

## Agilent 35670A GPIB Commands: Quick Reference

This Quick Reference of the GPIB commands recognized by the Agilent 35670A lists the common commands and then lists the subsystem commands in alphabetical order. Figure 1 shows the Agilent 35670A status registers.

- Syntax descriptions use the following conventions:

|     |   |
|-----|---|
|     | indicates “or”; one and only one of the items can be chosen |
| <>  | indicates the name of items that need further definition    |
| [ ] | indicates the enclosed items are optional                   |
| ~   | indicates a valid range of values                           |

- Add a “?” to make the query form of a command; commands listed with a “?” are query only; commands listed with a “-?” cannot be queried.
- A “:” indicates branching points on the command tree.
- Use “;” to send multiple commands within a single program message. The command parser assumes the second command comes from the same branch as the preceding command.
- Use “;:” to reset the command parser to the base of the command tree when sending multiple commands within a single program message.
- The input defaults to channel 1 and the trace defaults to trace A if the optional [1|2|3|4] parameter is not specified.
- To view the GPIB command which corresponds to a front panel operation, press [ **Local/GPIB** ] [ GPIB ECHO ON OFF ] to highlight **ON**.
- For more information on a particular command refer to *GPIB Programming with the Agilent 35670A*.

## Parameter Definitions:

### <BLOCK>

If you are sending binary data using indefinite length syntax,

<BLOCK> takes the following form:

<BLOCK> ::= #0<data\_byte>[,<data\_byte>] . . .<LF><^END>

<data\_byte> ::= unsigned 8-bit data

<LF> ::= line feed character, ASCII decimal 10

<^END> ::= GPIB END message (EOI set true)

If you are sending binary data using definite length syntax,

<BLOCK> takes the following form:

<BLOCK> ::= #<byte><length\_bytes><data\_byte>[<data\_byte>] . . .

<byte> ::= number of length bytes to follow (ASCII encoded)

<length\_bytes> ::= number of data bytes to follow (ASCII encoded)

<data\_byte> ::= unsigned 8-bit data

If you are sending ASCII data, <BLOCK> takes the following form:

<BLOCK> ::= Integer[,Integer]. . . <LF>

or

<BLOCK> ::= Floating-point number[,Floating-point]. . . <LF>

### <FILENAME> takes the following form:

<FILENAME> ::= '[MSIS:][\DIR\_NAME\]filename'

where MSIS: must be replaced with:

RAM: which selects volatile RAM.

NVRAM: which selects non-volatile RAM.

INT: which selects the internal disk drive.

EXT[,<select\_code>[,<unit\_number>]]: which selects the external disk drive.

\DIR\_NAME\ ::= ASCII characters

(MS-DOS file systems only)

### <MMEMNAME> takes the following form:

<MMEMNAME> ::= '[MSIS:][\DIR\_NAME\]filename'

'MSIS:[\DIR\_NAME][filename]'

\_'MSIS:[\DIR\_NAME]filename'

See <FILENAME> for additional information.

### <MSINAME> takes the following form:

<MSINAME> ::= 'MSIS:[\DIR\_NAME]'

See <FILENAME> for additional information.

For more information about parameters, refer to chapter 2, "Introduction to the Command Reference," in *GPIB Programming with the Agilent 35670A*.

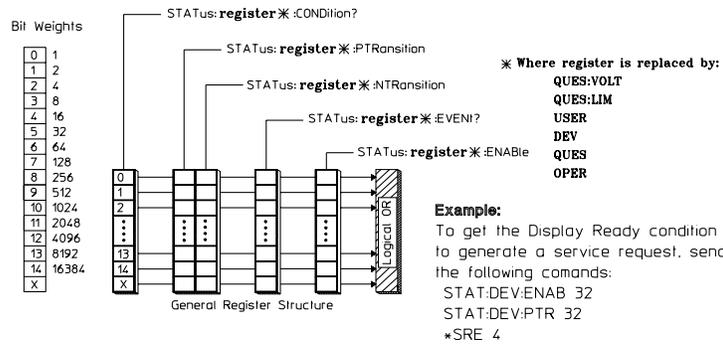
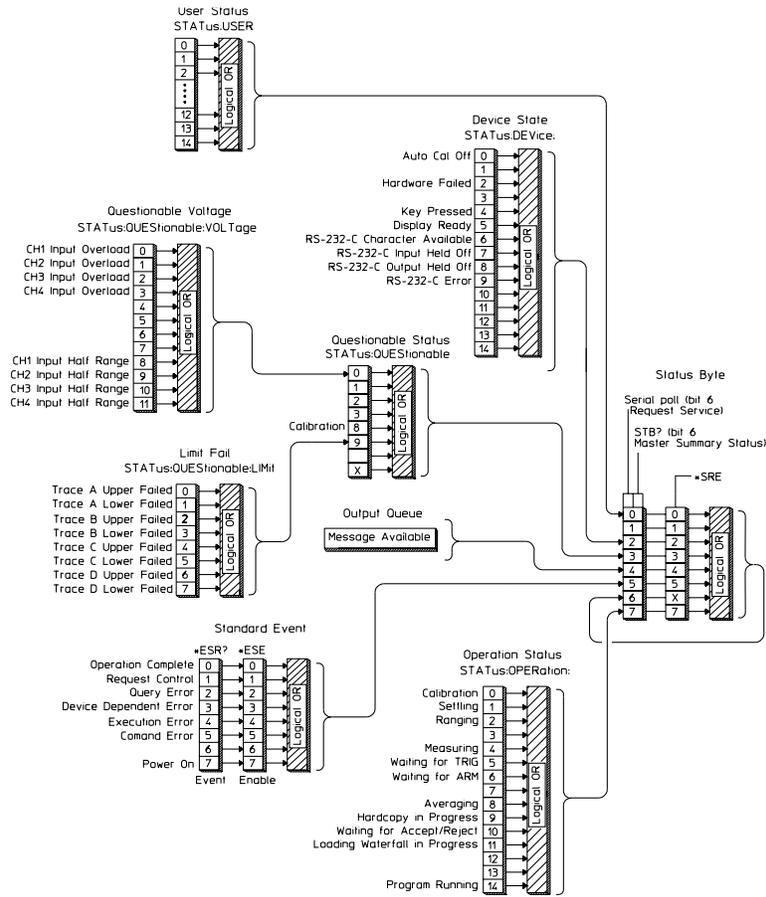


Figure 1. HP 35670A Status Register Summary

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## Command List

### Common Commands

|                    |  |
|--------------------|--|
| *CAL?              | Calibrates analyzer and returns the result                             |
| *CLS               | Clears the Status Byte   |
| *ESE 0~255         | Sets or queries bits in the Standard Event Enable register             |
| *ESR?              | Reads and clears the Standard Event event register                     |
| *IDN?              | Returns analyzer's identification string                               |
| *OPC               | Enables the status bit to be set for completion of overlapped commands |
| *OPC?              | Queries completion of overlapped commands                              |
| *OPT?              | Returns analyzer's option configuration                                |
| *PCB-? 0~30[,0~30] | Sets the pass-control-back address                                     |
| *PSC -32767~32767  | Sets or queries Power-On Status Clear flag                             |
| *RST               | Executes a device reset  |
| *SRE 0~255         | Sets or queries bits in the Service Request Enable register            |
| *STB?              | Reads Status Byte register   |
| *TRG               | Triggers analyzer  |
| *TST?              | Performs self test   |
| *WAI               | Wait-to-continue command   |

### ABORt

ABORt

### ARM

ARM[:IMMediate]

ARM:RPM:INCRement 1~500000[RPM]

ARM:RPM:MODE OFF|O|UPI|DOWN

ARM:RPM:THReshold 5~491520[RPM]

ARM:SOURce IMMEDIATE|MANUAL|RPM|TIMER

ARM:TIMer 0~500000[S]

**CALCulate[1|2|3|4]**

CALCulate[1|2|3|4]:ACTive AIBICIDIABICDIABCD  
 CALCulate[1|2|3|4]:CFIT:ABORT  
 CALCulate[1|2|3|4]:CFIT:COPY-? SYNThesis  
 CALCulate[1|2|3|4]:CFIT:DATA <BLOCK>  
 CALCulate[1|2|3|4]:CFIT:DESTination D1|D2|D3|D4|D5|D6|D7|D8  
 CALCulate[1|2|3|4]:CFIT:FREQuency[:AUTO] OFFI0|ONI1  
 CALCulate[1|2|3|4]:CFIT:FREQuency:STARt 0~115000[HZ]  
 CALCulate[1|2|3|4]:CFIT:FREQuency:STOP 0.390625~115000[HZ]  
 CALCulate[1|2|3|4]:CFIT:FSCale 1e-06~1e+06  
 CALCulate[1|2|3|4]:CFIT[:IMMEDIATE]  
 CALCulate[1|2|3|4]:CFIT:ORDer:AUTO OFFI0|ONI1  
 CALCulate[1|2|3|4]:CFIT:ORDer:POLes 0~20  
 CALCulate[1|2|3|4]:CFIT:ORDer:ZERos 0~20  
 CALCulate[1|2|3|4]:CFIT:TDELay -100~100[S]  
 CALCulate[1|2|3|4]:CFIT:WEIGHt:AUTO OFFI0|ONI1  
 CALCulate[1|2|3|4]:CFIT:WEIGHt:REGister D1|D2|D3|D4|D5|D6|D7|D8  
 CALCulate[1|2|3|4]:DATA?  
 CALCulate[1|2|3|4]:DATA:HEADer:POINTs?  
 CALCulate[1|2|3|4]:FEED <CMDSTR>  
 CALCulate[1|2|3|4]:FORMat MLINear|MLOGarithmic|PHASel|REAL|IMAGinary|  
 NYQuist|UPHase|GDELay|POLar  
 CALCulate[1|2|3|4]:GDAPerture:APERture 0~20[PCT]  
 CALCulate[1|2|3|4]:LIMit:BEEP[:STATe] OFFI0|ONI1  
 CALCulate[1|2|3|4]:LIMit:FAIL?  
 CALCulate[1|2|3|4]:LIMit:LOWer:CLEar[:IMMEDIATE]  
 CALCulate[1|2|3|4]:LIMit:LOWer:MOVE:Y-? -9.9e+37~9.9e+37  
 CALCulate[1|2|3|4]:LIMit:LOWer:REPort[:DATA]?  
 CALCulate[1|2|3|4]:LIMit:LOWer:REPort:YDATA?  
 CALCulate[1|2|3|4]:LIMit:LOWer:SEGment <BLOCK>  
 CALCulate[1|2|3|4]:LIMit:LOWer:SEGment:CLEar-? -9.9e+37~9.9e+37  
 CALCulate[1|2|3|4]:LIMit:LOWer:TRACe[:IMMEDIATE]  
 CALCulate[1|2|3|4]:LIMit:STATe OFFI0|ONI1  
 CALCulate[1|2|3|4]:LIMit:UPPer:CLEar[:IMMEDIATE]  
 CALCulate[1|2|3|4]:LIMit:UPPer:MOVE:Y-? -9.9e+37~9.9e+37  
 CALCulate[1|2|3|4]:LIMit:UPPer:REPort[:DATA]?  
 CALCulate[1|2|3|4]:LIMit:UPPer:REPort:YDATA?  
 CALCulate[1|2|3|4]:LIMit:UPPer:SEGment <BLOCK>  
 CALCulate[1|2|3|4]:LIMit:UPPer:SEGment:CLEar-? -9.9e+37~9.9e+37  
 CALCulate[1|2|3|4]:LIMit:UPPer:TRACe[:IMMEDIATE]  
 CALCulate[1|2|3|4]:MARKer:BAND:STARt -9.9e+37~9.9e+37[HZ|SIORDI  
 COUNT|AVG|VIVPKIRPMIEUIREV]

CALCulate[1|2|3|4]:MARKer:BAND:STOP -9.9e+37~9.9e+37[HZ|SI|ORDI  
 COUNT|AVG|VIVPK|IRPM|IEUIREV]

CALCulate[1|2|3|4]:MARKer:COUPled[:STATe] OFF|O|ONI1

CALCulate[1|2|3|4]:MARKer:DTABle:CLEar[:IMMediate]

CALCulate[1|2|3|4]:MARKer:DTABle:COPIY[1|2|3|4]

CALCulate[1|2|3|4]:MARKer:DTABle[:DATA]?

CALCulate[1|2|3|4]:MARKer:DTABle:X[:DATA]?

CALCulate[1|2|3|4]:MARKer:DTABle:X:DELeTe

CALCulate[1|2|3|4]:MARKer:DTABle:X:INSert -9.9e+37~9.9e+37[HZ|SI|ORDI  
 COUNT|AVG|VIVPK|IRPM|IEUIREV]

CALCulate[1|2|3|4]:MARKer:DTABle:X:LABel '<STRING>'

CALCulate[1|2|3|4]:MARKer:DTABle:X:SELeCt[:POINt] 1~50

CALCulate[1|2|3|4]:MARKer:FUNCTion OFF|O|HPOWer|THD|BPOWer|BRMS|  
 SPOWer|OVERshoot|RTIMe|STIMe|DTIMe|SSLevell|GMARgin|PMARgin|  
 GCRossover|PCRossover|FREQuency|DAMPing|SINFo|WEIGHt|TPOWer|  
 WPOWer

CALCulate[1|2|3|4]:MARKer:FUNCTion:RESult?

CALCulate[1|2|3|4]:MARKer:HARMonic:COUNT 0~400

CALCulate[1|2|3|4]:MARKer:HARMonic:FUNDamental -9.9e+37~9.9e+37[HZ|  
 ORD|ICPM]

CALCulate[1|2|3|4]:MARKer:MAXimum[:GLOBal]

CALCulate[1|2|3|4]:MARKer:MAXimum[:GLOBal]:TRACk OFF|O|ONI1

CALCulate[1|2|3|4]:MARKer:MAXimum:LEFT

CALCulate[1|2|3|4]:MARKer:MAXimum:RIGHT

CALCulate[1|2|3|4]:MARKer:MODE ABSolute|RELative

CALCulate[1|2|3|4]:MARKer:POSition -9.9e+37~9.9e+37[HZ|SI|  
 ORD|ICOUNT|AVG|VIVPK|IRPM|IEUIREV]

CALCulate[1|2|3|4]:MARKer:POSition:POINt 0~2047

CALCulate[1|2|3|4]:MARKer:REFerence:X -9.9e+37~9.9e+37[HZ|SI|ORDI  
 COUNT|AVG|VIVPK|IRPM|IEUIREV]

CALCulate[1|2|3|4]:MARKer:REFerence:Y -9.9e+37~9.9e+37[DBVRMS|VPKI  
 DBVPK|IV|DBV|IEUI|DBEUI|VRMS]

CALCulate[1|2|3|4]:MARKer:SIDeband:CARRier -9.9e+37~9.9e+37[HZ|ORDI  
 CPM]

CALCulate[1|2|3|4]:MARKer:SIDeband:COUNT 0~200

CALCulate[1|2|3|4]:MARKer:SIDeband:INCRement -9.9e+37~9.9e+37[HZ|  
 ORD|ICPM]

CALCulate[1|2|3|4]:MARKer[:STATe] OFF|O|ONI1

CALCulate[1|2|3|4]:MARKer:X[:ABSolute] -9.9e+37~9.9e+37[HZ|SI|ORDI  
 COUNT|AVG|VIVPK|IRPM|IEUIREV]

CALCulate[1|2|3|4]:MARKer:X:RELative -102400~102400[HZ|SI|ORD|ICOUNT|  
 AVG|VIVPK|IRPM|IEUIREV]

CALCulate[1|2|3|4]:MARKer:Y[:ABSolute]?

CALCulate[1|2|3|4]:MARKer:Y:RELative -150~150

CALCulate[1|2|3|4]:MATH:CONStant[1|2|3|4|5] -9.9e+37~9.9e+37  
 [-9.9e+37~9.9e+37]  
 CALCulate[1|2|3|4]:MATH:DATA <USER>  
 CALCulate[1|2|3|4]:MATH[:EXPRession[1|2|3|4|5]] <EXPR>  
 CALCulate[1|2|3|4]:MATH:SELEct F1|F2|F3|F4|F5  
 CALCulate[1|2|3|4]:MATH:STATe OFF|O|ON|1  
 CALCulate[1|2|3|4]:SYNThesis:COPIY-? CFIT  
 CALCulate[1|2|3|4]:SYNThesis:DATA <BLOCK>  
 CALCulate[1|2|3|4]:SYNThesis:DESTination D1|D2|D3|D4|D5|D6|D7|D8  
 CALCulate[1|2|3|4]:SYNThesis:FSCale 1e-06~1e+06  
 CALCulate[1|2|3|4]:SYNThesis:GAIN -9.9e+37~9.9e+37  
 CALCulate[1|2|3|4]:SYNThesis[:IMMediate]  
 CALCulate[1|2|3|4]:SYNThesis:SPACing LINear|LOGarithmic  
 CALCulate[1|2|3|4]:SYNThesis:TDELay -100~100[S]  
 CALCulate[1|2|3|4]:SYNThesis:TTYPe PZERol|PFRaction|POLYnomial  
 CALCulate[1|2|3|4]:UNIT:AMPLitude PEAK|PIRMS  
 CALCulate[1|2|3|4]:UNIT:ANGLE DEGR|e|RADian  
 CALCulate[1|2|3|4]:UNIT:DBReference 'DBV'|'DBM'|'DBSPL'|'DBUSER146  
 CALCulate[1|2|3|4]:UNIT:DBReference:IMPedance 1e-15~1e+15[OHM]  
 CALCulate[1|2|3|4]:UNIT:DBReference:USER:LABel '<STRING>'  
 CALCulate[1|2|3|4]:UNIT:DBReference:USER:REFerence 1e-15~1e+15  
 CALCulate[1|2|3|4]:UNIT:MECHanical 'G'|'M/S2'|'M/S'|'M'|'INCH/S2'|'INCH/S'|  
 'INCH'|'MILS'  
 CALCulate[1|2|3|4]:UNIT:VOLTage 'V'|'V2'|'V2/HZ'|'V2S/HZ'|@ 14 6V/RTHZ'  
 CALCulate[1|2|3|4]:UNIT:X 'HZ'|'CPM'|'ORD'|'USER'  
 CALCulate[1|2|3|4]:UNIT:X:ORDer:FACTor 1e-15~1e+15[HZ/ORD|RPM/ORD]  
 CALCulate[1|2|3|4]:UNIT:X:USER:FREQuency:FACTor 1e-15~1e+15  
 CALCulate[1|2|3|4]:UNIT:X:USER:FREQuency:LABel '<STRING>'  
 CALCulate[1|2|3|4]:UNIT:X:USER:TIME:FACTor 1e-15~1e+15  
 CALCulate[1|2|3|4]:UNIT:X:USER:TIME:LABel '<STRING>'  
 CALCulate[1|2|3|4]:WATerfall:COUNT 1~32767  
 CALCulate[1|2|3|4]:WATerfall[:DATA]?  
 CALCulate[1|2|3|4]:WATerfall:SLICe:COPIY-? D1|D2|D3|D4|D5|D6|D7|D8  
 CALCulate[1|2|3|4]:WATerfall:SLICe:SELEct -16382~1e+06[HZ|S|ORD|  
 COUNT|AVG|VIVPK|IRPM|IEUIREV]  
 CALCulate[1|2|3|4]:WATerfall:SLICe:SELEct:POINT 0~2048  
 CALCulate[1|2|3|4]:WATerfall:TRACe:COPIY-? D1|D2|D3|D4|D5|D6|D7|D8  
 CALCulate[1|2|3|4]:WATerfall:TRACe:SELEct -9.9e+37~9.9e+37[S|IRPM|  
 COUNT|AVG]  
 CALCulate[1|2|3|4]:WATerfall:TRACe:SELEct:POINT 0~32767  
 CALCulate[1|2|3|4]:X:DATA?

**CALibration**

CALibration[:ALL]?

CALibration:AUTO OFF|O|O|N|1|O|N|C|E

**DISPlay**

DISPlay:ANNotation[:ALL] OFF|O|O|N|1

DISPlay:BODE

DISPlay:BRIGhtness 0.5~1

DISPlay:ERRor-? '&lt;STRING&gt;'

DISPlay:EXTernal[:STATe] OFF|O|O|N|1

DISPlay:FORMat SINGLE|ULOWer|FBACK|SUBLIULFBIQUAD

DISPlay:GPIB:ECHO OFF|O|O|N|1

DISPlay:PROGram:KEY:BOX 0~9,OFF|O|O|N|1

DISPlay:PROGram:KEY:BRACket 0~9,0~9,OFF|O|O|N|1

DISPlay:PROGram[:MODE] OFF|O|FULL|UPPer|LOWer

DISPlay:PROGram:VECTor:BUFFer[:STATe] OFF|O|O|N|1

DISPlay:RPM[:STATe] OFF|O|O|N|1

DISPlay:STATe OFF|O|O|N|1

DISPlay:TCAPture:ENVELOpe[:STATe] OFF|O|O|N|1

DISPlay:VIEW TRACe|MSTATe|MMEMory|STABle|CTABle|FTABle|TTABle|  
MEMory|OPTion|CAPTure|I|STATe|MESSage

DISPlay[:WINDow[1|2|3|4]]:DTABle:MARKer[:STATe] OFF|O|O|N|1

DISPlay[:WINDow[1|2|3|4]]:DTABle[:STATe] OFF|O|O|N|1

DISPlay[:WINDow[1|2|3|4]]:LIMit:STATe OFF|O|O|N|1

DISPlay[:WINDow[1|2|3|4]]:POLar:CLOCKwise OFF|O|O|N|1

DISPlay[:WINDow[1|2|3|4]]:POLar:ROTation -360~360

DISPlay[:WINDow[1|2|3|4]]:TRACe:APOWer[:STATe] OFF|O|O|N|1

DISPlay[:WINDow[1|2|3|4]]:TRACe:BPOWer[:STATe] OFF|O|O|N|1

DISPlay[:WINDow[1|2|3|4]]:TRACe:GRATicule:GRID[:STATe] OFF|O|O|N|1

DISPlay[:WINDow[1|2|3|4]]:TRACe:LABel '&lt;STRING&gt;'

DISPlay[:WINDow[1|2|3|4]]:TRACe:LABel:DEFault[:STATe] OFF|O|O|N|1

DISPlay[:WINDow[1|2|3|4]]:TRACe:X:MATCh[1|2|3|4]

DISPlay[:WINDow[1|2|3|4]]:TRACe:X[:SCALE]:AUTO OFF|O|O|N|C|E

DISPlay[:WINDow[1|2|3|4]]:TRACe:X[:SCALE]:LEFT -9.9e+37~9.9e+37[HZ|SI  
ORDICOUNT|AVG|V|VPK|IRPM|IEUIREV]DISPlay[:WINDow[1|2|3|4]]:TRACe:X[:SCALE]:RIGHT -9.9e+37~9.9e+37[HZ|SI  
ORDICOUNT|AVG|V|VPK|IRPM|IEUIREV]

DISPlay[:WINDow[1|2|3|4]]:TRACe:X:SPACing LINear|LOGarithmic

DISPlay[:WINDow[1|2|3|4]]:TRACe:Y:MATCh[1|2|3|4]

DISPlay[:WINDow[1|2|3|4]]:TRACe:Y[:SCALE]:AUTO OFF|O|O|N|1|O|N|C|E

DISPlay[:WINDow[1|2|3|4]]:TRACe:Y[:SCALE]:BOTTom -9.9e+37~9.9e+37  
[DBVRMS|VRMS|V|PK|IDB|VPK|IDB|V|IEUI|DBEU]

DISPLAY[:WINDow[1|2|3|4]]:TRACe:Y[:SCALe]:CENTer -9.9e+37~9.9e+37  
 [DBVRMSIVRMSIVPKIDBVPKIVIDBVIEWIDBEU]  
 DISPLAY[:WINDow[1|2|3|4]]:TRACe:Y[:SCALe]:PDIVision 0~9.9e+37[DBI  
 VRMSIVPKIV]  
 DISPLAY[:WINDow[1|2|3|4]]:TRACe:Y[:SCALe]:REFerence TOPICENTerI  
 BOTTomIRANGe  
 DISPLAY[:WINDow[1|2|3|4]]:TRACe:Y[:SCALe]:TOP -9.9e+37~9.9e+37  
 [DBVRMSIVRMSIVPKIDBVPKIVIDBVIEWIDBEU]  
 DISPLAY[:WINDow[1|2|3|4]]:TRACe:Y:SPACing LINearLOGarithmic  
 DISPLAY[:WINDow[1|2|3|4]]:WATERfall:BASEline 0~100[PCT]  
 DISPLAY[:WINDow[1|2|3|4]]:WATERfall:BOTTom 0~9.9e+37[SIRPMICOUNTI  
 AVG]  
 DISPLAY[:WINDow[1|2|3|4]]:WATERfall:COUNT 1e-06~9.9e+37[SIRPMICOUNTI  
 AVG]  
 DISPLAY[:WINDow[1|2|3|4]]:WATERfall:HEIGHT 1~100[PCT]  
 DISPLAY[:WINDow[1|2|3|4]]:WATERfall:HIDDEN OFFI0ION1  
 DISPLAY[:WINDow[1|2|3|4]]:WATERfall:SKEW OFFI0ION1  
 DISPLAY[:WINDow[1|2|3|4]]:WATERfall:SKEW:ANGLE 0~45  
 DISPLAY[:WINDow[1|2|3|4]]:WATERfall[:STATe] OFFI0ION1  
 DISPLAY[:WINDow[1|2|3|4]]:WATERfall:TOP 0~9.9e+37[SIRPMICOUNTI|AVG]

## FORMat

FORMat[:DATA] ASCii|REAL[,3~64]

## HCOPY

HCOpy:COLor:DEFault  
 HCOpy:DESTination 'SYSTem:COMMunicate:GPIB:RDEvice'|'MMEMory 46I  
 'SYSTem:COMMunicate:CENTronics'|'SYSTem:COMMuni cate:SERial'  
 HCOpy:DEvice:LANGUage HPGLIPCLIPHPGI  
 HCOpy:DEvice:SPEed 0~100  
 HCOpy[:IMMEDIATE]  
 HCOpy:ITEM:ALL[:IMMEDIATE]  
 HCOpy:ITEM:FFEEd:STATe OFFI0ION1  
 HCOpy:ITEM:LABel:COLor 0~16  
 HCOpy:ITEM:LABel:STATe OFFI0ION1  
 HCOpy:ITEM:LABel:TEXT '<STRING>'  
 HCOpy:ITEM:TDSTamp:FORMat FORMat1|FORMat2|FORMat3|FORMat4|  
 FORMat5  
 HCOpy:ITEM:TDSTamp:STATe OFFI0ION1  
 HCOpy:ITEM[:WINDow[1|2|3|4]]:TRACe:COLor 0~16  
 HCOpy:ITEM[:WINDow[1|2|3|4]]:TRACe:GRATICule:COLor 0~16  
 HCOpy:ITEM[:WINDow[1|2|3|4]]:TRACe:GRATICule[:IMMEDIATE]  
 HCOpy:ITEM[:WINDow[1|2|3|4]]:TRACe[:IMMEDIATE]

HCOPy:ITEM[:WINDow[1|2|3|4]]:TRACe:LIMit:LTYPe SOLid|DASHed|DOTTed|  
 STYLe<n>  
 HCOPy:ITEM[:WINDow[1|2|3|4]]:TRACe:LTYPe SOLid|DASHed|DOTTed|  
 STYLe<n>  
 HCOPy:ITEM[:WINDow[1|2|3|4]]:TRACe:MARKer:COLor 0~16  
 HCOPy:ITEM[:WINDow[1|2|3|4]]:TRACe:MARKer[:IMMediate]  
 HCOPy:ITEM[:WINDow[1|2|3|4]]:TRACe:MARKer:REFerence[:IMMediate]  
 HCOPy:PAGE:DIMensions:AUTO OFFI0IONI1  
 HCOPy:PAGE:DIMensions:USER:LLEfT -32767~32767,-32767~32767  
 HCOPy:PAGE:DIMensions:USER:URIGht -32767~32767,-32767~32767  
 HCOPy:PLOT:ADDRes 0~30  
 HCOPy:PRINt:ADDRes 0~30  
 HCOPy:TITLe[1|2] '<STRING>'

### **INITiate**

INITiate:CONTInuous OFFI0IONI1  
 INITiate[:IMMediate]

### **INPut[1|2|3|4]**

INPut[1|2|3|4]:BIAS[:STATe] OFFI0IONI1  
 INPut[1|2|3|4]:COUPling ACIDC  
 INPut[1|2|3|4]:FILTer:AWeighting[:STATe] OFFI0IONI1  
 INPut[1|2|3|4]:FILTer[:LPASs][:STATe] OFFI0IONI1  
 INPut[1|2|3|4]:LOW GROund|FLOat  
 INPut[1|2|3|4]:REFerence:DIRectIon 0~32767  
 INPut[1|2|3|4]:REFerence:POINt 0~32767  
 INPut[1|2|3|4][:STATe] OFFI0IONI1

### **INSTrument**

INSTrument:NSElect 0~5  
 INSTrument[:SElect] FFT|OCTave|ORDER|SINE|HISTogram|CORRelation

### **MEMory**

MEMory:CATalog[:ALL]?  
 MEMory:CATalog:NAME? TCAPture|WATerfall|WREGister|PROGram|IRDISk  
 MEMory:DELeTe:ALL  
 MEMory:DELeTe[:NAME]-? TCAPture|WATerfall|WREGister|PROGram|IRDISk  
 MEMory:FREE[:ALL]?

**MMEMory**

MMEMory:COpy-? <MMEMNAME>,<MMEMNAME>  
 MMEMory:DELeTe-? <MMEMNAME>  
 MMEMory:DISK:ADDRess 0~30  
 MMEMory:DISK:UNIT 0~10  
 MMEMory:FSYSstem?  
 MMEMory:INITialize-? [<MSINAME>],[LIFIDOS],[0~7.00006e+06],[0~256]  
 MMEMory:LOAD:CFIT-? <FILENAME>  
 MMEMory:LOAD:CONTInue  
 MMEMory:LOAD:CONTInue?  
 MMEMory:LOAD:DTABLE:TRACe[1|2|3|4]-? <FILENAME>  
 MMEMory:LOAD:LIMit:LOWer:TRACe[1|2|3|4]-? <FILENAME>  
 MMEMory:LOAD:LIMit:UPPer:TRACe[1|2|3|4]-? <FILENAME>  
 MMEMory:LOAD:MATH-? <FILENAME>  
 MMEMory:LOAD:PROGram-? <FILENAME>  
 MMEMory:LOAD:STATe-? 1~1,<FILENAME>  
 MMEMory:LOAD:SYNThesis-? <FILENAME>  
 MMEMory:LOAD:TCAPture-? <FILENAME>  
 MMEM:LOAD:TRACe-? D1ID2ID3ID4ID5ID6ID7ID8,<FILENAME>[,NOScale]  
 MMEMory:LOAD:WATerfall-? W1IW2IW3IW4IW5IW6IW7IW8,<FILENAME>  
 MMEMory:MDIRectory-? '<DIR\_NAME>'  
 MMEMory:MOVE-? <FILENAME>,<FILE>  
 MMEMory:MSIS <MSINAME>  
 MMEMory:NAME '<FILENAME>'  
 MMEMory:STORE:CFIT-? <FILENAME>  
 MMEMory:STORE:CONTInue  
 MMEMory:STORE:CONTInue?  
 MMEMory:STORE:DTABLE:TRACe[1|2|3|4]-? <FILENAME>  
 MMEMory:STORE:LIMit:LOWer:TRACe[1|2|3|4]-? <FILENAME>  
 MMEMory:STORE:LIMit:UPPer:TRACe[1|2|3|4]-? <FILENAME>  
 MMEMory:STORE:MATH-? <FILENAME>  
 MMEMory:STORE:PROGram-? <FILENAME>  
 MMEMory:STORE:PROGram:FORMat ASCiilBINary  
 MMEMory:STORE:STATe-? 1~1,<FILENAME>  
 MMEMory:STORE:SYNThesis-? <FILENAME>  
 MMEMory:STORE:TCAPture-? <FILENAME>  
 MMEMory:STORE:TRACe-? TRACe1|TRACe2|TRACe3|TRACe4,<FILENAME>  
 MMEMory:STOR:WATerfall-? TRACe1|TRACe2|TRACe3|TRACe4,<FILENAME>

**OUTPut**

OUTPut:FiLTeR[:LPASs][:STATe] OFFI0ION1

OUTPut[:STATe] OFFI0ION1

**PROGram**

PROGram:EDIT:ENABle OFFI0ION1

PROGram:EXPLicit:DEFine

PROGram1|PROGram2|PROGram3|PROGram4|PROGram5,<PROGRAM>

PROGram:EXPLicit:LABel PROGram1|PROGram2|PROGram3|PROGram4|  
PROGram5,'<STRING>'

PROGram[:SELeCted]:DEFine <PROGRAM>

PROGram[:SELeCted]:DELete:ALL

PROGram[:SELeCted]:DELete[:SELeCted]

PROGram[:SELeCted]:LABel '<STRING>'

PROGram[:SELeCted]:MALLocate 1200~500000

PROGram[:SELeCted]:NAME PROGram1|PROGram2|PROGram3|PROGram4|  
PROGram5

PROGram[:SELeCted]:NUMBer '<NVARNAME>','<BLOCK>'

PROGram[:SELeCted]:STATe STOPIPAUSelRUNICONTinue

PROGram[:SELeCted]:STRing '<SVARNAME>','<STRING>'

**[SENSe:]**

[SENSe:]AVERAge:CONFidence 0.25~2[DB]

[SENSe:]AVERAge:COUNT 1~1e+07

[SENSe:]AVERAge:HOLD OFFI0IMAXimum|MINimum

[SENSe:]AVERAge:IMPulse OFFI0ION1

[SENSe:]AVERAge:IREsult:RATE 1~1e+07

[SENSe:]AVERAge:IREsult[:STATe] OFFI0ION1

[SENSe:]AVERAge:PREView OFFI0IMANual|TIMed

[SENSe:]AVERAge:PREView:ACCept

[SENSe:]AVERAge:PREView:REJect

[SENSe:]AVERAge:PREView:TIME 0.1~3600[S]

[SENSe:]AVERAge[:STATe] OFFI0ION1

[SENSe:]AVERAge:TCONtrol FREeze|REPeat|EXPOntial

[SENSe:]AVERAge:TIME 0~9.9e+37[S|RECIpNT]

[SENSe:]AVERAge:TYPE MAXimum|RMS|TIME|VECTor|ECONFidence

[SENSe:]FEED INPut|TCAPture

[SENSe:]FREQuency:BLOCKsize 256~2048

[SENSe:]FREQuency:CENTer 0.0234375~115000[HZ|CPM]

[SENSe:]FREQuency:MANual 0.015625~51200[HZ]

[SENSe:]FREQuency:RESolution 0.015625~51200[HZ|PCT|PNT|SWPI  
PNT|DECIPNT|OCT]

[SENSe:]FREQuency:RESolution:AUTO OFFI0IONI1  
 [SENSe:]FREQuency:RESolution:AUTO:MCHange 0.00391~100[PCT]  
 [SENSe:]FREQuency:RESolution:AUTO:MINimum 0.015625~51200[HZICPM]  
 PNT/SWIPNT/DECIPNT/OCT]  
 [SENSe:]FREQuency:RESolution:OCTave THIRdIFULLITWELFth  
 [SENSe:]FREQuency:SPAN 0.015625~102400[HZICPM]  
 [SENSe:]FREQuency:SPAN:FULL  
 [SENSe:]FREQuency:SPAN:LINK STARTtICENTer  
 [SENSe:]FREQuency:STARt 0~115000[HZICPM]  
 [SENSe:]FREQuency:STEP[:INCRement] 0.015625~102400[HZICPM]  
 [SENSe:]FREQuency:STOP 0.03125~115000[HZICPM]  
 [SENSe:]HISTogram:BINS 4~1024  
 [SENSe:]ORDer:MAXimum 3.125~200[ORD]  
 [SENSe:]ORDer:RESolution 0.0078125~1[ORD]  
 [SENSe:]ORDer:RESolution:TRACk 1~2048  
 [SENSe:]ORDer:RPM:MAXimum 0~9.9e+37[RPM]  
 [SENSe:]ORDer:RPM:MINimum 0~9.9e+37[RPM]  
 [SENSe:]ORDer:TRACk[1|2|3|4|5] 0~9.9e+37[ORD]  
 [SENSe:]ORDer:TRACk[1|2|3|4|5]:STATe OFFI0IONI1  
 [SENSe:]REFerence SINGleIPAIR  
 [SENSe:]REJect:STATe OFFI0IONI1  
 [SENSe:]SWEep:DIRection UPIDOWN  
 [SENSe:]SWEep:DWELI 0.00025~32768[SICYCLE]  
 [SENSe:]SWEep:MODE AUTOIMANual  
 [SENSe:]SWEep:OVERlap 0~99[PCT]  
 [SENSe:]SWEep:SPACing LINearLOGarithmic  
 [SENSe:]SWEep:STIME 0~9.9e+37[SICYCLE]  
 [SENSe:]SWEep:TIME 0.000976562~8192[S]  
 [SENSe:]TCAPture:ABORt  
 [SENSe:]TCAPture:DELete  
 [SENSe:]TCAPture[:IMMediate]  
 [SENSe:]TCAPture:LENGth 0~9.9e+37[SIBLKIPNT]  
 [SENSe:]TCAPture:MALLocate  
 [SENSe:]TCAPture:STARt[1|2|3|4] -9.9e+37~9.9e+37[SIBLKIPNT]  
 [SENSe:]TCAPture:STOP[1|2|3|4] -9.9e+37~9.9e+37[SIBLKIPNT]  
 [SENSe:]TCAPture:TACHometer:RPM:MAXimum 5~491519  
 [SENSe:]TCAPture:TACHometer[:STATe] OFFI0IONI1  
 [SENSe:]VOLTagE[1|2|3|4][:DC]:RANGe:AUTO OFFI0IONI1  
 [SENSe:]VOLTagE[1|2|3|4][:DC]:RANGe:AUTO:DIRection UPIEITHer  
 [SENSe:]VOLTagE[1|2|3|4][:DC]:RANGe:UNIT:USER:LABel '<STRING>'  
 [SENS:]VOLT[1|2|3|4][:DC]:RANGe:UNIT:USER:SFACTor -9.9e+37~9.9e+37  
 [V/EUIEU/V]  
 [SENSe:]VOLTagE[1|2|3|4][:DC]:RANGe:UNIT:USER[:STATe] OFFI0IONI1

[SENSe:]VOLTage[1|2|3|4][:DC]:RANGe:UNIT:XDCR:LABel PAIGIM/S2IM/SI  
MIKGINIDYNIINCH/S2IINCH/SIINCHIMILILBIUSER  
[SENSe:]VOLTage[1|2|3|4][:DC]:RANGe[:UPPer] -51~31.66[DBVRMSIVPK  
IDBVPKIVDBVIEUIDBEUIVRMS]  
[SENSe:]WINDow[1|2|3|4]:EXPonential 3.8147e-06~9.9999e+06[S]  
[SENSe:]WINDow[1|2|3|4]:FORCe 3.8147e-06~9.9999e+06[S]  
[SENSe:]WINDow[1|2|3|4]:ORDer:DC OFFI0IONI1  
[SENSe:]WINDow[1|2|3|4][:TYPE] HANNingI FLATtopI UNIFORMI FORCeI  
EXPonentialI LAGILLAG

## SOURce

SOURce:BURSt 0~100[PCT]  
SOURce:FREQuency[:CW] 0~115000[HZ]  
SOURce:FREQuency:FIXed 0~115000[HZ]  
SOURce:FUNCTion[:SHAPE] SINusoidIRANDomIBRANDomIPCHirpIBCHirpI  
PINKIUSERICAPT  
SOURce:USER:CAPTure 1~4  
SOURce:USER[:REGister] D1ID2ID3ID4ID5ID6ID7ID8  
SOURce:USER:REPeat OFFI0IONI1  
SOURce:VOLTage[:LEVel]:AUTO OFFI0IONI1  
SOUR:VOLT[:LEVel][:IMMediate][:AMPLitude] -9.9e+37~13.9794[DBVRMSI  
VPKIDBVPKIVDBVIVRMS]  
SOURce:VOLTage[:LEVel][:IMMediate]:OFFSet -10~10[V]  
SOURce:VOLTage[:LEVel]:REFerence -69.276~31.66[DBVRMSIVPKIDBVPKIVI  
DBVIEUIDBEUIVRMS]  
SOURce:VOLTage[:LEVel]:REFerence:CHANnel INPut1IINPut2IINPut3IINPut4  
SOURce:VOLTage[:LEVel]:REFerence:TOLerance 0.1~20[DB]  
SOURce:VOLTage:LIMit[:AMPLitude] -9.9e+37~13.9794[DBVRMSIVPKI  
DBVPKIVDBVIVRMS]  
SOURce:VOLTage:LIMit:INPut -69.276~31.66[DBVRMSIVPKIDBVPKIVI  
DBVIEUIDBEUIVRMS]  
SOURce:VOLTage:SLEW 0~10000[V/SIVPK/SIVRMS/S]

## STATus

STATus:DEVice:CONDition?  
STATus:DEVice:ENABLE 0~32767  
STATus:DEVice[:EVENT]?  
STATus:DEVice:NTRansition 0~32767  
STATus:DEVice:PTRansition 0~32767  
STATus:OPERation:CONDition?  
STATus:OPERation:ENABLE 0~32767  
STATus:OPERation[:EVENT]?  
STATus:OPERation:NTRansition 0~32767

STATus:OPERation:PTRansition 0~32767  
 STATus:PRESet  
 STATus:QUEStionable:CONDition?  
 STATus:QUEStionable:ENABle 0~32767  
 STATus:QUEStionable[:EVENT]?  
 STATus:QUEStionable:LIMit:CONDition?  
 STATus:QUEStionable:LIMit:ENABle 0~32767  
 STATus:QUEStionable:LIMit[:EVENT]?  
 STATus:QUEStionable:LIMit:NTRansition 0~32767  
 STATus:QUEStionable:LIMit:PTRansition 0~32767  
 STATus:QUEStionable:NTRansition 0~32767  
 STATus:QUEStionable:PTRansition 0~32767  
 STATus:QUEStionable:VOLTage:CONDition?  
 STATus:QUEStionable:VOLTage:ENABle 0~32767  
 STATus:QUEStionable:VOLTage[:EVENT]?  
 STATus:QUEStionable:VOLTage:NTRansition 0~32767  
 STATus:QUEStionable:VOLTage:PTRansition 0~32767  
 STATus:USER:ENABle 0~32767  
 STATus:USER[:EVENT]?  
 STATus:USER:PULSe-? 0~32767

## SYSTem

SYSTem:BEEPer[:IMMEDIATE]-? [25~14880][,0~60][,0~1]  
 SYSTem:BEEPer:STATe OFFI0ION1  
 SYSTem:COMMunicate:GPIB[:SELF]:ADDRess 0~30  
 SYSTem:COMMunicate:SERial[:RECEive]:BAUD 300~9600  
 SYSTem:COMMunicate:SERial[:RECEive]:BITS 5~8  
 SYSTem:COMMunicate:SERial[:RECEive]:PACE NONEIXON  
 SYSTem:COMMunicate:SERial[:RECEive]:PARity:CHECK OFFI0ION1  
 SYSTem:COMMunicate:SERial[:RECEive]:PARity[:TYPE] NONEIEVENI0DD  
 SYSTem:COMMunicate:SERial[:RECEive]:SBITS 1~2  
 SYSTem:COMMunicate:SERial:TRANsmit:PACE NONEIXONIDSR  
 SYSTem:DATE 0~9999,1~12,1~31  
 SYSTem:ERRor?  
 SYSTem:FAN[:STATe] OFFI0IFULLIAUTO  
 SYSTem:FLOG:CLEar  
 SYSTem:KEY 0~255  
 SYSTem:KLOCK OFFI0ION1  
 SYSTem:POWer:SOURce? ACIDC  
 SYSTem:POWer:STATe OFFI0ION1  
 SYSTem:PRESet  
 SYSTem:SET <STATE>

SYSTem:TIME 0~23,0~59,0~60

SYSTem:VERSion?

## TEST

TEST:LOG:CLEar

TEST:LONG

TEST:LONG:RESult?

## TRACe

TRACe[:DATA] D1ID2ID3ID4ID5ID6ID7ID8,<DATA>

TRACe:WATERfall[:DATA] W1IW2IW3IW4IW5IW6IW7IW8,<WDATA>

TRACe:X[:DATA]? TRACe1|TRACe2|TRACe3|TRACe4ID1ID2ID3ID4ID5ID6ID7ID8IW1IW2IW3IW4IW5IW6IW7IW8

TRACe:X:UNIT? TRACe1|TRACe2|TRACe3|TRACe4ID1ID2ID3ID4ID5ID6ID7ID8IW1IW2IW3IW4IW5IW6IW7IW8

TRACe:Z[:DATA]? TRACe1|TRACe2|TRACe3|TRACe4ID1ID2ID3ID4ID5ID6ID7ID8IW1IW2IW3IW4IW5IW6IW7IW8

TRACe:Z:UNIT? TRACe1|TRACe2|TRACe3|TRACe4ID1ID2ID3ID4ID5ID6ID7ID8IW1IW2IW3IW4IW5IW6IW7IW8

## TRIGger

TRIGger:EXTErnal:FILTer[:LPAS][:STATe] OFF|O|ON|1

TRIGger:EXTErnal:LEVel -10~10[V]

TRIGger:EXTErnal:RANGe HIGH|LOW

TRIGger[:IMMediate]

TRIGger:LEVel -9.9e+37~9.9e+37[PCTIV|VPKIEU]

TRIGger:LEVel:TTL HIGH|LOW

TRIGger:SLOPe POSitive|NEGative

TRIGger:SOURce IMMediate|EXTErnal|INTERNAL1|INTERNAL2|INTERNAL3|INTERNAL4|OUTPUT|BUS

TRIGger:STARt[1|2|3|4] -9.9e+37~9.9e+37[S]

TRIGger:TACHometer:HOLDoff 0~0.052224[S]

TRIGger:TACHometer:LEVel -20~20[V]

TRIGger:TACHometer:PCOunt 0.5~2048

TRIGger:TACHometer:RANGe HIGH|LOW

TRIGger:TACHometer[:RPM]?

TRIGger:TACHometer:SLOPe POSitive|NEGative