
Error Messages

The spectrum analyzer can generate various messages that appear on its screen during operation to indicate a problem.

There are three types of messages: hardware error messages (H), user-created error messages (U), and informational messages (M).

- Hardware error messages indicate the spectrum analyzer hardware is probably broken.
- User-created error messages appear when the spectrum analyzer is used incorrectly. They are usually generated during remote operation (entering programming commands using either a controller or the external keyboard).
- Informational messages provide information indicating the spectrum analyzer progress within a specific procedure.

The messages are listed in alphabetical order on the following pages; each message is defined, and its type is indicated by an (H), (U), or (M).

ϕ LOCK OFF

Indicates slow YTO tuning. This message may appear if the spectrum analyzer is using default correction factors. If this message appears constantly, perform the CAL FREQ routine to try to eliminate this message. ϕ LOCK OFF appears briefly during the CAL FREQ routine, during instrument preset, or when the frequency value is changed; this is normal and does not indicate a problem. (U) and (H)

ADC-2V FAIL

ADC-GND FAIL

ADC-TIME FAIL

Cal harmonic > = 5.7 GHz NOT found

Indicates that the CAL YTF routine for an HP 85953 cannot find a harmonic of the 300 MHz calibration signal. If this happens, ensure that the CAL OUT connector is connected to the spectrum analyzer input, perform the CAL FREQ & AMPTD routine, and then perform the CAL YTF routine again. (U) and (H)

CAL:- - -

During the self-calibration routine, messages may appear on the display to indicate how the calibration routines are progressing. For example, sweep, freq, span, MC delay, FM coil, and atten can appear on the spectrum analyzer display. ϕ LOCK OFF appears briefly during the CAL FREQ self-calibration routine; this is normal and does not indicate a problem. (M)

CAL: DONE: Press CAL STORE to save

Indicates that the self-calibration routine is finished and that you should press CAL STORE . (M)

CAL: cannot execute CALAMP enter: 0 dB PREAMP GAIN

The preamplifier gain should be set to 0 dB before the CAL AMPTD routine is performed. The preamplifier gain is set by using EXTERNAL PREAMPG . This message also sets SRQ 110. (U)

CAL: DATA NOT STORED CAL AMP NEEDED

The correction factors are corrupt and cannot be stored. You need to perform the

CAL FREQ & AMPTD routine before trying to store the correction factors. This message also sets SRQ 110. (U)

CAL: FM SPAN SENS FAIL

The spectrum analyzer could not set up span sensitivity of the FM coil. (H)

CAL: GAIN FAIL

Indicates the signal amplitude is too low during the CAL AMPTD routine. This message also sets SRQ 110. (H)

CAL: MAIN COIL SENSE FAIL

The spectrum analyzer could not set up span sensitivity of the main coil. If this message appears, press **[FREQUENCY]**, -37, (Hz), (CAL), More 1 of 4, More 2 of 4, DEFAULT CAL DATA, and perform the CAL FREQ routine again. (H)

CAL: NBW 200 Hz notch amp failed

Indicates that the 200 Hz resolution bandwidth is not the correct shape for the calibration routine. (H)

CAL: NBW 200 Hz notch failed

Indicates that the 200 Hz resolution bandwidth is not the correct shape for the calibration routine. (H)

CAL: NBW 200 Hz width failed

Indicates that the 200 Hz resolution bandwidth is not the correct bandwidth for the calibration routine. (H)

CAL: NBW gain failed

Indicates that one of the resolution bandwidths is not the correct amplitude for the calibration routine. (H)

CAL: NBW width failed

Indicates that one of the resolution bandwidths is not the correct width for the calibration routine. (H)

CAL: PASSCODE NEEDED

Indicates that the function cannot be accessed without the pass code. For the DEFAULT CAL DATA function, the pass code is setting the center frequency of the spectrum analyzer to -37 Hz. (M)

CAL: RES BW AMPL FAIL

The relative insertion loss of the resolution bandwidth is incorrect. This message also sets SRQ 110. (H)

CAL SIGNAL NOT FOUND

Indicates the calibration signal (CAL OUT) cannot be found. Check that the CAL OUT and the spectrum analyzer input connectors are connected with an appropriate cable. If the calibration signal is connected to the spectrum analyzer input but cannot be found, press **[FREQUENCY]**, -37, **[Hz]**, (CAL), More 1 of 4, More 2 of 4, DEFAULT CAL DATA. If the calibration signal still cannot be found, press **[FREQUENCY]**, -37, **[Hz]** and perform the CAL FREQ or CAL FREQ & AMPTD self-calibration routines. This message also sets SRQ 110. (U) and (H)

CAL: SPAN SENS FAIL

The self-calibration span sensitivity routine failed. This message also sets SRQ 110. (H)

CAL: USING DEFAULT DATA

Indicates that the calibration data is corrupt and the default correction factors are being used. Interruption of the self-calibration routines or an error can cause this problem. (M)

CAL: YTF FAILED

Indicates that the CAL YTF routine could not be successfully completed. If this message appears, ensure that the CAL OUT connector (for the 85953) or 100 MHz COMB OUT connector (for the 8592L, 85933, or 85963) is connected to the spectrum analyzer input, perform the CAL FREQ & AMPTD routine, and then perform the CAL YTF routine again. (U) and (H)

CAL: ZERO FAIL

The spectrum analyzer could not set up the tuning sensitivity of the main coil. If this message appears, press **FREQUENCY**, -37, (Hz), **CAL**, More 1 of 4, More 2 of 4, DEFAULT CAL DATA, and perform the CAL FREQ routine again. (H)

Cannot engage phase lock with current CAL FREQ data

Indicates that the CAL FREQ routine needs to be performed before phase locking can be turned on. (U)

Cannot reach N dB points

Indicates that the number of dB specified for the N dB PTS function is greater than the distance of the signal peak from the spectrum analyzer noise floor or peak threshold. (U)

Check trigger input

Indicates that the spectrum analyzer needs an external trigger signal to use the time-gating functions. Before using the time-gating functions, you should ensure there is a trigger pulse connected to the GATE TRIGGER INPUT connector on the rear panel of spectrum analyzer and that the GATE OUTPUT is connected the EXT TRIG INPUT connector. (U)

Comb harmonic at --- GHz NOT found

Indicates that the CAL YTF routine for the spectrum analyzer cannot find a harmonic of the comb generator at frequency displayed. If this happens, ensure that the 100 MHz COMB OUT connector (for an 8592L, 85933, or 8596E) or the CAL OUT connector (for an 85953) is connected to the spectrum analyzer input with a low-loss, short cable before the CAL YTF routine is performed. (U) and (H)

COMB SIGNAL NOT FOUND

The comb signal cannot be found. Check that 100 MHz COMB OUT is connected to the spectrum analyzer input. The comb generator is available with the 8592L, 85933, or 85963 only. (U) and (H)

CMD ERR:- - -

The specified programming command is not recognized by the spectrum analyzer. Press ANNOTATN ON OFF to clear, (U)

CONF TEST FAIL

Indicates that the confidence test failed. If this happens, ensure that the CAL OUT connector is connected to the spectrum analyzer input, perform the CAL FREQ & AMPTD routine, and then perform the confidence test again. This message also sets SRQ 110. (H) and (U)

EMPTY DLP MEM

Indicates that the user-defined items (user-defined functions, user-defined variables, user-defined traces, user-defined softkeys) and any personalities (for example, the HP 85716A CATV System Monitor Personality) in the spectrum analyzer memory have been deleted. If the message is continuously displayed at power up, it may indicate a hardware failure. See the spectrum analyzer Service Guide for more information. (U)

Factory dlp, not editable

Indicates that the downloadable program or variable that you have selected is used by a "personality" and cannot be edited. A personality is a program that is manufactured by Hewlett Packard and is available for use with the HP 8590 Series spectrum analyzer. An example of a personality is the 85716A CATV system monitor personality. (U)

FAIL:- - -

An error was discovered during the power-up check. The 4-digit by 10-digit code indicates the type of error. Error codes are described in the spectrum analyzer service guide. (H)

File type incompatible

Indicates that the selected file is not a display image file. The file name for a display image file is always preceded by an "i." (U)

FREQ UNCAL

If the FREQ UNCAL message appears constantly, it indicates a YTO-tuning error. If this message appears constantly, perform the CAL FREQ routine. FREQ UNCAL appears briefly during the CAL FREQ routine; this is normal and does not indicate a problem. (U) and (H)

Function not available in current Mode

Indicates that the function that you have selected can only be used with the spectrum analyzer mode. You can use the **MODE** key to select the spectrum analyzer mode. (U)

Function not available with analog display

Indicates that the function that you have selected is not compatible with the Analog+ display mode. To use the function, you must first turn off the Analog+ display mode with ANALOG+ ON OFF. (U)

Gate card not calibrated

This message can indicate that either the CAL AMPTD routine need to be performed before the time-gating functions can be used, or that something was connected to the GATE TRIGGER INPUT connector during the CAL AMPTD or CAL FREQ & AMPTD routines. If your spectrum analyzer has an Option 105 installed in it, you should ensure that nothing is connected to the GATE TRIGGER INPUT connector when the CAL AMPTD or CAL FREQ & AMPTD routines are performed. (U) and (H)

INTERNAL LOCKED

The spectrum analyzer internal trace and state registers have been locked. To unlock the trace or state registers, press SAV LOCK ON OFF so that OFF is underlined. For remote operation, use PSTATE OFF. (U)

INVALID ACTDEF: - - -

The specified ACTDEF name is not valid. See the ACTDEF programming command. (U)

INVALID AMPCOR: FREQ

For the AMPCOR command, the frequency data must be entered in increasing order. See the description for the AMPCOR programming command for more information. (U)

INVALID BLOCK FORMAT: IF STATEMENT

An invalid block format appeared within the IF statement. See the description for the IF THEN ELSE ENDIF programming command for more information. (U)

INVALID CARD

Indicates one of the following conditions: a card reader is not installed, the memory card is write-protected (check the position of the switch on the memory card), the memory card is a read-only memory (ROM) card, or a memory card has not been inserted. This message can also occur if remote programming commands for the memory card capability are executed with an 8590L, 8592L, or 8594L that does not have an Option 003. (U)

INVALID CARD: BAD MEDIA

Indicates the formatting routine (FORMAT CARD) for the memory card could not be completed. See the description for INVALID CARD above for more information about the possible causes of this message. (U) and (H)

INVALID CARD: DATA ERROR

Indicates the data could not be retrieved from the memory card. (U) and (H)

INVALID CARD: DIRECTORY

Indicates the memory card has not been formatted. (U)

INVALID CARD: NO CARD

Indicates a memory card has not been inserted. (U)

INVALID CARD: TYPE

Indicates one of the following conditions: a card reader is not installed, the memory card is write-protected (check the position of the switch on the memory card), the memory card is a read-only memory (ROM) card, or a memory card has not been inserted. This message can also occur if remote programming commands for the memory card capability are executed with an 8590L, 8592L, or 8594L that does not have an Option 003. (U)

INVALID CHECKSUM: USTATE

The user-defined state does not follow the expected format. (U)

INVALID COMPARE OPERATOR

An IF/THEN or REPEAT/UNTIL routine is improperly constructed. Specifically, the IF or UNTIL operands are incorrect. (U)

INVALID DET: FM or TV option only

Indicates that the selected detector cannot be used until the appropriate option is installed in the spectrum analyzer. (U)

INVALID ENTER FORMAT

The enter format is not valid. See the appropriate programming command description to determine the correct format. (U)

INVALID <file name> NOT FOUND

Indicates that the specified file could not be loaded into spectrum analyzer memory or purged from memory because the file name cannot be found. (U)

INVALID FILENAME ---

Indicates the specified file name is invalid. A file name is invalid if there is no file name specified, if the first letter of the file name is not alphabetic, or if the specified file type does not match the type of file. See the description SAVRCLW or STOR programming command for more information. (U)

INVALID FILE: NO ROOM

Indicates that there is insufficient space available on the memory card to store the data. (U)

INVALID HP-IB ADRS/OPERATION

An HP-IB operation was aborted due to an incorrect address or invalid operation. Check that there is only one controller (the spectrum analyzer) connected to the printer or plotter. (U)

INVALID HP-IB OPERATION REN TRUE

The HP-IB operation is not allowed. (This is usually caused by trying to print or plot when a controller is on the interface bus with the spectrum analyzer.) To use the spectrum analyzer print or plot functions, you must disconnect any other controllers on the HP-IB. If you are using programming commands to print or plot, you can use an HP BASIC command instead of disconnecting the controller. See the *8590 E-Series and L-Series Spectrum Analyzer and 8591C Cable TV Analyzer Programmer's Guide* for more information. (U)

INVALID ITEM:- - -

Indicates an invalid parameter has been used in a programming command. (U)

INVALID KEYLBL: - - -

Indicates that the specified key label contains too many characters. A key label is limited to 8 printable characters per label line. (U)

INVALID KEYNAME: - - -

The specified key name is not allowed. (The key name may have conflicted with a spectrum analyzer programming command.) To avoid this problem, use an underscore as the second character in the key name, or avoid beginning the key name with the following pairs of letters: LB, OA, OL, TA, TB, TR, MA, MF, TS, OT, and DR. (U)

INVALID OUTPUT FORMAT

The output format is not valid. See the appropriate programming command description to determine the correct format. (U)

INVALID RANGE: Stop < Start

Indicates that the first trace element specified for a range of trace elements is larger than the ending trace element. When specifying a trace range the starting element must be less than the ending element. For example, TRA[2,300] is legal but TRA[300,2] is not. (U)

INVALID REGISTER NUMBER

The specified trace register number is invalid. (U)

INVALID REPEAT MEM OVFL

Memory overflow occurred due to a REPEAT routine. This can occur if there is not enough spectrum analyzer memory for the REPEAT UNTIL declaration, or if the REPEAT UNTIL declaration exceeds 2047 characters. (U)

INVALID REPEAT NEST LEVEL

The nesting level in the REPEAT routine is improperly constructed. This can occur if too many REPEAT routines are nested. When used within a downloadable program (DLP), the maximum number of REPEAT UNTIL statements that can be nested is 20. (U)

INVALID RS-232 ADRS/OPERATION

An RS-232 operation was aborted due to an invalid operation. (U)

INVALID SAVE REG

Data has not been saved in the specified state or trace register, or the data is corrupt. (U)

INVALID SCRMOVE

Indicates the spectrum analyzer may have a hardware failure. See The spectrum analyzer Service Guide for more information. (H)

INVALID START INDEX

Indicates that the first trace element specified for a range of trace elements is not within the trace range of the specified trace. (U)

INVALID STOP INDEX

Indicates that the ending trace element specified for a range of trace elements is not within the trace range of the specified trace. (U)

INVALID STORE DEST: - - -

The specified destination field is invalid. (U)

INVALID TRACE: - - -

The specified trace is invalid. (U)

INVALID TRACE NAME: - - -

The specified trace name is not allowed. Use an underscore as the second character in the trace name, or avoid beginning the trace name with the following pairs of letters: LB, OA, OL, TA, TB, TR, MA, MF, TS, OT, and DR. (U)

INVALID TRACENAME: - - -

Indicates the specified trace could not be saved because the trace name is not allowed. To avoid this problem, use an underscore as the second character in the trace name, or avoid beginning the trace name with the following pairs of letters: LB, OA, OL, TA, TB, TR, MA, MF, TS, OT, and DR. (U)

INVALID VALUE PARAMETER: - - -

The specified value parameter is invalid. (U)

INVALID VARDEF: - - -

The specified variable name is not allowed. To avoid this problem, use an underscore as the second character in the variable label, or avoid beginning the variable label with the following pairs of letters: LB, OA, OL, TA, TB, TR, MA, MF, TS, OT, and DR. (U)

INVALID WINDOW TYPE: - - -

The specified window is invalid. See the description for the TWINDOW programming command. (U)

LOST SIGNAL

For the 8592L, 8593E, or 85963, this message indicates that the cable from the 100 MHz COMB OUT connector to the spectrum analyzer input is defective or has become disconnected during the CAL YTF routine. For the 85953, this message indicates that the cable from the CAL OUT connector is defective or has been disconnected during the CAL YTF routine. Be sure to use a short, low-loss cable to connect the signal to the spectrum analyzer input when performing the CAL YTF routine. (U)

LO UNLVL

Indicates that the spectrum analyzer local oscillator distribution amplifier is not functioning properly. (H)

Marker Count Reduce SPAN

Indicates the resolution bandwidth to span ratio is too small to use the marker count function. Check the span and resolution bandwidth settings. (U)

Marker Count Widen RES BW

Indicates that the current resolution bandwidth setting is too narrow to use with the marker counter function. The marker counter function can be in narrow resolution bandwidths (bandwidths that are less than 1 kHz) with the following procedure:

1. Place the marker on the desired signal.
2. Increase the resolution bandwidth to 1 kHz and verify the marker is on the signal peak.
3. If the marker is on the signal peak, the marker count function can be used in either the 1 kHz resolution bandwidth or the original narrow resolution bandwidth setting. If the marker is not on the signal peak, it should be moved to the signal peak and the marker counter function should not be used with a resolution bandwidth setting of less than 1 kHz.

(U)

MEAS UNCAL

The measurement is uncalibrated. Check the sweep time, span, and bandwidth settings, or press **AUTO COUPLE**, AUTO ALL. (U)

MEMORY OVERFLOWERASE DLP MEM and reload

This message indicates that too many user-defined items (functions, variables, key definitions), or downloadable programs have been loaded into spectrum analyzer memory. If this message appears, use ERASE DLP MEM and then load the user-defined item or downloadable program into spectrum analyzer memory. (U)

No card found

Indicates that the memory card is not inserted. (U)

No points defined

Indicates the specified limit line or amplitude correction function cannot be performed because no limit line segments or amplitude correction factors have been defined. (U)

OVEN COLD

Indicates that the spectrum analyzer has been powered up for less than 5 minutes. (The actual temperature of the precision frequency oven is not measured.) (Option 004 only.) (M)

PARAMETER ERROR: - - -

The specified parameter is not recognized by the spectrum analyzer. See the appropriate programming command description to determine the correct parameters. (U)

PASSCODE NEEDED

Indicates that the function cannot be accessed without the pass code. (U)

POS-PK FAIL

Indicates the positive-peak detector has failed. (H)

REF UNLOCK

Indicates that the frequency reference is not locked to the external reference input. Check that the 10 MHz REF OUT connector is connected to the EXT REF IN connector, or, when using an external reference, that an external 10 MHz reference source of sufficient amplitude is connect to the EXT REF IN connector. (U) and (H)

Require 1 signal > PEAK EXCURSION above THRESHOLD

Indicates that the N dB PTS routine cannot locate a signal that is high enough to measure. The signal must be greater than the peak excursion above the threshold level to measure. (U)

Require 3 signals > PEAK EXCURSION above THRESHOLD

Indicates that the % AM routine cannot locate three signals that are high enough to measure. The signals must be greater than the peak excursion above the threshold level to measure. (U)

Require 4 signals > PEAK EXCURSION above THRESHOLD

Indicates that the TO1 routine cannot locate four signals that are high enough to measure. The signals must be greater than the peak excursion above the threshold level to measure. (U)

Required option not installed Some spectrum analyzer functions require that an option be installed in the spectrum analyzer. See the description for the function in the *HP 8590 E-Series and L-Series Spectrum Analyzers* User's Guide for more information about which option is required. (U)

RES-BW NOISE FAIL

Indicates the noise floor level is incorrect at the indicated bandwidth. (H)

RES-BW SHAPE FAIL

Indicates the 3 dB bandwidth is not within specifications. (H)

RF PRESEL ERROR

Indicates that the preselector peak routine cannot be performed. (H)

RF PRESEL TIMEOUT

Indicates that the preselector peak routine cannot be performed. (H)

SAMPLE FAIL

Indicates the sample detector has failed. (H)

SETUP ERROR

Indicates that the span, channel bandwidth, or channel spacing are not set correctly for the adjacent channel power or channel power measurement. (U)

SIGNAL NOT FOUND

Indicates the PEAK ZOOM routine did not find a valid signal. (U)

SIGNAL CLIPPED

Indicates that the current FFT measurement sweep resulted in a trace that is above the top graticule line on the spectrum analyzer display. If this happens, the input trace (trace A) has been "clipped," and the FFT data is not valid. (U)

Signals do not fit expected % AM pattern

Indicates that the % AM routine cannot perform the percent AM measurement because the on-screen signals do not have the characteristics of a carrier with two sidebands. (U)

Signals do not fit expected TO1 pattern

Indicates that the TO1 routine cannot perform the third-order intermodulation measurement because the on-screen signals do not have the characteristics of two signals and two distortion products. (U)

SMPLR UNLCK

Indicates that the sampling oscillator circuitry is not functioning properly. If this message appears, check that the external frequency reference is correctly connected to the EXT REF INPUT. (U) and (H)

SOFTKEYOVFL

Softkey nesting exceeds the maximum number of levels. (U)

SRQ ---

The specified service request is active. Service requests are a form of informational message and are explained in Appendix A of the *8590 E-Series and L-Series Spectrum Analyzers User's Guide*. (M)

STEP GAIN/ATTN FAIL

Indicates the step gain has failed. (H)

Stop at marker not available with negative detection

Indicates that the marker counter cannot be used when negative peak detection is selected. To use the marker counter, turn off negative peak detection with DETECTOR PK SP NG. (U)

TABLE FULL

Indicates the upper or lower table of limit lines contains the maximum number of entries allowed. Additional entries to the table are ignored. (U)

TG SIGNAL NOT FOUND

Indicates the tracking generator output signal cannot be found. Check that the tracking generator output (RF OUT 500 or RF OUT 75Ω) is connected to the spectrum analyzer input connector with an appropriate cable. (U)

TG UNLVL

This message can indicate the following: that the source power is set higher or lower than the spectrum analyzer can provide, that the frequency span extends beyond the specified frequency range of the tracking generator, or that the calibration data for the tracking generator is incorrect. See "Stimulus-Response Measurements" in Chapter 4 of the *8590 E-Series and L-Series Spectrum Analyzers User's Guide* for more information. (17)

Too many signal with valid N dB points

Indicates the N dB PTS function has located two or more signals that have amplitudes within the specified dB from the signal peak. If this happens, you should decrease the span of the spectrum analyzer so that only the signal that you want to measure is displayed. (U)

Trace A is not available

Indicates that trace A is in the store-blank mode and cannot be used for limit-line testing. Use CLEAR WRITE A or VIEW A to change trace A from the store-blank mode to the clear write mode, and then turn on limit-line testing. (U)

UNDF KEY

The softkey number is not recognized by the spectrum analyzer. (U)

USING DEFAULTS self cal needed

Indicates that the current correction factors are the default correction factors and that the CAL FREQ & AMPTD routine needs to be performed. For the 8592L, 85933, 85953, or 85963, CAL YTF routine needs to be performed also. (U)

Verify gate trigger input is disconnected before CAL AMPTD

This message is meant to remind you that nothing should be connected to the GATE TRIGGER INPUT connector on the spectrum analyzer rear panel during the CAL AMPTD routine. (U)

VID-BW FAIL

Indicates the video bandwidths have failed. (H)

Waiting for gate input . . .

Indicates that the spectrum analyzer needs an external trigger signal to use the time-gating functions. Before using the time-gating functions, you should ensure there is a trigger pulse connected to the GATE TRIGGER INPUT connector on the rear panel of spectrum analyzer and that the GATE OUTPUT is connected the EXT TRIG INPUT connector. If you do not want to use the time-gating functions, press **PRESET**. (U)

YTF is not available

The YTF is only available for the 8592L, 85933, 85953, and 85963. (U)