

Errata

Title & Document Type: 54600A/54601A Oscilloscope Programmer's Quick Reference

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HP References in this Manual

This manual may contain references to HP or Hewlett-Packard. Please note that Hewlett-Packard's former test and measurement, semiconductor products and chemical analysis businesses are now part of Agilent Technologies. We have made no changes to this manual copy. The HP XXXX referred to in this document is now the Agilent XXXX. For example, model number HP8648A is now model number Agilent 8648A.

About this Manual

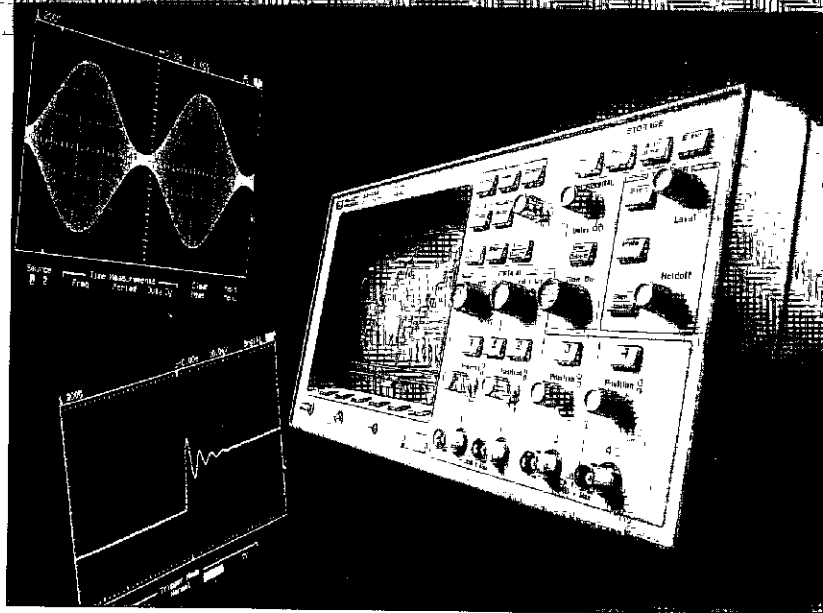
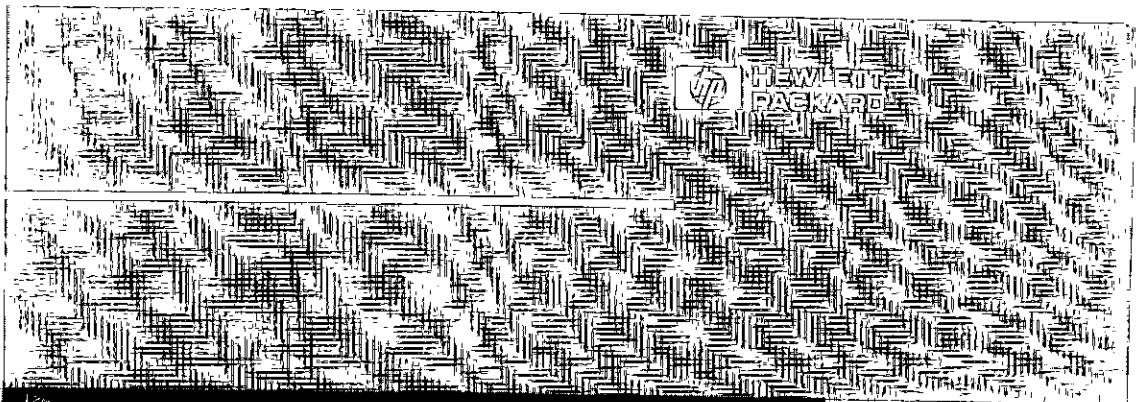
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Search for the model number of this product, and the resulting product page will guide you to any available information. Our service centers may be able to perform calibration if no repair parts are needed, but no other support from Agilent is available.



Programmer's
Quick Reference

HP 54600A and
HP 54601A
Oscilloscopes

Error Messages

| Error Number | Description | Error Number | Description |
|--------------|------------------------------------|--------------|---|
| -100 | Command error (unknown command) | -160 | Block data error |
| -101 | Invalid character | -161 | Invalid block data |
| -102 | Syntax error | -168 | Block data not allowed |
| -103 | Invalid separator | -170 | Expression error |
| -104 | Data type error | -171 | Invalid expression |
| -105 | GET not allowed | -178 | Expression data not allowed |
| -108 | Parameter not allowed | -200 | Execution error |
| -109 | Missing parameter | -211 | Trigger ignored |
| -112 | Program mnemonic too long | -221 | Settings conflict |
| -113 | Undefined header | -222 | Data out of range |
| -121 | Invalid character in number | -223 | Too much data |
| -123 | Numeric overflow | -310 | System error |
| -124 | Too many digits | -350 | Too many errors |
| -128 | Numeric data not allowed | -400 | Query error |
| -130 | Suffix error | -410 | Query INTERRUPTED |
| -131 | Invalid suffix | -420 | Query UNTERMINATED |
| -138 | Suffix not allowed | -430 | Query DEADLOCKED |
| -140 | Character data error | -440 | Query UNTERMINATED after indefinite response |
| -141 | Invalid character data | | |
| -144 | Character data too long | | |
| -148 | Character data not allowed | | |
| -150 | String data error | | |
| -151 | Invalid string data | | |
| -152 | String data not allowed | | |

Programmer's Quick Reference

Introduction

The following section lists the commands and queries with their corresponding arguments and returned formats. The arguments for each command list the minimum argument required. The part of the command or query listed in uppercase letters refers to the short form of that command or query. The long form is the combination of uppercase and lowercase letters.

Conventions

The following conventions are used in this section:

< > Angular brackets enclose words or characters that symbolize a program code parameter or an HP-IB command.

:: = "is defined as." For example, <A> :: = indicates that <A> can be replaced by in any statement containing <A>.

| "or." Indicates a choice of one element from a list. For example, <A> | indicates <A> or but not both.

... An ellipsis (trailing dots) indicate that the preceding element may be repeated one or more times.

[] Square brackets indicate that the enclosed items are optional.

{ } When several items are enclosed by braces, one, and only one of these elements may be selected.

Suffix Multipliers

The suffix multipliers available for arguments are:

EX :: = 1E18

PE :: = 1E15

T :: = 1E12

G :: = 1E9

MA :: = 1E6

K :: = 1E3

M :: = 1E-3

U :: = 1E-6

N :: = 1E-9

P :: = 1E-12

F :: = 1E-15

A :: = 1E-18

For more information on specific commands or queries, refer to the Programmer's Reference.

| | | |
|---|--------------------------------|----------------------|
| *CLS | (Clear Status) | command |
| Command Syntax: *CLS | | |
| *ESE | (Event Status Enable) | command/query |
| Command Syntax: *ESE {0 to 255} | | |
| Query Syntax: *ESE? | | |
| Returned Format: {integer, 0 to 255}<NL> | | |
| *ESR | (Event Status Register) | query |
| Query Syntax: *ESR? | | |
| Returned Format: {integer, 0 to 255}<NL> | | |
| *IDN | (Identification Number) | query |
| Query Syntax: *IDN? | | |
| Returned Format: HEWLETT-PACKARD, 54600A, 0, X, X<NL> | | |
| *LRN | (Learn) | query |
| Query Syntax: *LRN? | | |
| Returned Format: :SYSTEM SETUp #800000121<learn string><NL> | | |
| *OPC | (Operation Complete) | command/query |
| Command Syntax: *OPC | | |
| Query Syntax: *OPC? | | |
| Returned Format: 1<NL> | | |
| *OPT | (Option) | query |
| Query Syntax: *OPT? | | |
| Returned Format: 0<NL> | | |
| *RCL | (Recall) | command |
| Command Syntax: *RCL {1 to 16} | | |

| | | |
|---|---------------------------------|----------------------|
| *RST | (Reset) | command |
| Command Syntax: *RST | | |
| *SAV | (Save) | command |
| Command Syntax: *SAV {1 to 16} | | |
| *SRE | (Service Request Enable) | command/query |
| Command Syntax: *SRE {0 to 255} | | |
| Query Syntax: *SRE? | | |
| Returned Format: <mask><NL> | | |
| Where: <mask> ::= sum of all bits set - integer, 0 to 255 | | |
| *STB | (Status Byte) | query |
| Query Syntax: *STB? | | |
| Returned Format: {integer, 0 to 255}<NL> | | |
| *TRG | (Trigger) | command |
| Command Syntax: *TRG | | |
| *TST | (Test) | query |
| Query Syntax: *TST? | | |
| Returned Format: {0 or non-zero value}<NL> | | |
| Where: 0 ::= test passed non-zero ::= test failed | | |
| *WAI | (Wait) | command |
| Command Syntax: *WAI | | |
| :ACQUIRE:COMPLETE | | command/query |
| Command Syntax: :ACQUIRE:COMPLETE {0 to 100} | | |
| Query Syntax: :ACQUIRE:COMPLETE? | | |
| Returned Format: {integer, 0 to 100}<NL> | | |

:ACQUIRE:COUNT **command/query**

Command Syntax: :ACQUIRE:COUNT {8 | 64 | 256}

Query Syntax: :ACQUIRE:COUNT?

Returned Format: { 8 | 64 | 256}<NL>

:ACQUIRE:POINTS **query**

Query Syntax: :ACQUIRE:POINTS?

Returned Format: {integer, 1 to 4000}<NL>

:ACQUIRE:SETUP **query**

Query Syntax: :ACQUIRE:SETUP?

Returned Format: <string><NL>

:ACQUIRE:TYPE **command/query**

Command Syntax: :ACQUIRE:TYPE {NORMAL | AVERAGE | PEAK}

Query Syntax: :ACQUIRE:TYPE?

Returned Format: {NORM | AVER | PEAK}<NL>

:ASTORE **command**

Command Syntax: :ASTORE

:AUTOSCALE **command**

Command Syntax: :AUTOSCALE

:BLANK **command**

Command Syntax: :BLANK {CHANNEL{1 | 2 | 3 | 4}|PMEMORY{1 | 2}}

:CHANNEL{1 | 2}:BWLIMIT **command/query**

Command Syntax: :CHANNEL{1 | 2}:BWLIMIT {ON | OFF}

Query Syntax: :CHANNEL{1 | 2}:BWLIMIT?

Returned Format: {ON | OFF}<NL>

:CHANnel{1 | 2 | 3 | 4}:COUPLing **command/query**

Command Syntax: :CHANnel{1 | 2}:COUPLing {AC | DC | GND} | {3 | 4}:COUPLing {DC | GND}
Query Syntax: :CHANnel{1 | 2 | 3 | 4}:COUPLing?
Returned Format: {AC | DC | GND}<NL> for Channels 1 and 2
{DC | GND}<NL> for Channels 3 and 4

:CHANnel{1 | 2}:INVert **command/query**

Command Syntax: :CHANnel{1 | 2}:INVert {ON | OFF}
Query Syntax: :CHANnel{1 | 2}:INVert?
Returned Format: {ON | OFF}

:CHANnel:MATH **command/query**

Command Syntax: :CHANnel:MATH {OFF | PLUS | SUBtract}
Query Syntax: :CHANnel:MATH?
Returned Format: {OFF | PLUS | SUB}

:CHANnel{1 | 2 | 3 | 4}:OFFSet **command/query**

Command Syntax: :CHANnel{1 | 2 | 3 | 4}:OFFSet <offset value>
Query Syntax: :CHANnel{1 | 2 | 3 | 4}:OFFSet?
Returned Format: <exponential, offset value><NL>

:CHANnel{1 | 2 | 3 | 4}:PROBe **command/query**

Command Syntax: :CHANnel{1 | 2 | 3 | 4}:PROBe {X1 | X10 | X100}
Query Syntax: :CHANnel{1 | 2 | 3 | 4}:PROBe?
Returned Format: {X1 | X10 | X100}<NL>

:CHANnel{1 | 2 | 3 | 4}:RANGe **command/query**

Command Syntax: :CHANnel{1 | 2}:RANGe<full-scale range> | {3 | 4}:RANGe {HIGH | LOW}
Query Syntax: :CHANnel{1 | 2 | 3 | 4}:RANGe?
Returned Format: <exponential full-scale range><NL> for Channels 1 and 2
{HIGH | LOW}<NL> for Channels 3 and 4

:CHANnel{1 | 2 | 3 | 4}:SETup **query**

Query Syntax: :CHANnel{1 | 2 | 3 | 4}.SETup?
Returned Format: <string><NL>

:CHANnel{1 | 2}:VERNier **command/query**

Command Syntax: :CHANnel{1 | 2}:VERNier {ON | OFF}
Query Syntax: :CHANnel:VERNier?
Returned Format: {ON | OFF}<NL>

:DIGitize **command**

Command Syntax: :DIGitize CHANnel{1 | 2 | 3 | 4}, [,CHANnel{1 | 2 | 3 | 4}]

:DISPlay:COLumn **command/query**

Command Syntax: :DISPlay:COLumn {0 to 63}
Query Syntax: :DISPlay:COLumn?
Returned Format: {integer, 0 to 63}<NL>

:DISPlay:DATA **command/query**

Command Syntax: :DISPlay:DATA #800016257<data>
Query Syntax: :DISPlay:DATA?
Returned Format: #800016257<data><NL>

:DISPlay:GRID **command/query**

Command Syntax: DISPlay:GRID {ON | OFF}
Query Syntax: DISPlay:GRID?
Returned Format: {ON | OFF}<NL>

:DISPlay:INVerse **command/query**

Command Syntax: DISPlay:INVerse {ON | OFF }
Query Syntax: :DISPlay:INVerse?
Returned Format: {ON | OFF}<NL>

:DISPlay:LINE **command**

Command Syntax: :DISPlay.LINE <quoted string>

:DISPlay:PIXel **command/query**

Command Syntax: :DISPlay:PIXel <x>, <y>, <intensity>

Query Syntax: :DISPlay:PIXel? <x>, <y>

Returned Format: <integer, intensity><NL>

:DISPlay:ROW **command/query**

Command Syntax: :DISPlay:ROW [1 to 20]

Query Syntax: :DISPlay:ROW?

Returned Format: {integer, 1 to 20}<NL>

:DISPlay:Setup **query**

Query Syntax: :DISPlay:SETup?

Returned Format: <string><NL>

:DISPlay:SOURce **command/query**

Command Syntax: :DISPlay:SOURce PMEMory{1 | 2}

Query Syntax: :DISPlay:SOURce?

Returned Format: PMEM{1 | 2}<NL>

:DISPlay:TEXT **command**

Command Syntax: :DISPlay:TEXT BLANK

:DITher **command/query**

Command Syntax: :DITher {ON | OFF}

Query Syntax: :DITher?

Returned Format: {ON | OFF}<NL>

:ERASe **command**

Command Syntax: :ERASe [PMEMory{1 | 2}]

:MEASure:ALL**query**

Query Syntax: :MEASure:ALL?
Returned Format: <FREquency result>,<PERiod result>,<PWIDTH result>,<NWIDTH result>,<RISetime result>,<FALLtime result>,<VPP result>,<DUTycycle result>,<VRMS result>,<VMAX result>,<VMIN result>,<VTOP result>,<VBASE result>,<VAverage result><NL>

:MEASure:DUTycycle**command/query**

Command Syntax: :MEASure:DUTycycle
Query Syntax: :MEASure:DUTycycle?
Returned Format: <exponential, dutycycle value><NL>

:MEASure:FALLtime**command/query**

Command Syntax: :MEASure:FALLtime
Query Syntax: :MEASure:FALLtime?
Returned Format: <exponential, falltime value><NL>

:MEASure:FREquency**command/query**

Command Syntax: :MEASure:FREquency
Query Syntax: :MEASure:FREquency?
Returned Format: <exponential, frequency value><NL>

:MEASure:NWIDTH**command/query**

Command Syntax: :MEASure:NWIDTH
Query Syntax: :MEASure:NWIDTH?
Returned Format: <exponential, negative_width value><NL>

:MEASure:PERiod**command/query**

Command Syntax: :MEASure:PERiod
Query Syntax: :MEASure:PERiod?
Returned Format: <exponential, period value><NL>

:MEASure:PWIDth **command/query**

Command Syntax: :MEASure:PWIDth
Query Syntax: :MEASure:PWIDth?
Returned Format: <exponential, positive_width value><NL>

:MEASure:RISetime **command/query**

Command Syntax: :MEASure:RISetime
Query Syntax: :MEASure:RISetime?
Returned Format: <exponential, risetime value><NL>

:MEASure:SCRatch **(Clear Results)** **command**

Command Syntax: :MEASure:SCRatch

:MEASure:SHOW **command/query**

Command Syntax: :MEASure:SHOW {ON | OFF}
Query Syntax: :MEASure:SHOW?
Returned Format: {ON | OFF}<NL>

:MEASure:SOURce **command/query**

Command Syntax: :MEASure:SOURce CHANnel {1 | 2 | 3 | 4}
Query Syntax: :MEASure:SOURce?
Returned Format: CHAN{1 | 2 | 3 | 4}<NL>

:MEASure:TDELta **query**

Query Syntax: :MEASure:TDELta?
Returned Format: <exponential, delta time markers><NL>

:MEASure:TStArt **command/query**

Command Syntax: :MEASure:TStArt <start marker time>
Query Syntax: :MEASure:TStArt?
Returned Format: <exponential, start marker time><NL>

:MEASure:TSTOp **command/query**

Command Syntax: :MEASure:TSTOp <stop marker time>
Query Syntax: :MEASure:TSTOp?
Returned Format: <exponential, stop marker time><NL>

:MEASure:TVOLT **query**

Query Syntax: :MEASure:TVOLT? <voltage>, <slope><occurrence>
Returned Format: <exponential, time of voltage crossing><NL>

:MEASure:VAverage **command/query**

Command Syntax: :MEASure:VAverage
Query Syntax: :MEASure:VAverage?
Returned Format: <exponential, average voltage><NL>

:MEASure:VBASe **command/query**

Command Syntax: :MEASure:VBASe
Query Syntax: :MEASure:VBASe?
Returned Format: <exponential, base voltage><NL>

:MEASure:VDELta **query**

Query Syntax: :MEASure:VDELta?
Returned Format: <exponential, delta voltage markers><NL>

:MEASure:VMAX **command/query**

Command Syntax: :MEASure:VMAX
Query Syntax: :MEASure:VMAX?
Returned Format: <exponential, maximum voltage><NL>

:MEASure:VMIN **command/query**

Command Syntax: :MEASure:VMIN
Query Syntax: :MEASure:VMIN?
Returned Format: <exponential, minimum voltage><NL>

:MEASure:VPP **command/query**

Command Syntax: :MEASure:VPP
Query Syntax: :MEASure:VPP?
Returned Format: <exponential, peak-to-peak voltage><NL>

:MEASure:VRMS **(DC RMS)** **command/query**

Command Syntax: :MEASure:VRMS
Query Syntax: :MEASure:VRMS?
Returned Format: <exponential, dc_rms voltage><NL>

:MEASure:VStart **command/query**

Command Syntax: :MEASure:VStart <marker1 voltage>
Query Syntax: :MEASure:VStart?
Returned Format: <exponential, vmarker1 voltage><NL>

:MEASure:VSTOP **command/query**

Command Syntax: :MEASure:VStop <marker2 voltage>
Query Syntax: :MEASure:VStop?
Returned Format: <exponential, vmarker2 voltage><NL>

:MEASure:VTime **query**

Query Syntax: :MEASure:VTime? <time from trigger>
Returned Format: <exponential, voltage at specified time><NL>

:MEASure:VTop **command/query**

Command Syntax: :MEASure:VTop
Query Syntax: :MEASure:VTop?
Returned Format: <exponential, top_voltage><NL>

:MENU**command/query****Command Syntax:** :MENU {0 to 16}**Query Syntax:** :MENU?**Returned Format:** {integer, 1 to 16}<NL>**Where:** <integer>::= 0 = Clear Menu
1 = Channel 1
2 = Channel 2
3 = Channel 3
4 = Channel 4
5 = Math
6 = Trigger Source
7 = Trigger Mode
8 = Trigger Slope
9 = Main/Delayed (Horizontal)
10 = Time Measurements
11 = Voltage Measurements
12 = Cursors
13 = Trace
14 = Setup
15 = Display
16 = Utility

:MERGe**command****Command Syntax:** :MERGe PMEMory{1 | 2}

:PRINt**query****Query Syntax:** :PRINt? [HIRes]

:RUN**command****Command Syntax:** :RUN

:STATus**query****Query Syntax:** :STATus? {CHANne1{1 | 2 | 3 | 4 } | PMEMory{1 | 2}}**Returned Format:** {ON | OFF}<NL>

:STOP**command****Command Syntax:** :STOP

:SYSTem:DSP**command**

Command Syntax: :SYSTem:DSP <quoted ASCII string>

:SYSTem:ERRor**query**

Query Syntax: :SYSTem:ERRor?

Returned Format: <integer, error number><NL>

Where:

<error number>:=

- | | |
|---------------------------------------|-----------------------------------|
| +0, No error | |
| -100, Command error (unknown command) | -160, Block data error |
| -101, Invalid character | -161, Invalid block data |
| -102, Syntax error | -168, Block data not allowed |
| -103, Invalid separator | |
| -104, Data type error | -170, Expression error |
| -105, GET not allowed | -171, Invalid expression |
| -108, Parameter not allowed | -178, Expression data not allowed |
| -109, Missing parameter | |
| | |
| -112, Program mnemonic too long | -200, Execution error |
| -113, Undefined header | |
| | |
| -121, Invalid character in number | -211, Trigger ignored |
| -123, Numeric overflow | |
| -124, Too many digits | -221, Settings conflict |
| -128, Numeric data not allowed | -222, Data out of range |
| | -223, Too much data |
| | |
| -130, Suffix error | |
| -131, Invalid suffix | |
| -138, Suffix not allowed | -310, System error |
| | |
| -140, Character data error | -350, Too many errors |
| -141, Invalid character data | |
| -144, Character data too long | -400, Query error |
| -148, Character data not allowed | -410, Query INTERRUPTED |
| | -420, Query UNTERMINATED |
| -150, String data error | -430, Query DEADLOCKED |
| -151, Invalid string data | -440, Query UNTERMINATED |
| | after indefinite response |
| -158, String data not allowed | |

:SYSTEM:KEY**command/query****Command Syntax:** :SYSTEM KEY {-1 to 50}**Query Syntax:** :SYSTEM KEY?**Returned Format:** {integer, -1 to 50}<NL>**Where:**

| | | | |
|--------------|----------------------|---------------------|------------------------|
| <integer>::= | -1 for NO KEY | 21 for STOP | 43 for DELAY_CW |
| | 0 for AUTOSCALE | 22 for ERASE | 44 for DELAY_CCW |
| | 1 for CH1 | 23 for SOFTKEY_1 | 45 for TRG_LEVEL_CW |
| | 2 for CH2 | 24 for SOFTKEY_2 | 46 for TRG_LEVEL_CCW |
| | 3 for CH3 | 25 for SOFTKEY_3 | 47 for TRG_HOLD_CW |
| | 4 for CH4 | 26 for SOFTKEY_4 | 48 for TRG_HOLD_CCW |
| | 5 for +/- | 27 for SOFTKEY_5 | 49 for CURSOR_KNOB_CW |
| | 6 for TRG_SRC | 28 for SOFTKEY_6 | 50 for CURSOR_KNOB_CCW |
| | 7 for TRG_MODE | 29 for CH1_VOLT_CW | |
| | 8 for TRG_SLOPE | 30 for CH1_VOLT_CCW | |
| | 9 for MAIN/DELAYED | 31 for CH1_POS_CW | |
| | 10 for TIME | 32 for CH1_POS_CCW | |
| | 11 for VOLTAGE | 33 for CH2_VOLT_CW | |
| | 12 for CURSORS | 34 for CH2_VOLT_CCW | |
| | 13 for SAVE_TRACE | 35 for CH2_POS_CW | |
| | 14 for SAVE_SETUP | 36 for CH2_POS_CCW | |
| | 15 for DISPLAY | 37 for CH3_POS_CW | |
| | 16 for PRINT/UTILITY | 38 for CH3_POS_CCW | |
| | 17 NA | 39 for CH4_POS_CW | |
| | 18 NA | 40 for CH4_POS_CCW | |
| | 19 for RUN | 41 for S/DIV_CW | |
| | 20 for AUTOSTORE | 42 for S/DIV_CCW | |

CW denotes clockwise rotation of the knob.

CCW denotes counter-clockwise rotation of the knob.

:SYSTem:LOCK **command/query**

Command Syntax: :SYSTem:LOCK {ON | OFF}
Query Syntax: :SYSTem:LOCK?
Returned Format: {ON | OFF}

:SYSTem:SETup **command/query**

Command Syntax: :SYSTem:SETup #80000121<setup data string>
Query Syntax: :SYSTem:SETup?
Returned Format: #80000121<setup data string><NL>

:TER **(Trigger Event Register)** **query**

Query Syntax: :TER?
Returned Format: {1 | 0}<NL>

:TIMEbase:DELay **command/query**

Command Syntax: :TIMEbase:DELay <delay time>
Query Syntax: :TIMEbase:DELay?
Returned Format: <exponential, delay time><NL>

:TIMEbase:MODE **command/query**

Command Syntax: :TIMEbase:MODE {NORMal | DELayed | XY}
Query Syntax: :TIMEbase:MODE?
Returned Format: {NORM | DEL | XY}<NL>

:TIMEbase:RANGe **command/query**

Command Syntax: :TIMEbase:RANGe {20 ns to 50 s}
Query Syntax: :TIMEbase:RANGe?
Returned Format: {exponential, 20 ns to 50 s}<NL>

:TIMEbase:REFerence **command/query**

Command Syntax: :TIMEbase:REFerence {LEFT | CENTER}
Query Syntax: :TIMEbase:REFerence?
Returned Format: {LEFT | CENT}<NL>

| | |
|--|----------------------|
| :TIMebase:SETup | query |
| Query Syntax: :TIMebase:SETup? | |
| Returned Format: <string><NL> | |
| :TIMebase:VERNier | command/query |
| Command Syntax: :TIMebase:VERNier {ON OFF} | |
| Query Syntax: :TIMebase:VERNier? | |
| Returned Format: {ON OFF}<NL> | |
| :TRIGger:COUPling | command/query |
| Command Syntax: :TRIGger:COUPling {AC DC} | |
| Query Syntax: :TRIGger:COUPling? | |
| Returned Format: {AC DC}<NL> | |
| :TRIGger:HOLDoff | command/query |
| Command Syntax: :TRIGger:HOLDoff <time> | |
| Query Syntax: :TRIGger:HOLDoff? | |
| Returned Format: <time><NL> | |
| Where: <time> ::= exponential, 40 ns to 320 ms | |
| :TRIGger:LEVel | command/query |
| Command Syntax: :TRIGger:LEVel <level> | |
| Query Syntax: :TRIGger:LEVel? | |
| Returned Format: <exponential, trigger level in volts><NL> | |
| :TRIGger:MODE | command/query |
| Command Syntax: :TRIGger:MODE {AUTLeVel AUTO NORMal SINGle TV} | |
| Query Syntax: :TRIGger:MODE? | |
| Returned Format: {AUTL AUTO NORM SING TV}<NL> | |
| :TRIGger:NREJect | command/query |
| Command Syntax: :TRIGger:NREJect:{ON OFF} | |
| Query Syntax: :TRIGger:NREJect? | |
| Returned Format: {ON OFF}<NL> | |

:TRIGger:POLarity **command/query**

Command Syntax: :TRIGger:POLarity {POSitive | NEGative}
Query Syntax: :TRIGger:POLarity?
Returned Format: {POS | NEG}<NL>

:TRIGger:REJect **command/query**

Command Syntax: :TRIGger:REJect {OFF | LF | HF}
Query Syntax: :TRIGger:REJect?
Returned Format: {OFF | LF | HF}<NL>

:TRIGger:Setup **query**

Query Syntax: :TRIGger:SETup?
Returned Format: <string><NL>

:TRIGger:SLOPe **command/query**

Command Syntax: :TRIGger:SLOPe {POSitive | NEGative}
Query Syntax: :TRIGger:SLOPe?
Returned Format: {POS | NEG}<NL>

:TRIGger:SOURce **command/query**

Command Syntax: :TRIGger:SOURce {CHANnel{1 | 2 | 3 | 4} | EXTerNaL | LINE}
Query Syntax: :TRIGger:SOURce?
Returned Format: {CHAN{1 | 2 | 3 | 4} | EXT | LINE}<NL>

:TRIGger: TVHFreject **command/query**

Command Syntax: :TRIGger:TVHFreject {ON | OFF}
Query Syntax: :TRIGger:TVHFreject?
Returned Format: {ON | OFF}<NL>

:TRIGger: TVMode **command/query**

Command Syntax: :TRIGger:TVMode {FIELD1 | FIELD2 | LINE}
Query Syntax: :TRIGger:TVMode?
Returned Format: {FIELD1 | FIELD2 | LINE}<NL>

:VIEW**command**

Command Syntax: :VIEW {CHANne1{1 | 2| 3| 4}| PMEMory{1 | 2} }

:WAVEform:BYTeorder**command/query**

Command Syntax: :WAVEform:BYTeorder {LSBFfirst | MSBFfirst}

Query Syntax: :WAVEform:BYTeorder?

Returned Format: {LSBF | MSBF}<NL>

:WAVEform:DATA**command/query**

Command Syntax: :WAVEform:DATA <binary block data in # format>

Query Syntax: :WAVEform:DATA?

Returned Format: <binary block data in IEEE 488.2 format><NL>

:WAVEform:FORMat**command/query**

Command Syntax: :WAVEform:FORMat {ASCii | WORD | BYTE}

Query Syntax: :WAVEform:FORMat?

Returned Format: {ASC | WORD | BYTE}<NL>

:WAVEform:POINts**query**

Command Syntax: :WAVEform:POINts {100 | 200 | 250 | 400 | 500 | 800 | 1000 | 2000 | 4000}

Query Syntax: :WAVEform:POINts?

Returned Format: {100 | 200 | 250 | 400 | 500 | 800 | 1000 | 2000 | 4000}<NL>

:WAVeform:PREamble**query**

Query Syntax: :WAVeform:PREamble?
Returned Format: <preamble block><NL>
Where: <preamble block> ::= <format NR1>, <type NR1>, <points NR1>, <count NR1>, <xincrement NR3>, <xorigin NR3>, <xreference NR1>, <yincrement NR3>, <yorigin NR3>, <yreference NR1>

<format> ::= 0 for ASCII format
1 for BYTE format
2 for WORD format

<type> ::= 0 for AVERAGE type
1 for NORMAL type
2 for PEAK DETECT type

:WAVeform:SOURce**command/query**

Command Syntax: :WAVeform:SOURce CHANnel{1 | 2 | 3 | 4}
Query Syntax: :WAVeform:SOURce?
Returned Format: CHAN{1 | 2 | 3 | 4}<NL>

:WAVeform:TYPE**query**

Query Syntax: :WAVeform:TYPE?
Returned Format: {NORM | PEAK | AVER}<NL>

:WAVeform:XINCrement**query**

Query Syntax: :WAVeform:XINCrement?
Returned Format: <exponential, x-increment value><NL>

:WAVeform:XORigin**query**

Query Syntax: :WAVeform:XORigin?
Returned Format: <exponential, x-origin value><NL>

:WAVeform:XREFerence**query**

Query Syntax: :WAVeform:XREFerence?
Returned Format: <integer, x-reference value><NL>

:WAVeform:YINCrement**query**

Query Syntax: :WAVeform:YINCrement?
Returned Format: <exponential, y-increment value><NL>

:WAVeform:YORigin**query**

Query Syntax: :WAVeform:YORigin?
Returned Format: <exponential, y-origin value><NL>

:WAVeform:YREFerence**query**

Query Syntax: :WAVeform:YREFerence?
Returned Format: <integer, y-reference value><NL>

1
OR
2

1 Coupling BW Lim Invert Vernier Probe
 Off On AC± On Off On Off On 10 100

Blank Channel 1
 VIEW Channel 1
 Channel 1 Coupling (DC/AC/NO)
 Channel 1 BW Lim 1
 Channel 1 Invert (OFF/ON)
 Channel 1 Vernier (OFF/ON)
 Channel 1 Probe (X/10/100)

3
OR
4

3 Coupling V Div Probe
 Off On DC± 1 5V 10 100

VIEW Channel 3
 BLANK Channel 3
 Channel 3 Coupling (DC/AC/NO)
 Channel 3 RANGE LOW
 Channel 3 RANGE HIGH
 Channel 3 Probe (X/10/100)

Main Delayed

Horizontal Mode Vernier Time Ref
 Main Delayed XY Off On Left Off

TIMEBASE MODE NORM
 TIMEBASE MODE SE-Offset
 TIMEBASE MODE XY
 TIMEBASE REFERENCE (OFF/ON)
 TIMEBASE MODE (LEFT/ON/Off)

Source

Trigger Source
 1 2 3 4 Line

TRIGGER SOURCE CHANNEL 1
 TRIGGER SOURCE CHANNEL 2
 TRIGGER SOURCE CHANNEL 3
 TRIGGER SOURCE CHANNEL 4
 TRIGGER SOURCE LINE

Source

Trigger Mode
 Auto Normal Single TV

TRIGGER MODE Auto
 TRIGGER MODE AUTO
 TRIGGER MODE NORM
 TRIGGER MODE SINGLE
 TRIGGER MODE TV

Mode

Slope Reject Noise Rej
 P± AC Off LF HF Off On

TRIGGER SLOPE (POS/1/NEG/0/±)
 TRIGGER COUPLING (DC/AC)
 TRIGGER REJECT Off
 TRIGGER REJECT LF
 TRIGGER REJECT HF
 TRIGGER REJECT (OFF/ON)

Stop Coupling

Polarity TV Mode HF Rej
 Field 1 Field 2 Auto Off On

TRIGGER POLARITY (NEGATIVE/POSITIVE)
 TRIGGER TVMODE FIELD 1
 TRIGGER TVMODE FIELD 2
 TRIGGER TVMODE LINE
 TRIGGER (HF/RF)

TV MODE

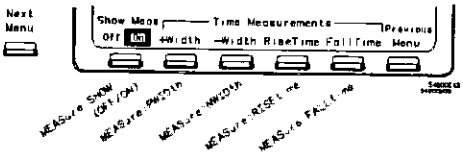
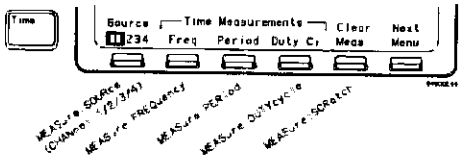
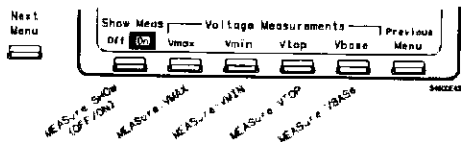
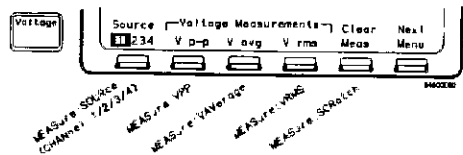
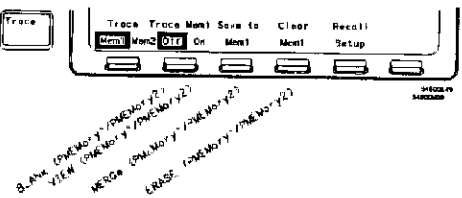
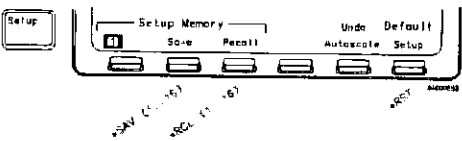
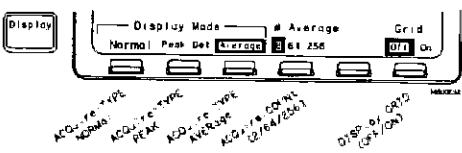
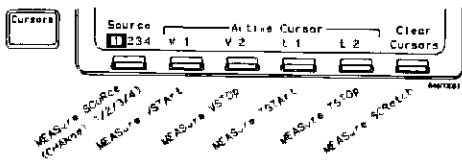
Channel Math
 Off 1+2 1-2

Channel Math Off
 Channel Math 1+2
 Channel Math Subtract

Print Utility

Print Screen Clear Menu Self Test Self Cal Menu

Print Screen
 Clear Menu
 Self Test Menu
 Self Cal Menu



:(root)

- *CLS
- *ESE
- *ESP
- *IRN
- *LRN
- *OPC
- *OPT
- *RCL
- *RST
- *SAV
- *SRE
- *STB
- *TRG
- *TST
- *WAI

- ASTore
- AUToscale
- BLANK
- DIGitize
- DITHer
- ERASe
- MENU
- MERCe
- PRINt
- RUN
- STATus
- STOP
- TER
- VIEW

- SYSTem
- DSP
- ERRor
- KEY
- LOCK
- SETup

- ACQuire
- COMPlete
- COUNt
- POINts
- SETup
- TYpe

- CHANnel<N>
- BWLimit
- COUPLing
- INVert
- MATH
- OFFSet
- PROBe
- RANGe
- SETup
- VERNier

- DISPloy
- COLumn
- DATA
- GRID
- INVerse
- LINE
- PIXel
- ROW
- SETup
- SOURce
- TEXT

Common
Commands
(IEEE 488.2)

The HP54600A has two identical channel subsystems
The HP54601A channels 1 and 2 are identical and fully
attenuated. Channels 3 and 4 are identical and can be
set for 1V or 5V/div with dc or ground coupling

54600512

- MEASure

- ALL
- DUTYcycle
- FALLtime
- FREQuency
- NWIDth
- PERiod
- PWIDth
- RISetime
- SCRatch
- SHOW
- SOURce
- DELta
- TStArt
- YStOp
- TVOLt
- VAVerage
- VBASE
- VDELta
- VMAX
- VMIN
- VPP
- VRMS
- VStArt
- VStOp
- VTime
- VTOP

- TIMEbase:

- DELay
- MODE
- RANGe
- REFerence
- SETup
- VERNier

- TRIGger

- COUPLing
- HOLDoff
- LEVEL
- MODE
- NREJect
- POLarity
- REJect
- SETup
- SLOPe
- SOURce
- TVHFrej
- TV Mode

- WAYeform:

- BYTeorder
- DATA
- FORMat
- POINts
- PREamble
- SOURce
- TYpe
- XINCrement
- XORigin
- XREFerence
- YINCrement
- YORigin
- YREFerence

54600513