — PERMITS OPERATOR TO CONTROL THE PLOT AREA MANUALLY

References: PCMD PMARK PMODE PDATA PINTF PANNP PANNC OPT

Command: PARITY **Category:** RS-232 PARAMETER **Product:** 682

Function: SELECTS PARITY MODE FOR SPECIFIED SERIAL PORT

Syntax: PARITY[(S)][= M]

Comments: WHERE S IS THE SERIAL PORT: 1 SER0:, 2 SER1: AND M IS THE MODE: 1 ODD, 2 EVEN, 3 NONE

References: BAUD STOPB DUPLEX RS232

Command: PAWIDE **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS WIDTH OF TEXT FOR ANNOTATION

Syntax: PAWIDE[= R]

Comments: WHERE R IS A RATIO OF 6.666 TO THE INCH

IF, FOR EXAMPLE, THE ANNOTATION IS TO BE 1/5 INCH WIDE, 6.66 X .2 IS 1.4652

PAWIDE = 1.4652 (OR EQUIV) WILL SET ANNOTATION TEXT TO 1/5 INCH WIDTH

References: PAHIGH PLHIGH PLWIDE

Command: PAXFRM **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS AXIS FRAME ON OR OFF

Syntax: PAXFRM[= S]

Comments: WHERE S IS THE STATUS OF THE FRAME: 1 OFF, 2 ON

References: PAXLOC PAXTCK PAXPEN

Command: PAXLBL
Category: PLOTTER PARAMETER Product: 682
Function: SELECTS AXIS LABELING ON OR OFF
Syntax: PAXLBL[=S]
Comments: WHERE S IS THE STATUS OF THE LABELING: 1 OFF, 2 ON
References: PAXLOC PAXTCK PAXPEN

Command: PAXLIN **Category:** PLOTTER PARAMETER **Product:** 682
Function: SELECTS PLOTTER AXIS LINE TYPE
Syntax: PAXLIN[=T]
Comments: WHERE T IS AN INTEGER FROM 1 TO 12
References: PAXLOC PAXTCK PAXPEN

Command: PAXLOC **Category:** PLOTTER PARAMETER **Product:** 682
Function: SELECTS INTERSECT LOCATION OF THE AXES
Syntax: PAXLOC[=L]
Comments: WHERE L IS THE LOCATION: 1 NO AXES, 2 BOT LEFT, 3 TOP RIGHT, 4 CENTER, 5 ORIGIN, 6 GRID B-L, 7 GRID T-R
References: PAXTCK PAXLBL PAXPEN

Command: PAXPEN **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS PEN FOR PLOTTING AXIS

Syntax: PAXPEN[= P]

Comments: WHERE P IS THE PEN SELECTION: 1 PEN1, 2 PEN2, 3 PEN3, 4 PEN4, 5 PEN5, 6 PEN6, 7 PEN7, 8 PEN8, 9 0 + TRACE#, 10 1 + TRACE#, 11 2 + TRACE#, 12 3 + TRACE#

THE PEN TYPES ARE WELL DOCUMENTED ON PAGE H2-15 OF THE REFERENCE MANUAL

References: PCPEN PDPEN PBPEN PLPEN PAPEN

Command: PAXTCK **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS TICK MARK INTERVAL FOR AXIS LINES

Syntax: PAXTCK[= I]

Comments: WHERE I IS THE INTERVAL: 1 OFF, 2 1 TICK, 3 3 TICKS, 4 5 TICKS, 5 10 TICKS, 6 20 TICKS, 7 50 TICKS

References: PAXLOC PAXFRM

Command: PBADR **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS PLOTTER GPIB ADDRESS (FOR 6100 CONTROLLER FUNCTION)

Syntax: PBADR[= A]

Comments: WHERE A IS AN ADDRESS IN THE RANGE 1-31 THAT DOES NO CONFLICT WITH THE CBADR ADDRESS (21 BY DEFAULT)

REMEMBER THAT THE PLOTTER INTERFACE WILL NOT OPERATE IF ANOTHER CONTROLLER IS STILL ACTIVE AND HAS NOT PASSED CONTROL

References: CBADR

Command: PBLBL **Category:** PLOTTER PARAMETER **Product:** 682
Function: LOCATION FOR BASELINE LEVEL LABEL
Syntax: PBLBL[= L]
Comments: WHERE L IS THE LOCATION: 1 NONE, 2 ON LINE, 3 ON SIDE
References: PBPEN PBLINE

Command: PBLINE **Category:** PLOTTER PARAMETER **Product:** 682
Function: SELECTS LINE TYPE FOR BASELINE
Syntax: PBLINE[= T]
Comments: WHERE T IS THE LINE TYPE: 1 BLANK, 2 SOLID, 3 TYPE 2, 4 TYPE3, 5 TYPE 4, 6 TYPE 5, 7 TYPE 6, 8 TYPE 7, 9 0 + TRACE#, 10 1 + TRACE#, 11 2 + TRACE#, 12 3 + TRACE#
References: PMARKS PBLBL PBPEN

Command: PBPEN **Category:** PLOTTER PARAMETER **Product:** 682
Function: SELECTS PEN FOR PLOTTING BASELINE
Syntax: PBPEN[= P]
Comments: WHERE P IS THE PEN SELECTION: 1 PEN1, 2 PEN2, 3 PEN3, 4 PEN4, 5 PEN5, 6 PEN6, 7 PEN7, 8 PEN8, 9 0 + TRACE#, 10 1 + TRACE#, 11 2 + TRACE#, 12 3 + TRACE#
References: PCPEN PDPEN PAXPEN PLPEN PAPEN

Command: PCEMRK **Category:** PLOTTER PARAMETER **Product:** 682
Function: NOT IMPLEMENTED

Command: PCHKD1 **Category:** PLOTTER PARAMETER **Product:** 682
Function: CHECKS THE REFERENCE POINT D1 ON PLOTTER
Syntax: PCHKD1
Comments: COMMAND ONLY
CAUSES PLOTTER PEN TO GO TO THE LOWER-LEFT SET POINT
References: PCHKD2 PSETD1 PSETD2

Command: PCHKD2 **Category:** PLOTTER PARAMETER **Product:** 682
Function: CHECKS THE REFERENCE POINT D2 ON PLOTTER
Syntax: PCHKD2
Comments: COMMAND ONLY
CAUSES PLOTTER PEN TO GO TO THE UPPER-RIGHT SET POINT
References: PCHKD1 PSETD1 PSETD2

Command: PCLINE **Category:** PLOTTER PARAMETER **Product:** 682
Function: SELECTS LINE TYPE FOR CURSOR
Syntax: PCLINE[= T]
Comments: WHERE T IS THE LINE TYPE: 1 BLANK, 2 SOLID, 3 TYPE 2, 4 TYPE3, 5 TYPE 4, 6 TYPE 5, 7 TYPE 6, 8 TYPE 7, 9 0 + TRACE#, 10 1 + TRACE#, 11 2 + TRACE#, 12 3 + TRACE#
References: PMARKS PMARK PCMARK PCPEN

Command: PCLK **Category:** PLOTTER PARAMETER **Product:** 682
Function: ENABLES OR DISABLES PLOTTER TIME STAMP, FROM REAL TIME CLOCK
Syntax: PCLK[= S]
Comments: WHERE S IS THE STATUS: 1-OFF, 2-ON. OFF IS THE DEFAULT. THE STATUS CAN BE SENT AS AN INTEGER (1 OR 2) OR AS A CHARACTER STRING (OFF OR ON). PCLK SENT ALONE WILL RETURN CURRENT STATUS

Command: PCMARK **Category:** PLOTTER PARAMETER **Product:** 682
Function: SELECTS DATA POINT MARKER FOR CURSOR
Syntax: PCMARK[= M]
Comments: WHERE M IS A MARKER: 1 NONE, 2 *, 3 +, 4 x, 5 o, 6 ., 7 #, 8 $, 9 1, 10 2, 11 3, 12 4, 13 A, 14 B, 15 C, 16 D, 17 X, 18 Y, 19 Z, 20 T, 21 * + TRACE#, 22 1 + TRACE#, 23 A + TRACE#, 24 X + TRACE#
References: PMARKS PCLINE PCPEN

Command: PCMD **Category:** PLOTTER PARAMETER **Product:** 682

Function: CALLS PLOT COMMAND MENU

Syntax: PCMD

Comments: COMMAND ONLY — PERMITS OPERATOR TO MANUALLY ISSUE PLOT COMMANDS

References: PMARK PMODE PDATA PINTF PANNP PANNC PAREA OPT

Command: PCPEN **Category:** PLOTTER PARAMETER Product: 682

Function: SELECTS PEN FOR PLOTTING CURSOR

Syntax: PCPEN[= P]

Comments: WHERE P IS THE PEN SELECTION: 1 PEN1, 2 PEN2, 3 PEN3, 4 PEN4, 5 PEN5, 6 PEN6, 7 PEN7, 8 PEN8, 9 0 + TRACE#, 10 1 + TRACE#, 11 2 + TRACE#, 12 3 + TRACE#

References: PDPEN PBPEN PAXPEN PLPEN PAPEN

Command: PDATA **Category:** PLOTTER PARAMETER **Product:** 682

Function: CALLS DATA POINT CONTROL MENU

Syntax: PDATA

Comments: COMMAND ONLY — PERMITS OPERATOR TO MANUALLY CHANGE THE DATA POINT CONTROL PARAMETERS

References: PCMD PMARK PMODE PINTF PANNP PANNC PAREA OPT

Command: PDLINE **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS LINE TYPE FOR DATA

Syntax: PDLINE[=T]

Comments: WHERE T IS THE LINE TYPE: 1 BLANK, 2 SOLID, 3 TYPE 2, 4 TYPE3, 5 TYPE 4, 6 TYPE 5, 7 TYPE 6, 8 TYPE 7, 9 0+TRACE#, 10 1+TRACE#, 11 2+TRACE#, 12 3+TRACE#

References: PDMARK PDPEN

Command: PDMARK **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS DATA POINT MARKER FOR EXPANDED SCREEN PLOTS

Syntax: PDMARK[=M]

Comments: WHERE M IS A MARKER: 1 NONE, 2 *, 3 +, 4 x, 5 o, 6 ., 7 #, 8 $, 9 1, 10 2, 11 3, 12 4, 13 A, 14 B, 15 C, 16 D, 17 X, 18 Y, 19 Z, 20 T, 21 *+TRACE#, 22 1+TRACE#, 23 A+TRACE#, 24 X+TRACE#

References: PDLINE PDPEN

Command: PDPEN **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS PEN FOR PLOTTING DATA

Syntax: PDPEN[=P]

Comments: WHERE P IS THE PEN SELECTION: 1 PEN1, 2 PEN2, 3 PEN3, 4 PEN4, 5 PEN5, 6 PEN6, 7 PEN7, 8 PEN8, 9 0+TRACE#, 10 1+TRACE#, 11 2+TRACE#, 12 3+TRACE#

References: PCPEN PBPEN PAXPEN PLPEN PAPEN

Command: PDX **Category:** PLOTTER PARAMETER **Product:** 682

Function: DIRECT PEN MOVE TO X CO-ORDINATE

Syntax: PDX[= C]

Comments: WHERE C IS A CO-ORDINATE IN THE RANGE 0-1.00
WHEN 1.00, THE PEN IS IN THE RIGHT-MOST POSITION, WHEN 0, IT IS IN THE LEFT-MOST POSITION

USE THIS COMMAND WITH PDY, PAHIGH, PAWIDE PLABEL AND PPRINT TO ANNOTATE SPECIAL PLOTS

References: PDY PAHIGH PAWIDE PLABEL PPRINT

Command: PDY **Category:** PLOTTER PARAMETER **Product:** 682

Function: DIRECT PEN MOVE TO Y CO-ORDINATE

Syntax: PDY[= C]

Comments: WHERE C IS A CO-ORDINATE IN THE RANGE 0-1.00

WHEN 1.00, THE PEN IS IN THE TOP-MOST POSITION, WHEN 0, IT IS IN THE BOTTOM-MOST POSITION

USE THIS COMMAND WITH PDX, PAHIGH, PAWIDE PLABEL AND PPRINT TO ANNOTATE SPECIAL PLOTS

References: PDX PAHIGH PAWIDE PLABEL PPRINT

Command: PEND Category: PLOTTER PARAMETER **Product:** 682

Function: ENDS PLOT SEQUENCE AND STORES PEN FOR PAPER REMOVAL

Syntax: PEND

Comments: COMMAND ONLY

REQUIRED FOR CERTAIN PLOTTERS AND BEFORE PAPER REMOVAL TO ENSURE CORRECT SUBSEQUENT OPERATION — THIS COMMAND SHOULD BE SENT AFTER A DELAY LOOP AND NOT WHILE THE PLOTTER IS OPERATING; THE D6100 WILL IGNORE I/O DURING THIS PERIOD

References: PLOT DPLOT

Command: PER **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS PERIOD OF THE FIRST CYCLE IN THE SPECIFIED RECORD

Syntax: [D =][M]PER[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR THE PERIOD, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD.

EXAMPLE: PRD = CR:BL:PER(BUF.A1)

RETURNS THE PERIOD OF THE FIRST CYCLE IN BUF.A1 WITHIN THE CUSOR LIMITS AND RELATIVE TO THE BASELINE.

NOTE: DO NOT CONFUSE THIS COMMAND WITH THE "PERIOD" COMMAND (TIMEBASE).

References: FREQ HCYC PLSW DLY

Command: PERIOD **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: SELECTS OR FINDS THE SAMPLE PERIOD FOR THE SPECIFIED TIMEBASE

Syntax: PERIOD[(T)][= t]

Comments: T MAY BE 1 or 2 (A or B), AND t MAY BE ANY TIME-PER-POINT UP TO THE PLUG-IN DEPENDENT LIMITS; THIS COMMAND TAKES FOR FORMS: 1) PERIOD alone is a query and returns t for the current timebase (TMBSEL) 2) PERIOD(T) is also a query and returns t for timebase T 3) PERIOD = t sets the time-per-point for the current timebase (TMBSEL) 4) PERIOD(T) = T sets the time-per-point for timebase T

References: TMB TMBSEL DELAY NPTS PERSRC

Command: PERROR **Category:** PLOTTER PARAMETER **Product:** 682

Function: RETURNS LAST PLOTTER ERROR REPORTED

Syntax: PERROR

Comments: COMMAND ONLY, WILL RETURN THE CODE OF THE LAST ERROR REPORTED BY THE PLOTTER

Command: PERSRC **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: SELECTS OR FINDS THE CLOCK SOURCE FOR A SPECIFIED TIMEBASE

Syntax: PERSRC[(T)][= s]

Comments: T MAY BE TIMEBASE 1 or 2 (A or B), s MAY BE ANY CLOCK SOURCE UP TO THE PLUG-IN DEPENDENT LIMITS; THIS COMMAND TAKES FOUR FORMS: 1) PERIOD alone is a query and returns s for the current timebase (TMBSEL) 2) PERIOD(T) is also a query and returns s for timebase T 3) PERIOD = s sets the clock source for the current timebase (TMBSEL) 4) PERIOD(T) = s sets the clock source for timebase T

NOTE: s MAY BE ANY INTEGER INDEX INTO THE LIST OF OPTIONS: 6XX—PERSRC

References: TMB TMBSEL DELAY NPTS PERSRC PERIOD

Command: PGMMOD **Category:** KEYSTROKE PROGRAM **Product:** 6100

Function: SELECTS THE EDITOR OR STEP/CONTROL MODE FOR INTERNAL PROGRAMMING

Syntax: PGMMOD[= M]

Comments: WHERE M IS THE MODE: 1 EDIT, 2 RUN

NOTE: THE PROGRAM WILL RUN AUTOMATICALLY BY DEFAULT ON EVERY ACQUISITION UNLESS, WHIL IN "RUN" MODE, THE EXECUTE ON FIELD HAS BEEN CHANGED TO RUN/STOP OR AQU,MODS

References: EXECON

Command: PGMST **Category:** KEYSTROKE PROGRAM **Product:** 6100

Function: RETURNS STATUS OF INTERNAL PROGRAM

Syntax: PGMST

Comments: RETURNS AN INTEGER REPORTING STATUS: 1 STOPPED, 2 RUNNING, 3 ERROR, 4 STEPPED

References: EXECON PGMMOD

Command: PINTF **Category:** PLOTTER PARAMETER **Product:** 682

Function: CALLS PLOTTER INTERFACE MENU

Syntax: PINTF

Comments: COMMAND ONLY — PERMITS OPERATOR TO VIEW THE INTERFACE STATUS.

NOTE: THE PLOTTER CANNOT BE RESET FROM THIS MENU, NOR CAN THE PLOTTER INTERFACE BE CHANGED; THE PURPOSE OF PINTF IS FOR MODEL VIEW AND LINK CONFIRMATION ONLY.

References: PCMD PMARK PMODE PDATA PANNP PANNC PAREA OPT

Command: PKPK **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS PEAK-TO-PEAK AMPLITUDE OF THE SPECIFIED RECORD

Syntax: [D =][M]PKPK[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR THE VALUE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD

EXAMPLE: PPKVAL = TR:PKPK(BUF.A1)

RETURNS THE PEAK-TO-PEAK AMPLITUDE FOUND IN BUF.A1 WITHIN THE SCREEN LIMITS

References: SDEV MAX MIN MEAN

Command: PLABEL **Category:** PLOTTER PARAMETER **Product:** 682

Function: PERMITS DEFINITION OF STRINGS FOR PLOT ANNOTATION

Syntax: PLABEL[= "<STRING>"]

Comments: WHERE <STRING> IS A STRING OF LESS THAN 32 CHARACTERS AND NOT CONTAINING PARNTHESES, BRACKETS, QUOTES OR A SLASH; THE QUOTES AROUND THE STRING ARE REQUIRED

NOTE: TO CAUSE SCALAR RESULTS TO BE PRINTED, FIRST SEND PLABEL = " "(A STRING OF SPACES), THE PLABEL = <FUNCTION>, AS IN PLABEL = CR:RMS(BUF.A1) THEN, AT PPRINT, THE RESULT WILL BE PRINTED IN THE CURRENT FORMAT AT THE CO-ORDINATES ASSIGNED BY PDX AND PDY

References: PTITLE PANNTS PDX PDY PPRINT

Command: PLEND **Category:** PLOTTER PARAMETER **Product:** 682

Function: END LOCATION FOR FREE DRAW

Syntax: PLEND[= E]

Comments: SEE PLSTRT

DRAWS LINE TYPE SPECIFIED IN PALINE COMMAND FROM LOCATION SPECIFIED IN PLSTRT COMMAND TO LOCATION E

References: PEND PLOT DPLOT PALINE PDX PDY

Command: PLHIGH **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS HEIGHT OF AXIS UNITS LABEL

Syntax: PLHIGH[= R]

Comments: WHERE R IS A RATIO OF 6.666 TO THE INCH

IF, FOR EXAMPLE, THE ANNOTATION IS TO BE 1/5 INCH HIGH, 6.66 X .2 IS 1.4652

PLHIGH = 1.4652 (OR EQUIV) WILL SET AXIS UNITS LABEL TO 1/5 INCH HEIGHT

References: PAWIDE PAHIGH PLWIDE

Command: PLOT **Category:** PLOTTER PARAMETER **Product:** 682

Function: PLOTS SCREEN IMMEDIATELY

Syntax: PLOT

Comments: COMMAND ONLY — WILL BEGIN PLOT AND SUSPEND I/O UNTIL DONE

References: DPLOT PABORT PEND PLEND

Command: PLOTM **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS MODE OF PLOT FOR SCREEN, WATERFALL OR X VS Y

Syntax: PLOTM[= M]

Comments: WHERE M IS THE MODE: 1 DISPLAY, 2 WATERFALL, 3 X VS Y

References: PXNPS PWCURW PWNWAV PWXRAT PWYRAT

Command: PLPEN **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS PEN FOR PLOTTING AXIS LABELS

Syntax: PLPEN[= P]

Comments: WHERE P IS THE PEN SELECTION: 1 PEN1, 2 PEN2, 3 PEN3, 4 PEN4, 5 PEN5, 6 PEN6, 7 PEN7, 8 PEN8, 9 0 + TRACE#, 10 1 + TRACE#, 11 2 + TRACE#, 12 3 + TRACE#

References: PCPEN PDPEN PBPEN PAXPEN PAPEN

Command: PLSTRT **Category:** PLOTTER PARAMETER **Product:** 682

Function: DEFINE START POINT FOR FREE DRAW

Syntax: PLSTRT[= S]

Comments: S IS THE STARTING POINT FOR A "FREE DRAW" LINE

References: PLEND PALINE PDX PDY

Command: PLSW **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE WIDTH OF A + TO − ZERO CROSSING IN THE SPECIFIED RECORD

Syntax: [D =][M]PLSW[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR THE VALUE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD

EXAMPLE: WIDTH = TR:PLSW(BUF.A1)

RETURNS THE PULSE WIDTH FOUND IN BUF.A1 WITHIN THE SCREEN LIMITS TO VARIABLE WIDTH

References: SDEV MAX MIN MEAN

Command: PLWIDE **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS WIDTH OF AXIS UNITS LABEL

Syntax: PLWIDE[= R]

Comments: WHERE R IS A RATIO OF 6.666 TO THE INCH

IF, FOR EXAMPLE, THE ANNOTATION IS TO BE 1/5 INCH HIGH, 6.66 X .2 IS 1.4652

PLWIDE = 1.4652 (OR EQUIV) WILL SET AXIS UNITS LABEL TO 1/5 INCH HEIGHT

References: PAWIDE PAHIGH PLHIGH

Command: PMARK **Category:** PLOTTER PARAMETER **Product:** 682

Function: CALLS PLOT MARKER MENU

Syntax: PMARK

Comments: COMMAND ONLY – PERMITS OPERATOR TO MANUALLY CHANGE PLOT MARKER PARAMETERS

References: PMODE PCMD PDATA PINTF PANNP PANNC PAREA OPT

Command: PMARKS **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS PLOT MARKER IN MARKER FIELD

Syntax: PMARKS[= M]

Comments: WHERE M IS THE MARKER: 1 CURSOR, 2 BASELINE, 3 AXIS, 4 AXIS LABEL,

PMARK; PMARKS = 3 WILL SHOW THE MARKER CONTROL MENU WITH AXIS PARAMETERS DISPLAYED

References: PMARK

Command: PMODE **Category:** PLOTTER PARAMETER **Product:** 682

Function: CALLS PLOT MODE MENU

Syntax: PMODE

Comments: COMMAND ONLY — PERMITS OPERATOR TO MANUALLY CHANGE PLOT MODE PARAMETERS

References: PMARK PCMD PDATA PINTF PANNP PANNC PAREA OPT

Command: PMODEL **Category:** PLOTTER PARAMETER **Product:** 682

Function: RETURNS MODEL NUMBER OF PLOTTER AT SELECTED INTERFACE

Syntax: PMODEL

Comments: QUERY ONLY; RETURNS THE MODEL NUMBER OF THE PLOTTER AS RETURNED TO THE DATA 6100 BY THE HP-GL OI; COMMAND

References: PINTF

Command: PORT **Category:** I/O PARAMETER Product: 6100/682

Function: SELECTS OR FINDS THE CURRENT TARGET PORT FOR PARAMETER CHANGES

Syntax: PORT[= N]

Comments: N IS THE PORT NUMBER, 1(SER0:), 2(SER1:) OR 3(GPIB:) PORT, IF SENT ALONE, RETURNS AN INTEGER 1,2 OR 3 INDICATING THE CURRENT PORT

EXAMPLE: PORT = 1;HNDSHK = 2 WILL MAKE SER0: THE CURRENT TARGET PORT AND ENABLE HANDSHAKING

References: FLDDLM LINDLM LINEND LINDLM PROMPT

Command: PPORT **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS THE CURRENT PLOTTER PORT

Syntax: PPORT[= P]

Comments: WHERE P IS THE PORT NUMBER 1 OR 3

WARNING: THE DIPSWITCH #8 MUST BE SET TO EITHER SER0: OR GPIB:. SER1: WILL NOT OPERATE AS A PLOTTER INTERFACE, NOR WILL PPORT OPERATE EXCEPT TO HANG THE DATA 6100 IF A PLOTTER IS NOT FOUND AT THE DEVICE SPECIFIED BY THE DIPSWITCH SETTING.

SWITCH IS DOWN FOR SER0: AND UP FOR GPIB:

References: PMODEL

Command: PPRINT **Category:** PLOTTER PARAMETER **Product:** 682

Function: CAUSES CURRENT PLABEL TO BE PRINTED

Syntax: PPRINT

Comments: COMMAND ONLY, WILL PRINT THE STRING DEFINED IN PLABEL (OR THE SCALAR VALUE) AT THE CO-ORDINATES SPECIFIED WITH PDX AND PDY

References: PLABEL PDX PDY

Command: PRBSEL **Category:** DIGITIZER CONTROL **Product:** 640

Function: ENABLES/DISABLES PROBE BUTTON FOR ARM/DISARM

Syntax: PRBSEL = 1, 2 (PROBE DISABLED, PROBE ENABLED FOR ARM/DISARM)

Comments: SEE 640 MANUAL

Command: PRESET **Category:** PLOTTER PARAMETER **Product:** 682

Function: PLOTTER RESET COMMAND

Syntax: PRESET

Comments: WARNING — SOME PLOTTERS MAY NOT RECOGNIZE THIS COMMAND AND THIS ACTION MAY RESET THE DATA 6100. DO NOT USE UNLESS YOU HAVE FIRST VERIFIED THE RESULT.

References: PINTF PPORT

Command: PROBE **Category:** INPUT PARAMETER **Product:** PLUG-IN

Function: SELECTS PROBE ATTENUATION FACTOR FOR AMPLITUDE SCALING

Syntax: PROBE[= F]

Comments: WHERE F IS THE ATTENUATION FACTOR: 1 1X, 2 10X, 3 100X, 4 1000X, 5 10KX, 6 100KX

THE DATA 6100 WILL NOW RE-SCALE ALL AMPLITUDE MEASUREMENTS IN TERMS OF THE ATTENUATION FACTOR.

EXAMPLE: IF A 10X PROBE IS USED, SEND PROBE = 2 AND THE VOLTAGE READINGS WILL BE RE-SCALED TO REFLECT THE 10-1 ATTENUATION FACTOR

Command: PROC **Category:** NAMED KEY **Product:** PLUG-IN

Function: PUSHES PROC KEY AND CALLS PROC MENU

Syntax: PROC

Comments: THIS PERMITS MANUAL SELECTION OF (AVERAGED/PROCESSED) BUFFERS AND AVERAGING TYPES AND PARAMETERS IF LOCAL CONTROL HAS BEEN RETURNED TO THE OPERATOR

NOTE: THE AVERAGING PERFORMED BY PROC IS PERFORMED BEFORE THE RECORD IS TRANSFERRED TO THE SYSTEM — THE AVG KEY FUNCTION WILL PERMIT AVERAGING OF EXISTING RAW DATA RECORDS VIA AN INTERNAL PROGRAM

References: RECSEL INPSEL TMBSEL AVGM AVGCNT CURAVG AVGCLR EXPM MXMCLR MAXMIN

Command: PROG **Category:** NAMED KEY **Product:** D6100

Function: PUSHES PROG KEY AND CALLS PROG EDITOR AND MENU

Syntax: PROG

Comments: PROG WILL DISPLAY THE PROGRAM, IF ANY, AND PERMIT AN OPERATOR TO EDIT, MODIFY, DEBUG OR CONTROL A PROGRAM

References: EXECON RUN RUNP PGMMOD PGMST

Command: PROMPT **Category:** I/O PARAMETER **Product:** 682

Function: SELECTS PROMPT CHARACTER RETURNED BY THE DATA 6100

Syntax: PROMPT[= T]

Comments: WHERE T IS THE PROMPT TYPE: 1 NONE, 2 PROMPT, 3 PROMPT + MSGEND

THE PROMPT CHARACTER IS AN ASCII(62) OR GREATER THAN SYMBOL (>)

MESSAGE END IS DEFINED BY MSGEND AND WILL OFTEN BE REQUIRED FOR SOME GPIB SYSTEMS TO TERMINATE THE PROMPT CHARACTER'S TRANSMISSION

USE BYTE COUNT, EOI OR OTHER MEANS IF POSSIBLE TO AVOID PROMPT IF NOT DESIRED

References: MSGEND

Command: PROSEL **Category:** PROCESS PARAMETER **Product:** PLUG-IN

Function: SELECTS TYPE OF PROCESSING FOR A SPECIFIED TIMEBASE AND CHANNEL

Syntax: PROSEL[(T,I)][= M]

Comments: WHERE T IS THE TIMEBASE AND I IS THE INPUT (A = 1, B = 2, CH1 — CH 4) AND M IS THE MODE: 1 SUMMATION AVERAGING, 2 EXPONENTIAL AVERAGING, 3 MIN-MAX HOLD

THIS PERMITS MANUAL ENABLE OF THE AVERAGING MODES BY THE OPERATOR PROSEL(1,2) = 2. PROC WILL PERMIT AN OPERATOR TO SET EXP AVG PARAMETERS UNDER PROGRAM CONTROL, USE THE AVGM, EXPM AND MAXMIN COMMANDS.

NOTE: PROSEL WILL NOT UPDATE THE MENU ENTIRELY, ISSUE PROC AFTER PROSEL.

References: MAXMIN EXPM AVGM

Command: PSETD1 **Category:** PLOTTER PARAMETER **Product:** 682

Function: SETS LOWER-LEFT CORNER OF PLOT AREA

Syntax: PSETD1

Comments: IMMEDIATE; SETS THE LOWER-LEFT LIMIT TO WHEREVER THE PEN HAPPENS TO BE

IF PDX AND PDY ARE USED, THE PSETXX COMMANDS CAN BE USED TO RE-DEFINE SMALL PLOT AREAS WITHIN A PAGE

References: PDX PDY PSETD2 PCHKD1 PCHKD2

Command: PSETD2 **Category:** PLOTTER PARAMETER **Product:** 682

Function: SETS UPPER-RIGHT CORNER OF PLOT AREA

Syntax: PSETD2

Comments: IMMEDIATE; SETS THE UPPER-RIGHT LIMIT TO WHEREVER THE PEN HAPPENS TO BE

IF PDX AND PDY ARE USED, THE PSETXX COMMANDS CAN BE USED TO RE-DEFINE SMALL PLOT AREAS WITHIN A PAGE

References: PDX PDY PSETD1 PCHKD1 PCHKD2

Command: PTITLE **Category:** PLOTTER PARAMETER **Product:** 682

Function: PERMITS RE-DEFINITION OF THE DATA LABELS ON PLOT

Syntax: PTITLE[(T)][= "<STRING>"

Comments: WHERE <STRING IS ANY STRING OF CHARACTERS TO 32 THAT WILL REPLACE THE SYSTEM VARIABLE NAMES (LIKE BUF.A1, AVG.A1, ETC.) WITH USEFUL, DESCRIPTIVE TITLES FOR EACH RECORD IN THE PLOT

T IS THE NUMBER OF THE TRACE TO WHICH THE TITLE APPLIES

NOTE: LEARN AND USE THIS COMMAND OFTEN FOR CLEAR, READABLE PLOTS AND USE PLABEL AND PPRINT FOR ARBITRARY ANNOTATION

References: PLABEL PXLBL PYLBL PPRINT PDX PDY

Command: PTRACE **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS DATA FOR THE PRIMARY TRACE

Syntax: PTRACE[= N]

Comments: WHERE N IS AN INTEGER NUMBER OF THE ORIGINAL ORDER OF DISPLAY TO CHANGE THE SOURCE FOR, AND ORDER OF, CALCULATIONS. THIS MAY BE USED MONITOR OPERATIONS ON-SCREEN.

NOTE: THE PTRACE AND STRACE COMMANDS ACTUALLY MOVE THE DATA TO THE POSITION OF PRIMARY OR SECONDARY TRACES WHERE THE TRACE COMMAND CAUSES THE SPECIFIED DATA TO ASSUME THE PRIMARY TRACE ORDER IN CALCULATIONS.

NOTE: A PTRACE MAY NOT HAVE A LOWER ORDINAL VALUE THAN STRACE.

References: TRACE STRACE TRCSRC

Command: PTSEL **Category:** PLOTTER PARAMETER **Product:** 682

Function: NON-OPERATING COMMAND INCLUDED FOR COMPLETENESS ONLY

Syntax: PTSEL

Comments: OFTEN RETURNS A VALUE OF 1

Command: PWCURW **Category:** PLOTTER PARAMETER **Product:** 682

Function: RETURNS THE CURRENT WAVE TO PLOT DURING A WATERFALL

Syntax: PWCURW

Comments: AS A WATERFALL PLOT IS IN PROGRESS, BETWEEN PLOTS THE PLOTTER IS INTERRUPTED AND I/O CONTROL IS RETURNED. DURING THIS TIME, IT IS POSSIBLE TO OBTAIN THE CURRENT WAVE BEING PLOTTED BY THE PLOTTER.

NOTE, HOWEVER, THAT THIS IS UNNECESSARY IF THE CONTROLLER IS MANAGING THE RECORDS IN THE D6100; THAT IS, ONLY IF AN INTERNAL PROGRAM IS RUNNING IN RUN/STOP MODE CAN THE CONTROLLER REGAIN ACCESS BETWEEN PLOTS

References: PWNWAV

Command: PWNWAV **Category:** PLOTTER PARAMETER **Product:** 682

Function: SELECTS NUMBER OF WAVES IN WATERFALL (Z-AXIS DENSITY)

Syntax: PWNWAV[= N]

Comments: WHERE N IS THE NUMBER OF WAVES ON THE Z AXIS IN THE RANGE 1-255

THE PLOT SOFTWARE AUTOMATICALLY ACCOUNTS FOR THE NEW X AND Y INCREMENTS IMPLIED BY THE CHANGE IN DENSITY

References: PWNWAV

Command: PWXRAT **Category:** PLOTTER PARAMETER **Product:** 682
Function: SELECTS X RATIO WITH RESPECT TO PLOT AREA FOR WATERFALL WAVES
Syntax: PWXRAT[=R]
Comments: WHERE R IS A RATIO FROM 0.00 TO 1.00, DEFAULT IS 0.50
THE LARGER THE RATIO, THE SMALLER THE INCREMENT PER WAVE
References: PWYRAT

Command: PWYRAT **Category:** PLOTTER PARAMETER **Product:** 682
Function: SELECTS Y RATIO WITH RESPECT TO PLOT AREA FOR WATERFALL WAVES
Syntax: PWYRAT[=R]
Comments: WHERE R IS A RATIO FROM 0.00 TO 1.00, DEFAULT IS 0.50
THE LARGER THE RATIO, THE SMALLER THE INCREMENT PER WAVE
References: PWXRAT

Command: PX **Category:** PLOTTER PARAMETER **Product:** 682
Function: RETURNS RATIO OF X USER-DEFINED PLOT AREA TO TOTAL AREA
Syntax: PX
Comments: COMMAND ONLY, IF D1 AND D2 WERE RE-DEFINED EITHER BY MANUAL OR REMOTE (PSETD1, PSETD2), THEN THE PX COMMAND RETURNS NON-ZERO RATIO
References: PY PDX PDY PSETD1 PSETD2 PCHKD1 PCHKD2

Command: PXLBL **Category:** PLOTTER PARAMETER **Product:** 682

Function: PERMITS USER DEFINITION OF X-AXIS LABEL FOR SPECIFIED TRACE

Syntax: PXLBL[(T)][="<STRING>"]

Comments: WHERE T IS THE NUMBER OF THE TRACE TO WHICH THE LABEL APPLIES AND <STRING> IS A STRING DESCRIBING THE X AXIS

THE NEW LABEL WILL REPLACE THE CURRENT UNITS LABEL FOR THAT TRACE

References: PYLBL

Command: PXNPTS **Category:** PLOTTER PARAMETER **Product:** 682

Function: DEFINES NUMBER OF X POINTS TO PLOT IN WATERFALL MODE

Syntax: PXNPTS[=N]

Comments: WHERE N IS A PORTION OF THE ORIGINAL DATA FROM 1 TO 10,700 POINTS

Command: PY **Category:** PLOTTER PARAMETER **Product:** 682

Function: RETURNS RATIO OF Y USER-DEFINED PLOT AREA TO TOTAL AREA

Syntax: PY

Comments: COMMAND ONLY, IF D1 AND D2 WERE RE-DEFINED EITHER BY MANUAL OR REMOTE (PSETD1, PSETD2), THEN THE PY COMMAND RETURNS NON-ZERO RATIO

References: PX PDX PDY PSETD1 PSETD2 PCHKD1 PCHKD2

Command: PYLBL **Category:** PLOTTER PARAMETER **Product:** 682

Function: PERMITS USER DEFINITION OF Y-AXIS LABEL FOR SPECIFIED TRACE

Syntax: PYLBL[(T)][="<STRING>"]

Comments: WHERE T IS THE NUMBER OF THE TRACE TO WHICH THE LABEL APPLIES AND <STRING> IS A STRING DESCRIBING THE Y AXIS

THE NEW LABEL WILL REPLACE THE CURRENT UNITS LABEL FOR THAT TRACE

References: PXLBL

Command: QBAYn **Category:** BUFFER SELECTOR **Product:** 600

Function: RETURNS THE IDENTITY OF THE PLUG-IN IN BAYn

Syntax: QBAY[n], WHERE [n] IS AN INTEGER FROM 1 — 4

Comments: THIS COMMAND IS A QUERY ONLY. IT WILL NOT EFFECT A CHANGEOVER TO ANOTHER BAY.

References: BAY BAYn SBAYn

Command: QTMB **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: RETURNS STATUS FOR THE SPECIFIED TIMEBASE

Syntax: QTMB[T]

Comments: RETURNS AN INTEGER NUMBER BETWEEN 0 AND 4: 0, TIMEBASE IDLE; 1, ARMED; 2, DELAYING; 3, PRERECORDING (PRIOR TO TRIGGER); 4, RECORDING T IS AN OPTIONAL TIMEBASE SPECIFICATION FOR DUAL TIMEBASE OPERATION QTMB MAY BE USED WHILE A RECORDING IS IN PROGRESS SINCE THE TIMEBASE OPERATES AS AN INDEPENDENT SYSTEM

QTMB IS IDEAL FOR RS-232 SYSTEMS WHERE THERE IS A NEED TO MONITOR SYSTEM EVENTS

References: SRQ AQUSRQ QTRG WAIT AQUSRQ

Command: QTRG **Category:** TRIGGER PARAMETER **Product:** PLUG-IN

Function: RETURNS CURRENT TRIGGER STATUS

Syntax: QTRG

Comments: QTRG RETURNS AN INTEGER REPRESENTING THE STATUS OF THE TRIGGER THIS STATUS IS APPLICABLE TO BOTH MAIN AND ARM TRIGGER

0 DISARMED, 1 ARM ENABLED (WAITING FOR ARM TRIGGER), 2 ARMED (WAITING FOR MAIN TRIGGER), 3 TRIGGERED (RECORDING), 4 HOLDING TRIGGER

SEND: QTRG RESP: 3 IF A TRIGGER (MAIN) HAS OCCURRED

References: QTMB TRGM TRGSRC TRGLEV HLDOFF SRQ AQUSRQ WAIT

Command: RANGE **Category:** INPUT PARAMETER **Product:** PLUG-IN

Function: SELECTS THE FULL-SCALE RANGE FOR THE SPECIFIED INPUT

Syntax: RANGE[(I)][= R]

Comments: WHERE I IS THE INPUT NUMBER (CHANNEL NUMBER) AND R IS THE RANGE FROM 1 TO N BEGINNING WITH THE LOWEST RANGE AVAILABLE ON THE PARTICULAR PLUG-IN

References: INPSEL COUPLE

Command: RANGE1 **Category:** INPUT PARAMETER **Product:** D1000

Function: SELECTS THE FULL-SCALE RANGE FOR CHANNEL 1

Syntax: RANGE1[= R]

Comments: WHERE R IS THE RANGE FROM 1 (50 mV) TO 9 (20V)

IF THE MODEL 106 IS INSTALLED, THE RANGES MAY BE CONTROLLED USING THE RANGE(CHANNEL) COMMAND WITH THE 620 ONLY

References: INPCON COUPL1 COUPL2 RANGE2

Command: RANGE2 **Category: INPUT PARAMETER Product: D1000**

Function: SELECTS THE FULL-SCALE RANGE FOR CHANNEL 2

Syntax: RANGE2[= R]

Comments: WHERE R IS THE RANGE FROM 1 (50 mV) TO 9 (20V)

IF THE MODEL 106 IS INSTALLED, THE RANGES MAY BE CONTROLLED USING THE RANGE (CHANNEL) COMMAND WITH THE 620 ONLY

References: INPCON COUPL1 COUPL2 RANGE1

Command: RCP **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS RECIPROCAL OF SPECIFIED VARIABLE OR RECORD

Syntax: [D] = [M]RCP[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR RECORD, M IS THE MODIFIER OR MODIFIERS AND R IS THE SOURCE RECORD

EXAMPLE: RCBUF = CR:RCP(BUF.B4) RETURNS THE RECIPROCAL OF BUF.B4 WITHIN CURSOR LIMITS TO THE VARIABLE RCBUF

References: SQ SQRT LOGX

Command: REC **Category:** BUFFER PARAMETER **Product:** PLUG-IN

Function: ENABLES/DISABLES SPECIFIED BUFFER FOR USE BY SYSTEM

Syntax: REC[(T,C)][= S]

Comments: WHERE T AND C ARE TIMEBASE AND CHANNEL (A = 1, B = 2, CH 1 AND CH 2) AND S IS THE STATUS; 1 OFF, 2 ON. THIS COMMAND DOES NOT APPLY TO A 620.

NOTE: THIS COMMAND SHOULD BE USED EARLY IN THE CODE AND SENT ONCE PER BUFFER. REC IS USED TO ENABLE OR DISABLE A RAW DATA TIME BUFFER FOR USE BY THE SYSTEM. IF THE T AND/OR C PARAMETERS ARE OMITTED, THE S PARAMETER APPLIES TO THE CURRENT TIMEBASE AND/OR CHANNEL — IF S IS OMITTED, REC RETURNS THE STATUS OF THE RECORD. REC(2,4) = 2 CAUSES THE (PROTECTED) RECORD BUF.B4 TO APPEAR IN THE DIRECTORY.

References: TMBSEL RECSEL INPSEL LDIR DIR BUFM BUFR

Command: RECA **Category:** TIMEBASE PARAMETER **Product:** 620

Function: SELECTS CHANNEL ONE OR TWO FOR TIMEBASE A SAMPLE RATE

Syntax: RECA[= M]

Comments: WHERE M IS THE MODE: 1 CHANNEL 1, 2 CHANNEL 2, 3 CHANNELS 1 AND 2

NOTE: WHEN USING TIMEBASE A AND B (RECB), ONLY ONE CHANNEL PER TIMEBASE MAY BE USED, WHETHER 1 AND 1, 1 AND 2, 2 AND 1 OR 2 AND 2.

References: RECB REC

Command: RECALL **Category:** FILE OPERATIONS **Product:** 6100

Function: RECALLS DATASETS AND/OR CONTROLS

Syntax: RECALL"[<DRIVE>:]<FILENAME>.EXT"

Comments: WHERE <DRIVE>: IS AN OPTIONAL DRIVE SPECIFICATION AND <FILENAME> IS THE NAME OF THE FILE TO BE RECALLED. .EXT IS A REQUIRED EXTENTION OF TYPE .CTL FOR A CONTROLS FILE AND .DAT FOR A DATASET.

NOTE: DON'T CONFUSE DATASETS (GROUPS OF DATA FILES) WITH VARIABLES (A SINGLE RECORD). ARRAY VARIABLES (RECORDS) HAVE THE EXTENTION ".VAR".

References: STORE SAVE LOAD Save—file Recl—file

Command: RECB **Category:** TIMEBASE PARAMETER **Product:** 620

Function: SELECTS THE CHANNEL(S) RECORDED USING TIMEBASE B

Syntax: RECB[= M]

Comments: WHERE M IS THE MODE: 1 CHANNEL 1, 2 CHANNEL 2, 3 OFF
NOTE: THERE ARE LIMITS ON THE NUMBER OF CHANNELS THAT MAY BE USED WITH BOTH A AND B ENABLED; SEE RECA COMMAND.

References: RECA

Command: RECMOD **Category:** DISPLAY PARAMETER **Product:** 640
Function: SELECTS STANDARD OR UPDATE MODE SUBMENUS UNDER TIMEBASE KEY
Syntax: RECMOD = 1, 2 (MENU 1, MENU 2)
Comments: SEE 640 MANUAL
References: RECRNG RECRTE RECSTP

Command: RECRNG **Category:** DISPLAY PARAMETER **Product:** 640
Function: SELECTS RANGE OF UPDATING IN UPDATE MODE MENU
Syntax: RECRNG = 1, 2 (FULL, CURSOR)
Comments: SEE 640 MANUAL
References: RECMOD RECRTE RECSTP

Command: RECRTE **Category:** DISPLAY PARAMETER **Product:** 640
Function: SELECTS INTERVAL OF SCREEN UPDATING, PER RECORD OR PER POINT
Syntax: RECRTE = 1, 2 (PER RECORD, PER POINT)
Comments: SEE 640 MANUAL
References: RECMOD RECRNG RECSTP

Command: RECSEL **Category:** INPUT PARAMETER **Product:** PLUG-IN

Function: RETURNS BUFFER NAME IN "RECORD" FIELD FOR BUFR AND PROC MENUS

Syntax: RECSEL

Comments: USE ONLY WHEN OPERATOR IS LIKELY TO CHANGE THE RECORD NAME FOR AVERAGING PARAMETERS OR RECORD SELECTION

INFORMS APPLICATION PROGRAM OF THE CURRENT SELECTED RECORD FOR PROC MENU OR BUFR MENU — WILL NOT SELECT THE RECORD / STATUS ONLY

USE THE INPSEL AND TMBSEL COMMANDS TO SELECT A RECORD FROM A RUNNING APPLICATION PROGRAM FOR PARAMETER CHANGES OR THE REC COMMAND TO ENABLE/DISABLE

References: PROC BUFR INPSEL TMBSEL REC

Command: RECSTP **Category:** DISPLAY PARAMETER **Product:** 640

Function: SELECTS STEP COUNT OF PER POINT SCREEN UPDATING

Syntax: RECSTP = 0 OR BIN ST (BINARY STEP), 1 TO #POINTS

Comments: SEE 640 MANUAL

References: RECMOD RECRNG RECRTE

Command: REMLOC **Category:** I/O PARAMETER **Product:** 682

Function: RETURNS THE STATUS OF REMOTE/LOCAL FRONT-PANEL MODE

Syntax: REMLOC

Comments: COMMAND ONLY, REMLOC RETURNS THE STATUS OF FRONT-PANEL ACCESS

1 LOCAL UNLOCK 2 LOCAL LOCK (ACCESS PERMITTED, NO ACCESS UPON "REMOTE" COMMAND) 3 REMOTE UNLOCK (LIMITED ACCESS VIA DIR/PROG PAIR) 4 REMOTE LOCK (NO ACCESS EXCEPT RESET)

References: CONT REMOTE LOCAL

Command: REMOTE **Category:** I/O PARAMETER **Product:** 682

Function: DENIES FULL ACCESS TO THE DATA 6100 VIA FRONT PANEL

Syntax: REMOTE

Comments: COMMAND ONLY

IF LOCKED, NO ACCESS IS PERMITTED EXCEPT RESET IF UNLOCKED, LIMITED ACCESS IS PERMITTED VIA DIR/PROG PAIR

References: LOCK LOCAL REMLOC

Command: RENUM **Category:** KEYSTROKE PROGRAM **Product:** 6100

Function: RENUMBERS INTERNAL PROGRAM IN STEPS OF 10 STARTING AT 10

Syntax: RENUM

Comments: DUPLICATES PRESSING OF SOFTKEYS IN FIELD 4 OF PROG MENU

References: LIST PGMMOD

Command: RESET **Category:** CONTROLS **Product:** 6100

Function: INITIALIZES D6100 TO THE POWER-UP STATE — DATA AND PROGRAMS LOST

Syntax: RESET

Comments: RESETS THE DATA 6100; ALL INTERNAL RAM IS CLEARED, PARAMETERS ARE SET TO DEFAULT; A FILE IN A POWERED-ON DISK DRIVE NAMED PWRON.PGM WILL AUTOMATICALLY EXECUTE

ANY LIVE DATA OR PROGRAMS OR CONTROLS ARE LOST

References: MINN PPORT

Command: RESOLU **Category:** INPUT PARAMETER **Product:** 640

Function: SELECTS NUMBER OF BITS OF RESOLUTION OF THE WAVEFORM

Syntax: RESOLU = 1 TO 16

Comments: SEE 640 MANUAL

Command: RISE **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE RISETIME OF AN RISING EDGE IN THE SPECIFIED RECORD

Syntax: [D =][M]RISE[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR THE VALUE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD

EXAMPLE: TIMER = CR:RISE(BUF.A1)

RETURNS THE RISETIME FOUND IN BUF.A1 WITHIN THE CURSOR LIMITS TO VARIABLE TIMER

References: FALL PLSW STL1 STL2

Command: RMS **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE ROOT-MEAN-SQUARE VALUE OF THE SPECIFIED RECORD

Syntax: [D =][M]RMS[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR THE VALUE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD

EXAMPLE: RMSA = CR:RMS(A)

RETURNS THE RMS VALUE OF A WITHIN THE CURSOR LIMITS TO VARIABLE RMSA

References: MEAN SDEV PKPK

Command: RS232 **Category:** RS-232 PARAMETER **Product:** 682
Function: CALLS RS-232 PARAMETERS MENU
Syntax: RS232
Comments: PERMITS OPERATOR SELECTION OF RS-232 PARAMETERS
THE PORT APPEARING AT THE FIRST FIELD IS SELECTED USING SERSEL
References: SERSEL BAUD PARITY STOPB DUPLEX HNDSHK

Command: RUN **Category:** INTERNAL PROGRAM **Product:** 6100
Function: RUNS CURRENT PROGRAM
Syntax: RUN[[<DRIVE>:]<NAME>.PGM]
Comments: ACTS AS RUN/STOP KEY TO RUN A STORED PROGRAM
<DRIVE>: IS AN OPTIONAL DISK DRIVE SPECIFICATION <NAME>.PGM IS AN OPTIONAL PROGRAM NAME WHETHER RESIDING ON DISK OR IN SYSTEM
References: RUNP LOAD STORE

Command: RUNP **Category:** KEYSTROKE PROGRAM **Product:** 6100
Function: LOADS AND RUNS A SPECIFIED PROGRAM
Syntax: RUNP[<DRIVE>:]<NAME>.PGM
Comments: LOADS AND RUNS A NAMED PROGRAM FROM SYSTEM OR DISK
<DRIVE>: IS AN OPTIONAL DISK DRIVE SPECIFICATION <NAME>.PGM IS AN OPTIONAL PROGRAM NAME WHETHER RESIDING ON DISK OR IN SYSTEM
NOTE: IF <DRIVE> IS OMITTED THEN SYSTEM IS ASSUMED
References: RUN LOAD STORE

Command: Rcal—file **Category:** DISK OPERATIONS **Product:** 681

Function: PROCEDURE TO RECALL DATA FROM DISK

Syntax: V = <DRIVE>:<NAME>.VAR

Comments: WHERE V IS THE TARGET SYSTEM VARIABLE NAME FOR THE FILE <NAME>.VAR ON DISK DRIVE <DRIVE>: THE COLON(:) AND THE EXTENTION (.VAR) ARE REQUIRED.

References: Save—file STORE LOAD SAVE RECALL

Command: SAVE Category: FILE OPERATIONS **Product:** 6100

Function: SAVES DATASETS OR CONTROLS TO SYSTEM OR DISK

Syntax: SAVE"[<DRIVE>:]<NAME>.EXT"

Comments: WHERE <DRIVE>: IS AN OPTIONAL DRIVE SPECIFICATION AND <NAME>.EXT IS A REQUIRED FILENAME WITH THE REQUIRED EXTENTION OF .DAT FOR A DATASET AND .CTL FOR CONTROLS.

NOTE: DON'T CONFUSE A DATASET WITH A RECORD OR VARIABLE; SEE RECALL.

References: RECALL STORE LOAD RUNP

Command: SAVG **Category:** MATHEMATICS **Product:** 6100

Function: CALLS AVERAGING MENU

Syntax: SAVG

Comments: PERMITS OPERATOR SELECTION OF AVERAGING PARAMETERS

References: AVGTYP NAVG

Command: SB: **Category:** MODIFIER **Product:** 6100

Function: SETS THE BASELINE LEVEL TO THE RESULT OF A SCALAR FUNCTION

Syntax: SB:[M]<FUNCTION>[(R)]

Comments: WHERE M IS A MODIFIER(S), <FUNCTION> MAY BE ANY VALID FUNCTION AND R IS A SOURCE RECORD EXAMPLE: SB:CR:MEAN(BUF.A1) WILL CAUSE THE BASELINE LEVEL TO ASSUME THE MEAN VALUE OF THE DATA BETWEEN THE CURSOR LIMITS IN THE RECORD BUF.A1

References: BLEVEL SC: SE:

Command: SBAYn **Category:** BUFFER SELECTOR **Product:** 600

Function: EXECUTES CHANGEOVER TO PLUG-IN IN BAYn OF EXPANSION RACK

Syntax: SBAY[n], WHERE [n] IS AN INTEGER FROM 1 — 4

Comments: THIS IS AN IMMEDIATE EXECUTE COMMAND AND WILL NOT DO A COURTESY CHECK BEFORE CHANGING TO ANOTHER PLUG-IN.

References: BAY BAYn QBAYn

Command: SC: **Category:** CURSOR PARAMETER **Product:** 6100

Function: SETS START POINT OF CURSOR TO RESULT OF SCALAR FUNCTION

Syntax: SC:[M]<FUNCTION>

Comments: WHERE M IS A MODIFIER OR MODIFIERS AND <FUNCTION> IS A SCALAR MEASUREMENT RESULTING IN A HORIZONTAL CO-ORDINATE

EXAMPLE: SC:BL:CRSP WILL SET THE START POINT OF THE CURSOR TO THE TIME AT WHICH THE DATA CROSSES THE BASELINE

References: SE:

Command: SCLR **Category:** MATHEMATICS **Product:** 6100
Function: CALLS MATH FUNCTION CLEAR MENU
Syntax: SCLR
Comments: PERMITS MANUAL OPERATION OF CLEAR FOR AVERAGING, TRENDING, COPY AND DISTRIBUTION
References: CLRSUM CLRDST

Command: SCONV **Category:** MATHEMATICS **Product:** 6100
Function: CALLS CONVOLUTION MENU
Syntax: SCONV
Comments: PERMITS MANUAL SELECTION OF CONVOLUTION PARAMETERS
References: CONVM CNVINP CNVOFF

Command: SCORR **Category:** MATHEMATICS **Product:** 6100
Function: CALLS CORRELATION MENU
Syntax: SCORR
Comments: PERMITS MANUAL SELECTION OF CORRELATION PARAMETERS
References: CORRM CORINP COROFF

Command: SDEV **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE STANDARD DEVIATION OF THE SPECIFIED RECORD

Syntax: [D =][M]SDEV[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR THE VALUE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD

EXAMPLE: DEV = CR:SDEV(BUF.A1)

RETURNS THE STANDARD DEVIATION OF BUF.A1 WITHIN THE CURSOR LIMITS TO VARIABLE DEV

References: MEAN RMS PKPK MAX MIN

Command: SDST **Category:** MATHEMATICS **Product:** 6100

Function: CALLS DISTRIBUTION MENU

Syntax: SDST

Comments: PERMITS MANUAL SELECTION OF DISTRIBUTION PARAMETERS

References: DCNTR DSPAN DLEN

Command: SE: **Category:** CURSOR PARAMETER **Product:** 6100

Function: SETS END POINT OF CURSOR TO RESULT OF SCALAR FUNCTION

Syntax: SE:[M]<FUNCTION>

Comments: WHERE M IS A MODIFIER OR MODIFIERS AND <FUNCTION> IS A SCALAR MEASUREMENT RESULTING IN A HORIZONTAL CO-ORDINATE

EXAMPLE: SE:BL:CRSP WILL SET THE END POINT OF THE CURSOR TO THE TIME AT WHICH THE DATA CROSSES THE BASELINE

References: SC:

Command: SERSEL **Category:** RS-232 PARAMETER **Product:** 682

Function: SELECTS OR FINDS THE CURRENT TARGET PORT FOR PARAMETER CHANGES

Syntax: SERSEL[= N]

Comments: N IS THE PORT NUMBER, 1(SER0:) OR 2(SER1:) SERSEL SENT ALONE RETURNS AN INTEGER 1 OR 2 INDICATING THE CURRENT SERIAL PORT

EXAMPLE: SERSEL = 1;HNDSHK = 2 WILL MAKE SER0: THE CURRENT TARGET PORT AND ENABLE HANDSHAKING

References: PORT

Command: SFFT **Category:** MATHEMATICS **Product:** 6100

Function: CALLS FFT MENU

Syntax: SFFT

Comments: PERMITS OPERATOR SELECTION OF FFT PARAMETERS

References: FFTINP FFTM FFTOUT

Command: SQ **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS SQUARE (X^2) OF SPECIFIED VARIABLE OR RECORD

Syntax: [D] = [M]SQ[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR RECORD, M IS THE MODIFIER OR MODIFIERS AND R IS THE SOURCE RECORD

EXAMPLE: ASQAR = CR:SQ(BUF.A1) RETURNS THE SQUARE OF BUF.A1 WITHIN CURSOR LIMITS TO THE VARIABLE ASQAR

References: SQRT RCP LOGX

Command: SQRT **Category:** MATHEMATICS **Product:** 6100

Function: RETURNS SQUARE ROOT (X^0.5) OF SPECIFIED VARIABLE OR RECORD

Syntax: [D] = [M]SQRT[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR RECORD, M IS THE MODIFIER OR MODIFIERS AND R IS THE SOURCE RECORD

EXAMPLE: ASQRT = CR:SQRT(A) RETURNS THE SQUARE ROOT OF A WITHIN CURSOR LIMITS TO THE VARIABLE ASQRT

References: SQ RCP LOGX

Command: SRC **Category:** I/O PARAMETER **Product:** 682

Function: IMMEDIATELY SENDS THE DATA FROM THE SPECIFIED TRACE

Syntax: SRC[(T)]

Comments: WHERE T IS THE TRACE NUMBER

THERE ARE FOUR TRACES FOR DISPLAY. REGARDLESS OF THE RECORD IN ANY TRACE SRC WILL SEND THE DATA FOR THAT TRACE IN THE CURRENT FORMAT FOR THE CURRENT COMMAND DEVICE TO THE COMMAND DEVICE

SRC(3) SENDS THE DATA FROM THE RECORD IN TRACE 3 TO THE COMMAND DEVICE
NOTE: IF T IS OMITTED, SRC SENDS DATA FOR THE CURRENT PRIMARY TRACE

References: PORT CMDDEV FORMAT FLDDLM

Command: SRQ **Category:** I/O PARAMETER **Product:** 682

Function: RETURNS THE DECIMAL VALUE OF THE SRQ STATUS BYTE

Syntax: SRQ

Comments: RETURNS A DECIMAL VALUE REPRESENTING THE SUM OF THE STATUS BITS:
VALUE MEANING IF TRUE

BIT#	1	1	STATUS IS REMOTE	NOTE: AN SRQ CANNOT BE
	2	2	GPIB: IS CMDDEV	GENERATED UNTIL
	4	8	TALK BUFFER READY	XXXSRQ = 2 IS SENT
	5	16	ACQISITION COMPLETE	
	6	32	KEY HAS BEEN PRESSED	
	7	64	D6100 HAS REQUESTED SERVICE	
	8	128	ERROR HAS OCCURED	

References: AQUSRQ OUTSRQ ERRSRQ CLRSRQ CLRKEY CLRERR KEY ERR

Command: SSRC **Category:** I/O PARAMETER **Product:** 682

Function: IMMEDIATELY SENDS THE DATA FROM THE SECONDARY TRACE

Syntax: SSRC

Comments: SENDS THE DATA FROM THE RECORD IN THE CURRENT SECONDARY TRACE TO THE CURRENT COMMAND DEV IN THE FORMAT SPECIFIED FOR THE COMMAND DEV PORT

References: TRACE STRACE PORT CMDDEV FORMAT FLDDLM

Command: STL1 **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS 1% SETTLING TIME OF A PULSE IN THE SPECIFIED RECORD

Syntax: [D =][M]STL1[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR SETTLING TIME, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD

EXAMPLE: SETT = CR:STL1(BUF.A1)

REFER TO THE DISCUSSION OF THE SETTLING TIME ALGORITHM IN THE MANUAL FOR APPLICATION OF CURSOR AND BASELINE MODIFIERS

References: SETL2

Command: STL2 **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS .1% SETTLING TIME OF A PULSE IN THE SPECIFIED RECORD

Syntax: [D =][M]STL2[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE FOR SETTLING TIME, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE DATA RECORD

EXAMPLE: SETT = CR:STL2(BUF.A1)

REFER TO THE DISCUSSION OF THE SETTLING TIME ALGORITHM IN THE MANUAL FOR APPLICATION OF CURSOR AND BASELINE MODIFIERS

References: SETL1

Command: STOP **Category:** KEYSTROKE PROGRAM **Product:** 6100

Function: SETS INTERNAL PROGRAM STATUS TO STOPPED

Syntax: STOP

Comments: SINCE THE PROGRAM WILL MOST OFTEN INHIBIT I/O, THIS COMMAND HAS LITTLE APPLICATION EXCEPT EXIT STEP MODE

References: RUN RUNP EXECON PGMST

Command: STOPB **Category:** RS-232 PARAMETER **Product:** 682

Function: SELECTS THE NUMBER OF STOP BITS FOR THE SPECIFIED SERIAL PORT

Syntax: STOPB[(S)][= N]

Comments: WHERE S IS THE SERIAL INTERFACE AND N IS THE CHOICE: 1 SYNC, 2 1, 3 1.5, 4 2

IF THE PARITY IS ON, THEN USE SYNC FOR 8 BIT CHARACTERS, IF PARITY IS NONE, USE STOPB = 2 FOR 8 BIT CHARACTERS. IN BINARY TRANSMISSION, 8 BIT CHARACTERS ARE NECESSARY TO ENSURE DATA INTEGRITY

References: BAUD PARITY DUPLEX

Command: STORE **Category:** FILE OPERATIONS **Product:** 6100

Function: STORES CURRENT PROGRAM TO SYSTEM OR DISK USING SPECIFIED NAME

Syntax: STORE"[<DRIVE>:]<NAME>.PGM"

Comments: WHERE <DRIVE>: IS AN OPTIONAL DRIVE SPECIFICATION AND <NAME>.PGM IS THE NAME USED TO STORE THE PROGRAM. THE EXTENTION OF .PGM IS REQUIRED

References: LOAD SAVE RECALL Save—file Recl—file

Command: STRACE **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS DATA FOR THE SECONDARY TRACE

Syntax: STRACE[= N]

Comments: WHERE N IS AN INTEGER NUMBER OF THE ORIGINAL ORDER OF DISPLAY TO CHANGE THE SOURCE FOR, AND ORDER OF, CALCULATIONS. THIS MAY BE USED TO MONITOR OPERATIONS ON-SCREEN.

NOTE: THE PTRACE AND STRACE COMMANDS ACTUALLY MOVE THE DATA TO THE POSITION OF PRIMARY OR SECONDARY TRACES WHERE THE TRACE COMMAND CAUSES THE SPECIFIED DATA TO ASSUME THE PRIMARY TRACE ORDER IN CALCULATIONS.

NOTE: A PTRACE MAY NOT HAVE A LOWER ORDINAL VALUE THAN STRACE.

References: TRACE PTRACE TRCSRC

Command: STRND **Category:** MATHEMATICS **Product:** 6100

Function: CALLS TREND MENU

Syntax: STRND

Comments: USED TO PRE-SET PARAMETERS FOR THE TREND FUNCTION.

NOTE: THE TREND COMMAND IS NOT EXECUTABLE FROM THE INTERFACE BY DIRECT COMMAND; IT MUST BE USED IN AN INTERNAL PROGRAM.

References: KTRND TRND TRNDM TRLEN

Command: STRT **Category:** DISPLAY PARAMETER **Product:** 6100

Function: RETURNS THE STARTING POINT OF THE SPECIFIED TRACE IN X UNITS

Syntax: [D =]STRT[(T)]

Comments: WHERE D IS THE DESTINATION DIVICE OR VARIABLE AND T IS THE TRACE NUMBER

START POINT IS RETURNED IN THAT TRACE'S X UNITS RELATIVE TO THE TRIGGER DELAY (TMB DELAY)

References: XSTART XEND YSTART XDELTA SC: SE: CR: END

Command: SUB **Category:** MATHEMATICS **Product:** 6100

Function: SUBTRACTS TWO SPECIFIED RECORDS

Syntax: [D =]DIV[(R1[,R2])]

Comments: WHERE D IS A DEVICE OR VARIABLE NAME AND R1, R2 ARE RECORD NAMES IF R2 IS OMITTED, R1 IS DIVIDED BY THE RECORD IN THE SECONDARY TRACE IF BOTH ARE OMMITTED, THE SECONDARY TRACE DATA IS SUBTRACTED FROM THE PRIMARY TRACE DATA MAY OPERATE ON SCALAR, VECTOR OR MIXED VARIABLES RESLT = SUB(A,B) WILL SUBTRACT B FROM A AND PLACE THE RESULT IN THE VARIABLE RESLT

References: ADD DIV MUL

Command: SUNIT **Category:** MATHEMATICS **Product:** 6100

Function: CALLS UNITS MENU

Syntax: SUNIT

Comments: PERMITS OPERATOR SELECTION OF UNITS PARAMETERS

References: XUNIT YUNIT UYFSR UYMLT UXSCL UXOFF UYOFF

Command: SX: **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SETS A REFERENCED POINT IN THE PRIMARY TRACE TO CENTER SCREEN

Syntax: SX:[M]<FUNCTION>[(R)]

Comments: WHERE M IS A VALID MODIFIER, <FUNCTION> IS A SCALAR FUNCTION AND R IS A RECORD.

IF, FOR EXAMPLE, BUF.A1 HAD AN AMPLITUDE MAXIMUM AT 230 μS AFTER THE TRIGGER, THE SEQUENCE: SX:MAX(BUF.A1) WILL SHIFT THE DATA IN THE PRIMARY TRACE (1) SUCH THAT CENTER SCREEN WILL INTERSECT THE POINT RECORDED AT 230 μS FROM t = 0

VERY USEFUL FOR EXPANDING ABOUT AN EVENT

References: SC: SE:

Command: SXFER **Category:** FILE OPERATIONS **Product:** 6100

Function: CALLS TRANSFER MENU

Syntax: SXFER

Comments: PERMITS OPERATOR SELECTION AND OPERATION OF TRANSFER UTILITIES

References: Save—file Recl—file

Command: SYSFIL **Category:** FILE OPERATIONS **Product:** 6100

Function: SELECTS SYSTEM RECORD FOR USE WITH THE SXFER TRANSFER UTILITIES

Syntax: SYSFIL[=<NAME>]

Comments: WHERE <NAME> IS THE NAME OF AN EXISTING, OR NEWLY CREATED, FILE EITHER IN, OR TO BE WRITTEN TO, THE SYSTEM MEMORY

TO USE SYSFIL, THE REFERENCED NAME MUST EXIST IN THE DIRECTORY

References: XFVOL

Command: Save—file **Category:** DISK OPERATIONS **Product:** 681

Function: PROCEDURE TO SAVE A DATA FILE TO DISK

Syntax: <DRIVE>:<NAME> = VARIABLE

Comments: WHERE DRIVE IS THE DISK DRIVE SPEC, A: OR B:, <NAME> IS THE NAME OF THE DESTINATION DATA FILE AND VARIABLE IS THE SOURCE DATA RESIDENT IN THE SYSTEM. AFTER THE DATA IS SAVED TO DISK, THE FILE WILL HAVE THE <NAME> AND THE EXTENTION .VAR:

A:TEST2 = BUF.A1 WILL SAVE THE DATA IN BUF.A1 TO THE DISK DRIVE A: IN A FILE CALLED TEST2.VAR

References: Recl—file STORE LOAD SAVE RECALL

Command: TEST **Category:** DIAGNOSTIC **Product:** 650

Function: CALLS TEST ROUTINES FOR MAINTAINENCE AND TROUBLESHOOTING

Syntax: TEST[=T]

Comments: WHERE T IS THE TEST TO BE PERFORMED. SEE 650 MANUAL.

Command: THYST **Category:** TRIGGER PARAMETER **Product:** 650
Function: SETS AMOUNT OF HYSTERESIS IN THE TRIGGER LEVEL
Syntax: THYST = [N]
Comments: WHERE N IS A REAL NUMBER. SEE 650 MANUAL.

Command: TLEVA **Category:** TRIGGER PARAMETER **Product:** 650
Function: SETS LEVEL OF TRIGGER SOURCE A WHEN A,B TRIGGER TYPE IS USED
Syntax: TLEVA = [N]
Comments: WHERE N IS A REAL NUMBER. SEE 650 MANUAL.

Command: TLEVB **Category:** TRIGGER PARAMETER **Product:** 650
Function: SETS LEVEL OF TRIGGER SOURCE B WHEN A,B TRIGGER TYPE IS USED
Syntax: TLEVB = [N]
Comments: WHERE N IS A REAL NUMBER. SEE 650 MANUAL.

Command: TLEVH **Category:** TRIGGER PARAMETER **Product:** 650
Function: SETS TRIGGER LEVEL WHEN EDGE OR EDGE-HYST TRIGGER TYPE IS USED
Syntax: TLEVH = [N]
Comments: WHERE N IS A REAL NUMBER. SEE 650 MANUAL.

Command: TMB **Category:** NAMED KEY **Product:** PLUG-IN

Function: PUSHES TIMEBASE KEY ANDCALLS TIMEBASE MENU

Syntax: COMMAND ONLY

Comments: WITH THE TIMEBASE MENU ON SCREEN, EITHER AN OPERATOR OR PROGRAM MAY EITHER PRESS OR ADDRESS THE KEY TO EXERCISE THE OPTION BY INCREMENTING, DECREMENTING OR PAIRING THE SOFTKEYS.

EXAMPLE: TMB;KEY = 1002

INCREMENTS THE SELECTED TIMEBASE TO "B", OPERATOR MAY NOW SELECT A SAMPLE PERIOD AND DELAY WITH "B" ALREADY SELECTED

References: KEY PERIOD PERSRC DELAY TRIG NPTS TMBSEL

Command: TMBSEL **Category:** TIMEBASE PARAMETER **Product:** PLUG-IN

Function: SELECTS THE SPECIFIED TIMEBASE AS THE TARGET FOR ANY NEW PARAMETER

Syntax: TMBSEL = T

Comments: T = TIMEBASE 1 OR 2 (A or B), ANY CHANGE IN THE TIMEBASE PARAMETERS, IF THE CHANGE'S TARGET IS UNSPECIFIED, WILL APPLY TO TIMEBASE "T"

EXAMPLE: TMBSEL = 2;PERIOD = 350 μS

SELECTS TIMEBASE "B" AS THE TARGET FOR ANY OTHER TIMEBASE COMMANDS THEN SELECTS A SAMPLE PERIOD OF 350 μS (WHICH NOW APPLIES TO TIMEBASE "B") ALTERNATIVE: PERIOD(2) = 350 μS

References: TMB REC RECSEL PERIOD DELAY NPTS PERSRC

Command: TMOD **Category:** TRIGGER PARAMETER **Product:** 650

Function: SETS TRIGGER MODE

Syntax: TMOD = AUTO, NORMAL, SINGLE

Comments: SEE 650 MANUAL.

Command: TOPLIN **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS THE TYPE OF ANNOTATION AVAILABLE AT THE TOP LINE

Syntax: TOPLIN[= M]

Comments: WHERE M IS THE TOP LINE MODE: 1 OFF, 2 NORMAL, 3 EQU, 4 PLG, 5 DSP, 6 ERR

THAT IS, NORMAL, EQUATION RESULTS, PLUG-IN RECORDING STATUS, DISPLAY SCREEN PARAMETERS AND ERRORS ONLY — TOPLIN = 1 CAN IMPROVE DISPLAY FLICKER IN 4 TRACE OPERATION NOTE: HIGH-THROUGHPUT PROGRAMMERS; THE TOPLIN = 1 COMMAND WILL CAUSE A THROUGH PUT INCREASE OF 5-15 mS PER RECORD IN ADDITION TO THAT SAVED BY INTEN = 1

References: INTEN INT CALCYC

Command: TR: **Category:** MODIFIER **Product:** 6100

Function: DELIMITS OPERATIONS TO THOSE POINTS VISIBLE WITHIN SCREEN EDGES

Syntax: TR: < FUNCTION[(RECORD)]

Comments: PERMITS SELECTIVE PROCESSING OF CAPTURED DATA.

NOTE: TR: IS A CONVENIENT WAY TO DELIMIT FFT OPERATIONS SINCE X SCALES ARE ALWAYS POWERS OF TWO AND THE SCREEN DISPLAYS 512 POINTS.

NOTE: IF THE HORIZONTAL (X) SCALE (XSCL) IS LESS THAN 1, TR: WILL CAUSE EVERY 1/Nth POINT TO BE IGNORED; IF, FOR EXAMPLE, THE SCALE IS 1/4, THEN EVERY 4th POINT IS IGNORED — IF EXPANDED, THE SELECTED FILL IS USED FOR CALCULATION.

References: CR: BL: NX:

Command: TRACE **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS CURRENT PRIMARY (ORDER ONLY, NOT POSITION) TRACE FOR MATH

Syntax: TRACE[= T]

Comments: WHERE T IS THE SELECTED TRACE, AN INTEGER BETWEEN 1 AND 4

THE D6100 WILL HOLD FOUR RECORDS OR SCALARS. THESE MAY BE SEEN USING THE DSPM = 4 OR = 5 COMMAND OR SELECTING 4 TRACE MODE VIA DSPL MANUALLY. NORMALLY, IF A FUNCTION OR OTHER OPERATION IS USED, THE PRIMARY TRACE IS THE ONE OPERATED ON; THE DEFAULT TRACE IS 1. IF ANOTHER TRACE IS TO BECOME THE PRIMARY TRACE, THE TRACE COMMAND IS USED. IF THEY ARE TO BE RE-ORDERED, THE PTRACE/STRACE COMMANDS ARE USED. FOR RE-ASSIGNMENT OF DATA, USE TRCSRC

References: PTRACE STRACE TRCSRC

Command: TRCSRC **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS RECORD OR SCALAR FOR DISPLAY IN TRACES 1-4

Syntax: TRCSRC[= <NAME>]

Comments: WHERE <NAME> IS A VARIABLE RESIDING IN SYSTEM MEMORY; DO NOT USE QUOTES.

WARNING: IF, FOR EXAMPLE, TRCSRC = 1, 2, 3 OR 4 IS SENT IN ERROR, THE D6100 MAY ASSIGN A VARIABLE NAME AND DISPLAY THE DATA AS IF IT WERE A SCALAR; IT MAY ALSO RESET THE SYSTEM. BE CAREFUL WITH THIS COMMAND.

References: TRACE STRACE PTRACE

Command: TRG **Category:** TRIGGER PARAMETER **Product:** 650

Function: TRIGGERS AQUISITION

Syntax: TRG

Comments: IMMEDIATE EXECUTION. SEE 650 MANUAL.

Command: TRGCPL **Category:** TRIGGER PARAMETER **Product:** PLUG-IN

Function: PERMITS OR FINDS THE TRIGGER COUPLING FOR THE SPECIFIED SOURCE

Syntax: TRGCPL[(I)][= S]

Comments: I IS THE INPUT, CHANNEL 1 OR 2; S IS THE INTEGER STATUS, 1-N TO THE LIMITS OF THE PLUG-IN.

NOTE: THIS EFFECT OF THIS COMMAND MAY NOT APPEAR IN THE CURRENT TRIG MENU; SEND "TRIG" TO UPDATE THE DISPLAY, IF NECESSARY.

EXAMPLE TRGCPL(1) = 2;TRIG SETS TRIGGER COUPLING AT CHANNEL 1 TO AC (610)

References: TRGSLP INPSEL TRGSEL TRGSRC TRGLEV

Command: TRGLEV **Category:** TRIGGER PARAMETER **Product:** PLUG-IN

Function: RETURNS OR SELECTS TRIGGER LEVEL

Syntax: TRGLEV[(T)][= L]

Comments: WHERE T IS AN OPTIONAL TRIGGER SPECIFICATION (MAIN OR ARM, 1 OR 2) AND L IS THE TRIGGER LEVEL IN VOLTS (IF OMITTED, THE PRESENT LEVEL IS RETURNED) TRIGGER LEVEL RANGE IS A FUNCTION OF THE PROBE ATTENUATION FACTOR THE TRIGGER LEVEL IS SET IN N-BIT STEPS AND DEFAULTS TO THE CLOSEST N-BIT RESOLUTION VALUE TO THE USER'S SELECTION (RANGE: ± F.S.)

TRGLEV(2) = – 254.001 WILL SET THE ARM TRIGGER LEVEL (PROBE FACTOR OF 100X)

References: TRGSRC TRGSEL PROBE TRGCPL

Command: TRGM **Category:** TRIGGER PARAMETER **Product:** PLUG-IN

Function: SELECTS OR RETURNS TRIGGER MODE (AUTO OR NORMAL)

Syntax: TRGM[= M]

Comments: IF M IS OMITTED, TRGM RETURNS AN INTEGER REPRESENTING THE CURRENT MODE; 1, NORMAL; 2, AUTO TRIGGER

NOTE: THIS MODE APPLIES TO THE ARM TRIGGER AS WELL

TRGM = 1 WILL SET THE TRIGGER MODE TO NORMAL (610)

References: TRGSEL TRGSLP TRGLEV

Command: TRGMOD **Category:** TRIGGER PARAMETER **Product:** 630

Function: SELECTS ARM/RUN MODE FOR THE 630 PLUG-IN

Syntax: TRGMOD[= M]

Comments: WHERE M IS THE MODE: 1 RUN FIRST, 2 ARM FIRST

BEST USED IF LEFT ON 1, REFERS TO THE MASTER/SLAVE MODE FOR TWO OR MORE UNITS

Command: TRGSEL **Category:** TRIGGER PARAMETER **Product:** PLUG-IN

Function: SELECTS MAIN OR ARM TRIGGER

Syntax: TRGSEL[= M]

Comments: WHERE M IS THE MODE, 1 MAIN TRIGGER, 2 ARM TRIGGER

ARM TRIGGER IS A FIRST-LEVEL TRIGGER THAT WILL ARM THE UNIT UPON A SIGNAL CROSSING ITS THRESHOLD.

DO NOT USE ARM TRIGGER UNLESS IT IS NEEDED SINCE, FOR TRANSIENT EVENTS, IT WILL CAUSE CONFUSION

Command: TRGSLP **Category:** TRIGGER PARAMETER **Product:** PLUG-IN

Function: RETURNS OR SELECTS TRIGGER SLOPE

Syntax: TRGSLP[(T)][= S]

Comments: WHERE T IS THE MAIN(1) OR ARM (2) TRIGGER AND S IS THE SLOPE IF T IS OMITTED, TRGSLP RETURNS/SELECTS THE SLOPE FOR THE SELECTED TRIGGER IF S IS OMITTED, TRGSLP RETURNS THE SLOPE FOR THE SPECIFIED OR DEFAULT TRIGGER.

TRGSLP(1) = 2 WILL CAUSE THE MAIN TRIGGER SLOPE (610) TO BE " – ".

NOTE: THE MENU WILL NOT NECESSARILY REFLECT THE CHANGE UNTIL RECALLED.

References: TRGSEL TRGLEV TRGSRC

Command: TRGSRC **Category:** TRIGGER PARAMETER **Product:** PLUG-IN

Function: SELECTS OR RETURNS TRIGGER SOURCE FOR SPECIFIED TRIGGER

Syntax: TRGSRC[(T)][= I]

Comments: WHERE T IS AN OPTIONAL INTEGER TRIGGER SPECIFICATION AND I IS AN OPTIONAL INTEGER TRIGGER SOURCE SETTING. COMMAND ONLY OR COMMAND WITH SPECIFICATION RETURNS THE CURRENT SETTING.

"I" IS ASSIGNED AS FOLLOWS:

1 — NONE
2 — CH 1
3 — CH 2
4 — CH 3
5 — CH 4
6 — LINE
7 — EXT TRIG
8 — INP0 TTL

References: TRIG TRGLEV TRGSLP TRGSEL

Command: TRGTYP **Category:** TRIGGER PARAMETER **Product:** 650

Function: SELECTS TYPE OF TRIGGER

Syntax: TRGTYP = 1 THROUGH 10

Comments: SEE 650 MANUAL

Command: TRGUPR **Category:** TRIGGER PARAMETER **Product:** 650

Function: SETS UPPER TRIGGER BOUNDARY FOR IN-BNDS OR OUT-BNDS TRIGGER TYPES

Syntax: TRGUPR = [N]

Comments: WHERE N IS A REAL NUMBER. SEE 650 MANUAL.

Command: TRIG **Category:** NAMED KEY **Product:** PLUG-IN

Function: PUSHES TRIG KEY AND CALLS TRIGGER MENU

Syntax: TRIG

Comments: USE IN INTERACTIVE SYSTEMS WHERE OPERATOR MUST ADJUST TRIGGER LEVEL

References: KEY INP TMB

Command: TRLEN **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE LENGTH OF A TREND RECORD

Syntax: TRLEN[= N]

Comments: WHERE N IS THE LENGTH OF THE TREND RECORD IN POINTS. THE DEFAULT VALUE IS 512 AND THE DATA 6100 MUST GENERATE THE TREND RECORD USING AN INTERNAL PROGRAM

References: TRNDM TRND

Command: TRLOW **Category:** TRIGGER PARAMETER **Product:** 650
Function: SETS LOWER TRIGGER BOUNDARY FOR IN-BNDS OR OUT-BNDS TRIGGER TYPES
Syntax: TRLOW = [N]
Comments: WHERE N IS A REAL NUMBER. SEE 650 MANUAL.

Command: TRNDM **Category:** MATHEMATICS **Product:** 6100
Function: SELECTS MODE FOR THE TREND RECORD — FIFO OR STOP
Syntax: TRNDM[= M]
Comments: WHERE M IS THE MODE: 1 FIFO, 2 STOP AT N
IF THE FIRST N MEASUREMENTS MUST BE RECORDED, USE OPTION 2, IF THE LAST N MEASUREMENTS MUST BE RECORDED, USE OPTION 1
References: TRLEN TRND

Command: TSLPA **Category:** TRIGGER PARAMETER **Product:** 650
Function: SELECTS TRIGGER SLOPE A FOR A,B TRIGGER TYPES
Syntax: TSLPA = 1 OR 2 (+ OR −)
Comments: SEE 650 MANUAL

Command: TSLPB **Category:** TRIGGER PARAMETER **Product:** 650
Function: SELECTS TRIGGER SLOPE B FOR A,B TRIGGER TYPE
Syntax: TSLPB = 1 OR 2 (+ OR −)
Comments: SEE 650 MANUAL

Command: TSRCH **Category:** TRIGGER PARAMETER **Product:** 650

Function: SELECTS TRIGGER SOURCE FOR EDGE-HYST, IN-BNDS, AND OUT-BNDS TRIGGER TYPES

Syntax: TSRCH = 1, 2, 3, 4

Comments: SEE 650 MANUAL

Command: Trans—data **Category:** PROCEDURE **Product:** 6100

Function: PROCEDURE TO TRANSFER ASCII DATA TO OR FROM THE DATA 6100

Syntax: FROM D6100: <NAME>.<EXT> – OR – TO D6100: <NAME> = X1,X2,...,Xn

Comments: WHERE <NAME>.<EXT> IS A SYSTEM VARIABLE NAME + LINDLM & <NAME> = X1-Xn IS A LIST OF VALUES SENT FROM THE COMMAND DEVICE SEPARATED BY THE FLDDLM AFTER THE EQUALS SIGN TERMINATED BY THE LINDLM CHARACTER. EXAMPLES: BUF.A1 WILL BEGIN SENDING ALL VALUES IN BUF.A1 TO THE COMMAND DEVICE WITH THE FLDDLM CHARACTER SEPARATING THEM AND THE LINEND CHR AT THE END. FLCOEF = .75,.95,.877,.843,.77,7,6,4,2,0, – 12 <LD> WILL AUTOMATICALLY CREATE A RECORD NAMED FLCOEF WITH A LENGTH EQUAL TO THE LENGTH OF THE LIST AND A FULL SCALE VALUE OF FOUR TIMES THE LARGEST ABSOLUTE VALUE IN THE LIST.

References: FORMAT LINEND FLDDLM LINDLM

Command: UAXIS **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS X OR Y AXIS FOR MODIFICATION BY UNITS FUNCTION

Syntax: UAXIS[= A]

Comments: WHERE A IS THE AXIS: 1 X ABSOLUTE, 2 Y ABSOLUTE, 3 Y RELATIVE

X ABSOLUTE SELECTS A TIME/FREQUENCY/UNIT PER POINT (UXSCL) Y ABSOLUTE DEFINES THE PEAK-TO-PEAK FULL-SCALE RANGE (UYFSR) Y RELATIVE SCALES EVERY DATUM BY THE SPECIFIED FACTOR (UYMLT)

References: UYMLT UYOFF UXOFF XUNIT YUNIT UXSCL UYFSR KUNIT

Command: UKEY **Category:** DISPLAY PARAMETER **Product:** 6100

Function: ACTIVATES USER KEY LABELS IF UKEY MODE IS ON – PUSHES OPT – I/O PAIR

Syntax: UKEY

Comments: COMMAND ONLY, WILL CAUSE ALL UKEY LABELS TO APPEAR IF THE COMMAND UKEYM = 2 HAS ALREADY BEEN SENT AND LABELS HAVE BEEN DEFINED

References: LABEL UKEYM KEY KEYSRQ SRQ CLRKEY

Command: UKEYM **Category:** DISPLAY PARAMETER **Product:** 6100

Function: ENABLES THE USER KEY MODE

Syntax: UNKEYM[= S]

Comments: WHERE S IS THE STATUS OF THE USER KEY MODE: 1 OFF, 2 ON

ONCE UKEYM IS SET TO ON, AND LABELS HAVE BEEN DEFINED, UKEY WILL ACTIVATE THE LABELS

References: UKEY LABEL UKROW UKFIELD

Command: UKFLD **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS THE CURRENT FIELD FOR THE USER-KEY LABEL COMMAND

Syntax: UKFLD[= F]

Comments: WHERE F IS THE FIELD IN THE RANGE 1-5

WHEN UKFLD AND UKROW HAVE BEEN DEFINED, LABEL MAY THEN BE USED ALONE OR WITH SUBSCRIPTS (IF USED ALONE, THE LABEL WILL APPLY TO THE CURRENT ROW AND FIELD)

References: UKROW LABEL UKEYM UKEY

Command: UKROW **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS THE CURRENT ROW FOR THE USER-KEY LABEL COMMAND

Syntax: UKROW[= R]

Comments: WHERE R IS THE ROW IN THE RANGE 1-5

WHEN UKFLD AND UKROW HAVE BEEN DEFINED, LABEL MAY THEN BE USED ALONE OR WITH SUBSCRIPTS (IF USED ALONE, THE LABEL WILL APPLY TO THE CURRENT ROW AND FIELD)

References: UKFLD LABEL UKEYM UKEY

Command: UNLOCK **Category:** I/O PARAMETER **Product:** 682

Function: DISABLES LOCK MODE (IF ENABLED) TO ALLOW LIMITED FRONT PANEL ACCESS

Syntax: UNLOCK

Comments: COMMAND ONLY, SEE LOCK

References: REMOTE LOCAL LOCK CONT

Command: USHIFT **Category:** I/O PARAMETER **Product:** D6100

Function: PERMITS UPPER CASE / LOWER CASE COMMAND ENTRY

Syntax: USHIFT[= S]

Comments: WHERE S IS THE STATUS OF USHIFT. DEFAULT IS 1 1 UPPER CASE ONLY, 2 UPPER OR LOWER CASE MAY BE USED

References: CMDDEV PORT LINEND LINDLM FLDDLM HNDSHK

Command: UX: **Category:** MODIFIER **Product:** 6100

Function: UNSCALES THE HORIZONTAL AXIS DURING A COPY OPERATION

Syntax: UX:D = R

Comments: WHERE D IS THE DESTINATION NAME FOR THE UNSCALED COPY AND R IS THE SOURCE DATA. THIS FORM IS THE ONLY VALID FORM

THE UNSCALED COPY WILL HAVE THE X/POINT SCALING OF 1.00000 WITH NO UNITS

THE RECORD IS NOW SUITABLE FOR OPERATIONS WITH UNIQUE X SCALING AND UNITS

References: UY:

Command: UXOFF **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE AMOUNT OF X OFFSET FOR X UNITS CONVERSION

Syntax: UXOFF[= O]

Comments: WHERE O IS THE AMOUNT OF OFFSET TO BE ASSIGNED TO THE CONVERTED RECORD IN THE RANGE 1E-15 TO ± 9.9999E14

References: UAXIS UXOFF UYOFF XUNIT YUNIT UXSCL UYFSR KUNIT

Command: UXSCL **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE X SCALING FOR X UNITS CONVERSION

Syntax: UXSCL[= S]

Comments: WHERE S IS THE VALUE PER POINT TO BE ASSIGNED TO THE CONVERTED RECORD IN THE RANGE 1E-15 TO ± 9.9999E14

References: UAXIS UYMLT UXOFF UYOFF XUNIT YUNIT UYFSR KUNIT

Command: UY: **Category:** MODIFIER **Product:** 6100

Function: UNSCALES THE VERTICAL AXIS DURING A COPY OPERATION

Syntax: UY:D = R

Comments: WHERE D IS THE DESTINATION NAME FOR THE UNSCALED COPY AND R IS THE SOURCE DATA. THIS FORM IS THE ONLY VALID FORM

THE UNSCALED COPY WILL HAVE THE Y P-P SCALING OF 2.00000 WITH NO UNITS

THE RECORD IS NOW SUITABLE FOR OPERATIONS WITH UNIQUE Y SCALING AND UNITS

References: UX:

Command: UYFSR **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE Y FULL SCALE RANGE FOR Y UNITS CONVERSION

Syntax: UYFSR[= S]

Comments: WHERE S IS THE FULL-SCALE VALUE TO BE ASSIGNED TO THE CONVERTED RECORD IN THE RANGE 1E-15 TO ± 9.9999E14

References: UYMLT UXOFF UYOFF UXSCL XUNIT YUNIT UYFSR KUNIT

Command: UYMLT **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE Y MULTIPLIER FOR Y UNITS CONVERSION

Syntax: UYMLT[= M]

Comments: WHERE M IS THE MULTIPLIER VALUE TO BE ASSIGNED TO THE CONVERTED RECORD IN THE RANGE 1E-15 TO ± 9.9999E14

AN IMPORTANT PARAMETER: IF A USER WISHES TO CONVER THE OUTPUT OF A PRESSURE TRANSDUCER FROM VOLTS TO Psi, AND THE TRANSDUCER'S OUTPUT IS SCALED AT 1 VOLT PER 1000 Psi (A RATIO OF 1000/1) THEN UYMLT SHOULD BE SET EQUAL TO 1K (UYMLT = 1000) AND THE Y UNITS SET TO Psi (YUNIT = 70)

References: UAXIS UXOFF UYOFF UXSCL XUNIT YUNIT UYFSR KUNIT

Command: UYOFF **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS THE Y OFFSET FOR Y UNITS CONVERSION

Syntax: UYOFF[= O]

Comments: WHERE M IS THE OFFSET VALUE TO BE ASSIGNED TO THE CONVERTED RECORD IN THE RANGE 1E-15 TO ± 9.9999E14

References: UAXIS UXOFF UYOFF UXSCL XUNIT YUNIT UYFSR KUNIT

Command: VMAX **Category:** MATHEMATICS **Product:** 6100

Function: CALCULATES AVERAGE MAXIMUM AND CREATES RECORD OR RETURNS DATA TO COMMAND DEVICE

Syntax: VMAX or <name> = VMAX(a,b,c,d,e)

Comments: a IS THE SOURCE DATA RECORD, b IS A TEMPORARY BUFFER USED IN CALCULATION, c IS THE # SWEEPS SELECTED, d IS THE # SWEEPS COMPLETED, AND e IS MODE OF DURATION (STOP AT N OR INFINITE). VMAX SENT ALONE WILL CALCULATE AND RETURN THE AVERAGE MAXIMUM TO THE COMMAND DEVICE AS A STRING OF REAL NUMBERS. IN AN EQUATION, THE CALCULATION WILL PRODUCE A RECORD UNDER <name>.

References: SAVG AVGTYP VMIN

Command: VMIN **Category:** MATHEMATICS Product: 6100

Function: CALCULATES AVERAGE MINIMUM AND CREATES RECORD OR RETURNS DATA TO COMMAND DEVICE

Syntax: VMIN or <name> = VMIN(a,b,c,d,e)

Comments: a IS THE SOURCE DATA RECORD, b IS A TEMPORARY BUFFER USED IN CALCULATION, c IS THE # SWEEPS SELECTED, d IS THE # SWEEPS COMPLETED, AND e IS THE MODE OF DURATION (STOP AT N OR INFINITE). VMIN SENT ALONE WILL CALCULATE AND RETURN THE AVERAGE MINIMUM TO THE COMMAND DEVICE AS A STRING OF REAL NUMBERS. IN AN EQUATION, THE CALCULATION WILL PRODUCE A RECORD UNDER <name>.

References: SAVG AVGTYP VMAX

Command: WAIT **Category:** I/O PARAMETER **Product:** 6100

Function: HOLDS COMMAND EXECUTION UNTIL ANY ENABLED SRQ

Syntax: WAIT

Comments: UNTIL RELEASED BY AN SRQ, THE INTERFACE WILL NOT RESPOND TO THE COMMAND DEVICE.

Command: WEXP **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS EXPONENTIAL WEIGHT FOR EXPONENTIAL AVERAGING

Syntax: WEXP[= N]

Comments: WHERE N IS THE WEIGHT USED IN THE FOLLOWING ALGORITHM:

EAVG = ((1-1/N) x EOLD) + ((1/N) x DATA)

WHERE EAVG IS THE NEW AVERAGE BUFFER, EOLD IS THE OLD AVERAGE BUFFER AND DATA IS THE NEW TIME RECORD – IN OTHER WORDS, THE NEW AVERAGE CONTAINS 1-(1/N) OF THE OLD AVERAGE PLUS (1/N) OF THE NEW DATA

References: AVGTYP

Command: X **Category:** NAMED KEY **Product:** D6100

Function: PUSHES X KEY AND CALLS X MENU

Syntax: X

Comments: USED FOR OPERATOR SELECTION OF SOURCE DATA AND ADJUSTMENT OF X SCALING AND OFFSET PARAMETERS

References: XOFF XSCL

Command: XCROSS **Category:** MARKER PARAMETER **Product:** D6100

Function: RETURNS CROSSHAIR HORIZONTAL INTERSECTION VALUE

Syntax: XCROSS

Comments: XCROSS RETURNS THE HORIZONTAL INTERCEPT POINT IN THE HORIZONTAL UNITS FOR THE PRIMARY TRACE

MAY BE USED FOR AUTO-LOGGING VALUES WHILE AN OPERATOR MANIPULATES X OFFSET TO LOCATE EVENTS

References: XOFF X YTRACK Y XSCL

Command: XDELTA **Category:** MARKER PARAMETER **Product:** 6100

Function: SETS OR RETURNS THE CURSOR WIDTH IN HORIZONTAL UNITS
Syntax: [D =]XDELTA[(T)][= X]

Comments: WHERE X IS THE VALUE OF THE CURSOR WIDTH IN POINTS TIMES THE X INTERVAL — D IS THE DESTINATION DEVICE OR VARIABLE, T IS THE TRACE NUMBER

IF THE SAMPLE RATE WERE 10 μS PER POINT, THEN XDELTA = 200 μS SETS THE CURSOR WIDTH TO 20 POINTS FROM THE START

(THIS IS THE DT IN DV/DT)

References: XSTART XEND YSTART YDELTA SC: SE: CR: STRT END

Command: XDIV **Category:** MARKER PARAMETER **Product:** D6100

Function: RETURNS HORIZONTAL GRID UNITS PER DIVISION

Syntax: XDIV

Comments: RETURNS THE HORIZONTAL UNITS PER DIVISION THAT WILL BE USED FOR GRID MEASUREMENTS. NOTE THAT IF X SCALING IS CHANGED THAT THE GRID SCALING WILL CHANGE ALSO

References: YDIV XSCL X MARK GRID

Command: XEND **Category:** MARKER PARAMETER **Product:** 6100

Function: SETS OR RETURNS ABSOLUTE TIME VALUE OF END OF CURSOR

Syntax: [D =]XEND[(T)][= X]

Comments: WHERE X IS THE END X VALUE OF THE CURSOR IN HORIZONTAL UNITS D IS THE DESTINATION DEVICE OR VARIABLE, T IS THE TRACE XEND IS EXPRESSED IN TERMS OF THE UNITS PER X POINT

FOR A RECORD RECORDED AT 100mS PER POINT, XEND = 5S WILL SET THE END OF THE CURSOR TO THE 50th POINT (ASSUMING NO DELAY)

References: XSTART XDELTA YSTART YDELTA SC: SE: CR: STRT END

Command: XFDIR **Category:** FILE OPERATIONS Product: 6100

Function: SETS TRANSFER DIRECTION FOR THE FILE TRANSFER UTILITIES

Syntax: XFDIR[= D]

Comments: WHERE D IS THE DIRECTION FOR THE TRANSFER: 1 FROM SYSTEM TO VOLUME, 2 FROM VOLUME TO SYSTEM

References: XFVOL

Command: XFERN **Category:** FILE OPERATIONS **Product:** 6100

Function: RETURNS THE NUMBER OF COPIES TO BE AUTO-COPIED

Syntax: XFERN

Comments: RETURNS THE VALUE ONLY — TO SET THE VALUE VIA REMOTE, THE KEYS MUST BE "PRESSED" VIA THE KEY COMMAND

USE THE Save—file PROCEDURE IN A LOOP TO EMULATE THIS UTILITY VIA REMOTE

BE SURE TO WAIT FOR THE PROMPT CHARACTER BEFORE ATTEMPTING NEW COMMANDS DURING SUCH OPERATIONS

References: XMODE

Command: XFILL **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SELECTS/DISABLES THE TYPE OF INTERPOLATION BETWEEN SAMPLE POINTS

Syntax: XFILL[(T)][= F]

Comments: WHERE T IS THE TRACE, F IS THE FILL TYPE: 1 NONE, 2 LINEAR, 3 SINX/X

BOTH 2 AND 3 WILL BE USED IN CALCULATIONS USING THE MODIFIERS CR: AND TR: LINEAR MAY BE USED TO IMPROVE TIMING AND FREQUENCY MEASUREMENTS IN THE TIME DOMAIN WHERE SINX/X WILL IMPROVE FREQUENCY RESOLUTION IN THE FREQUENCY DOMAIN. TRACE COPIES (TR:COPY) OF SINX/X FITTED PORTIONS OF ADEQUATELY SAMPLED DATA WILL PLOT WITH EXCELLENT RESULTS (AS WILL PORTIONS OF FFTS)

References: COPY CR: TR:

Command: XFVOL **Category:** FILE OPERATIONS **Product:** 6100

Function: SELECTS THE VOLUME FOR THE TRANSFER UTILITIES

Syntax: XFVOL[= "<VOLUME>"]

Comments: WHERE "<VOLUME>" MAY BE A: B: OR SYSTEM

References: XFDIR SXFER

Command: XLMAX **Category:** SCALAR FUNCTION **Product:** *6100*

Function: RETURNS THE X VALUE AT WHICH THE SLOPE CHANGES FROM + TO – (PEAKS)

Syntax: [D =][M]XLMAX[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE RECORD

IDEAL FOR MAKING HARMONIC OR MODAL MEASUREMENTS; USE WITH LMAX/LMIN BEST RESULTS ARE OBTAINED WHEN A BASELINE IS USED TO DEFINE A THRESHOLD

BL:XLMAX WILL RETURN THE FREQUENCY OF THE FIRST PEAK IN AN FFT ABOVE THE BASELINE THRESHOLD (A THRESHOLD IS NEEDED SO THAT NOISE IS NOT SEEN BY XLMAX)

References: XLMIN XMAX XMIN SX:

Command: XLMIN **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS THE X VALUE AT WHICH THE SLOPE CHANGES FROM – TO + (NODES)

Syntax: [D =][M]XLMIN[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE RECORD

IDEAL FOR MAKING HARMONIC OR MODAL MEASUREMENTS; USE WITH LMAX/LMIN BEST RESULTS ARE OBTAINED WHEN A BASELINE IS USED TO DEFINE A THRESHOLD

BL:XLMIN WILL RETURN THE FREQUENCY OF THE FIRST NODE IN AN FFT BELOW THE BASELINE THRESHOLD (A THRESHOLD IS NEEDED SO THAT NOISE IS NOT SEEN BY XLMIN)

References: XLMAX XMAX XMIN SX:

Command: XMODE **Category:** FILE OPERATIONS Product: 6100

Function: RETURNS THE MODE FOR AUTO-COPY

Syntax: XMODE

Comments: WHEN VALUE IS 1, MODE IS STOP AT N, WHEN 2, RESTART

References: SXFER XFERN

Command: XMSLP **Category:** SCALAR FUNCTION **Product:** 6100

Function: RETURNS X VALUE OF POINT AT WHICH SLOPE IS MAX ABSOLUTE VALUE

Syntax: [D =][M]XMSLP[(R)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE, M IS A MODIFIER OR MODIFIERS AND R IS THE SOURCE RECORD

NOTE: XMSLP RETURNS THE X VALUE JUST BEFORE THE MAX SLOPE — THAT IS, IF THE DELTA V FROM 220 μS AND 222 μS IS THE HIGHEST ABS(DV/DT) IN THE RECORD, XMSLP WILL RETURN 220 μS

IN THE DERIVATIVE, DIFF, THIS DV/DT WOULD HAVE BEEN PLACED AT 222 μS

References: XMAX XMIN XLMAX XLMIN DIFF INTG MAX MIN

Command: XOFF **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SETS OR RETURNS HORIZONTAL DISPLAY OFFSET IN X UNITS

Syntax: [D =]XOFF[(T)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE AND T IS THE TRACE NUMBER

J = XOFF(3) WILL RETURN THE X DISPLAY OFFSET IN SECONDS IF BUF.A1, OR ANOTHER TIME BUFFER IS IN TRACE 3

References: YOFF SX: XSCL XFILL

Command: XSCL **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SETS OR RETURNS THE X EXPANSION FACTOR FOR THE SPECIFIED TRACE

Syntax: XSCL[(T)][= S]

Comments: WHERE S IS THE SCALE: 1 X1/4, 2 X1/2, 3 X1, 4 X2, 5 X4, 6 X8, 7 X16, 8 X32, 9 X64

T IS THE TRACE NUMBER

XSCL VALUES ARE INTEGER VALUES REPRESENTING POWERS-OF-TWO EXPANSION

References: YSCL XOFF YOFF

Command: XSTART **Category:** MARKER PARAMETER **Product:** D6100

Function: SETS OR RETURNS CURSOR START POSITION

Syntax: [D =]XSTART[(T)][= X]

Comments: WHERE X IS THE HORIZONTAL POSITION IN THE HORIZONTAL UNITS OF THE PRIMARY TRACE

D IS THE DESTINATION DEVICE OR VARIABLE, T IS THE TRACE NUMBER

References: XEND XDELTA CR: SC: SE: START END

Command: XUNIT **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS OR RETURNS CURRENT X UNIT FOR UNITS CONVERSION

Syntax: XUNIT[= U]

Comments: WHERE U IS THE X UNIT IN THE RANGE 1-75

References: UYOFF UXOFF YUNIT UXFSR UYFSR KUNIT

Command: XY **Category:** NAMED KEY PAIR **Product:** 6100

Function: PUSHES X-Y PAIR AND PERMITS BOTH X AND Y POSITION AND SCALING

Syntax: XY

Comments: USUALLY, EITHER X OR Y PARAMETERS MAY BE MAIPULATED. IF XY IS USED, AN OPERATOR MAY MANIPULATE BOTH ON THE SAME SCREEN

References: X Y XSCL YSCL XOFF YOFF

Command: Y **Category:** NAMED KEY **Product:** 6100

Function: PUSHES Y KEY AND CALLS Y SCALE AND OFFSET MENU

Syntax: Y

Comments: PERMITS OPEATOR MANIPULATION OF Y POSITION AND SCALE

NOTE: Y SCALING MAY BE AN ARBITRARY VALUE

References: XY X YSCL YOFF

Command: YCROSS **Category:** MARKER PARAMETER **Product:** D6100

Function: RETURNS Y VALUE OF CROSSHAIR INTERSECT POINT

Syntax: YCROSS

Comments: YCROSS RETURNS THE VALUE OF THE POINT AT WHICH THE CROSSHAIR VERTICAL LINE INTERCEPTS THE DATA. UNITS ARE THE Y UNITS OF THE PRIMARY TRACE.

NOTE: YTRACK (OR AUTO-TRACK) MUST BE ON AND THE DISPLAY MODE (DSPM = 1) MUST BE SINGLE IN ORDER TO OBTAIN THE Y CROSSING VALUE.

USEFUL FOR LOGGING VALUES OF OPERATOR SELECTED POINTS IN THE DATA.

References: Y YTRACK X XOFF CROSS DSPM

Command: YDELTA **Category:** MARKER PARAMETER **Product:** 6100

Function: RETURNS THE CURSOR DELTA AMPLITUDE IN VERTICAL UNITS

Syntax: [D =]YDELTA[(T)]

Comments: RETURNS THE AMPLITUDE DIFFERENCE BETWEEN THE START AND END POINTS OF THE CURSOR (WITH RESPECT TO THE START)

WHERE D IS THE DESTINATION DEVICE OR VARIABLE, AND T IS THE TRACE NUMBER

(THIS IS THE DV IN DV/DT)

References: XSTART XEND YSTART XDELTA SC: SE: CR: STRT END

Command: YDIV **Category:** MARKER PARAMETER **Product:** D6100

Function: RETURNS VERICAL UNITS PER GRID DIVISION

Syntax: YDIV

Comments: RETURNS THE VERTICAL UNITS PER DIVISION THAT WILL BE USED FOR GRID MEASUREMENTS. NOTE THAT THE UNITS PER DIVISION WILL CHANGE WHEN Y SCALING IS CHANGED

References: XDIV YSCL X Y GRID MARK

Command: YEND **Category:** MARKER PARAMETER **Product:** 6100

Function: RETURNS Y ABSOLUTE AMPLITUDE AT END OF CURSOR

Syntax: [D =]YEND[(T)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE AND T IS THE TRACE NUMBER AS OPPOSED TO YDELTA, YEND RETURNS THE ABSOLUTE AMPLITUDE OF THE CURSOR END POINT

References: XSTART XEND XDELTA YSTART YDELTA STRT END

Command: YOFF **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SETS OR RETURNS Y DISPLAY OFFSET (POSITION)

Syntax: [D =]YOFF[(T)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE AND T IS THE TRACE SPECIFICATION

Y OFFSET MAY BE AN ARBITRARY VALUE BETWEEN ± 32767

References: X Y XY XOFF XSCL YSCL

Command: YSCL **Category:** DISPLAY PARAMETER **Product:** 6100

Function: SETS OR RETURNS THE Y EXPANSION FACTOR FOR THE SPECIFIED TRACE

Syntax: YSCL[(T)][= S]

Comments: WHERE S IS A REAL NUMBER, THE Y SCALE IN THE RANGE 0-32767
T IS THE TRACE NUMBER

YSCL VALUES ARE REAL VALUES REPRESENTING ARBITRARY EXPANSION

EXCELLENT FOR OPTIMIZING PLOTTER OUTPUT

References: XSCL XOFF YOFF

Command: YSTART **Category:** MARKER PARAMETER **Product:** 6100

Function: RETURNS ABSOLUTE AMPLITUDE OF CURSOR START POINT

Syntax: [D =]YSTART[(T)]

Comments: WHERE D IS THE DESTINATION DEVICE OR VARIABLE AND T IS THE TRACE NUMBER

UNLIKE YDELTA, YSTART RETURNS THE ABSOLUTE AMPLITUDE, NOT THE RELATIVE

References: XSTART XEND YSTART YDELTA SC: SE: CR: STRT END

Command: YTRACK **Category:** DISPLAY PARAMETER **Product:** D6100

Function: ENABLES/DISABLES AUTO-TRACKING FOR OPERATOR MANUAL MEASUREMENT

Syntax: YTRACK[T][= S]

Comments: WHERE T IS THE TRACE NUMBER AND S IS THE STATUS OF THE AUTO-TRACK: 1, ON 2, OFF

IF S IS OMITTED, YTRACK RETURNS THE CURRENT VALUE OF S AND IF T IS OMITTED, THE RETURNED VALUE APPLIES TO THE PRIMARY TRACE.

References: Y YOFF YSCL X XOFF XSCL TRACE TRCSRC

Command: YUNIT **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS OR RETURNS CURRENT Y UNIT FOR UNITS CONVERSION

Syntax: YUNIT[= U]

Comments: WHERE U IS THE Y UNIT IN THE RANGE 1-75

References: XUNIT

Command: ZCENTR **Category:** MATHEMATICS Product: 6100

Function: SELECTS CENTER VALUE FOR ZOOM TRANSFORMATION

Syntax: ZCENTR = [f], WHERE [f] IS A REAL NUMBER IN HERTZ

Comments: ZOOM CENTER CANNOT BE LESS THAN ONE HALF OF ZOOM WIDTH

References: FFTM SFFT ZWDTH

Command: ZFFT **Category:** MATHEMATICS **Product:** 6100

Function: PERFORMS ZOOM TRANSFORMATION AND CREATES RECORD OR RETURNS DATA TO COMMAND DEVICE

Syntax: ZFFT or <name> = ZFFT(a,b,c,d,e,f)

Comments: a IS THE SOURCE DATA RECORD, b IS NOT USED, c IS THE ZOOM CENTER, d IS THE ZOOM WIDTH, e IS THE FFT MODE (ALWAYS 3 WHEN USING ZOOM), AND f IS THE WINDOW TO BE APPLIED TO THE INPUT RECORD. ZFFT SENT ALONE WILL CALCULATE AND RETURN THE ZOOM TRANSFORM TO THE COMMAND DEVICE AS A STRING OF REAL NUMBERS. IN AN EQUATION, THE CALCULATION

Command: ZWDTH **Category:** MATHEMATICS **Product:** 6100

Function: SELECTS WIDTH VALUE FOR ZOOM TRANSFORMATION

Syntax: ZWDTH = [f], WHERE [f] IS A REAL NUMBER IN HERTZ

Comments: MAXIMUM AND MINIMUM VALUES OF ZWDTH ARE AFFECTED BY SAMPLING FREQUENCY.

References: FFTM SFFT ZCENTR

7

MNEMONIC INSTRUCTIONS

INTRODUCTION

This chapter lists all the mnemonic commands that are recognized by the DATA 6100. They may be transmitted as part of a message from a remote terminal, or entered at the front panel by using the function keypad in the alpha shift mode.

There are three sections of this chapter following the introduction, subheaded A, B, and C. "A" is the Keyword Summary, which lists all the commands in aphabetical order, with a brief description of each one's function. "B" is the Functional Listing, which divides up the commands into functional categories, alphabetized by category name, each command is also accompanied by a brief description. A list of these category names is provided in this introduction.

"C" is the Command Reference, listing all commands in alphabetical order with some or all of the following information accompanying each command:

a) Category name (See listing of category names in this intro)

b) Product to which command applies:

6100 — refers to the mainframe system

PLUG-IN — refers to any of the plug-ins

610-1/611-1, 620-1, 630-1, 640-1, 650-1/652-1 — refers to specific plug-ins

600 — refers to the four bay plug-in expansion rack

681 — refers to the disk drive

682 — refers to interface accessory, frequently for plotter operations

D1000 — refers to the pre-amplifier

c) Function — what the command does

d) Syntax example — how to enter the command

e) Comments

f) References to related commands

Note on Mnemonic Listings

There are a few listings that appear in the Keyword Summary, Functional Listing, and Command Reference as lower case letters. These are not commands by themselves, but rather are names of procedures which can be performed by entering various combinations of characters and/or commands. Look at the Syntax and Comments headings as guides to setting up these procedures.