

OUTPUTS/WAVEFORMS

DC Output Generation

APPLY?	Output Function Query
APPLY DCI	Apply DC Current
APPLY DCMEMI	Apply Triggered DCI
APPLY DCMEMV	Apply Triggered DCV
APPLY DCV	Apply DC Voltage

DC Output Parameters

ARANGE (?)	Set/Read Autorange
DCRES (?)	Set/Read DC Resolution
DELAY (?)	Set/Read Output Delay
IMP (?)	Set/Read Output Impedance
OUTPUT?	Output Value Query
RANGE (?)	Set/Read Output Range
TERM (?)	Set/Read Output Terminal
USE (?)	Set/Read Use Channel

AC Waveform Parameters

ARANGE (?)	Set/Read Autorange
DCOFF (?)	Set/Read DC Offset Voltage
DELAY (?)	Set/Read Output Delay
DUTY (?)	Set/Read Duty Cycle
FREQ (?)	Set/Read Output Frequency
IMP (?)	Set/Read Output Impedance
OUTPUT?	Output Value Query
PANG (?)	Set/Read Phase Angle
RANGE (?)	Set/Read Output Range
TERM (?)	Set/Read Output Terminal
USE (?)	Set/Read Use Channel

AC Waveform Generation

APPLY?	Output Function Query
APPLY ACV	Apply Current Sine Wave
APPLY ACV	Apply Voltage Sine Wave
APPLY RPI	Apply Current Ramp Wave
APPLY RPV	Apply Voltage Ramp Wave
APPLY SQI	Apply Current Square Wave
APPLY SQV	Apply Voltage Square Wave
APPLY WFI	Apply Current Arbitrary Wave
APPLY WFV	Apply Voltage Arbitrary Wave
DEMO	Demonstration Waveforms
FASTAMP	Fast Ampl/Offset Changes
FASTFREQ	Fast Frequency Changes
TRIGFREQ	Triggered Frequency Mode

Triggering Commands

DRIVETBn (?)	Set/Read Trigger Bus n Source
PHSYNC	Synchronized Output Mode
REFIN (?)	Set/Read Ref Frequency Input
REFOUT (?)	Set/Read Ref Frequency Output
SYNCOUT (?)	Set/Read Sync Out Destination
TBn?	Trigger Bus n Query
TRG	Pulse Trigger Bus
TRIGIN (?)	Set/Read Trigger Input Source
TRIGMODE (?)	Set/Read Trigger Mode
TRIGOUT (?)	Enable/Read Trigger Output

INSTRUMENT FUNCTIONS

Front Panel Functions

DEFKEY (?)	Define Key/Read Defined Key
DISP (?)	Enable/Read Front Panel Display
MON	Monitor Conditions

General Query Functions

ADDRESS?	Read HP-IB Address
CTYPE?	Channel Type Query
ERR?	Error Query
ERRSTR?	Error String Query
ID?	Model Number Query
IDN?	Identity Query
MEMAVAIL?	Memory Available Query
REV?	Revision Query
SER?	Serial Number Query
SIZE?	Size Query
USE?	Read Use Channel

Timing Functions

SET TIME	Set Time
TIME	Read Time
WAIT	Wait
WAITFOR	Wait For Event

Storing/Recalling States

RSTATE	Recall Stored State
RSTATEA	Recall Channel A State
RSTATEB	Recall Channel B State
SET (?)	Send/Read HP 3245A State
SSTATE	Store HP 3245A State
SSTATEA	Store Channel A State
SSTATEB	Store Channel B State
STOREATO	Copy Channel A State
STOREBTOA	Copy Channel B State

Memory Management

MEM	Set Memory Mode
MEMAVAIL?	Query Available Memory

Test/Calibration

CAL	Channel Calibration
CALEN?	Read CAL Jumper Setting
CALNUM?	Calibration Number Query
CALSTR (?)	Store/Read Calibration Data
DTEST	Data Self-Test
FTEST	Fixtured Self-Test
SECURE	Calibration Security
TEST	Confidence Self-Test

ARRAYS/SUBROUTINES

General Purpose Math

+	Addition
-	Subtraction
*	Multiplication
/	Division
^	Exponentiation
ABS	Absolute Value
AND	Logical AND
ATN	Arctangent
BINAND	Binary AND
BINCMPL	Binary Complement
BINEOR	Binary Exclusive-OR
BINIOR	Binary Inclusive-OR
BIT	Read Bit Value
COS	Cosine
DIV	Division
EXOR	Exclusive-OR
EXP	Exponent
LGT	Logarithm
LOG	Natural Logarithm
MOD	Modulo
NOT	Inclusive-NOT
OR	Inclusive-OR
ROTATE	Rotate Bits
SHIFT	Shift Bits
SIN	Sine
SQR	Square Root

Variable/Array Operations

CAT	Catalog Arrays/Subroutines
DIM	Dimension REAL Array
FETCH	Fetch Value
FILL	Fill Array
FILLAC	Fill Array w/Sine Wave
FILLBIN	Fill Array w/Binary
FILLRP	Fill Array w/Ramp Wave
FILLWF	Fill Array w/Arb Wave
INTEGER	Dim INTEGER Array/Variable
LET	LET Assignment
MEM	Memory Mode
SCRATCH	Delete All
VREAD	Read Variable/Array

Subroutine Commands

ABORT	Abort Subroutine
CALL	Call Subroutine
CAT	Catalog Arrays/Subroutines
COMPRESS	Compress Subroutine
CONT	Continue Subroutine
DELSUB	Delete Subroutine
END IF	End of If-End If Loop
END WHILE	End of While-End While Loop
FOR..NEXT	For-Next Loop
IF..END IF	If-End If Branching
LIST	List Subroutine
PAUSE	Pause Subroutine
PAUSED?	Pause Query
RETURN	Return to Caller
RUN	Run Subroutine
RUNNING?	Running Query
SCRATCH	Delete All
STEP	Single Step Subroutine
SUB	Begin Subroutine
SUBEND	End Subroutine
WHILE	While-End While Loop

INPUT/OUTPUT OPERATIONS

HP-IB Communication

ADDRESS (?)	Set/Read HP-IB Address
BEEP	Enable Beep Mode
CLR	Device Clear
ECHO	Echo
LOCAL	Go to Local
LOCK	Lock Front Panel Keyboard
RESET	Reset Instr/Channel
REM	Remote
TEST	Confidence Self-Test
USE (?)	Set/Read Use Channel

Input/Output Buffering

BLOCKOUT	Block Output Mode
CLROUT	Clear Output Buffer
END	End or Identify
INBUF	Enable/Disable Input Buffer
MEM	Memory Mode
OFORMAT	Output Format
OUTBUF	Enable Output Buffer
READY?	Query Ready Status
VREAD	Read Data From Memory

Interrupts/Service Requests

PONSQ	Power-on SRQ
RQS (?)	Set/Read Service Request Enable
SRQ	Programmed Service Request
STA?	Status Word Query
STB?	Status Byte Query

HP-IB Commands

ABORT	Clear HP-IB Interface
CLEAR	Device Clear/Sel Dev Clear
LOCAL	Go to Local
LOCAL LOCKOUT	Local Lockout
REMOTE	Set REN Line TRUE
SPOLL	Serial Poll
TRIGGER	Group Execute Trigger