

# **Programming Conversion Guide**

## **Agilent Technologies PSA Series Spectrum Analyzers**

**This manual provides documentation for the following instruments:**

**E4440A (3 Hz – 26.5 GHz)**

**E4443A (3 Hz – 6.7 GHz)**

**E4445A (3 Hz – 13.2 GHz)**

**E4446A (3 Hz – 44.5 GHz)**

**E4448A (3 Hz – 51.0 GHz)**



**Agilent Technologies**

**Manufacturing Part Number: E4440-90064**

**Supersedes: E4440-90046**

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# **1 Programming Conversion Guide**

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## About this Guide

This document helps programmers convert HP/Agilent Spectrum Analyzer programming code to the SCPI code that applies to an Agilent PSA Series spectrum analyzers. It compares the remote programming commands of your Agilent PSA Series Spectrum Analyzers with the HP/Agilent 8590-Series, HP 8566B, HP 8568B, and HP/Agilent 8560E/EC-Series Spectrum Analyzers.

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### NOTE

Information in the description/comments column is “aligned” horizontally with the command(s) to which it applies.

There may be more than one SCPI command that applies to any given command. In these cases, the SCPI commands are listed one after the other in column 4 of the table.

For example: There is no PSA SCPI command the same as the HP/Agilent 8590-Series command CAL, and the description of CAL is given in column 5. CAL ALL has an associated SCPI command in column 4, with comments about the SCPI command in column 5. CAL OFF/ON has two SCPI commands that are related, and no comments are given for those commands.

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## What is In This Book?

- Commands “A” on page 8
- Commands “H - K” on page 43
- Commands “U - Z” on page 106
- “How to Represent Units” on page 112
- “Additional Alternate Commands” on page 113

## Where to Find the Latest Instrument Information

Documentation is updated periodically. For the latest information about Agilent PSA Series Spectrum Analyzers, including firmware upgrades and application information, please visit the following Internet URL:

<http://www.agilent.com/find/psa>

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## SCPI Output Format

The Agilent PSA Series Spectrum Analyzers return data in NR3 format as described in IEEE Std 488.2-1992. Response terminators may be different than other HP/Agilent spectrum analyzer terminators. For example, note the following differences:

- non-block response termination in the HP/Agilent 8590-Series and 8560E/EC-Series analyzers is <CR><LF>. The HP 8566B/68B analyzers is <CR><LF><EOI>, but in the Agilent PSA Series analyzers it is <LF><EOI>
- boolean queries in HP/Agilent 8590-Series and 8566B/68B analyzers return ON or OFF, whereas boolean queries in HP/Agilent 8560E/EC-Series and Agilent PSA Series analyzers return 1 or 0
- EP is a valid parameter for many HP/Agilent 8590-Series, HP/Agilent 8560E/EC-Series, and HP 8566B/68B spectrum analyzer commands, but is not valid for Agilent PSA Series analyzer commands
- OA is a valid parameter for many HP/Agilent 8590-Series and 8560E/EC-Series spectrum analyzer commands, but is not valid for Agilent PSA Series analyzer commands

**A**

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ABORT		ABORT <sup>a</sup>	:ABORT	Stops the execution of all user-defined functions and reads the instrument for the next command received.
ABS	ABS	ABS <sup>a</sup>		Places the absolute value of the source values in the destination.
ACP		ACPMEAS		Performs the adjacent channel power measurement.
			:MEASure:ACP?	Performs the ACP measurement and returns three scalar results.
		ACPACCL		Sets the adjacent channel power measurement speed to normal, faster, fastest.
		ACPALPHA		Sets the adjacent channel power measurement alpha weighting.
		ACPALTCH		Sets the number of adjacent channel pairs to be measured for an ACP measurement.
		ACPBRRPER		Sets the cycle time of the burst signal when making an ACP measurement.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ACPBW		ACPBRWID		Sets the burst width for a gated method ACP measurement.
ACPBW?		ACPBW	[:SENSe]:ACP:BAWwidth   BWIDth:INTegration <freq> [:SENSe]:CHPower:BAWwidth   BWIDth:INTegration <freq> [:SENSe]:ACP:BAWwidth   BWIDth:INTegration? [:SENSe]:CHPower:BAWwidth   BWIDth:INTegration?	Allows you to specify the channel bandwidth used for the adjacent channel power (ACP), extended ACP (EACP), and for the channel power (CHP) measurement.
		ACPCompute		Performs the adjacent channel power computation on the designated signal without changing any instrument state settings.
ACPContM				Changes the spectrum analyzer sweep mode to continuous sweep, and then performs the previous power measurement (occupied bandwidth, adjacent channel, or channel power) at the end of every sweep.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ACPE				Performs the adjacent channel power extended measurement.
ACPGR		ACPFRRQWT		Sets the frequency weighting for ACP measurements.
ACPGRAPH		ACPGRAPH		Determines if the adjacent channel power (ACP) graph function is enabled or disabled.
		ACPLOWER?	FETCh:ACP:LOWer?	Computes and displays an adjacent channel power (ACP) graph.
		ACPMAX?		Returns the power ratio result of the ACP measurement for the lower frequency channel.
		ACPMETHOD		Returns the highest adjacent power result for the ACP measurement.
ACPMK				Selects the measurement method to be used for making ACP measurements.
				Determines if the graph marker function is enabled or disabled for the adjacent channel power (ACP) graph.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ACPPAR		ACPMSTATE CURR   DFLT ACPMSTATE? ACPMSTATE?	MEASure:ACP? READ:ACP?	Sets the ACP measurement state to a default or to the current state. Sets the ACP measurement state to a default state, measures, and returns values. If ACP measurement is already running and the default state is changed, READ makes a new measurement and returns values.
				Determines if the spectrum analyzer settings used for the adjacent channel power (ACP), extended adjacent channel power (ACPE), channel power (CHP), or occupied bandwidth (OBW) measurement are set manually or automatically.
		ACPPWRTX?	FETCh:ACP:MAIN?	Returns the power result of the ACP measurement for the main channel transmit power.
		ACPRSLTS?	FETCh:ACP?	Returns an array of ACP measurement data. The number values returned depends on measurement method and the number of alternate channels. Returns the three scalar ACP results.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

A

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ACPSNGLM				Changes the spectrum analyzer sweep mode to single sweep, performs a take sweep (TS), and then performs the previous power measurement.
ACPSP	ACPSP		[:SENSe]:ACP:CSPacing <freq>	Allows you to specify the frequency spacing between channels.
	ACPT			Sets the T weighting for ACP measurements.
	ACPUPPER?		FETCH:ACP:UPPer?	Returns the power ratio result of the ACP measurement for the upper frequency channel.
ACTDEF				Creates a user-defined active function.
	ACTVFUNC <sup>a</sup>			Makes a user-defined function operate like an active function.
ACTVF				Returns a "0" if the given function is not active, a "1" if it is active.
ADD	ADD	ADD <sup>a</sup>		Adds the sources and sends the sum to the destination.
CAL ALL		ADJALL	:CALibration:[ALL]	Immediately runs all the self-alignment routines.
		ADJCRT		Turns on CRT adjustment patterns.

a. Added with 85620A mass memory module

attached.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

b. No equivalent command for 8568B analyzer.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
AMB	AMB	ADJIF	:CALibration:IF	Activates constant IF self-alignment routines.
AMBPL	AMBPL	AMB		Subtracts trace B from trace A and sends the result to trace A during every sweep of the spectrum analyzer.
AMBPL	AMBPL	AMBPL		Subtracts trace B from trace A, adds the display line value to the difference, and sends the result to trace A during every sweep of the spectrum analyzer.
AMPCOR		AMPCOR		Applies amplitude correction at specified frequencies.
AMPCOR <values>		AMPCORDATA {<freq>, <amp>}	[SENSE:]CORRection:CSET[1]   2   3   4:D ATA <freq>, <rel_amp>{,<freq>, <rel_amp >}	Units and spaces are not allowed in SCPI. The separator must be a comma (,) and the terminator must be a semicolon (;). Frequency and amplitude values must be entered in Hz and dB.
AMPCOR OFF   ON		AMPCOR OFF   ON	[:SENSe]:CORRection:CSET:ALL [:STATe] OFF   ON   0   1 [:SENSe]:CORRection:CSET[1]   2   3   4 [:STATe] OFF   ON   0   1	

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

A

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
AMPCOR?		AMPCORDATA?	[SENSE:]CORRection:CSET[1]   2   3   4:D ATA?	The data format for the command and query is always TDF P (in 856x and 859x), with data in frequency/amplitude pairs of the format:12000000, -57.71, 12133333, -56.87. The Agilent PSA analyzer returns data in the format: 1.20000000E+007, -5.77100000E+001, 1.21333333E+007, -5.68700000E+001. This is an example of IEEE NR3 numeric response data.
	AMPCORRCL  AMPCORSAVE		MMEMory:LOAD:CORRection ANTenna   CABLe   OTHER   USER, <"filename">  MMEMory:STORe:CORRection ANTenna   CABLe   OTHER   USER, <"filename">	Saves and recalls (to instrument memory) a table of amplitude/frequency correction pairs identified by a register number.
AMPLN	AMPCORSIZE?			Returns the number of frequency-amplitude correction factors that have been entered.
ANLGPLUS				Turns the Analog+ display mode on or off.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.

- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ANNO ANNO ON   OFF ANNO?	ANNO ANNO ON   OFF ANNO?	ANNO ANNO ON   OFF ANNO?		Turns the screen annotation on or off.  The HP/Agilent 8590-Series analyzer returns ON or OFF. The Agilent PSA analyzer returns 1 or 0.
APB	APB	APB		Adds trace A to trace B and sends the result to trace A.
		ARRAYDEF <sup>a</sup>		Allows you to create user-defined arrays.
AT AT <value>	AT AT <value>	AT AT <integer>	[:SENSe]:POWer[:RF]:ATTenuation <rel_amp>	Specifies RF input attenuation. The up/down steps are in 2 dB increments.
AT AUTO AT UP   DN AT?	AT UP   DN AT?	AT AUTO AT UP   DN AT?	[:SENSe]:POWer[:RF]:ATTenuation: AUTO ON   1 [:SENSe]:POWer[:RF]:ATTenuation?	The up/down steps are in 2 dB increments.  The HP/Agilent 8590-Series analyzer outputs data in the format: 10. The Agilent PSA analyzer outputs data in the format: +1.000000000E+001.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
AUNITS	AUNITS	AUNITS		Specifies amplitude units for the input, output, and display.
AUNITS?	AUNITS?	AUNITS?	:UNIT:POWer DBM   DBMV   DBUV   V   W :UNIT:POWer?	Specifies amplitude units for the input, output, and display for the active window.
AUTO		AUTO		Couples the active functions automatically.
AUTO		AUTOPL AUTOPL	:COUPlE ALL   NONE	The instrument can automatically couple instrument settings together for accurate measurements and optimum range. This command is used to override the coupling for special measurement needs.  The NONE parameter applies only to the SCPI language.
		AUTOEXEC <sup>a</sup>		Turns on/off the automatic function as defined with the AUTOFUNC command.
		AUTOFUNC <sup>a</sup>		Specifies an operation/function for automatic execution.
		AUTOSAVE <sup>a</sup>		Turns on/off the function to automatically save traces as defined by the AUTOFUNC command.
AVG	AVG	AVG <sup>a</sup>		Averages trace data.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
AXB	AXB	AXB	:TRACe:EXCHange TRACE1, TRACE2	Exchanges trace A and trace B. Exchanges TRACE1 (trace A) and TRACE2 (trace B), point by point.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

**B**

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
BAUDRATE				Specifies the baud rate of a spectrum analyzer with the RS-232 interface option (Option 1AX) installed.
BAUDRATE?				Returns the state of a bit.
BIT				Returns the state of a bit.
BITF				Returns the state of a bit.
BLANK	BLANK	BLANK		Blanks trace A, trace B, or trace C and stops taking new data into the specified trace.
BLANK TRA	BLANK TRA	BLANK TRA		Selects the blank display mode for the selected trace. TRACE1 corresponds to trace A, TRACE2 corresponds to trace B, and TRACE3 corresponds to trace C. The blank display mode turns off the trace data so that it is not viewed on the display.
BLANK TRB	BLANK TRB	BLANK TRB	:TRACe[1]   2   3:MODE BLANK	
BLANK TRC	BLANK TRC	BLANK TRB		

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
BML	BL or BML	BML		Subtracts display line from trace B and places the result in trace B.
	BRD			Reads the two-byte word at the analyzer's internal I/O bus, at the specified address.
BTC	BTC		:TRACe:COpy TRACE2, TRACE3	Transfers trace B into trace C. Transfers TRACE2 (trace B) into TRACE3 (trace C).
	BWR			Writes a two-byte word to the analyzer's internal I/O bus, at the specified address.
BXC	BXC		:TRACe:EXCHange TRACE2, TRACE3	Exchanges trace B and trace C. Exchanges TRACE2 (trace B) into TRACE3 (trace C).

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

C

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
CAL		ADJALL	:CALibration:[ALL]	Initiates self-alignment routines.
CAL ALL				Immediately runs all the self-alignment routines.
CAL AMP				
CAL ON/OFF			:CALibration:AUTO OFF   ON   ALERt	The alert setting is the same as off except that the instrument will prompt you with a message when it needs an alignment.
CAL YTF			:CALibration:AUTO[:STATe] OFF   ON   0   1	
CAL INIT			:CALibration:RF	
CAL FREQ			:CALibration:DATA:DEFault	
			:CALibration:FREQuency[:STATe] OFF   ON   0   1	
	CARDLOAD <sup>a</sup>			Copies the specified data from the memory card to the module battery-backed memory.
	CARDSTORE <sup>a</sup>			Copies the specified data from the module memory to the memory card.
	CARROFF			Measures the carrier power when the burst is turned off.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
CAT		CARRON		Measures the average power of the carrier while the burst is turned on.
CF CF <value> CF UP   DN CF?	CF CF <value> CF UP   DN CF?	CATALOG <sup>a</sup>	:MMEMory:CATalog? <drive>	Displays/returns directory information from either the specified or current mass storage device.  Lists all files in the current directory. <msus> is the mass storage device. The return data will be of the format: <mem_used>, <mem_free> {<file_listing>}, where <file_listing> is of the format: <file_name>, <file_type>, <file_size>.
CF CF <value> CF UP   DN CF?	CF CF <value> CF UP   DN CF?	CF CF <value> CF UP   DN CF?	[:SENSe]:FREQuency:CENTer <freq>  [:SENSe]:FREQuency:CENTer?	Specifies center frequency.  The HP/Agilent 8590-Series analyzer outputs data in the format: 750000000. The Agilent PSA analyzer outputs data in the format: +750000000.  Performs the channel power measurement.
	CHANNEL UP   DN			Changes the center frequency by one channel width.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
CHP		CHANPWR TRA   TRB CHANPWR?	MEASure:CHPower?	Performs the channel power measurement. Performs the channel power measurement on the identified trace data. Performs the channel power measurement and returns two scalar results.
CHPGR		CHPWRBW	[:SENSe]:CHPower:BANDwidth   BWIDth:INtegration <freq>	Sets the channel power bandwidth.
CLRAVG	CLRAVG			Determines if the channel power graph function is enabled or disabled.
CLRBOX			[:SENSe]:AVERage:CLEar	Restarts video averaging. Re-start the trace averaging function.
CLRDSP		CLRDSP <sup>a</sup>		Clears a rectangular area on the spectrum analyzer display.
		CLRSCHED <sup>a</sup>		Erases user-generated graphics and text. Clears the Autosave/Autoexec schedule.
CLRW CLRW TRA   TRB   TRC	CLRW CLRW TRA   TRB	CLRW CLRW TRA   TRB	:TRACe[1]   2   3:MODE WRITe	Clears the specified trace and enables trace data acquisition. TRACE1 corresponds to trace A, TRACE2 corresponds to trace B, and TRACE3 corresponds to trace C.

a. Added with 85620A mass memory module attached.  
 b. No equivalent command for 8568B analyzer.  
 c. No equivalent command for 8566B analyzer.  
 d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
CLS				Clears all status bits. The status bits do not map exactly.
CMDERRQ				Allows query of error queue.
CNF				
CNTLA		CNTLA <sup>a</sup>		Sets the control line A of the auxiliary interface high or low. Agilent PSA spectrum analyzers do not have an auxiliary interface.
CNTLB		CNTLB <sup>a</sup>		Sets the control line B of the auxiliary interface high or low. Agilent PSA spectrum analyzers do not have an auxiliary interface.
CNTLC		CNTLC <sup>a</sup>		Sets the interface control line C of the auxiliary interface high or low. Agilent PSA spectrum analyzers do not have an auxiliary interface.
CNTLD		CNTLD <sup>a</sup>		Sets the interface control line D of the auxiliary interface high or low. Agilent PSA spectrum analyzers do not have an auxiliary interface.

a. Added with 85620A mass memory module

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
CNTLI		CNTLI <sup>a</sup>		Returns a "1" when the interface control line I of the auxiliary interface is high, and "0" if the line is low. Agilent PSA spectrum analyzers do not have an auxiliary interface.
	CNVLOSS <sup>b</sup>	CNVLOSS		Specifies the conversion loss of an external mixer used to extend the analyzer frequency range.
COMB				Turns the comb generator on or off. This hardware is not present in Agilent PSA spectrum analyzers.
COMPRESS	COMPRESS			Reduces the number of trace elements while retaining the relative frequency and amplitude characteristics of the trace data.
CONCAT	CONCAT			Combines two traces.
CONTS	CONTS	CONTS	:INITiate:CONTinuous ON   1	Sets the spectrum analyzer to the continuous sweep mode.
CORREK			:CALibration:FREQuency[:STATel]?	Query the instrument for the state of corrections.

a. Added with 85620A mass memory module

c. No equivalent command for 8566B analyzer.

b. No equivalent command for 8568B analyzer.

d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
COUPLE	COUPLE			Selects direct-current (dc) coupling or alternating-current (ac) coupling.
COUPLE AC DC	COUPLE AC DC		:INPut:COUPling AC DC	Selects direct-current (dc) coupling or alternating-current (ac) coupling for the front panel RF INPUT port. A blocking capacitor is switched in for the ac mode.
COUPLE?	COUPLE?		:INPut:COUPling?	The output is AC or DC.
CRTHPOS				Specifies the horizontal position of the text and graticule on the spectrum analyzer display.
CRTVPOS				Specifies the vertical position of the text and graticule on the spectrum analyzer display.
CTA	CTA			Converts the source values from measurement units to the current absolute amplitude units and stores the result in the destination.
CTM	CTM			Converts the source values to measurement units and places the result in the destination.
	CTRLHPIB <sup>a</sup>			Takes control of the GPIB.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

**D - E**

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
	D1			Sets the display to normal size.
	D2			Sets the display to full CRT size.
	D3			Sets the display to expanded size.
DA	DA			Accesses the current address of the display list.
DATEMODE		DATEMODE <sup>a</sup>		Allows you to set the format for displaying the real-time clock. Allows you to set the format for displaying the real-time clock. To set the date and time use the command :SYSTem:DATE <year>,<month>,<day>.
DATEMODE?			:DISPlay:ANNotation:CLOCK:DATE:FORMat MDY   DMY  :DISPlay:ANNotation:CLOCK:DATE:FORMat?	The response output is in the form: MDY or DMY.
		DELMKBW <percent>		Returns the bandwidth of the selected percent of the power between the delta markers.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
DEMOM  DEMOM AM   FM  DEMOM ON   OFF  DEMOM?		DEMOM  DEMOM AM   FM  DEMOM ON   OFF  DEMOM?		Turns the demodulator on or off, and selects between AM, FM, or quasi-peak demodulation.  Sets the type of demodulation.  Turns demodulation on or off.  The HP/Agilent 8590-Series analyzer returns AM, FM or OFF.
		DEMOMDAGC		Turns the demodulation automatic gain control (AGC) on or off. IP turns AGC off.
		DEMOMDT		Selects the time the sweep pauses at the marker for demodulation of the signal.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
DET	DET	DET		Specifies the spectrum analyzer peak detection mode.
DET NEG	DET NEG	DET NEG	[:SENSe]:DETECTOR[:FUNCTION] NORMAL   NEGATIVE   POSITIVE   AVERAGE   SAMPLE	Specifies the detection mode. Negative peak detection displays the lowest sample taken during the interval being displayed.
DET POS	DET POS	DET POS		Positive peak detection displays the highest sample taken during the interval being displayed.
DET SMP	DET SMP	DET SMP		Sample detection displays the first sample taken during the interval being displayed.
DET?	DET?	DET?	[:SENSe]:DETECTOR[:FUNCTION]?	Normal detection alternates between displaying the positive/negative samples. The Agilent PSA analyzer returns NEG, POS, NORM, AVER, or SAMP.
DISPOSE	DISPOSE	DISPOSE <sup>a</sup>		Deletes user-defined functions and frees spectrum analyzer memory that was previously allocated for user-defined operands.
DIV	DIV	DIV <sup>a</sup>		Divides source 1 by source 2 and places the result in the destination.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
DL  DL <value>  DL ON   OFF  DL UP   DN  DL?	DL  DL <value>  DLE  DL UP   DN  DL?	DL  DL <value>  DL ON   OFF  DL UP   DN  DL?	:Display:WINDow:TRACe:Y:DLINe <ampl>  :DISPlay:WINDow:TRACe:Y:DLINe: STATE OFF   ON   0   1  :DISPlay:WINDow:TRACe:Y:DLINe: STATE?	Defines the level of the display line in the active amplitude units and displays the display line on the spectrum analyzer screen.  Defines the level of the display line in the active amplitude units, if no units are specified.  Turns the display line on or off.  The HP/Agilent 8590-Series analyzer outputs data in the format: -25.00. The Agilent PSA analyzer outputs data in the format: -2.50000000E+001.
a. Added with 85620A mass memory module attached. b. No equivalent command for 8568B analyzer.	DLYSWP	TRIGGER:DElay <time>	c. No equivalent command for 8566B analyzer. d. Option 002 only.	Delays the start of the sweep until the specified time elapses after the trigger event.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
DN				Reduces the active function by the applicable step size. Each HP/Agilent 8590-Series command to which DN can be applied will have <step> = DOWN   UP as a parameter in the SCPI command. DN (as well as UP) can only be sent as a parameter in SCPI.
DONE	DONE	DONE		Allows you to determine when the spectrum analyzer has started to execute all commands prior to and including DONE.
DONE?	DONE?	DONE?		The HP/Agilent 8590-Series analyzer outputs data in the format: 1.
DOTDENS				Sets the dot density value in the Analog+ display mode.
DRAWBOX				Draws a rectangular box on the spectrum analyzer display.
DSPLY	DSPLY	DSPLY <sup>a</sup>		Displays the value of a variable on the spectrum analyzer screen.
DT	DT			Defines any character as a label terminator.
			a. Added with 85620A mass memory module attached. b. No equivalent command for 8568B analyzer. c. No equivalent command for 8566B analyzer. d. Option 002 only.	Writes the value in the entry to the specified display memory address and increments the address by 1.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
		EDITDONE <sup>a</sup>		Is used at the completion of limit-line editing with the EDITLIML command.
EE	EE	EDITLIML <sup>a</sup>		Turns off any currently active limit lines and puts you in the edit mode.
EK	EK			Enables front-panel number entry. Sends the controller the values entered on the spectrum analyzer numeric keypad by the operator.
				Allows data entry with the front-panel knob when the spectrum analyzer is under remote control.
		EM <sup>a</sup>		Clears the display of user-generated graphics.
ENTER	ENTER	ENTER <sup>a</sup>		Allows the spectrum analyzer to receive data from other devices on the GPIB.
EP				Enter parameter from front panel. Sends values entered on the spectrum analyzer number keyboard to the present active function value.
ERASE	ERASE			Clears trace A and trace B, disposes of the contents of the user memory, and resets the state registers and the spectrum analyzer to the instrument preset state.

a. Added with 85620A mass memory module attached.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

b. No equivalent command for 8568B analyzer.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
	ERR?	ERR?		Returns a list of error numbers to the controller.
PWRUPTIME?			SYSTEM:ERRor[:NEXT]?	Returns the next error number and description in the queue.
		ET?		Returns the number of milli-seconds that have elapsed since the spectrum analyzer was turned on.
PWRUPTIME?			:SYSTEM:PON:ETIMe?	Returns the elapsed time of operation in hours. The HP/Agilent 8590-Series analyzer outputs data in the format: 1.91557506E8. The Agilent PSA analyzer data output format is +2.12926028E+003.
EXP	EXP	EXP <sup>a</sup>		Places the exponential of the source in the destination.
	EXTMXR <sup>b</sup>			Performs an external mixer preset.
		EXTMXR PRE   UNPR		Specifies the type of external mixing as preselected or unpreselected.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.



**F**

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
FA FA <value> FA UP   DN FA?	FA FA <value> FA UP   DN FA?	FA FA <value> FA UP   DN FA?	[:SENSe]:FREQuency:StARt <freq>  [:SENSe]:FREQuency:StARt?	Specifies the start frequency.  The HP/Agilent 8590-Series analyzer outputs data in the format: 750000000. The Agilent PSA analyzer outputs data in the format: +750000000.
FB FB <value> FB UP   DN FB?	FB FB <value> FB UP   DN FB?	FB FB <value> FB UP   DN FB?	[:SENSe]:FREQuency:StOP <freq>  [:SENSe]:FREQuency:StOP?	Specifies the stop frequency.  The HP/Agilent 8590-Series analyzer outputs data in the format: 750000000. The Agilent PSA analyzer outputs data in the format: +750000000.
		FDIAG		Returns the specified frequency diagnostic information.
		FDSP		Turns all frequency related annotation off.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

F

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
FFT	FFT	FFT		Performs a discrete fast Fourier transform on the source trace array and stores the result in the destination array.
FFTAUTO				Performs a fast Fourier transform (FFT) on the signal on which the marker is placed.
FFTCLIP				Indicates if the FFT results are valid.
FFTCONTS				Performs a fast Fourier transform (FFT) continuously on the current signal.
FFTMKR				Activates the FFT markers and displays the FFT annotation on the spectrum analyzer display.
FFTMMM				Changes the FFT mid-display frequency of the spectrum analyzer to the frequency of the FFT marker.
FFTMMS				Changes the FFT stop frequency of the spectrum analyzer to the frequency of the FFT marker.
FFTOFF				Exits the fast Fourier transform (FFT) measurement and FFT settings.
FFTPCTAM				Turns the percent AM function on or off during an FFT measurement.

a. Added with 85620A mass memory module

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
FFTPCTAMR				Returns the percent of amplitude modulation(AM).
FFTSNGLS				Changes the spectrum analyzer sweep mode to single sweep mode (if necessary), and then performs a fast Fourier transform (FFT) on trace A.
FFTSTAT				Returns the status of the spectrum analyzer FFT measurement functions.
FFTSTOP				Sets the FFT stop frequency of the FFT measurement.
FMGAIN FMGAIN <value> FMGAIN UP   DN FMGAIN?				Sets the total FM deviation for full screen demodulation.

- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.

F

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
FOFFSET	FOFFSET	FOFFSET		Specifies the frequency offset for all absolute frequency readouts such as center frequency.
FOFFSET?	FOFFSET?	FOFFSET UP_DN FOFFSET <value> FOFFSET?	:DISPlay:WINDow:TRACe:X[:SCALe]: OFFSet <freq> :DISPlay:WINDow:TRACe:X[:SCALe]: OFFSet?	The HP/Agilent 8590-Series analyzer outputs data in the format: 10. The Agilent PSA analyzer outputs data in the format: +1.00000000E+001.
FORMAT		FORMAT <sup>a</sup>		Formats the memory card.
	FPKA <sup>b</sup>			Performs a fast preselector peak and returns the measured value at the active marker.
		FREF	[[:SENSe]:ROSCillator:SOURce INternal EXternal	Specifies the internal, or an external, frequency reference source.
FS	FS	FS	[[:SENSe]:FREQuency:SPAN:FULL	Sets the frequency span of the spectrum analyzer to full span. Sets the frequency span to full span.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
FUNCDEF	FULBAND <integer> <sup>b</sup>	FULBAND K A Q U V E  W F D G Y J		For external mixing, it sets the full frequency span for the desired band.
FUNCDEF	FUNCDEF	FUNCDEF <sup>a</sup>		Defines a routine consisting of spectrum analyzer commands, assigns the routine a label, and stores the routine and its label in the user memory.

a. Added with 85620A mass memory module attached.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

b. No equivalent command for 8568B analyzer.

**G**

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
GATE GATE ON   OFF	GATE GATE ON   OFF	GATE GATE ON   OFF		Turns time gating on or off.
GATECTL  GATECTL EDGE   LEVEL  GATECTL?	GATECTL  GATECTL EDGE   LEVEL  GATECTL?	GATECTL  GATECTL EDGE   LEVEL  GATECTL?		Selects between the edge and the level mode for Option 105, the time-gated spectrum analysis capability.  Selects between the edge and the level mode for 1D6, the time-gated spectrum analysis capability.  Level triggers the gate when the signal surpasses a specific level, set to either low or high.  Edge triggers the gate when the edge of a signal is encountered, set to either a negative-going edge or a positive-going edge.  The HP/Agilent 8590-Series analyzer returns EDGE or LEVEL.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
GC				Presets Option 105, the time-gated spectrum analysis capability.
GD GD <value>		GD GD <value>		Presets Option 1D6, the time-gated spectrum analysis capability.
GD UP   DN GD?		GD? GD?		Sets the delay time before the gate opens. Sets the delay time from when the gate trigger occurs to when the gate opens. This is for EDGE triggering only.
GDRVCLPAR				The HP/Agilent 8590-Series analyzer outputs data in the format: 1E-6.
GDRVGDEL				Clears the pulse parameters (pulse width, pulse repetition interval, and reference edge) for a time-gate measurement by setting the pulse parameters to 0.
GDRVGLEN				For the frequency window only, GDRVGDEL sets the time delay from when the gate trigger occurs to when the gate is opened.
				Adjusts the gate length in both the time and frequency windows.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
GDRVGT				Turns the gate on or off in the frequency window.
GDRVGTIM				Activates the gate trigger marker, and places it at the given value.
GDRVPRI				Enters the specified value as the pulse repetition interval.
GDRVPWID				Enters the specified value as the pulse width. Specifies the gate time length in seconds. For EDGE triggering only.
GDRVRBW				Couples or uncouples the resolution bandwidth to the specified pulse width.
GDRVREFE				Allows you to enter the position (in time) for a reference edge.
GDRVST				Couples or uncouples the sweep time to the pulse repetition interval.
GDRVSWAP				Makes the window (either the time or frequency window) that is currently not the active window, the active window.
GDRVSWDE				Allows you to specify the delay from the edge of the gate trigger until the sweep is started in the time window.

a. Added with 85620A mass memory module attached.

c. No equivalent command for 8566B analyzer.

b. No equivalent command for 8568B analyzer.

d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
GDRVSWP				Specifies the sweep time for the time domain window of the gate utility.
GDRVUTIL				Turns the gate utility on or off.
GDRVVBW				Couples or uncouples the video bandwidth to the gate length.
GETPLOT				Initiates output of the spectrum analyzer display to a plotter.
GETPRNT			:HCOpy[:IMMmediate]	Initiates output of the spectrum analyzer display to a printer.
GL GL <value>	GL GL <value>			Sets the length of time the gate is open.
GL UP   DN GL?	GL?			Output formats are different.
GP GP POS   NEG GP?	GP GP POS   NEG GP?			Sets the polarity (positive or negative) for the gate trigger.  Returns POS or NEG.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
GR	GR			Graphs the given y coordinate while incrementing the x coordinate by 1.
GRAT	GRAT	GRAT		Turns the graticule on or off.
GRAT ON   OFF	GRAT ON   OFF	GRAT ON   OFF	:DISPlay:WINDow:TRACe:GRATicule:GRID[:STATe] OFF   ON   0   1	
GRAT?	GRAT?	GRAT?	:DISPlay:WINDow:TRACe:GRATicule:GRID[:STATe]?	The HP/Agilent 8590-Series analyzer outputs ON or OFF. The Agilent PSA analyzer outputs 1 or 0.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

## H - K

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
HAVE				Used by menus for testing for hardware configuration.
HD	HD	HD		Disables data entry via the spectrum analyzer numeric keypad, knob, or step keys. The active function readout is blanked, and any active function is deactivated.
HN				Returns the harmonic number of the current harmonic band in which the spectrum analyzer is tuning.
HNLOCK	HNLOCK <sup>b</sup>	HNLOCK		Forces the spectrum analyzer to use only the selected harmonic band.
HNUNLK	HNUNLK <sup>b</sup>	HNUNLK		Unlocks the harmonic band.
	I1 <sup>c</sup>			Enables the left RF input.
	I2 <sup>c</sup>			Enables the right RF input.
IB	IB			Provides a method for putting values into trace B.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ID	ID	ID?	*IDN?	Returns the spectrum analyzer model number.  The HP/Agilent 8590-Series analyzer returns the model number in the format: HP 8592L. The Agilent PSA analyzer returns the format: Agilent Technologies, E4440A. It also returns the serial number and firmware revision.
ID?				Sets the center frequency to the frequency of the signal identified by the SIGID (signal identification) function.
		IDCF		Returns to the controller the frequency of the signal identified by the SIGID (signal identification) function.
		IDCFREQ?		Specifies the completion status of the signal identifier (SIGID).
IF	IDSTAT <sup>b</sup>			IF/THEN/ELSE/ENDIF forms a decision and branching construct.
	IF	IF <sup>a</sup>		Places the greatest integer that is less than or equal to the source value into the destination.
INT	INT	INT <sup>a</sup>		

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
INZ				Specifies the value of input impedance expected at the active input port.
INZ 75   50				Amplitude correction is applied to the display data to adjust for the measurement situations where the Unit Under Test has a different impedance than the instrument 50 Ohm input impedance.
INZ?				The HP/Agilent 8590-Series analyzer outputs data in the format: 50.
IP	IP	IP	:SYSTem:PRESet	Performs an instrument preset.
KEYCLR		KEYCLR <sup>a</sup>		Clears softkeys 1 through 6.
KEYCMD				Allows you to define the function and label of a softkey. The softkey label is updated whenever a softkey is pressed.
KEYDEF	KEYDEF	KEYDEF <sup>a</sup>		Assigns a label and user-defined function to a softkey.
KEYENH				Allows you to activate inverse video mode or underline part or all of the softkey label.
KEYEXC	KEYEXC			Executes the specified, previously defined softkey.
KEYLBL				Relabels a softkey without changing its function.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

L

**L**

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
LB	LB	LB		Writes text at the current pen position.
LF	LF <sup>b</sup>	LCLVAR <sup>a</sup>		Defines a local variable that can only be used within a FUNCDEF.
LG	LG	LG		Performs an instrument preset to the baseband (band 0).
LG <value>	LG <value>	LG <value>	:DISPLAY:WINDOW:TRACe:Y[:SCALe]: PDIvision <rel_amp> :DISPLAY:WINDOW:TRACe:Y[:SCALe]: SPACing LOGarithmic :DISPLAY:WINDOW:TRACe:Y[:SCALe]: PDIvision?	Specifies the vertical graticule divisions as logarithmic units, without changing the reference level.
LG UP   DN LG?	LG UP   DN LG?	LG UP   DN LG?	:DISPLAY:WINDOW:TRACe:Y[:SCALe]: SPACing?	The HP/Agilent 8590-Series analyzer outputs data in the format: 10.00. The Agilent PSA analyzer outputs data in the format: +1.000000000E+001.

a. Added with 85620A mass memory module attached.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

b. No equivalent command for 8568B analyzer.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
	LIMD <sup>a</sup>			Enters the delta value for the amplitude of a limit-line segment.
	LIMF <sup>a</sup>			Enters the frequency value for a limit-line segment.
LIMIDEL	LIMPURGE <sup>a</sup>		:CALCulate:LLINe[1]   2:DELeTe	Deletes all segments in the current limit-line table.
LIMIDISP			:CALCulate:LLINe[1]   2:DISPlay OFF   ON   0   1	Controls when the limit line (or limit lines) are displayed.
LIMIFAIL	LIMIFAIL <sup>a</sup>		:CALCulate:LLINe[1]   2:FAIL?	Returns a "0" if the last measurement sweep of the trace A (856x/859x) or trace 1 (for PSA) is equal to or within the limit-line bounds.
LIMIFT			:CALCulate:LLINe:CONTRol:DOMain FREQuency   TIME	Selects how the limit-line segments are placed on the spectrum analyzer display, according to frequency, or according to the sweep time setting of the spectrum analyzer.
LIMIHALF				Edit/specify upper or lower limit line only. There is no similar function in Agilent PSA analyzers.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
LIMIHI				Allows you to specify a fixed trace as the upper limit line. There is no similar function in Agilent PSA analyzers.
LIMILINE			:CALCulate:LLINe[1]   2:DATA? :CALCulate:LLINe[1]   2:MARGin? :CALCulate:LLINe[1]   2:MARGin:STATE?	Outputs the current limit-line table definitions.
LIMILO				Allows you to specify a fixed trace as the lower limit line. There is no similar function in Agilent PSA analyzers.
LIMIMIRROR				Reflects the current definition about the amplitude axis at the largest frequency or the largest sweep time in the definition. There is no similar function in Agilent PSA analyzers.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
LIMIMODE				Determines whether the limit-line entries are treated as upper amplitude values, lower amplitude values, upper and lower amplitude values, or mid-amplitude and delta values.
LIMIREL	LIMIREL <sup>a</sup>	LIMIREL <sup>a</sup>	:CALCulate:LLINE:CMODE FIXed   RELative	Specifies the current limit lines as fixed or relative.
	LIMIRCL <sup>a</sup>	LIMIRCL <sup>a</sup>	MMEMory:LOAD:LIMit LLINE1   LLINE2, <"filename">	Recalls a limit-line set from the limit-line table in the module user memory.  Recalls a specified limit-line from a file in instrument memory.
	LIMISAV <sup>a</sup>	LIMISAV <sup>a</sup>	MMEMory:STORe:LIMit LLINE1   LLINE2, <"filename">	Saves the active limit-line to the module memory under the name assigned to it.  Saves the specified limit-line to the instrument memory under the filename assigned.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
LIMISEG			:CALCulate:LLINe[1]   2:DATA:MERGe <x-axis>, <ampl>, <connected> {, <x-axis>, <ampl>, <connected>} See also LIMIFT (:CALCulate:LLINe:CONTROL:DOMain FREQuency   TIME)	Adds new segments to the current frequency limit line in either the upper limit line or the lower limit line. <x> is frequency in Hz or time in seconds. <ampl> is amplitude in dB. <connected>: 1 = connected, and 2 = not connected.
LIMISEGT			:CALCulate:LLINe[1]   2:DATA:MERGe <x-axis>, <ampl>, <connected> { <x-axis>, <ampl>, <connected> }	Adds new segments to the current sweep time limit line in either the upper limit line or the lower limit line. <x> is frequency in Hz or time in seconds. <ampl> is amplitude in dB. <connected>: 1 = connected, and 2 = not connected.
LIMITEST	LIMITEST <sup>a</sup>	LIMITEST <sup>a</sup>	:CALCulate:LLINe[1]   2:STATE OFF   ON   0   1 :CALCulate:LLINe[1]   2:AMPLitude: INTerpolate:TYPE LOGarithmic   LINear	Compares trace A (856x/859x) or trace 1 (for PSA) with the current limit-line data.
	LIML <sup>a</sup>	LIML <sup>a</sup>		Is used within the SEDI command to assign the lower-limit amplitude value to a limit-line segment.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
	LIMM <sup>a</sup>			Is used within the SEDI command to assign the middle amplitude value to a limit-line segment.
	LIMTFL <sup>a</sup>			Is used within the SEDI command to make the selected limit-line segment flat.
	LIMTSL <sup>a</sup>			Is used within the SEDI command to make the selected limit-line segment have a slope.
	LIMU <sup>a</sup>			Is used within the SEDI command to assign the upper-amplitude value to a limit-line segment.
LINFILL				Fills linear interpolated data into the specified trace data points of a destination trace.
	LL			Provides the lower left recorder output voltage at the rear panel.
LN	LN	LN	:DISPlay:WINDow:TRACe:Y[:SCALe]:SPACing LINear	Specifies the vertical graticule divisions as linear units, without changing the reference level. Specifies the vertical graticule divisions as log or linear units.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
LOAD			:MMEMory:LOAD:STATE <reg_number>, <file_name>  :MMEMory:LOAD:TRACe TRACE1   TRACE2   TRACE3, <file_name>	For loading a trace, amplitude correction, limit, or state.  For loading the analyzer state from a file.  For loading a trace.
LOG	LOG	LOG <sup>a</sup>		Takes the logarithm (base 10) of the source, multiplies the result by the scaling factor, then stores it in the destination.
LSPAN			[:SENSe]:FREQuency:SPAN:PREVious	Changes the spectrum analyzer span to the previous span setting.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.

- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

## M

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
M4	M4		:CALCulate:MARKer[1]   2   3   4:MODE POSITION	Activates a single marker on the trace and enables the knob to change the position of the marker. The active function is then set to span.  Activates a single marker on the trace and enables the knob to change the position of the marker.
		MBIAS		Sets the bias level for external mixers that require diode bias for efficient mixer operation.
	MC0 <sup>c</sup> MC1 <sup>c</sup>		:CALCulate:MARKer[1]   2   3   4:FCOunt [:STATe] OFF   ON   0   1	Turns off the marker frequency counter.  Turns on the marker frequency counter.
MDS	MIDS		:FORMat [:TRACe][:DATA] ASCIi   INTeger,32   REAL,32   REAL,64	Turns on/off the marker frequency counter for the specified marker.  Specifies measurement data size as byte or word.  Specifies the measurement data size in SCPI.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MDU	MDU			Returns values for the spectrum analyzer baseline and reference level.
MEAN	MEAN	MEAN <sup>a</sup>		Returns the mean value of the given trace in measurement units.
MEAN TRA?	MEAN TRA	MEAN TRA? <sup>a</sup>		Returns the mean of the amplitudes of the trace amplitude elements in measurement units. The format of the response data will be different.
MEAN TRB?	MEAN TRB	MEAN TRB? <sup>a</sup>		Traces are: TRACE[1 2 3]. TRACE1 corresponds to trace A, TRACE2 corresponds to trace B, and TRACE3 corresponds to trace C.
MEAN TRC?	MEAN TRC			Measures the average power of the carrier while the burst is turned on and allows you to define the carrier-on amplitude range, in decibels below the peak value of the specified trace.
		MEANPWR		Returns the current sweep status. (SNGLS   CONTS)
MEANTH		MEAS?		Returns the mean value of the given trace above the threshold, in measurement units.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MEASOFF				Turns off the current measurement, erases the display, and then displays the menu accessed by MEAS/USER.
MEASURE				Determines the type of measurement: signal analysis, stimulus response, or signal normalization.
MEM	MEM	MEM <sup>a</sup>		Returns the amount of spectrum analyzer memory available.
MENU		MENU <sup>a</sup>		Selects and displays the softkey menus on the spectrum analyzer screen.
MERGE	MERGE			Merges the source trace into the specified area of the destination trace.
MF	MF	MF		Returns the frequency (or time) of the on-screen active marker.
MIN	MIN	MIN <sup>a</sup>	:CALCulate:MARKer[1]   2   3   4:X?	Returns the value in x-axis units, of the specified marker.
				Compares source 1 and 2, point by point, and stores the lesser of the two in the destination.

a. Added with 85620A mass memory module

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MINH		MINH	:TRACe[1]   2   3:MODE   MINHold	Updates trace C elements with minimum level detected.  Selects the display mode for the selected trace. Minimum hold displays the lowest measured trace value for all the data that has been measured since the function was turned on.
MINPOS	MINPOS			Returns a value, which is the x-axis position (in display units) of the minimum amplitude value in trace A, trace B, trace C, or user-defined trace.
MIRROR	MIRROR			Displays the mirror image of a trace.
MKA	MKA	MKA		Specifies amplitude of the active marker.
MKA?	MKA?  MKA?	MKA?  MKA?	:CALCulate:MARKer[1]   2   3   4:Y?	Read the current y-axis value for the designated marker on the assigned trace. The value is in the y-axis units for the trace (dBm, volts, and so forth).  The HP/Agilent 8590-Series analyzer outputs data in the format: -66.9. The Agilent PSA analyzer outputs data in the format: -6.69000000E+001.  The FORMat:DATA command changes the data output format

a. Added with 85620A mass memory module attached.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

b. No equivalent command for 8568B analyzer.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKACT	MKACT			Specifies the active marker.
MKACT 1   2   3   4	MKACT 1   2   3   4		:CALCulate:MARKer[1]   2   3   4:STATE ON   1	
MKACT?	MKACT?		:CALCulate:MARKer[1]   2   3   4:STATE?	Makes the current active marker the active function.
MKACTV				
MKBW		MKBW		Returns the bandwidth at the specified power level relative to an on-screen marker (if present) or the signal peak (if no on-screen marker is present).
MKCF	MKCF	MKCF		Sets the center frequency equal to the marker frequency and moves the marker to the center of the screen.
			:CALCulate:MARKer[1]   2   3   4[:SET]: CENTer	
		MKCHEDGE		Moves the delta markers to $\pm 0.5$ channel widths from the center frequency.
MKCONT	MKCONT			Resumes the sweep after execution of a MKSTOP command.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKD	MKD	MKD	:CALCulate:MARKer[1]   2   3   4:MODE DELTA :CALCulate:MARKer[1]   2   3   4:X <param>	Activates the delta marker. Positions and activates the designated marker on the assigned trace at the specified X value. The value is in the x axis units (which is often frequency or time).
		MKDELCHBW		Sets the channel power bandwidth to the difference between the delta markers.
MKDLMODE				Selects whether the marker amplitude values are shown as relative to the reference level (normal mode), or relative to the display line (delta mode) when the marker table is turned on.
	MKDR			Displays the reciprocal of the frequency (or time, when in zero span) difference between two markers.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKF	MKF	MKF	:CALCulate:MARKer[1]   2   3   4:X <param>	Specifies the frequency value of the active marker. Positions the designated marker on the assigned trace at the specified x-axis value. The value is in the x-axis units (which is often frequency or time).
MKF?	MKF?	MKF?	:CALCulate:MARKer[1]   2   3   4:X?	The HP/Agilent 8590-Series analyzer outputs data in the format: 750E6. The Agilent PSA analyzer outputs data in the format: +7.50000000E+008. The FORMat:DATA command changes the data output format.
MKFC	MKFC <sup>c</sup>	MKFC	:CALCulate:MARKer[1]   2   3   4:FCOunt [:STATe] OFF   ON   0   1	Turns the marker frequency counter on or off. Turns the marker frequency counter on or off for the specified marker.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKFCR	MKFCR <sup>c</sup>	MKFCR		Sets the resolution of the marker frequency counter.
MKFCR <freq>	MKFCR <freq>	MKFCR <freq>	:CALCulate:MARKer:FCOunt:RESolution <real>	Sets the resolution of the marker frequency counter. AUTO ON couples the marker counter resolution to the frequency span.
MKFCR AUTO			:CALCulate:MARKer:FCOunt:RESolution:AUTO ON   1	Sets the resolution of the marker frequency counter so it is automatically coupled to the frequency span, generating the fastest accurate count.
MKFCR UP   DN				
MKFCR?	MKFCR?	MKFCR?	:CALCulate:MARKer:FCOunt:RESolution?	The HP/Agilent 8590-Series analyzer outputs data in the format: 1000. The Agilent PSA analyzer outputs data in the format: +1000.
		MKMCF		Moves the midpoint of the delta markers to the center frequency.
MKMIN	MKMIN	MKMIN	:CALCulate:MARKer[1]   2   3   4:MINimum	Moves the active marker to the lowest point on the trace that is assigned to that particular marker number. Places the selected marker on the lowest point on the trace that is assigned to that particular marker number.
a. Added with 85620A mass memory module attached.	b. No equivalent command for 8568B analyzer.	c. No equivalent command for 8566B analyzer.	d. Option 002 only.	

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKN	MKN	MKN	:CALCulate:MARKer[1]   2   3   4:MODE POStition	Activates a normal marker and positions it at the center of the active trace.
MKN?	MKN UP   DN  MKN UP   DN	MKN UP   DN	:CALCulate:MARKer[1]   2   3   4:X <param>	Positions the designated marker on the current trace at the specified x value. The value is in the x-axis units (which is often frequency or time).  Moves the active marker to the right (UP) or left (DN) a distance that is 10% of the current frequency span.
MKN?	MKN?	MKN?	:CALCulate:MARKer[1]   2   3   4:X?	The HP/Agilent 8590-Series analyzer outputs data in the format: 750E6. The Agilent PSA analyzer outputs data in the format: +7.50000000E+008.  The FORMat:DATA command changes the data output format.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKNOISE	MKNOISE	MKNOISE		Displays the average noise level at the marker.
MKNOISE?	MKNOISE?	MKNOISE?	:CALCulate:MARKer[1]   2   3   4:FUNCTION NOISE   OFF	Selects the marker function for the specified marker. NOISE is a noise measurement.
MKOFF	MKOFF	MKOFF	:CALCulate:MARKer[1]   2   3   4:FUNCTION?	The HP/Agilent 8590-Series analyzer outputs ON or OFF. The Agilent PSA analyzer outputs 1 or 0.
MKOFF ALL	MKOFF ALL	MKOFF ALL	:CALCulate:MARKer[1]   2   3   4:STATE OFF   ON   0   1	Turns off either the active marker or all the markers.
			:CALCulate:MARKer:AOFF	Turns the selected marker on or off.
				Turns off all the markers on all the traces.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKP	MKP		:CALCulate:MARKer[1]   3   3   4:X: POSition <integer>	Places the active marker at the given x-axis coordinate. (in display units, not x-axis units like frequency or time)
MKP?	MKP?		:CALCulate:MARKer[1]   3   3   4:X: POSition?	The HP/Agilent 8590-series analyzer outputs data in the format: 200. The Agilent PSA series analyzer outputs data in the format: +2.00000000E+002. Use CALC:MARK:PEAK:SEAR:MODE to specify how peaks are defined.  The FORMat:DATA command changes the data output format.
MKPAUSE	MKPAUSE			Pauses the sweep at the active marker for the duration of the delay period.

a. Added with 85620A mass memory module attached.  
b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.  
d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKPK	MKPK	MKPK		Positions the active marker on a signal peak.
MKPK HI	MKPK HI	MKPK HI	:CALCulate:MARKer[1]   2   3   4: MAXimum	Places the selected marker on the highest point on the trace that is assigned to that particular marker number.
MKPK NL	MKPK NL	MKPK NL	:CALCulate:MARKer[1]   2   3   4: MAXimum:LEFT	Places the selected marker on the next highest signal peak to the left of the current marked peak.
MKPK NH	MKPK NH	MKPK NH	:CALCulate:MARKer[1]   2   3   4: MAXimum:NEXT	Places the selected marker on the next highest signal peak from the current marked peak.
MKPK NR	MKPK NR	MKPK NR	:CALCulate:MARKer[1]   2   3   4: MAXimum:RIGHT	Places the selected marker on the next highest signal peak to the right of the current marked peak.
		MKPT	CALCulate:MARKer[1]   2   3   4: PEAK:THReshold <ampl>	Specifies the marker peak threshold. Specifies the marker peak threshold for the specified marker. Select the parameter peak search mode to use threshold settings. See CALC:MARK:PEAK:SEAR:MODE PAR.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKPX	MKPX	MKPX		Specifies the minimum signal excursion for the spectrum analyzer internal peak-identification routine.
MKPX <value>	MKPX <value>	MKPX <value>	:CALCulate:MARKer:PEAK:EXCursion <rel_amp!>	Specifies the minimum signal excursion for the analyzer internal peak identification routine to recognize a signal as a peak. This applies to all traces and all windows.
MKPX UP   DN MKPX?	MKPX UP   DN MKPX?	MKPX UP   DN MKPX?	:CALCulate:MARKer:PEAK: EXCursion?	The HP/Agilent 8590-Series analyzer outputs data in the format: 6.00. The Agilent PSA analyzer outputs data in the format: +6.00000000E+000. Select the parameter peak search mode to use excursion settings. See CALC:MARK:PEAK:SEAR:MODE PAR.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKREAD	MKREAD			Selects the type of active trace information displayed by the spectrum analyzer marker readout.
MKREAD FRQ	MKREAD FRQ		:CALCulate:MARKer[1]   2   3   4:X:READout FREQuency   TIME   ITIME   PERiod	Selects the units for the x-axis readout of the marker. Available units are: frequency, time, inverse of time, period.
MKREAD SWT	MKREAD SWT			
MKREAD IST	MKREAD IST			
MKREAD PER	MKREAD PER			
MKREAD FFT	MKREAD FFT		:CALCulate:MARKer[1]   2   3   4:X:READout?	FFT is an invalid parameter for the Agilent PSA spectrum analyzers.
MKREAD?	MKREAD?		:CALCulate:MARKer[1]   2   3   4:X:READout?	The HP/Agilent 8590-Series analyzer returns marker readout in the format: FRQ SWT IST or PER. The Agilent PSA analyzer returns FREQ, TIME, ITIME, or PER.
MKRL	MKRL	MKRL	:CALCulate:MARKer[1]   2   3   4[:SET]:RLEVel	Sets the reference level to the amplitude value of the active marker.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKSP	MKSP	MKSP	:CALCulate:MARKer[1]   2   3   4[:SET]:SPAN	Sets the start and stop frequencies to the values of the delta markers. Sets the span to the value of the specified marker frequency. The specified marker must be in delta mode. Select the delta marker mode with :CALCulate:MARKer [1]   2   3   4:MODE:DELTA.
MKSS	MKSS	MKSS	:CALCulate:MARKer[1]   2   3   4[:SET]:STEP	Sets the center frequency step size to the marker frequency. Sets the center frequency step size equal to the marker frequency.
MKSTOP	MKSTOP			Stops the sweep at the active marker.
		MKT		Sets the marker to the position corresponding to the amount of time from the beginning of the sweep.
MKTBL  MKTBL?			:CALCulate:MARKer:TABLE:STATE OFF   ON   0   1  :CALCulate:MARKer:TABLE:STATE?	Turns the marker table on or off.  The HP/Agilent 8590-Series analyzer outputs ON or OFF. The Agilent PSA analyzer outputs 1 or 0.

- a. Added with 85620A mass memory module attached.  
b. No equivalent command for 8568B analyzer.

- c. No equivalent command for 8566B analyzer.  
d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKTRACE	MKTRACE			Moves the active marker to a corresponding position in trace A, trace B, or trace C.
MKTRACE TRA	MKTRACE TRA		:CALCulate:MARKer[1]   2   3   4:TRACe: AUTO OFF   ON   0   1	Automatically puts markers at the same x position on all the traces.
MKTRACE TRB	MKTRACE TRB			
MKTRACE TRC	MKTRACE TRC		:CALCulate:MARKer[1]   2   3   4:TRACe <integer>	Assigns the specified marker to the designated trace 1, 2, or 3.
MKTRACE?	MKTRACE?		:CALCulate:MARKer[1]   2   3   4:TRACe?	The HP/Agilent 8590-Series analyzer returns TRA, TRB, or TRC. The Agilent PSA analyzer returns +1, +2, or +3.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.

- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MKTRACK	MKTRACK	MKTRACK	:CALCulate:MARKer[1]   2   3   4: TRCKing[:STATE] OFF   ON   0   1	<p>Moves the signal with an active marker to the center of the spectrum analyzer display and keeps the signal peak at center screen.</p> <p>Turns marker signal tracking on or off. It continuously puts the selected marker on the highest displayed signal peak and moves it to the center frequency. This allows you to keep a signal on the display that is drifting in frequency.</p>
MKTRACK?	MKTRACK?	MKTRACK?	:CALCulate:MARKer[1]   2   3   4: TRCKing[:STATE]?	The HP/Agilent 8590-Series analyzer outputs ON or OFF. The Agilent PSA analyzer outputs 1 or 0.
MKTYPE	MKTYPE			Changes the type of the current active marker.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ML	ML	ML		Specifies the maximum signal level that is applied to the input mixer for a signal that is equal to or below the reference level.
ML <value>	ML <value>	ML <value>	[:SENSe]:POWer[:RF]:MIXer:RANGe[:UPPer] <ampl>	Specifies the maximum power at the input mixer for a signal this is equal to or below the reference level.
ML UP   DN	ML UP   DN	ML UP   DN	[:SENSe]:POWer[:RF]:MIXer:RANGe[:UPPer]?	The HP/Agilent 8590-Series analyzer outputs data in the format: -10. The Agilent PSA analyzer outputs data in the format: -1.00000000E+001.
ML?	ML?	ML?		Stores the remainder from the division of source 1 by source 2 in the destination.
MOD	MOD	MOD <sup>a</sup>		Returns a "0" if the mode of operation is spectrum analysis. A number other than "0" is returned if the operating mode (also called "personality") is other than spectrum analysis.
MODE		MODRCLT <sup>a</sup>		Recalls a trace from the source specified by MSDEV to the TRA/TRB in the instrument.
		MODSAVT <sup>a</sup>		Saves a trace in module memory.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
MOV	MOV	MOV <sup>a</sup>	:TRACe:COPIY <source_trace>,<dest_trace>	Copies the source values into the destination. <dest_trace>, <num_value>
MPY	MPY	MPY <sup>a</sup>		Transfers the source trace to the destination trace. Source traces are: TRACE[1]   2   3 Destination traces are: TRACE[1]   2   3
	MRD			Multiplies the sources, point by point, and places the results in the destination.
	MRDB			Reads the two-byte word at the specified memory address and returns it to the controller.
				Reads the 8-byte word at the specified memory address and returns its ASCII equivalent to the controller.
		MSDEV <sup>a</sup>		Specifies the data storage and access device to be either the module memory or the memory card.
MSI				Allows you to specify the current mass storage device as the spectrum analyzer memory or a memory card.
	MWR			Writes a two-byte message, starting at the specified memory address.

a. Added with 85620A mass memory module

b. No equivalent command for 8566B analyzer.  
c. No equivalent command for 8566B analyzer.  
d. Option 002 only.

b. No equivalent command for 8568B analyzer.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
	MWRB			Writes a one-byte message to the specified memory address.
MXM	MXM <sup>b</sup>	MXM <sup>a</sup>		Compares source 1 and source 2, point by point, sending the greater value of each comparison to the destination.
MXMH	MXMH <sup>b</sup>	MXMH	:TRACe[1]   2   3:MODE MAXHold	Updates trace elements with maximum level detected.
		MXRMODE		Specifies an internal or external mixer mode.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.



**N - O**

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
NDB				Specifies the distance (in dB) from the signal peak for the N dB points measurement (NDBPNT).
NDB?				The HP/Agilent 8590-Series analyzer outputs data in the format: -3.
NDBPNT				Turns the N dB points measurement on or off.
NDBPNT?				The HP/Agilent 8590-Series analyzer outputs ON or OFF.
NDBPNTR?				Returns the bandwidth measured by the N dB points measurement (NDBPT).
		NORMLIZE		Activates the normalization routine for stimulus-response measurements.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
NRL		NRL	:DISPlay:WINDow:TRACe:Y[:SCALel]:NRLevel <rel_ampl>	Sets the normalized reference level.
NRL?		NRL?	:DISPlay:WINDow:TRACe:Y[:SCALel]:NRLevel?	The HP/Agilent 8590-series analyzer outputs data in the format: 10. The Agilent PSA series analyzer outputs data in the format: +1.00000000E+001.
		NRPOS		Adjusts the normalized reference position.
	NSTART <sup>b</sup>			Specifies the start harmonic for signal identification (SIGID).
	NSTART <sup>b</sup>			Specifies the stop harmonic for signal identification (SIGID).
OA	OA			Returns the value of the active function.
OBW			:MEASure:OBWidth?	Performs the occupied bandwidth measurement using the value for occupied bandwidth percent (OBWPCT).
OBWPCT		OCCUP	[[:SENSe]:OBWidth:PERCent <percent>	Specifies the percent of total power that is to be used in calculating the occupied bandwidth (OBW).
OL	OL			Output current state in learn string format.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ONCYCLE				Executes the list of analyzer commands periodically.
ONDELAY				Executes the list of analyzer commands after the time value has elapsed.
ONEOS	ONEOS	ONEOS <sup>a</sup>		Executes the list of analyzer commands after the end of the sweep.
ONMKR				Performs the list of analyzer commands when the sweep reaches the marker position.
ONMKRU				Executes the list of analyzer commands whenever the value or the units of the active marker are changed.
ONPWRUP				Executes the list of spectrum analyzer commands once on power up.
ONSRQ				Executes the list of analyzer commands whenever a service request occurs.
ONSWP	ONSWP			Executes the list of analyzer commands at the beginning of the sweep.
ONTIME				Executes the list of analyzer commands at the specified time.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
OP	OP?	OP?		Returns the coordinates of the lower-left and upper-right corners of the spectrum analyzer display (P1,P2).
		OR <sup>a</sup>		Sets the origin of the graphics pen as determined by the values of the x- and y-coordinate offsets.
OUTPUT	OT			Returns all CRT annotation as 32 strings.
	OUTPUT	OUTPUT <sup>a</sup>		Allows the spectrum analyzer to send data to other devices on the GPIB.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

**P - Q**

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
PA	PA	PA <sup>a</sup>		Moves the pen to a vector location on the spectrum analyzer screen relative to the reference coordinates (0,0).
PARSTAT				Returns parallel port status.
PCTAM				Turns the percent AM measurement on or off.
PCTAMR				Returns the percent AM measured by the percent AM measurement (PCTAM).
PD	PD	PD <sup>a</sup>		Instructs the spectrum analyzer to plot vectors on the spectrum analyzer screen until a PU command is received.
PDA	PDA	PDA <sup>a</sup>		Sums the probability distribution of amplitude in the destination trace with the amplitude distribution function of the source trace.
PDF	PDF	PDF <sup>a</sup>		Increments an element of the destination trace whenever the corresponding element of the source trace exceeds a threshold.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
PEAKS	PEAKS	PEAKS <sup>a</sup>		Sorts signal peaks by frequency or amplitude, stores the results in the destination trace, and returns the number of peaks found.
PKDLMODE				Selects the signal peaks that are displayed in the peak table.
PKPOS	PKPOS			Returns a value, which is the index of the maximum value in trace A, trace B, trace C, or user-defined trace.
PKRES				Returns the x-axis coordinates of the peaks in the peak table.
PKSORT				Selects how the signal peaks listed in the peak table are sorted: by decreasing amplitude or by ascending frequency.
PKTBL				Turns the peak table on or off.
PKZMOK				Returns a "0" if the peak zoom routine (PKZOOM) found only the spectrum analyzer local oscillator feedthrough, otherwise a "1" is returned.
PKZOOM				Automatically tunes the spectrum analyzer to the signal with the highest amplitude level while narrowing the frequency span to the specified frequency span.

a. Added with 85620A mass memory module attached.  
 b. No equivalent command for 8568B analyzer.  
 c. No equivalent command for 8566B analyzer.  
 d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
PLOT	PLOT	PLOT		Initiates a plotter output of the screen data to the remote interface.
		PLOTORG		Specifies whether the P1, P2 plotter settings are the origin for the graticule, or the entire spectrum analyzer display.
PLTPRT				Directs the plotter output to GPIB, serial or parallel ports.
		PLOTSRC ALL   TRA   TRB   GRT   ANNT		Specifies the source for the plot.
POWERON				Selects the state the spectrum analyzer will be in when it is turned on: IP (instrument preset) or LAST state.
POWERON?			:SYSTEM:PON:TYPE PRESet   LAST :SYSTEM:PON:TYPE?	The response is: PRESET or LAST.
PP	PP <sup>b</sup>	PP	[:SENSe]:POWer[:RF]:PCENter	Performs a preselector peak. Centers the preselector tracking to maximize amplitude of the signal at the specified marker by minimizing the loss through the filter.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
PR	PR	PR <sup>a</sup>		Moves the pen to a new plot location on the spectrum analyzer screen relative to the current coordinates in display units.
PREAMPG			[.:SENSe]:CORRection:OFFSet [MAGNitude] <rel_amp1>	Subtracts a positive or negative preamplifier gain value from the displayed signal.
PREAMPG?			:SENSe:CORRection:OFFSet [MAGNitude]?	The HP/Agilent 8590-Series analyzer outputs data in the format: 10.00. The Agilent PSA analyzer outputs data in the format: +1.000000000E+001.
PREFIX				Specifies or changes the prefix used in save and recall operations.
PRINT		PRINT	HCOPY[:IMMEDIATE]	Initiates output of the spectrum analyzer display to a printer.
PRNPRT				Directs the printer output to GPIB, serial or parallel ports.
PRINTADRS				Allows you to set the GPIB address of the printer.
		PSDAC		Specifies the preselector peak DAC setting.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
PSTATE		PSTATE		Protects all of the spectrum analyzer user state and trace registers from being changed.
PU	PU	PU <sup>a</sup>		Instructs the spectrum analyzer not to plot vectors on the spectrum analyzer screen until a PD command is received.
PURGE				Deletes the specified file from the current mass storage device. Replaced by DELETE.
PWRBW	PWRBW	PWRBW		Computes the bandwidth around the trace center, which includes signals whose total power is a specified percentage of the total trace signal power.
			CONFIGure:OBW? [:SENSe]:OBWidth:PERCent <percent> READ:OBW: OBWidth?	Turn on OBW measurement. Set the desired percent of power. Return the bandwidth.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
PWRUPTIME	ET?		:SYSTem:PON:ETIMe?	Returns the number of milli-seconds that have elapsed since the spectrum analyzer was turned on. Returns the elapsed time of operation in hours. The HP/Agilent 8590-Series analyzer outputs data in the format: 1.91557506E8. The Agilent PSA analyzer data output format is +2.12926028E+003.
PWRUPTIME?				

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

**R**

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
RB RB <value> RB AUTO RB UP   DN RB?	RB RB UP   DN RB?	RB RB <value> RB AUTO RB UP   DN RB?	[:SENSe]:BANDwidth   BWIDth [:RESolution] <freq> [:SENSe]:BANDwidth   BWIDth [:RESolution]:AUTO OFF   ON   0   1  [:SENSe]:BANDwidth   BWIDth [:RESolution]?	Specifies the resolution bandwidth. Couples the resolution bandwidth to the frequency span. AUTO parameters ON   OFF are not available for the HP/Agilent 8590-Series spectrum analyzers.  The HP/Agilent 8590-Series analyzer outputs data in the format: 75000000. The Agilent PSA analyzer outputs data in the format: +750000000.
		RBR		Specifies the ratio between the resolution bandwidth and the frequency span.
		RCLOSCAL		Recalls averaged open/short reference trace data into trace B.
RCLS	RCLS	RCLS	*RCL <register #>	Recalls spectrum analyzer state data from one of nine state registers in spectrum analyzer memory. These registers do not appear in a FILE catalog.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
RCLT		RCLT		Recalls previously saved trace data, amplitude factors, or limit-line data from the trace registers in spectrum analyzer memory. These registers are specially mapped to named files.
		RCLTHRU	:MMEMory:LOAD:TRACe <label>,<file_name>	The contents of the file are loaded into the specified trace. See the LOAD command.
RELHPIB	RELHPIB	RELHPIB <sup>a</sup>		Recalls a thru-reference trace into trace B.
REPEAT . . . UNTIL	REPEAT . . . UNTIL	REPEAT . . . UNTIL <sup>a</sup>		Releases spectrum analyzer control of the GPIB.
RESETRL				REPEAT/UNTIL forms a looping construct.
RETURN		RETURN <sup>a</sup>		Resets the reference level to instrument preset value.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
REV REV?	REV	REV?		Returns the date code of the firmware revision number in YYMMDD format.  The HP/Agilent 8590-Series analyzer returns the firmware revision number date code in the format: 950129. The Agilent PSA analyzer returns the format: Agilent Technologies, E4440A, US45120125, A.01.00.
RL RL <value> RL UP   DN RL?	RL RL <value> RL UP   DN RL?	RL RL <value> RL UP   DN RL?	:DISPlay:WINDow:TRACe:Y[:SCALe]: RLEVel <ampl>  :DISPlay:WINDow:TRACe:Y[:SCALe]: RLEVel?	Specifies the amplitude value of the reference level.  Sets the amplitude value of the reference level for the y-axis. The active window is assumed when no window is specified.  The HP/Agilent 8590-Series analyzer outputs data in the format: 10.00. The Agilent PSA analyzer outputs data in the format: +1.000000000E+001.
		RLCAL		Calibrates the reference level.
RLPOS				Selects the position of reference level.
RMS	RMS	RMS <sup>a</sup>		Returns the root mean square value of the trace in measurement units.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ROFFSET	ROFFSET	ROFFSET	:DISPlay:WINDow:TRACe:Y[:SCALe]:RLEVel:OFFSet <rel_ampl>	Offsets all amplitude readouts without affecting the trace.  Sets the amplitude reference level for the y-axis. When no window is specified, the active window is assumed.
ROFFSET?	ROFFSET?	ROFFSET?	:DISPlay:WINDow:TRACe:Y[:SCALe]:RLEVel:OFFSet?	The HP/Agilent 8590-Series analyzer outputs data in the format: 10.00. The Agilent PSA analyzer outputs data in the format: +1.00000000E+001.
RQS	RQS	RQS		Sets a bit mask for service requests.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

## S

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
SAVEMENU		SADD <sup>a</sup>		Add a limit-line segment to the current limit line.
SAVES	SAVES	SAVES	*SAV <register #>  :MMEMory:LOAD:STATE <reg_number>,<file_name>	Saves menu 1 under the specified menu number.  Saves the currently displayed instrument state in spectrum analyzer memory. These registers do not appear in a FILE catalog.  The only acceptable delimiter is a single quote('). Only traces and states are supported. Use only file extensions: .TRC, .TRB, .TRA, and .STA. A disk drive name (C: or A:) must be included in the file name. States and traces saved using HP/Agilent 8590-Series analyzers cannot be read by Agilent PSA analyzers.
	SAVES PWRON		:SYSTEM:PRESet[:USER]:SAVE with :SYSTEM:PRESet:TYPE USER	Saves the current state as the instrument power-on preset state.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
SAVET  SAVET TRA SAVET TRB SAVET TRC  SAVET LIMILINE SAVET AMPCOR	SAVET  SAVET TRA SAVET TRB	:MMEMory:STORe:TRACe <label>, <file_name>		Saves the selected trace data and state information in spectrum analyzer memory. These registers are specially mapped to named files.  Agilent PSA analyzers save only state information registers *SAV and *RCL. The only acceptable delimiter is a single quote(. Only traces and states are supported. Limit lines and amplitude corrections are not supported. Use only file extensions: .TRC, .TRB, .TRA, and .STA. A disk drive name (C: or A:) must be included in the file name. States and traces saved using HP/Agilent 8590-Series analyzers cannot be read by Agilent PSA analyzers.  The FORMAT:DATA command changes the data output format
SAVRCLF				Specifies either a save or recall operation.
SAVRCLN				Specifies the number to append to the prefix for a save or recall operation, and initiates the transfer of data.
SAVRCLW				Specifies the data to be transferred.
	SDEL <sup>a</sup>			Deletes the limit-line segment specified with the SEDI command.

a. Added with 85620A mass memory module

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
		SDON <sup>a</sup>		Terminates the SEDI command.
SEGDEL		SEDI <sup>a</sup>		Activates the limit-line segment you identify by its segment number in the limit-line table.
SENDER		SENDER <sup>a</sup>		Deletes the specified segment from the limit-line tables.
SENDER				Enters the limit-line data in either the upper and lower limit-line tables or the mid and delta table for limit lines based on frequency.
SENDER				Enters the limit-line data in either the upper and lower limit-line table or the mid and delta table for limit lines based on sweep time.
SER				Returns the serial number suffix of the spectrum analyzer. For example, serial number 2725A00345 will return 0345.
SER?	SER?		*IDN?	The HP/Agilent 8590-Series analyzer returns the serial number suffix in the format: 0345. The 8560-series analyzers will return the complete serial number: 2725A00345. The Agilent PSA analyzer returns the format: Agilent Technologies, E4440A, US27250345, A.01.00.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
SETDATE		SETDATE <sup>a</sup>	:SYSTem:DATE <year>,<month>,<day>	Sets the date of the real-time clock. Year is a 4-digit integer. Month is an integer 1 to 12. Day is an integer 1 to 31 (depending on the month).
SETDATE?			:SYSTem:DATE?	The HP/Agilent 8590-Series analyzer returns the instrument date in the format: YYMMDD. The Agilent PSA analyzer returns the format: +YYYY, +MM, +DD.
SETTIME		SETTIME <sup>a</sup>	:SYSTem:TIME <hour>,<minute>,<second>	Sets the time of the real-time clock. Hour must be an integer 0 to 23. Minute must be an integer 0 to 59. Second must be an integer 0 to 59.
SETTIME?			:SYSTem:TIME?	The HP/Agilent 8590-Series analyzer returns the instrument time in the format: HHMMSS. The Agilent PSA analyzer returns the format: +HH, +MM, +SS.
	SIGDEL <sup>b</sup>	SIGID		Identifies signals for the external mixing frequency bands.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
	SIGDEL <sup>b</sup>			Specifies the maximum amplitude difference allowed between a signal and its image for the pair to be recognized by the signal identification routine (SIGID).
		SHOWMENU <sup>a</sup>		Displays labels in the softkey area of the display. Use SKYCLR/SKYDEF for labels.
		SKYCLR <sup>a</sup>		Clears all user-defined softkeys set up in DLPs.
		SKYDEF <sup>a</sup>		Used inside a DLP to attach a program to a softkey label.
SMOOTH	SMOOTH	SMOOTH <sup>a</sup>		Smooths the trace according to the number of points specified for the running average.
SMOOTH TRA	SMOOTH TRA	SMOOTH TRA <sup>a</sup>		
SMOOTH TRB	SMOOTH TRB	SMOOTH TRB <sup>a</sup>		
SMOOTH TRC	SMOOTH TRC			
SNGLS	SNGLS	SNGLS	:INITiate:CONTinuous OFF   0	Selects single-sweep mode.

a. Added with 85620A mass memory module

attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
SP	SP	SP		Changes the total displayed frequency range symmetrically about the center frequency.
SP <value> SP UP   DN	SP <value> SP UP   DN	SP <value> SP UP   DN	[:SENSe]:FREQUENCY:SPAN <freq>	Set the frequency span.
SP?	SP?	SP FULL SP ZERO SP LAST SP?	[:SENSe]:FREQUENCY:SPAN:FULL [:SENSe]:FREQUENCY:SPAN 0 Hz [:SENSe]:FREQUENCY:SPAN:PREVIOUS [:SENSe]:FREQUENCY:SPAN?	The HP/Agilent 8590-Series analyzer outputs data in the format: 75000000. The Agilent PSA analyzer outputs data in the format: +750000000.
SPEAKER SPEAKER ON   OFF				Turns the internal speaker on or off.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.

- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
SPZOOM			:CALCulate:MARKer[1]   2   3   4:STATe OFF   ON   0   1 :CALCulate:MARKer[1]   2   3   4: MAXimum :CALCulate:MARKer[1]   2   3   4:TRCKing [:STATe] OFF   ON   0   1	Places a marker on the highest on-screen signal (if an on-screen marker is not present), turns on the signal track function, and activates the span function.
SQLCH		SQUELCH		Sets the squelch threshold by setting the squelch level.
SQR	SQR	SQR <sup>a</sup>		Places the square root of the source into the destination.
SRCALC		SRCALC <sup>d</sup>		Selects internal or external leveling for use with the built-in tracking generator.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
SRCAT				Attenuates the source output level.
		SRCRSTK <sup>d</sup>		Adjusts the coarse tuning of the tracking generator oscillator.
		SRCFINTK <sup>d</sup>		Adjusts the fine tuning of the tracking generator oscillator.
SRCNORM				Subtracts trace B from trace A, adds the display line, and sends the result to trace A.
SRCPOFS		SRCPOFS <sup>d</sup>		Offsets the source power level readout.
SRCPOFS?		SRCPOFS? <sup>d</sup>		
SRCPSTP		SRCSTP <sup>d</sup>		Selects the source-power step size.
SRCPSTP <real>		SRCSTP <real> <sup>d</sup>		Specifies the source power step size to be one vertical scale division.
SRCPSTP AUTO				The HP/Agilent 8590-Series analyzer outputs data in the format: 10.00.
SRCPSTP?		SRCSTP? <sup>d</sup>		Selects the sweep range of the source output.
SRCPSWP		SRCPSWP <sup>d</sup>		The HP/Agilent 8590-Series analyzer outputs data in the format: 10.00.
SRCPSWP?				

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
SRCPWR		SRCPWR <sup>d</sup>		Selects the source power level.
SRCPWR?				The HP/Agilent 8590-Series analyzer outputs data in the format: 10.00.
SRCTK				Adjusts tracking of source output with spectrum analyzer sweep (3.0 GHz tracking generator only).
SRCTK?				The HP/Agilent 8590-Series analyzer outputs data in the format: 2048.
SRCTKPK		SRCTKPK <sup>d</sup>		Adjusts tracking of source output with spectrum-analyzer sweep (3.0 GHz tracking generator only).
SRQ	SRQ	SRQ		The SRQ command is used by an external controller to simulate interrupts from the spectrum analyzer.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
SS SS <value> SS AUTO SS UP   DN SS?	SS SS <value> SS UP   DN SS?	SS SS <value> SS AUTO SS UP   DN SS?	[:SENSe]:FREQuency:CENTer:STEP[:INCRement] <freq> [:SENSe]:FREQuency:CENTer:STEP:AUTO OFF   ON   0   1 [:SENSe]:FREQuency:CENTer:STEP[:INCRement]?	Specifies center-frequency step size. Specifies center-frequency step size. Specifies whether the step size is set automatically based on the span. The HP/Agilent 8590-Series analyzer outputs data in the format: 750000000. The Agilent PSA analyzer outputs data in the format: +750000000.
ST ST <value> ST AUTO ST UP   DN ST?	ST ST <value> ST UP   DN ST?	ST ST <value> ST AUTO ST UP   DN ST?	[:SENSe]:SWEep:TIME <time> [:SENSe]:SWEep:TIME:AUTO OFF   ON   0   1 [:SENSe]:SWEep:TIME?	Specifies the time in which the spectrum analyzer sweeps the displayed frequency (or time) range. Automatically selects the fastest sweep time for the current span. The HP/Agilent 8590-Series analyzer outputs data in the format: .500000. The Agilent PSA analyzer outputs data in the format: +5.00000000E-003.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
STB?		STB?	*STB?	Returns to the controller the decimal equivalent of the status byte.
STDEV	STDEV	STDEV <sup>a</sup>		Returns the standard deviation of the trace amplitude in measurement units.
STOR				Stores data on a RAM card.
		STOREOPEN		Saves the current instrument state and trace A in memory. It's used for open/short calibrations.
		STORESHORT		Averages the current data in trace A with the "open" data. Then stores it in register 8. It's used for open/short calibrations.
		STORETHRU		Stores a thru calibration trace in trace B and in state register 9. It's used for open/short calibrations.
SUB	SUB	SUB <sup>a</sup>		
SUM	SUM	SUM <sup>a</sup>		Returns the sum of the amplitudes of the trace elements in measurement units.
SUMSQR	SUMSQR	SUMSQR <sup>a</sup>		Returns the sum of the squares of the amplitude of each trace element.
	SW			Skips from the current address or the specified address to the next control word.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
SWPCPL		SWPCPL		Selects a stimulus-response (SR) or spectrum analyzer (SA) auto-coupled sweep time.
SWPCPL SR   SA		SWPCPL SR   SA		Specifies the type of automatic coupling for the fastest sweep time at the current span. This varies based on the current measurement mode.
SWPCPL?		SWPCPL?		The HP/Agilent 8590-Series analyzer returns SR or SA.
		SWPOUT RAMP   FAV   FAVA		Selects the output for J8. (For HP/Agilent 8564E/8565E only.)
SYNCMODE				Selects either the horizontal and vertical synchronizing constants, or the synchronization rate for the internal monitor.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

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HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
TA	TA	TA	TRACe[DATA]? TRACE1	Returns trace A amplitude values from the spectrum analyzer to the controller. Returns TRACE1 (trace A) amplitude values from the spectrum analyzer to the controller.
TB	TB	TB	TRACe[DATA]? TRACE2	Returns trace B amplitude values from the spectrum analyzer to the controller. Returns TRACE2 (trace B) amplitude values from the spectrum analyzer to the controller.
TDF	TDF	TDF		Formats trace information for return to the controller.
TDF A   B   M   I	TDF A   B   M   I	TDF A   B   M   I		There is no equivalent for A, B, M or I formats.
TDF P	TDF P	TDF P	:FORMat[:TRACe][:DATA] ASCii	The queries TRA?, TRB?, and TRC? always return in TDF P format.
TDF?	TDF?	TDF?	:FORMat[:TRACe][:DATA] :FORMat[:TRACe][:DATA] ASCii   INTegeR,16   REAL,32   REAL,64 :FORMat[:TRACe][:DATA]?	

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

T

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
TEXT	TEXT	TEXT <sup>a</sup>		Writes text on the analyzer screen at the current pen position.
TH	TH	TH		Clips signal responses below the threshold level.
TH <value>	TH <value>	TH <value>		
TH AUTO	THE ON   OFF	TH ON   OFF		
TH UP   DN	TH UP   DN	TH UP   DN		
TH?	TH?	TH?		

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
TIMEDATE		TIMEDATE <sup>a</sup>	:SYSTem:TIME <hour>, <minute>, <second> :SYSTem:DATE <year>, <month>, <day>	Sets the time/date of the real-time clock.  Year is a 4-digit integer. Month is an integer 1 to 12. Day is an integer 1 to 31.
TIMEDATE?			:SYSTem:DATE? :SYSTem:TIME?	The HP/Agilent 8590-Series analyzer returns the time/date in the format: YYMMDDHHMMSS. The Agilent PSA analyzer returns the format: +YYYY, +MM, +DD for the date query, and +HH, +MM, +SS for the time query. Both queries must be sent to receive the same information given by the single HP/Agilent 8590 query.
TIMEDSP			:DISPlay:ANNOtation:CLOCK[:STATe] OFF   ON   0   1 :DISPlay:ANNOtation:CLOCK[:STATe]?	Turns the real-time clock display on or off.  Turns the spectrum analyzer display of date and time on and off. The time and date pertain to all windows.  The HP/Agilent 8590-Series analyzer outputs ON or OFF. The Agilent PSA analyzer outputs 1 or 0.

- a. Added with 85620A mass memory module attached.
- b. No equivalent command for 8568B analyzer.
- c. No equivalent command for 8566B analyzer.
- d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
TITLE	TITLE	TITLE	:DISPlay:ANNotation:TITLe:DATA <string>	Activates the screen title mode.
TM	TM	TM		Specifies trigger mode.
TM FREE	TM FREE	TM FREE	:TRIGger[:SEQuence]:SOURce	Specifies the source (or type) of triggering used to start a measurement. Immediate is free-run triggering. Video triggers on the video signal. Line triggers on the power line signal. External allows you to connect an external trigger source.
TM VID	TM VID	TM VID	IMMediate   VIdeo   LINE   EXTernal[1]   EXTernal[2]	
TM LINE	TM LINE	TM LINE		
TM EXT	TM EXT	TM EXT		
TM?	TM?	TM?	:TRIGger[:SEQuence]:SOURce?	The HP/Agilent 8590-Series analyzer outputs: FREE, VID, LINE, or EXT. The Agilent PSA analyzer outputs: IMM, VID, LINE, EXT1, or EXT2.
TOI				Turns the third-order intermodulation (TOI) measurement on or off.
TOIR				Returns the highest third-order intermodulation product measured by the third-order intermodulation measurement (TOI).

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
TRA TRB TRC  TRA?  TRB?  TRC?	TRA TRB TRC	TRA TRB  TRA?  TRB?	:TRACe[:DATA] <trace_name>,<definite_length_block>  :TRACe[:DATA]? <trace_name>	Controls trace data input or output.  Transfers the trace data from the controller to the instrument. The query reads trace data out of the instrument. The data is in a machine readable format that the analyzer understands.  The data format for the command and query is always TDF P. The HP/Agilent 8590-Series analyzer returns data in the format: -57.71, -58.12, -56.87. The Agilent PSA analyzer returns data in the format: -5.46380000E+001, -5.44410000E+001, -5.47590000E+001. This is an example of IEEE NR3 numeric response data.
TRCMEM				Returns a non-negative integer that indicates the total number of trace registers available for SAVET and RCLT.
TRDEF	TRDEF	TRDEF <sup>a</sup>		Creates a user-defined trace.
TRDSP	TRDSP			Turns the display of trace A, B, or C on or off. It does this without clearing the trace (measurements can still be taken).
TRGRPH	TRGRPH			Displays a compressed trace on the analyzer display.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8566B analyzer.

c. No equivalent command for 8568B analyzer.

d. Option 002 only.

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HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
TRMATH	TRMATH	TRIGPOL	:TRIGger:SLOPe POSitive   NEGative	Selects the edge (pos or neg) of the trigger input that causes the trigger event.
TRPRST	TRPRST			Executes a list of analyzer commands at the end of each sweep.
TRSTAT	TRSTAT			Sets the trace operations to their preset values.
<p>a. Added with 85620A mass memory module attached.</p> <p>b. No equivalent command for 8568B analyzer.</p>			<p>:TRACe[1]   2   3:MODE?</p>	<p>Returns the status of traces A, B, and C: clear write, blank, view, minimum hold, or maximum hold.</p> <p>Traces are: TRACE[1]   2   3. TRACE1 corresponds to trace A, TRACE2 corresponds to trace B, and TRACE3 corresponds to trace C.</p> <p>The HP/Agilent 8590-Series analyzer returns the format: CLRW A;BLANK B;BLANK C; The Agilent PSA analyzer returns the format: WRIT;BLAN;BLAN. All three traces in the analyzer will be queried, with an EOI after each response.</p>

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.



HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
TS	TS	TS		Starts and completes one full sweep before the next command is executed. Allows you to determine when the spectrum analyzer has started to execute all commands prior to and including TS.
TVLINE			:INITiate [:IMMEDIATE]	Sets the line number of the horizontal line of video on which to trigger.
TVSRM				Specifies type of video frame to trigger on.
TVSTND				Selects the triggering for the various formats available.
TVSYNC				Selects between negative and positive triggering for video frame formats.
TWNDOW	TWNDOW	TWNDOW		Creates a window trace array for the fast Fourier transform (FFT) function.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

**U - Z**

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
UP				Increases the active function by the applicable step size. Each HP/Agilent 8590-Series command to which DN can be applied will have <step> = DOWN   UP as a parameter in the SCPI command. UP (as well as DN) can only be sent as a parameter in SCPI.
USTATE	UR			Provides the upper right x-y recorder output voltage at the rear panel.
VARDEF	VARDEF	VARDEF <sup>a</sup>		Transmits information that has been stored in the analyzer by the user.
VARIANCE	VARIANCE	VARIANCE <sup>a</sup>		Creates a user-defined variable and assigns it a value.
				Returns the amplitude variance of the specified trace, in measurement units.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
VAVG	VAVG	VAVG		Enables the video-averaging function, which averages trace points to smooth the displayed trace.
VAVG <number>	VAVG <number>	VAVG <number>	[[:SENSe]:AVERage:COUNT <integer>	Specifies the number of measurements that are combined.
VAVG ON   OFF	VAVG ON   OFF	VAVG ON   OFF	[[:SENSe]:AVERage[:STATe] OFF   ON   0   1	Specifies the number of measurements that are combined. The value of successive measurements can be combined together to average out measurement variations.
VAVG?		VAVG UP   DN VAVG?	[[:SENSe]:AVERage:COUNT?	The HP/Agilent 8590-Series analyzer returns the count in the format: 100 when VAVG is ON, and returns 0 when VAVG is OFF. The Agilent PSA analyzer returns +100 when VAVG is ON, and returns 0 when VAVG is OFF.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
VB VB <value> VB AUTO VB UP   DN VB?	VB VB <value> VB AUTO VB UP   DN VB?	VB VB <value> VB AUTO   MAN VB UP   DN VB?	[:SENSe]:BANDwidth   BWIDth:VIDeo <freq> [:SENSe]:BANDwidth   BWIDth:VIDeo: AUTO OFF   ON   0   1 [:SENSe]:BANDwidth   BWIDth:VIDeo?	Specifies the video bandwidth. Couples the video bandwidth to the resolution bandwidth. The HP/Agilent 8590-Series analyzer outputs data in the format: 750000000. The Agilent PSA analyzer outputs data in the format: +750000000.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
<p>VBR</p> <p>VBR &lt;value&gt;</p> <p>VBR UP   DN</p> <p>VBR?</p>	<p>VBO</p>	<p>VBR</p> <p>VBR &lt;value&gt;</p> <p>VBR UP   DN</p> <p>VBR?</p>	<p>[[:SENSe]:BANDwidth   BWIDTHh:VIDeo:RATio &lt;number&gt;</p> <p>[[:SENSe]:BANDwidth   BWIDTHh:VIDeo:RATio?]</p>	<p>Specifies coupling ratio of video bandwidth to resolution bandwidth.</p> <p>Specifies the ratio of the video bandwidth to the resolution bandwidth. This parameter is multiplied by the resolution bandwidth to determine the automatic setting of the video bandwidth.</p> <p>Specifies the ratio between the video bandwidth and the resolution bandwidth. For example: an entry of +1 sets the video bandwidth one bandwidth step wider than the resolution bandwidth.</p> <p>The HP/Agilent 8590-Series analyzer outputs data in the format: .3000000. The Agilent PSA analyzer outputs data in the format: +3.000000000E-001.</p>
<p>VIEW</p> <p>TRA   TRB   TRC</p>	<p>VIEW</p> <p>TRA   TRB   TRC</p>	<p>VIEW TRA   TRB</p>	<p>TRACe[1]   2   3:MODE VIEW</p>	<p>Displays trace A, trace B, or trace C, and stops taking new data into the viewed trace.</p>

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
WAIT	VTL VTL <ampl> VTL UP   DN VTL?	TRIGger:VIDeo:LEVel <ampl>  TRIGger:VIDeo:LEVel?		Sets the level for video trigger.
WINNEXT				Suspends all spectrum analyzer operation for the specified time duration.
WINOFF				Makes the window that is currently not the active window, active.
WINON				Turns off the windows display.
WINZOOM				Activates the windows display mode.
XCH	XCH			Expands the size of the active window so that it fills the entire spectrum analyzer display.
XCH TRA   TRB   TRC TRA   TRB   TRC			:TRACe:EXCHange <trace_1>,<trace_2>	Exchanges traces. Exchanges two traces, point by point. Trace_1 choices are: TRACE[1]   2   3 Trace_2 choices are: TRACE[1]   2   3
a. Added with 85620A mass memory module attached. b. No equivalent command for 8568B analyzer.			c. No equivalent command for 8566B analyzer. d. Option 002 only.	

HP/Agilent 8590-Series Analyzers Commands	HP 8566B and 8568B Analyzer Commands	HP/Agilent 8560E/EC-Series Analyzers Commands	Corresponding PSA Series Analyzers SCPI Commands	Description/Comments
ZMKCNTR				Positions the zone marker at the specified frequency.
ZMKPKNL				Places the zone marker at the next signal peak that is left of the current position of the zone marker.
ZMKPKNR				Places the zone marker at the next signal peak that is left of the current position of the zone marker.
ZMKSPAN				Allows you to change the width of the zone marker.

a. Added with 85620A mass memory module attached.

b. No equivalent command for 8568B analyzer.

c. No equivalent command for 8566B analyzer.

d. Option 002 only.

## How to Represent Units

HP/Agilent 8590-Series Analyzers	HP 8566B and 8568B Analyzer	HP/Agilent 8560E/EC Series Analyzers	PSA Series Analyzers
HZ	HZ	HZ	HZ
KZ, KHZ	KZ	KZ, KHZ	KHZ
MZ, MHZ	MZ	MZ, MHZ	MHZ
GZ, GHZ	GZ	GZ, GHZ	GHZ
DB	DB	DB	DB
DM, DBM	DM, DBM	DM, DBM	DBM
DBMV	DBMV	DBMV	DBMV
DBUV	DBUV	DBUV	DBUV
V	V	V	V
MV	MV	MV	MV
UV	UV	UV	UV
W, MW, UW		MW	W
SC	SC	S, SC	S
MS	MS	MS	MS
US	US	US	US
A		A	
MA		MA	
UA		UA	



## Additional Alternate Commands

The alternate commands listed in the following table provide compatibility with commands used by the HP/Agilent 8566A/B, HP/Agilent 8568A/B, and HP/Agilent 70000 Series analyzers. The equivalent commands for the HP/Agilent 8590-Series spectrum analyzers are listed in the far right column.

Alternate Commands	Description	HP/Agilent 8590-Series Command
A1	Clear write trace A	CLRW TRA
A2	Max hold trace A	MXMH TRA
A3	Store and view trace A	VIEW TRA
A4	Store and blank trace A	BLANK TRA
B1	Clear write trace B	CLRW TRB
B2	Max hold trace B	MXMH TRB
B3	Store and view trace B	VIEW TRB
B4	Store and blank trace B	BLANK TRB
BL	B – DL → B	BML
C1	Trace A minus trace B off	AMB OFF
C2	Trace A minus trace B on	AMB ON
CA	Coupled input attenuation	AT AUTO
CR	Coupled resolution bandwidth	RB AUTO
CS	Coupled step size	SS AUTO
CT	Coupled sweep time	ST AUTO
CV	Coupled video bandwidth	VB AUTO
E1	Peak search	MKPK HI
E2	Enter marker into center frequency	MKCF
E3	Enter marker delta into center frequency step size	MKSS
E4	Enter marker amplitude into reference level	MKRL
EM	Erase graphics memory	CLRDSP
EX	Exchange trace A and B	AXB

Alternate Commands	Description	HP/Agilent 8590-Series Command
KSA KSB KSC KSD KSE KSG KSH KSM KSO KSZ KSc KSi KSl KSm KSn KSo KSp	dBm amplitude units dBmV amplitude units dBuV amplitude units Volt amplitude units Screen title Video average on Video average off Marker noise Marker value to span Reference level offset Trace A plus trace B into trace A Exchange trace B and C Trace B into trace C Graticule off Graticule on Annotation off Annotation on	AUNITS DBM AUNITS DBMV AUNITS DBUV AUNITS V TITLE VAVG ON VAVG OFF MKNOISE MKSP ROFFSET APB BXC BTC GRAT OFF GRAT ON ANNOT OFF ANNOT ON
L0	Display line off	DL OFF
M1 M2 M3 MA MC MT0 MT1	Marker off Marker normal Marker delta Marker amplitude Marker count Marker track off Marker track on	MKOFF MKN MKD MKA? MKFC MKTRACK OFF MKTRACK ON
O1 O2 O3 O4	Output format, in real number format Output format, in binary format, two bytes (word) per element Output format, in measurement data format Output format, in binary format, 1 byte per element	TDF P TDF B;MDSW TDF M TDF B;MDS B

<b>Alternate Commands</b>	<b>Description</b>	<b>HP/Agilent 8590-Series Command</b>
R1 R2 R3 R4 RC	Activates illegal command service request only Activates end of sweep, illegal command Activates broken hardware, illegal command Activates units key pressed, illegal command Recall state	RQS 32 RQS 36 RQS 40 RQS 34 RCLS
S1 S2 SV	Sweep continuous Sweep single Save state	CONTS SNGLS SAVES
T0 T1 T2 T3 T4 T7 T8	Threshold off Trigger mode free run Trigger mode line Trigger mode external Trigger mode video Trigger mode level Trigger mode edge	TH OFF TM FREE TM LINE TM EXT TM VID GATECTL LEVEL GATECTL EDGE

