Errata

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

Manual Part Number: 54600-90911

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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

We've added this manual to the Agilent website in an effort to help you support your product. This manual provides the best information we could find. It may be incomplete or contain dated information, and the scan quality may not be ideal. If we find a better copy in the future, we will add it to the Agilent website.

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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.

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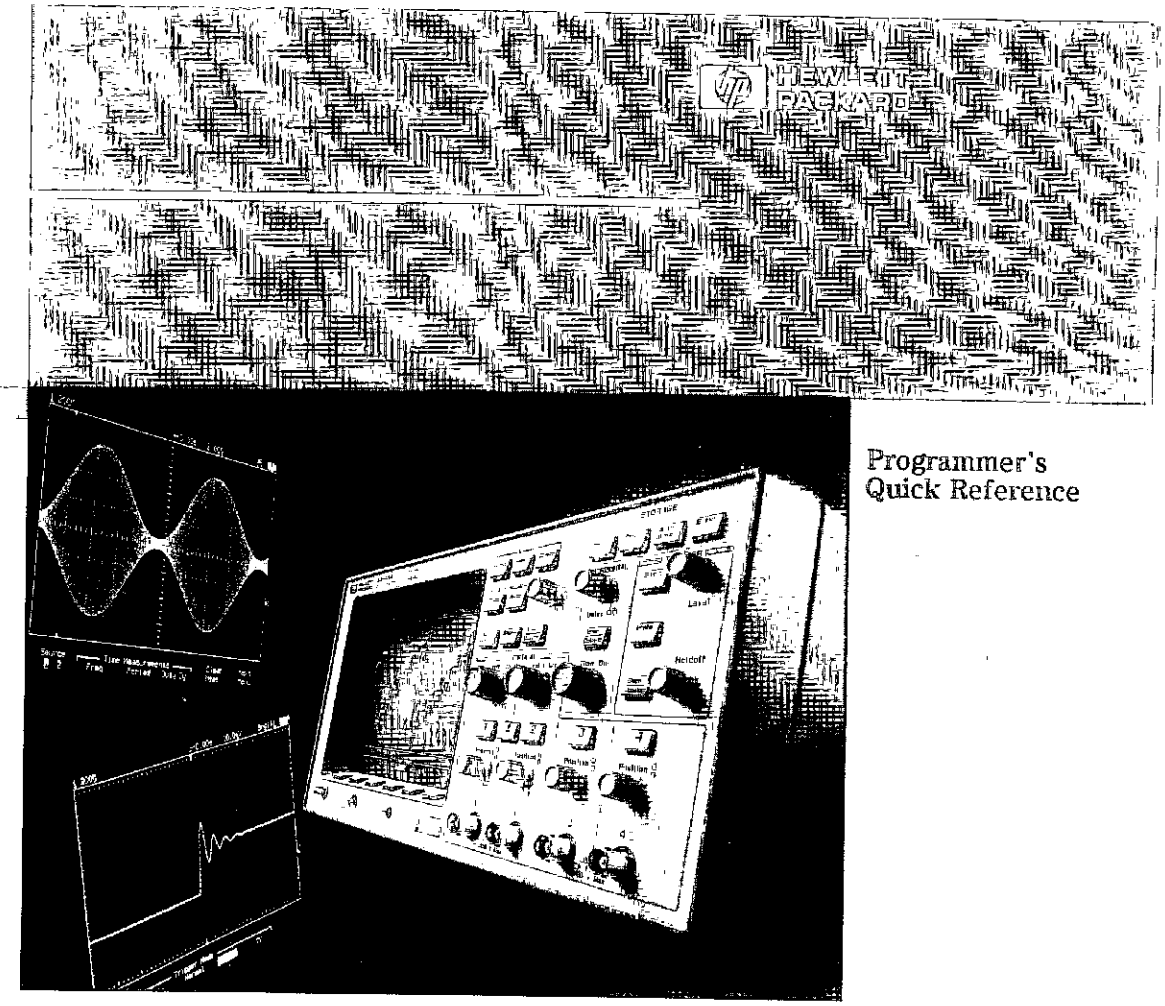


Programmer's
Quick Reference

HP 54600A and HP 54601A Oscilloscopes

Error Messages

Error Number	Description	Error Number	Description
		−160	Block data error
−100	Command error (unknown command)	−161	Invalid block data
−101	Invalid character	−168	Block data not allowed
−102	Syntax error		
−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		
−109	Missing parameter	−200	Execution error
−112	Program mnemonic too long	−211	Trigger ignored
−113	Undefined header	−221	Settings conflict
		−222	Data out of range
−121	Invalid character in number	−223	Too much data
−123	Numeric overflow		
−124	Too many digits	−310	System error
−128	Numeric data not allowed	−350	Too many errors
−130	Suffix error	−400	Query error
−131	Invalid suffix	−410	Query INTERRUPTED
−138	Suffix not allowed	−420	Query UNTERMINATED
		−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> :: = <B> indicates that <A> can be replaced by <B> in any statement containing <A>.

| "or." Indicates a choice of one element from a list. For example, <A> | <B> indicates <A> or <B> 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	M :: = 1E-3
PE :: = 1E15	U :: = 1E-6
T :: = 1E12	N :: = 1E-9
G :: = 1E9	P :: = 1E-12
MA :: = 1E6	F :: = 1E-15
K :: = 1E3	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 <vmarker1 voltage>
Query Syntax: :MEASure:VSTArt?
Returned Format: <exponential, vmarker1 voltage><NL>

:MEASure:VSTOp — command/query

Command Syntax: :MEASure:VSTOp <vmarker2 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? {CHANnel{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)
-101, Invalid character
-102, Syntax error
-103, Invalid separator
-104, Data type error
-105, GET not allowed
-108, Parameter not allowed
-109, Missing parameter

-112, Program mnemonic too long
-113, Undefined header

-121, Invalid character in number
-123, Numeric overflow
-124, Too many digits
-128, Numeric data not allowed

-130, Suffix error
-131, Invalid suffix
-138, Suffix not allowed

-140, Character data error
-141, Invalid character data
-144, Character data too long
-148, Character data not allowed

-150, String data error
-151, Invalid string data

-158, String data not allowed

-160, Block data error
-161, Invalid block data
-168, Block data not allowed

-170, Expression error
-171, Invalid expression
-178, Expression data not allowed

-200, Execution error

-211, Trigger ignored

-221, Settings conflict
-222, Data out of range
-223, Too much data

-310, System error

-350, Too many errors

-400, Query error
-410, Query INTERRUPTED
-420, Query UNTERMINATED
-430, Query DEADLOCKED
-440, Query UNTERMINATED after indefinite response

: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
0 for AUTOSCALE
1 for CH1
2 for CH2
3 for CH3
4 for CH4
5 for +/-
6 for TRG_SRC
7 for TRG_MODE
8 for TRG_SLOPE
9 for MAIN/DELAYED
10 for TIME
11 for VOLTAGE
12 for CURSORS
13 for SAVE_TRACE
14 for SAVE_SETUP
15 for DISPLAY
16 for PRINT/UTILITY
17 NA
18 NA
19 for RUN
20 for AUTOSTORE
21 for STOP
22 for ERASE
23 for SOFTKEY_1
24 for SOFTKEY_2
25 for SOFTKEY_3
26 for SOFTKEY_4
27 for SOFTKEY_5
28 for SOFTKEY_6
29 for CH1_VOLT_CW
30 for CH1_VOLT_CCW
31 for CH1_POS_CW
32 for CH1_POS_CCW
33 for CH2_VOLT_CW
34 for CH2_VOLT_CCW
35 for CH2_POS_CW
36 for CH2_POS_CCW
37 for CH3_POS_CW
38 for CH3_POS_CCW
39 for CH4_POS_CW
40 for CH4_POS_CCW
41 for S/DIV_CW
42 for S/DIV_CCW
43 for DELAY_CW
44 for DELAY_CCW
45 for TRG_LEVEL_CW
46 for TRG_LEVEL_CCW
47 for TRG_HOLD_CW
48 for TRG_HOLD_CCW
49 for CURSOR_KNOB_CW
50 for C URSOR_KNOB_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 #800000121<setup data string>
Query Syntax. :SYSTem:SETup?
Returned Format: #800000121<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: {FILED1 | FIELD2 | LINE}<NL>

:VIEW — command

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

:WAVEform:BYTeorder — command/query

Command Syntax: :WAVeform:BYTeorder {LSBFirst | MSBFirst}
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

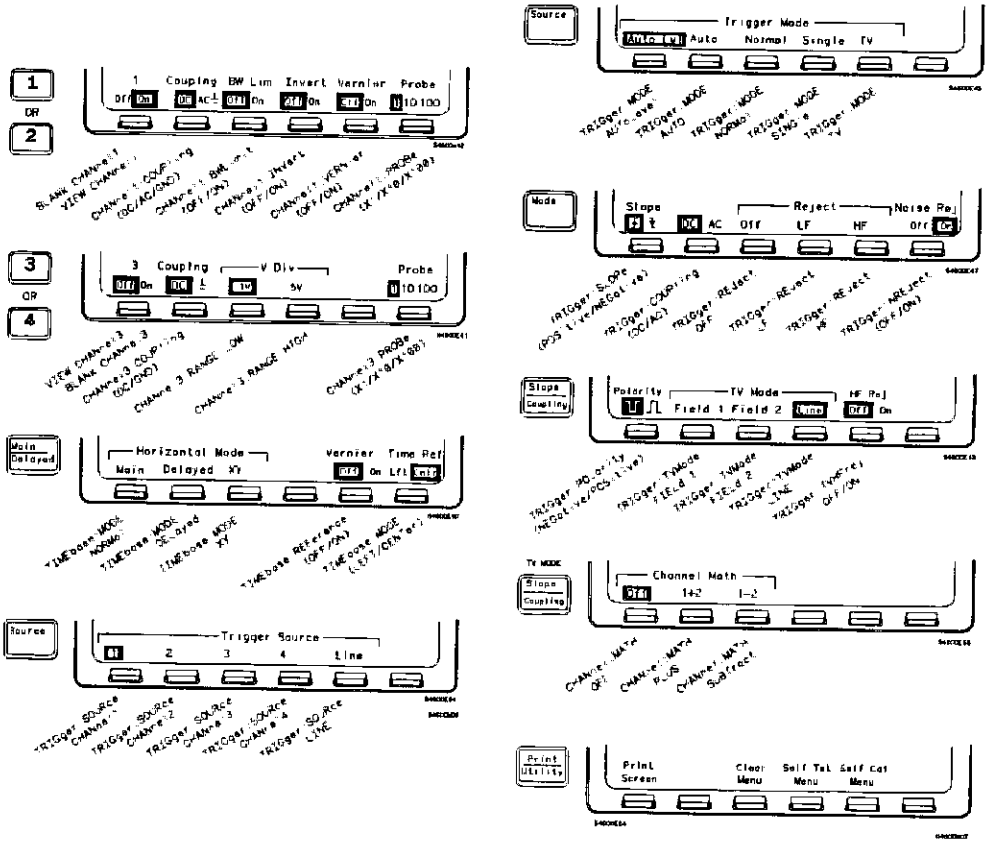
query

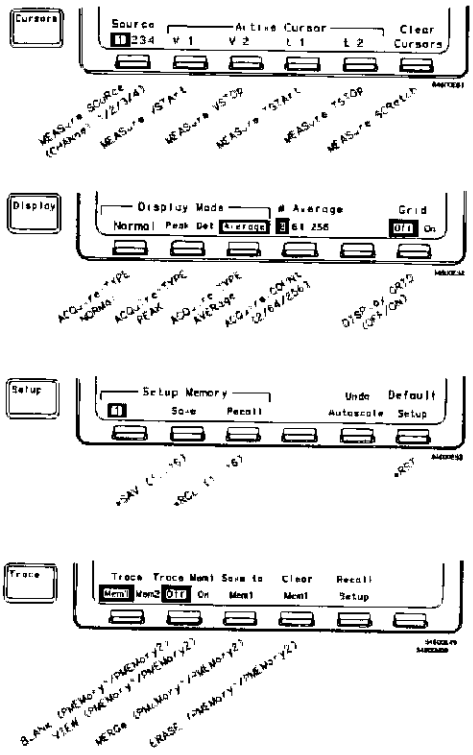
Query Syntax: :WAVeform:YORigin?
Returned Format: <exponential, y-origin value><NL>

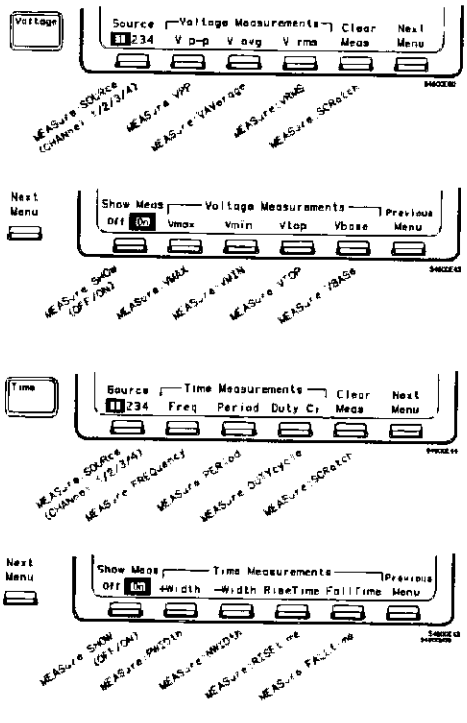
:WAVeform:YREFerence

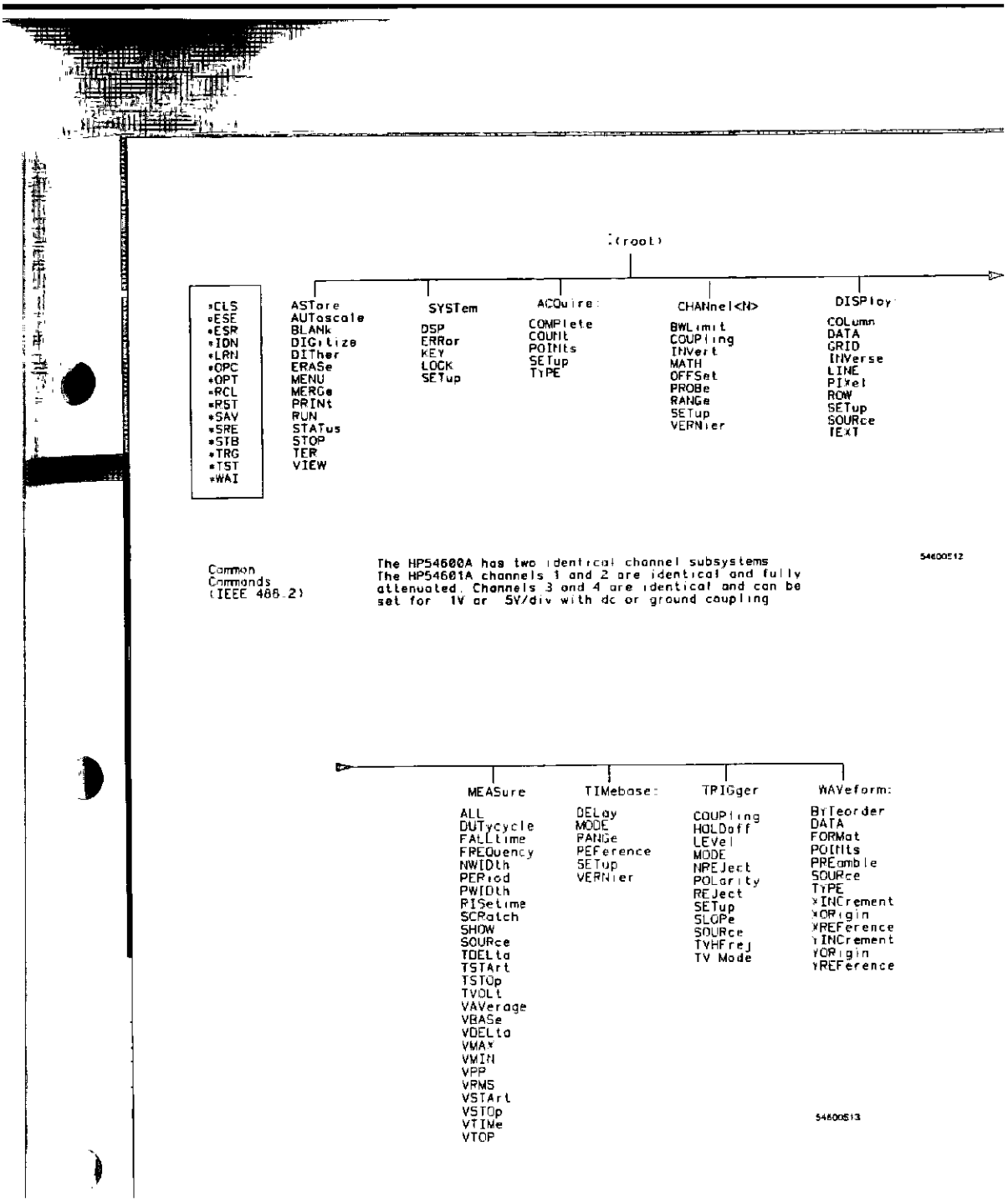
query

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


1
OR
2
1 Coupling BW Lim Invert Vernier Probe
Off On DC AC Off On Off On Off On 10:100
3
OR
4
3 Coupling V Div Probe
Off On DC 1M 5V 10:100
Main Delayed
Horizontal Mode
Main Delayed XY
Vernier Time Ref
Off On Left Right
Source
Trigger Source
1 2 3 4 Line
Source
Trigger Mode
Auto Level Auto Normal Single TV
Mode
Slope
Reject
Noise Rej
DC AC Off LF HF Off On
Slope Coupling
Polarity
TV Mode
HF Rej
Field 1 Field 2 Line Off On
TV MODE
Slope Coupling
Channel Math
Off 1+2 1−2
Print Utility
Print Screen
Clear Menu
Self Test Menu
Self Cal Menu


Cursors
Source
1 2 3 4
Active Cursor
V 1
V 2
t 1
t 2
Clear Cursors
Display
Display Mode
Normal
Peak Det
Average
Average
2 4 8 16 32 64 128 256
Grid
Off On
Setup
Setup Memory
Save
Recall
Undo
Autoscale
Default
Setup
Trace
Trace
Memory
Trace Memory
Math
Save to
Memory
Clear
Memory
Recall
Setup


Voltage
Source
1 2 3 4
Voltage Measurements
V p-p
V avg
V rms
Clear Meas
Next Menu
Next Menu
Show Meas
Off On
Voltage Measurements
Vmax
Vmin
Vtop
Vbase
Previous Menu
Time
Source
1 2 3 4
Time Measurements
Freq
Period
Duty Cy
Clear Meas
Next Menu
Next Menu
Show Meas
Off On
Time Measurements
+Width
-Width
RiseTime
FallTime
Previous Menu


:(root)
*CLS
*ESE
*ESR
*IDN
*LRN
*OPC
*OPT
*RCL
*RST
*SAV
*SRE
*STB
*TRG
*TST
*WAI
ASTore
AUTOscale
BLANk
DIGitize
DITher
ERASe
MENU
MERGe
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
DISPlay:
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
TDELta
TSTArt
TSTOp
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
WAVeform:
BYTeorder
DATA
FORMat
POINts
PREamble
SOURce
TYPE
XINCrement
XORigin
XREFerence
YINCrement
YORigin
YREFerence
54600513