
X-Series Signal Analyzers

A-Series Models

N9000A N9010A N9020A N9030A N9038A



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List of Instrument Messages

This list includes every Instrument Message described in this document, in alphanumeric order.

To find a message in the list, search according to its first character.

You can use the index table below to navigate to the section for messages starting with a specific letter.

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1 Products Covered by this Document

For the full list of instrument models covered by this documentation, see the title page: "[X-Series Signal Analyzers Instrument Messages Guide](#)" on page 1.

As from Software Revision X-Apps 2024 Update 1.0, this PDF guide covers *only* A-Series instruments (those with the softkey user interface).

The Instrument Messages Guide for B-Series instruments (those with the Multitouch user interface) is now available as online help. It can be found at:

<http://rfmw.em.keysight.com/wireless/helpfiles/HTML5Online-Msgs/FlexUI.htm>

2 Overview of Instrument Messaging System

The Error and Status messaging system of the instrument reports events and conditions in a consistent fashion, as well as logging and reporting event history.

This chapter contains the following topics:

- "Message Types" on page 26
- "Event and Condition Categories" on page 27
- "Error Message Fields" on page 29
- "Event Queues & Displays" on page 30
- "Message Display & Controls" on page 32

2.1 Message Types

Messages may be Events or Conditions:

- An **Event** is simply a message indicating that something has happened. Events are divided according to their severity, into **Error**, **Warning** or **Advisory** categories. These are described in more detail in ["Event Categories" on page 27](#)
- A **Condition** is a state of the instrument, which is characterized by a **Detection** (Start) event and a **Clearing** (End) event

Conditions are divided into two categories: **Warnings** and **Errors**. These are described in more detail in ["Condition Categories" on page 28](#)

Each Condition's Start event and End event have numbers and go into the front panel queue. Condition Errors also go into the SCPI queue, but Condition Warnings do not

All Conditions are mirrored by a bit in the STATus Register Subsystem (see ["Status Register System & SCPI STATus Subsystem " on page 101](#))

2.2 Event and Condition Categories

The categories of severity are described below, for both Events and Conditions.

- ["Event Categories" on page 27](#)
- ["Condition Categories" on page 28](#)

2.2.1 Event Categories

Errors	<p>An Event Error occurs when a requested operation is rejected. Generally this means no change is made to the instrument settings. Examples are "Undefined header" or "Peak not found." Event Errors also occur when an operation is accepted, but fails to complete successfully; for example "Disc full" when attempting to store data</p> <p>Error messages are often generated during remote operation when an invalid programming command has been entered</p> <p>In some cases, front panel activity generates an Advisory and not an Error event, even though the equivalent SCPI activity generates an Error Event. Typically this is when a function is grayed out; a benign advisory appears on the front panel, because nothing happened, but SCPI must treat it as an error because something that was requested was not delivered</p> <p>Event Errors have an associated number, and are sent to both the front panel queue and the SCPI queue for the interface that stimulated the Event</p>
Warnings	<p>Event Warnings advise you about a potentially unexpected condition that may influence the results of the measurement, for example, if a value is clipped to a different value than that requested</p> <p>Another example would be the case where you requested too high a stop frequency, which causes "Data out of range" to be displayed, and the instrument to set itself to the highest available stop frequency</p> <p>Event Warnings have an associated number, and are sent to both the front panel queue and the SCPI queue for the interface that stimulated the event</p>
Advisories	<p>Event Advisories simply provide some useful information. (For example, "File saved successfully" or "Measuring the fundamental")</p> <p>Event Advisories do not have an associated number, and are not reported to SCPI or logged in error queues</p> <p>Grayout messages are a special type of Advisory, which appear when you attempt to access a function that is not available. This could be a grayed out front panel key, or an inappropriate SCPI command. There are two types of grayout messages: Benign and Forced</p> <ol style="list-style-type: none">1. Benign: the requested function is not available because it does not make sense with the current instrument settings. Changing it does not affect the current measurement. (For example, setting the number of FFTs/Span when you are not in the FFT mode) A benign grayout gives an Advisory type of message only when the front panel key is pressed The requested function cannot be changed from the front panel, but it can be changed remotely

2 Overview of Instrument Messaging System

2.2 Event and Condition Categories

2. **Forced:** the requested function is not available either because changing it would cause an invalid measurement, or because of hardware limitations, or because the selection conflicts with other settings. (For example, selecting the electrical attenuator when the frequency span includes frequencies above 3.6 GHz)

A forced grayout function cannot be changed either from the front panel or remotely. It generates a special type of Advisory message. It also only appears on the front panel when the key is pressed. Remotely, the message will appear in the event queue as a warning “-221, Settings conflict; <conflict description>”

2.2.2 Condition Categories

Errors	<p>Condition Errors notify you that the instrument cannot make valid measurements while the condition is present</p> <p>Examples of error conditions are “LO Unlocked” or “Alignment required”</p> <p>A Condition Error exists for a period of time, so it has associated “Detected” and “Cleared” events. (For example, “LO Unlocked” or “External reference out of range”)</p> <p>Condition Errors are displayed in the front panel. The Detected and Cleared Events associated with each Condition Error message are logged in the error queues</p>
Warnings	<p>Condition Warnings appear when a requested operation has completed successfully, but there are modifications and/or side effects</p> <p>For example, if you set the sweep time too fast for a measurement to meet the instrument specifications then the “Meas Uncal” message is displayed until you slow down the sweep time</p> <p>A Warning Condition exists for a period of time, so it has a “Detected” event and a “Cleared” event</p> <p>Condition Warnings are displayed in the front panel, but are not sent to SCPI. They may set status bits in the SCPI Status tree (see "Status Register System & SCPI STATus Subsystem" on page 101)</p>

2.3 Error Message Fields

NOTE

The messages defined for Keysight's instruments extend those specified in the **1999 SCPI Syntax & Style Standard**. As a result, the terminology used here differs from that used in the Standard, as shown in **"Error Message Fields" on page 29** below.

Each Error message consists of three fields (Error Number, Error Message and Error Description), as shown in the table below (Events of this type are listed in **"-221 Settings Conflict Errors" on page 45**).

The SCPI query `:SYSTem:ERRor:NEXT?` returns a string containing these three fields. For more details, see the description of the query in the instrument's online help, or any **X-Series User's & Programmer's Reference**.

Additionally, most messages have an associated Verbose/Correction Explanation, which is provided *only* in this document and is not displayed in the instrument or returned via SCPI.

Table 2.1 Error Message Fields

Keysight Term	Error Number	Error Message	Error Description
SCPI Standard Term	Error/event Number	Error/event Description	Device-dependent info
Example	-221	Settings conflict	Electronic attenuator is disabled

For the example above, the Verbose/Correction Explanation is:

You are using the mechanical attenuator, and have not enabled the electronic attenuator. You cannot set the value of the electronic attenuator because it automatically sets/changes when enabled.

In this document, Event messages are listed in numerical order, according to their message number, except for Advisory Event messages, which do not have numbers and are listed in alphabetical order.

Condition messages are listed according to the number of their associated Start Event.

As specified in Volume 2, Section 21.8 of the **1999 SCPI Syntax & Style Standard**, messages with Error Numbers less than or equal to zero are predefined. The definitions listed in this document for those messages correspond to those in the Standard.

2.4 Event Queues & Displays

Events are logged into queues. Each source of control has its own queue. Thus there is a Front Panel queue, a SCPI GPIB queue, a SCPI LAN queue, and so on. Each remote queue is queried separately via its own interface.

The Front Panel queue may be viewed in two ways, via the Status or History lists, as described in [Table 2.2](#) below.

Error events generated by one interface may only be queried over that interface; for example, you cannot query GPIB errors from the LAN queue.

Note that Conditions are logged in the queues as pairs of Events: a Detected Event and a corresponding Cleared Event.

Table 2.2 Event Queue & Display Types

Front Panel Status (Current Conditions)	<p>Messages can be viewed by pressing System, Show Errors, Status</p> <p>The Status/Current Conditions list shows existing conditions</p> <p>When an event is caused by a command sent over a remote interface, the resulting messages are logged in the queue for that interface. For convenience, such Events are also logged in the Front Panel queue</p>
Front Panel Event History	<p>Messages can be viewed by pressing System, Show Errors, History</p> <p>The History list shows all the events that have occurred since the instrument was turned on, up to a maximum of 100 messages</p> <p>When an error situation is caused by a command sent over a remote interface, the resulting messages are logged in the queue for that interface. For convenience, they are also logged in the front panel queue</p>
Remote interfaces	<p>When an error event is caused by a command sent over a remote interface, the resulting messages are output to the queue for that interface. To return an error, you must query the queue for that interface</p> <p>An error event that is caused by a front panel action is not reported to any remote interface queue</p> <p>However, a status condition is usually caused by an internal event that is not related to a particular interface, so the Detected/Cleared Events for status conditions are reported to all the queues</p>

Table 2.3 Characteristics of the Event Queues

Characteristic	Front-Panel Status	Front-Panel History	Remote Interfaces (GPIB/LAN)
Capacity (maximum number of messages)	100	100	100
Overflow Handling	Circular (rotating) Drops oldest message as new message comes in	Circular (rotating) Drops oldest message as new message comes in	Linear, first-in/first-out Replaces newest message with: -350, Queue overflow
Viewing Entries	Press System, Show Errors, Status	Press System, Show Errors, History	Send SCPI query to the desired interface:

Characteristic	Front-Panel Status	Front-Panel History	Remote Interfaces (GPIB/LAN)
Clearing the Queue	Press System, Show Errors, Clear Error Queue Clears the messages in all the queues	Press System, Show Errors, Clear Error Queue Clears the messages in all the queues	:SYSTem:ERRor? Send *CLS command to the desired interface Clears messages in the queue for this particular interface only

Table 2.4 Summary of Event Reporting Modes

Event Type	SCPI Error Queues	Front Panel History Queue	Status Panel Display
Error/Warning/Advisory Event	Logged	Logged	Displayed in Message Line
Error/Warning Condition: Detected (Start) Event	Logged ^a .	Logged ^a .	Displayed in Status Line
Error/Warning Condition: Cleared (End) Event	Logged ^b .		
Grayout Advisory (Benign)	Not logged	Logged	Displayed in Status Line
Grayout Advisory (Forced)	See note ^c .	Logged	Displayed in Status Line

a. Logged with the same severity (Error or Warning) as the Condition

b. Logged with a “green” severity (Condition Resolved)

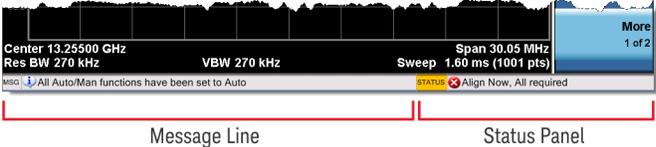
c. Not logged, unless the cause of the Advisory was remotely generated, in which case a Warning message, type –221, is logged

2.5 Message Display & Controls

Messages are displayed as follows.

- Event messages appear in the Message Line at the bottom left of the instrument's display window, as shown in Figure 2-1 below
- Condition messages appear in the Status Panel at the bottom right of the instrument's display screen, as shown in Figure 2-1 below

Figure 2-1 Instrument Message Line & Status Panel for A-Series Instruments



3 Instrument Message Descriptions

This section includes the following message types:

- "Advisory Messages" on page 34
- "Event Messages" on page 40
- "Condition Messages" on page 76

3.1 Advisory Messages

An Advisory is simply a message that lets you know something useful – for example, “File saved successfully” or “Measuring fundamental.” Operation completion and running status indications are common types of Advisories.

- Advisories have no number and are not logged in the error queue
- Advisories include gray-out “Settings conflict” errors. These gray-outs are benign (that is, changing them has no impact on the current measurement)
- Advisories are event-type errors only. They are never conditions

Message	Description/Correction Information
All Auto/Man functions have been set to Auto	Message generated by pressing the Auto Couple front-panel key
All Auto/Man functions have been set to Auto	
Allowable Center Frequency exceeded for the current span	When rotating the knob or step up/down keys to change the Center frequency, the value of the Span is kept constant. Therefore, the center frequency is limited by the frequency range of the instrument
Allowable Span exceeded for the current center frequency	When rotating the knob or step up/down keys to change the Span, the value of the Center frequency is kept constant. Therefore, the span is limited by the frequency range of the instrument
Allowable Start Frequency exceeded for the current span	When rotating the knob or step up/down keys to change the Start frequency, the value of the Span is kept constant. Therefore, the start frequency is limited by the frequency range of the instrument
Allowable Stop frequency exceeded for the current span	When rotating the knob or step up/down keys to change the Stop frequency, the value of the Span is kept constant. Therefore, the stop frequency is limited by the frequency range of the instrument
Allowable X Ref Level exceeded for the current Capture Length	X Ref Level and X Scale/Div are limited by the Capture Length of the measurement
Allowable X Scale/Div exceeded for the current Capture Length	X Ref Level and X Scale/Div are limited by the Capture Length of the measurement
Already in Single, press Restart to initiate a new	The instrument is already in the single state. If you want to start a new sweep or sequence, press the Restart key instead

Message	Description/Correction Information
sweep or sequence	
Auto sweep time rules do not apply in FFT sweeps	FFT sweeps do not use the auto sweep time rules, so the rules setting cannot be changed from the front panel. The setting can be changed remotely, and has no effect on the current operation unless the analyzer is switched out of FFT sweeps
Band Adjust has no effect on a Fixed marker	If a Marker is FIXed type, the marker's value does not change from when it first became fixed, so you cannot change the band of a fixed marker
Band Adjust has no effect with Mkr Function Off	If Marker Function is Off , changing the band has no effect
Band-pass filter set to OFF	Turning on any high-pass or low-pass filter will turn off band pass filters
Cal Cancelled; Calibration data cleared	User has cancelled the cal either directly or indirectly by changing the setup parameters. The current cal data has been erased. Perform a new user cal to obtain calibrated results again
Cal factor loaded from USB sensor	The cal factor stored in USB sensor has been loaded successfully
Cal Invalid: meas freq pt(s) > 3.6GHz are > 50MHz from existing Cal pts	When freq points being measured are above 3.6 GHz and a calibration has been successfully performed, and the number of points are changed, the new points are required to be within 50 MHz of the current cal points, or the preselector optimize frequencies become inaccurate and the whole cal needs to be invalidated. Interpolation of the cal can only be performed if the new freq points are within 50 MHz of the cal points. To overcome this problem, change the number of freq points back to match cal points or perform another user cal
Carrier power is too low for optimum dynamic range	For better dynamic range, transmit band spur measurements require >10 dBm signal power at the RF input port
Connecting to source...	External Signal Generator is being sent SCPI commands interrogating it to see whether it is suitable for the instrument to control Please wait until complete before pressing any buttons
Demod Time is not available in Zero Span	The Demod Time function is not available in zero span because in zero span we are ALWAYS demodulating
Detector <X> changed due to physical constraints	You have selected more detectors than the instrument hardware can implement. An existing detector selection has been changed to allow the current detector choice to be selected <X> indicates the trace number for which the detector was changed
Dynamic range is not optimum. Set AUTO RF input	
Exp. Averaging not available when AUTO PhNoise is active	

3 Instrument Message Descriptions

3.1 Advisory Messages

Message	Description/Correction Information
FFT Width is not settable unless Sweep Type is set to FFT	You must select the FFT sweep type before you can set the FFT Width
File <filename> saved	The file save operation executed successfully
Filter BW function is only available for Gaussian filter type	Flattop and CISPR/MIL filters have defined shapes that cannot be altered. So only the Gaussian filter type allows filter bandwidth definition changes
Fixed LO freq should be greater than RF Stop freq	The setup frequencies break the rules for a downconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The LO fixed freq should be greater than the RF freq's for an LSB or DSB (for DSB measurements the setup uses LSB values) downconverter setup. Use the graph icon on the DUT setup form to clarify the setup required
Freq Scale Type=Log is not available in Zero Span	Logarithmic scaling cannot be used for time domain sweeps (0 Hz span)
Frequency Hopping enabled, waiting for valid burst	The demodulated burst type has not been found in the originally demodulated slot location within the frame
Frequency menu has changed to reflect frequency context switch	The frequency context parameter has been changed either by the user or the system. The frequency menu will now contain the frequencies for the new context. No action required
Gate required for valid results	
High-pass and Low-pass filters set to OFF	Turning on any band pass filter will turn off high-pass and low-pass filters
High-pass filter set to OFF	Turning on any band pass filter will turn off high-pass filters
IF Fixed freq should be greater than LO Stop freq	The setup frequencies break the rules for an upconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The IF fixed freq should be greater than the LO Stop freq for a USB upconverter swept LO setup. Use the graph icon on the DUT setup form to clarify the setup required
IF Fixed freq should be greater than RF Stop freq	The setup frequencies break the rules for an upconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The IF fixed freq should be greater than the RF Stop freq for an upconverter swept LO setup. Use the graph icon on the DUT setup form to clarify the setup required
IF Start freq should be greater than LO Fixed freq	The setup frequencies break the rules for an upconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The IF start freq should be greater than the LO fixed freq for an USB upconverter fixed LO setup. Use the graph icon on the DUT setup form to clarify the setup required

Message	Description/Correction Information
IF Start freq should be greater than RF Start freq	The setup frequencies break the rules for an upconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The IF start freq should be greater than the RF Start freq for an upconverter fixed LO setup. Use the graph icon on the DUT setup form to clarify the setup required
Input is internal	The instrument's input is set to internal (the internal amplitude reference signal), so any signals connected to the front/rear panel inputs cannot be measured
LO Fixed freq should be greater than IF Stop freq	The setup frequencies break the rules for an upconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The LO fixed freq should be greater than the IF Stop freq for an LSB upconverter fixed LO setup. Use the graph icon on the DUT setup form to clarify the setup required
LO Fixed freq should be greater than RF Stop freq	The setup frequencies break the rules for a downconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The LO fixed freq should be greater than the RF Stop freq's for an LSB or DSB (for DSB measurements the setup uses LSB values) downconverter fixed LO setup. Use the graph icon on the DUT setup form to clarify the setup required
LO Start freq should be greater than IF Fixed freq	The setup frequencies break the rules for an upconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The LO Start freq should be greater than the IF fixed freq for an LSB upconverter swept LO setup. Use the graph icon on the DUT setup form to clarify the setup required
LO Start freq should be greater than RF Start freq	The setup frequencies break the rules for a downconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The LO start freq should be greater than the RF Start freq's for an LSB downconverter swept LO setup. Use the graph icon on the DUT setup form to clarify the setup required
LO Stop freq should be greater than RF Stop freq	The setup frequencies break the rules for a downconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The LO Stop freq should be greater than the RF Stop freq's for a DSB (for DSB measurements the setup uses LSB values) downconverter swept LO setup. Use the graph icon on the DUT setup form to clarify the setup required
Low-pass filter set to OFF	Turning on any band pass filter will turn off low-pass filters
No spurs have been found	You started a measurement in examine meas type in Single or Continuous sweep mode, or full meas type in Single sweep mode, but no spurs were found
Power meter or sensor is connected	A power meter or sensor at the given address is connected
Preparing Calculation...	
Preselector is centered	The preselector has been successfully centered
Preselector not used in this frequency range	You cannot center or adjust the preselector because it is not used at all at the current marker frequency or between the current start and stop frequencies
Probe connected, cal data is being reapplied; <port>; <probe>	A probe has been connected; calibration data is being reapplied

3 Instrument Message Descriptions

3.1 Advisory Messages

Message	Description/Correction Information
Probe connected, no probe cal; using cable cal data; <port>; <probe>	A probe has been connected and no probe calibration data is available. The latest cable calibration data will be used
Probe disconnected, reverting to cable calibration data; <port>	A probe has been disconnected, calibration data reverting to the last cable calibration data
Reading SNS data...	The Keysight Smart Noise Source has been connected and the application is reading the device EEPROM data Please wait until complete before continuing
Recalled File <filename>	A file recall (open/load) was successfully completed
Refer to online help for assistance with DSB measurements	The Double Side Band measurement requires careful setup to obtain valid results. Refer to the manuals for help with this setup
Requested timeslot number is not present	The selected timeslot is not on. (Timeslot is referenced to the trigger point)
Res BW changed	In instruments with Option B5X, Span was set to > 255 MHz while Res BW was greater than Res BW 4
RF Start freq should be greater than IF Fixed freq	The setup frequencies break the rules for a downconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The RF Start freq should be greater than the IF Fixed freq for a DSB (for DSB measurements the setup uses LSB values) downconverter swept LO setup. Use the graph icon on the DUT setup form to clarify the setup required
RF Start freq should be greater than IF start freq	The setup frequencies break the rules for a downconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The RF start freq should be greater than the IF Start freq's for an LSB downconverter fixed LO setup. Use the graph icon on the DUT setup form to clarify the setup required
RF Start freq should be greater than LO fixed freq	The setup frequencies break the rules for a downconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The RF start freq should be greater than the LO fixed freq's for an USB downconverter fixed LO setup. Use the graph icon on the DUT setup form to clarify the setup required
RF Start freq should be greater than LO Start freq	The setup frequencies break the rules for a downconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The RF start freq should be greater than the LO Start freq's for an USB downconverter swept LO setup. Use the graph icon on the DUT setup form to clarify the setup required
RF Stop freq should be greater than IF Stop freq	The setup frequencies break the rules for a downconverter measurement. The measurement will still run but check setup frequencies are correct before continuing. The RF Stop freq should be greater than the IF Stop freq's for an USB or DSB (for DSB measurements the setup uses LSB values) downconverter fixed LO setup. Use the graph icon on the DUT setup form to clarify the

Message	Description/Correction Information
Scale/Div only applies in Log Y Scale	setup required Setting the Scale/Division only makes sense when you are using a logarithmic Y scale
Signal Track is turned off when Zero Span is selected	Signal Track is not available when you have selected Zero Span, so if Zero Span is entered while in Signal Track is On, Signal Track is turned off
Signals deleted	The signals in the signal list were successfully deleted
Sweep Points/Span is < minimum. Results may be inaccurate	The sweep point to span ratio is below the minimum required to ensure the bucket ratio is large enough to test DVB-T masks
Sweep Setup is not available in Zero Span	Zero span is a display at a single frequency, so there is no “sweeping” to set up
Sync is RF Ampl (not Training Sequence). Bits are not accurate	
Trace file saved	The trace saving operation was successful
Use Gate View Sweep Time in the Gate menu	When in Gate View you use Gate View Sweep Time, rather than Sweep Time, to control the Gate View window
User Cal valid. Apply Cal from Meas Setup menu	The measurement setup has changed such that the current cal data can be applied to the results. To apply the cal, press Meas Setup/Cal Setup/Apply Calibration. A new cal can be performed if required

3.2 Event Messages

Event messages and message numbers are defined by the [1999 SCPI Syntax & Style Standard](#). All message numbers are less than or equal to zero.

The SCPI Standard refers to all these messages as "Error/event Messages". Most X-Series Event Messages fall into the Error Category (see ["Event Categories" on page 27](#)), but a small number are Warnings, as noted for the relevant entries below.

Device-dependent sub-messages are often appended, to provide additional information. For example, error -221 is defined as Settings Conflict, but you will often see a longer description appended to error -221, such as Settings Conflict; Function not available in Zero Span. This provides more information about why there is a Settings Conflict error.

The tables in this section are divided by Error Number range, as follows:

- ["-800, Operation Complete Event" on page 40](#)
- ["-700, Request Control Event" on page 41](#)
- ["-600, User Request Event " on page 41](#)
- ["-500, Power on Event" on page 41](#)
- ["-400 to -499, Query Errors" on page 41](#)
- ["-300 to -399, Device-Specific Errors" on page 42](#)
- ["-221 Settings Conflict Errors" on page 45](#)
- ["-200 to -299, Execution Errors" on page 60](#)
- ["-100 to -199, Command Errors" on page 73](#)
- ["0 No Error" on page 75](#)

3.2.1 -800, Operation Complete Event

Message	Verbose/Correction Information
<code>Operation complete</code>	The instrument has completed all selected pending operations in accordance with the IEEE 488.2, 12.5.2 synchronization protocol
<code>Operation complete; Loaded <ARB filename> successfully, but no license <required licenses> installed</code>	This is a warning, and is GUI-only, that is, this warning cannot be queried by SCPI. It indicates that the ARB is successfully loaded into ARB memory, but requires licenses that are not present on the instrument Install the required license(s) according to <required license> string to

Message	Verbose/Correction Information
	license it or multi-pack license it

3.2.2 -700, Request Control Event

Err#	Message	Verbose/Correction Information
-700	Request control	The instrument requested to become the active IEEE 4881 controller-in-charge

3.2.3 -600, User Request Event

Err#	Message	Verbose/Correction Information
-600	User request	The instrument has detected the activation of a user request local control

3.2.4 -500, Power on Event

Err#	Message	Verbose/Correction Information
-500	Power on	The instrument has detected an off to on transition in its power supply

3.2.5 -400 to -499, Query Errors

Err#	Message	Verbose/Correction Information
-440	Query UNTERMINATED after indefinite response	A query was received in the same program message after a query requesting an indefinite response was executed
-430	Query DEADLOCKED	Some condition caused a DEADLOCKED query to occur. For example, both the input buffer and the output buffer are full, and the analyzer cannot continue. The analyzer automatically discards output to correct the deadlock
-420	Query UNTERMINATED	Some condition caused an UNTERMINATED query to occur. For example, the device was addressed to talk, and an incomplete program message was received
-410	Query INTERRUPTED	Some condition caused an INTERRUPTED query to occur. For example, a query was followed by DAB or GET before a response was completely sent
-400	Query Error	There was a problem with a query. The exact problem cannot be specifically identified

3.2.6 -300 to -399, Device-Specific Errors

Err#	Message	Verbose/Correction Information
-365	Time out error	There was a time-out problem in the instrument. The exact problem cannot be specifically identified
-365	Time out error; Operation on source is held. If analyzer is waiting for trigger, change to free run to proceed	This is a warning message This warning can only occur when issuing SCPI to operate the source while the instrument is waiting for a trigger. When the instrument is waiting for a trigger, source operation is set to pending (Trigger Source operation is an exception) To avoid this, do not operate the source when the instrument is waiting for a trigger. If source and analyzer both are utilized, configure the source parameters ready and run before instrument waits for trigger If both the analyzer and source are waiting for a trigger, the only operations allowed on the source are trigger source operations, like external, manual, or bus trigger
-363	Input buffer overrun	A software or hardware input buffer on a port overflowed with data because of improper or nonexistent pacing
-362	Framing error in program message	A stop bit was not detected when data was received. For example, on a remote bus port
-361	Parity error in program message	A parity bit was not correct when the data was received. For example, on a parallel port
-360	Communication error	There was a problem with instrument remote communications. The exact problem cannot be specifically identified
-360	Communication error; SNS data read failure. Disconnect then reconnect SNS	The Keysight Smart Noise Source connected to the instrument has failed to be read by the application. Disconnect and reconnect the SNS. If this continues to fail, then the SNS may have had its EEPROM corrupted, or another hardware fault exists. Check SNS on another instrument, NFA and ESA are also SNS compatible instruments. Check the device is not an Keysight power sensor which uses the same cable interface
-360	Communication error; SNS is not connected	The Keysight Smart Noise Source connected to the instrument has failed to be read by the application. Disconnect and reconnect the SNS. If this continues to fail, then the SNS may have had its EEPROM corrupted, or another hardware fault exists. Check SNS on another instrument, NFA and ESA are also SNS compatible instruments. Check the device is not an Keysight power sensor which uses the same cable interface
-350	Queue overflow	An error occurred that did not get put in the error queue because the queue was full
-340	Calibration failed; <failure msg><port>	The calibration for one of the I-Q ports failed. The information in the "failure msg" field can be used to troubleshoot this problem. Contact Keysight technical support
-321	Out of memory	An internal operation needed more memory than was available. Report this error to the nearest Keysight Technologies sales or service office

Err#	Message	Verbose/Correction Information
-321	Out of memory; Results truncated	Reduce the acquisition count, analysis step count, or measurement count
-321	Out of memory; Sequence too long	The Sequence is too large to be captured. Reduce the Number of Acquisitions or the Acquisition Duration of each Acquisition
-321	Out of memory; Total analysis step reaches its limitation	Reduce the analysis steps count
-320	Storage fault;	A problem was found while using data storage. The error is not an indication of physical damage or failure of any mass storage element
-315	Configuration memory lost	The nonvolatile configuration data saved by the instrument has been lost
-314	Save/recall memory lost	The nonvolatile data saved by *SAV? has been lost
-313	Calibration memory lost	The nonvolatile calibration data used by *CAL? has been lost
-312	PUD memory lost	Protected user data saved by the *PUD command has been lost
-311	Memory error	There is a physical problem with the instrument memory, such as a parity error
-310	System error;	An internal system-type error has occurred. The exact problem cannot be specifically identified. Report this error to the nearest Keysight Technologies sales or service office
-310	System error; <feature> expired, please reboot within <time>	The trial license for the specified feature, for example "N9030T-RT1, has expired. You must finish any measurements in process and reboot the instrument within the time specified
-310	System error; <feature> expired, rebooting in <time>	The trial license for the specified feature, for example "N9030T-RT1, has expired. The instrument will automatically reboot at the time specified; you should save your measurement results immediately
-310	System Error; <filename> not recalled	The auto recall of cal factor .xml file has failed. You should load the cal factor manually from the recall dialog
-310	System error; A license will soon expire;<feature code> will expire in <time>	The indicated feature/software will expire in the specified time. Contact Keysight Technologies to purchase continued use of this functionality
-310	System Error; enable GPIB controller mode	Press System, I/O Config, GPIB and set GPIB Controller to Enabled, so that the analyzer can control the source over GPIB
-310	System error; feature <feature code> not licensed	The specified feature, for example "N9073A-TR2" is not licensed. The license may have expired. You cannot use it until you obtain or renew a license
-310	System error; Feature expired; <feature code>	The specified feature has expired. The license is no longer valid
-310	System error; License installation failed;<feature code>	The license installation of the specified feature, for example "N9073A-TR2", has failed. You should refer to the event log in the control panel for more

3 Instrument Message Descriptions
 3.2 Event Messages

Err#	Message	Verbose/Correction Information
		details
-310	System error; License removal failed; <feature code>	The license removal of the specified feature, for example “N9073A-TR2” has failed. You should refer to the event log in the control panel for more details
-310	System error; No license; <feature code> will terminate in <time>	The specified feature will stop working in the specified time due to the license expiration You will be prompted to save results and exit
-310	System Error; No power meter or sensor is selected	You must select a power meter or sensor before you can do this
-310	System Error; No supported source found	Signal source at given IP address is not responding / IP does not belong to a source. Check IP address and network connection
-310	System Error; PLL unlocked	PLL unlocked indicates the hardware is abnormal
-310	System Error; Power meter or sensor calibrate failure	The power meter or sensor calibration failed. Make sure you connect the power sensor to the reference output of power meter and re-perform the operation
-310	System Error; Power meter or sensor calibration required	The power meter or sensor needs calibration. Perform power meter calibration
-310	System Error; Power meter or sensor not responding or connection timeout. Please check your power meter connection and try again	Power meter or sensor at the given address is not responding within the timeout duration or it is not one of the supported power meter models. Check power meter model, address, and timeout
-310	System Error; Power meter or sensor zero and calibration required	The power meter or sensor needs zero and calibration. Perform power meter zero and calibration
-310	System Error; Power meter or sensor zero failure	The power meter or sensor zero failed. Make sure you disconnect the power sensor from any source of power and re-perform the operation
-310	System Error; Power meter or sensor zero required	The power meter or sensor needs zeroing. Perform power meter zero
-310	System Error; source connection lost, check interface connection	Signal source at given IP address is not responding / IP does not belong to a source. Check IP address and network connection
-300	Device-specific error	An instrument error occurred, and the exact problem cannot be specifically identified. Report this error to the nearest Keysight Technologies sales or service office

3.2.7 -221 Settings Conflict Errors

This is one of the errors in the standard SCPI error range of -200 to -299.

For all messages in the table below, the **Err#** is “-221”, so the column has been omitted.

Message	Verbose/Correction Information
De-emphasis only available in FM	The de-emphasis function is only available if FM demod is selected
Forceful message - “-221, Settings conflict; No tone correction target. At least one tone correction target should be enabled”	Issued in the Group Delay measurement CALIBRATE TONES becomes available when one or more of Tone Magnitude, Tone Phase, or Time Offset is on
Function not available in Zero Span	The function you are trying to access is not available in zero span
Setting Conflict; Alignments are not available while MIMO Sync is On	Resources required by Alignments are already occupied by MIMO Sync. To execute Alignments first stop MIMO Sync
Setting Conflict; Risk of high PAPR. Execute Apply Fill first	In the Group Delay measurement > Configure Tone Table, you must execute Apply Fill in orange before pressing Apply Tones to Signal Generator
Settings conflict: Timebase DAC not available with Pulse selected	The manual adjustment of the Timebase DAC cannot be performed when the currently selected timebase is Pulse
Settings conflict;	A legal command was received but it could not be executed due to the current device state
Settings conflict; *.CSV file format is not available in this measurement	You cannot load or save base instrument traces, as this is not supported by the Log Plot measurement
Settings conflict; <Q Param> cannot be changed when Q same as I	When the “Q Same as I” parameter is set to Yes, the I parameter value is copied to <Q Param> and the <Q Param> value cannot be changed. Set Q Same as I to No to enable explicit control of the <Q Param> value
Settings conflict; <trigger source> trigger is not available in current IF Path	The trigger source (Video, RF Burst, I/Q Mag, etc.) is not available when using the current IF Path, for example FMT is not available in the 1 GHz IF Path
Settings conflict; <trigger source> trigger is not available while input is <input port>	The trigger source (Video, RF Burst, I/Q Mag, etc.) is not available with the current input port (RF, IQ, etc.)
Settings conflict; A Valid User Cal is required. Optimize aborted	Optimize Preselector can only be performed if a valid user cal exists and is applied to current results. Perform a user cal first or apply existing cal
Settings conflict; Acquisition # Analysis Step # not exist	The configured Analysis Step does not exist Add the specified analysis step into the sequence
Settings conflict; Acquisition # not exist	The configured acquisition does not exist Add the specified acquisition into this sequence
Settings conflict; Acquisition	Acquisition duration cannot be less than < (analysis offset + analysis

3 Instrument Message Descriptions

3.2 Event Messages

Message	Verbose/Correction Information
duration time too short, Acq=#	interval) Increase the acquisition duration time or decrease the analysis offset and analysis interval
Settings conflict; Administrator privileges required	You must be logged in with administrator privileges to do this. Log out and log back in as the administrator, then restart the SA application
Settings conflict; Analysis Interval should be less than **ms, Acq=# Step=#	The analysis interval is too large for basic transmit power measurement Decrease the analysis interval
Settings conflict; Analysis Offset should be greater than # us, Acq=# Step=#	The Analysis Offset should be greater than # μ s due to physics requirement Increase the time of Analysis Offset
Settings conflict; At least one Phase must be turned on	At least one Phase must be turned on
Settings conflict; At least one Protective Earth must be turned on	At least one Protective Earth must be turned on
Settings conflict; Auto Carrier Frequency is only available when Modulation Mode is FM or PM	You are not allowed to change the Auto Carrier Frequency settings in AM Modulation Mode
Settings conflict; Auto Scan Time/Meas Time do not apply in Stepped Scan Type	The Auto Scan Time/Meas Time are not available when Scan Type = Stepped Scan
Settings conflict; Auto Set RF Level failed, Too much dynamic range is requested	The sequence requests too much dynamic range, auto range cannot be performed correctly Change the Peak Power or DUT Expected Power
Settings conflict; Auto Tune not available in Tracking Source mode	The Auto Tune feature cannot be used when you are using a Tracking Source
Settings conflict; Averaged acquisition duration time exceeds maximum value, Acq=#	Total acquisition duration time after averaging (average count * acquisition duration) exceeds maximum value Reduce the average count or decrease the acquisition duration time
Settings conflict; Basic Discrete PAVT measurement cannot be averaged, Acq=# Step=#	The average count of acquisition which contains basic Discrete PAVT measurement cannot be greater than 1 Set the average count of current acquisition to 1. Or remove the Basic Discrete PAVT measurement from this analysis step
Settings conflict; Basic IQ data measurement cannot be averaged, Acq=# Step=#	The average count of acquisition which contains basic IQ data measurement cannot be greater than 1 Set the average count of current acquisition to 1. Or remove the Basic IQ data measurement from this analysis step
Settings conflict; BTS gain is not available in this Mode	Base Transceiver Station gain correction is not available in some Modes, or in some measurements (for example, the SA measurement)
Settings conflict; Cal only available when Source Mode is Tracking	You must be in Tracking Source mode to use the Cal functions under Normalize. Press Source, Source Mode and set it to Tracking
Settings conflict; Calibrate TRFL is only available in Manual Range	You can only perform this operation when in Manual Range Switching

Message	Verbose/Correction Information
Switching when Recal is needed	mode and input power fall in the recal range
Settings conflict; Calibration cannot be performed without valid ENR data	The cal ENR table has no values in it, and hence the cal cannot be performed. Correct by either populating the cal ENR table, set ENR mode to Spot, or set the 'Use Meas Table Data for Cal' to 'On'
Settings conflict; Cancellation is not available while measuring DANL floor	Phase Noise cancellation does not make sense when measuring the DANL Floor, so for this reason it has been disabled
Settings conflict; Cancellation Ref trace has no data	When performing phase noise cancellation, you need to supply a reference trace that will be used to cancel out the background noise of the instrument. The reference trace must be in Reference (View) mode, and selected by the Ref Trace parameter under the Cancellation menu
Settings conflict; Cancellation trace has different X-Scale	Reference trace for the cancellation has a different range of X-axis against the target trace
Settings conflict; Cannot accept time or count input when step duration type is Continuous on step #	An attempt was made to set list sequence for one step's "Duration Time" or "Play Count" when that step's "Duration Type" is "Continuous". This error can only occur on SCPI input Set that step's "Duration Type" to "Play Count" or "Duration Time" first, then setup count or time
Settings conflict; Cannot delete current step, minimum number of steps reached	An attempt was made to delete the current step which is already the only step in the list sequence
Settings conflict; Cannot insert more steps, maximum number of steps reached	An attempt was made to insert more steps into list sequence which already contains the maximum of 1000 steps
Settings conflict; Cannot optimize while user cal in progress	Optimize Preselector cannot be performed while a user cal is in progress. The user cal performs an optimize preselector prior to taking the noise source on/off level results for the cal data
Settings conflict; Can't Auto-Couple Res BW in Zero Span	The resolution bandwidth cannot be set to auto while you are in zero span (time domain)
Settings conflict; Carrier freq not allowed with BMT (Bottom/Middle/Top only)	The transmit band spur measurement only allows bottom (B), middle (M), and top (T) channel frequencies for each supported frequency band. The carrier frequency must be set to the bottom, middle or top frequency of the current frequency band
Settings conflict; Change not allowed with \{0\} standard	You cannot change this parameter because the Meas Standard is set to \{0\}. Use another standard to enable this parameter \{0\} is the currently selected Meas Standard
Settings conflict; ClearList & Start not available when ScanSeq = (Re)measure	Cannot perform Clear List & Start during (Re)measure because we needs the frequency information of the peaks in signal list to perform (Re)measure
Settings conflict; Code channel duplication	This error is reported when the given code channel overlaps other code channel
Settings conflict; Cont Mode is not available	Current measurement does not support Continuous Sweep, only Single Sweep is available

3 Instrument Message Descriptions

3.2 Event Messages

Message	Verbose/Correction Information
Settings conflict; Continuous Peak is not available with Fixed marker	The Continuous Peak feature cannot be used with a marker that is FIXed , which, by definition, cannot change
Settings conflict; Continuous Peak is not available with Signal Track on	The Continuous Peak feature cannot be used while you are also using the signal tracking function
Settings conflict; Correction file not specified	Correction file has not been specified. There is no file to be removed
Settings conflict; Correction not available with Corr Group on	Correction is not available with Correction Group turned on
Settings conflict; Current setting is not available while input is RF/Audio	This control is specific to measurement that is not currently used. You can only perform this operation when the measurement is selected
Settings conflict; dB*/MHz is not applicable to the following Y-Axis units, dBm, W, V, A	You cannot turn on dB*/MHz for Y-Axis units: dBm, W, V, A. It is not applicable to these units
Settings conflict; De-emphasis is only available when Modulation Mode is FM	You are not allowed to change the De-emphasis value in AM and PM Modulation Mode
Settings conflict; Destination trace for Trace Math cannot be a trace operand	The resulting trace data (from doing a trace math function) cannot be put into the any of the traces that are being used by the math operation
Settings conflict; Differential setting determined by probe type	A probe is connected that has a built in Differential setting. The setting cannot be changed manually
Settings conflict; Display unit control not available when in Relative measurement	You are not allowed to change the display settings. The result is currently displayed in relative value, which reference to the power level when Set Ref action. To change the display settings, switch the Measurement Mode to Absolute
Settings conflict; Downconv only available when DUT is Amplifier	SCPI-only message. The System Downconverter can only be set to 'On' when the DUT type is amplifier. Change DUT type to Amplifier if the System Downconverter is required
Settings conflict; DUT Expected Power cannot be greater than Peak Power, Acq=# Step=#	Changing Peak Power causes DUT Expected Power to be clipped
Settings conflict; EDGE EVM only supports EDGE TCH burst type	
Settings conflict; Electronic attenuator is disabled	You are using the mechanical attenuator and have not enabled the electronic attenuator. You cannot set the value of the electronic attenuator because it automatically sets/changes when enabled
Settings conflict; Electronic attenuator is not available above 3.6 GHz	The maximum frequency of the electronic attenuator is 3.6 GHz. This is because of switching capacitance
Settings conflict; Electronic attenuator unavailable in current state	
Settings conflict; Electronic attenuator unavailable with Preamp on	The internal preamp is on. Electronic attenuator cannot be used while you are using the internal preamp

Message	Verbose/Correction Information
Settings conflict; EMI Avg and Voltage Avg cannot be selected simultaneously	You cannot turn on both EMI Avg and Voltage Avg detectors concurrently. If the EMI Average detector is selected, then Voltage Average detector cannot be turned on
Settings conflict; EMI Avg/RMS Avg and Average detector can't be used together	You cannot turn on EMI Avg/RMS Avg and Average detector together. They are always mutually exclusive
Settings conflict; EMI Detectors are not available in FFT sweep	QPD, EMI Average, EMI Peak, and MIL Peak are not allowed when in the manually selected FFT sweep mode
Settings conflict; Enabled modulation source conflicts with previous modulation source. Previous modulation disabled	Turning one modulation format (like AM, PM, FM, or ARB) on when another modulation format is already on results in the previous modulation format being turned off and the generation of an error
Settings conflict; External Mixer not available	A command has been sent to reference the External Mixer in a model that does not contain it
Settings conflict; FAST method can only be used while Radio Std is W-CDMA	
Settings conflict; Feature not available for Option <abc>	This functionality is not part of the instrument configured with the indicated option
Settings conflict; Feature not available in this View	Some functionality is available in one View, but not in another. (See the Views under the View/Display key.) This error occurs if you send a SCPI command or push a grayed-out key that is not available in the current selected View
Settings conflict; Feature not supported for selected source	You have asked for a feature that the selected source is not capable of
Settings conflict; Feature not supported for this Input	Some functionality is not available when certain Inputs are selected. For example, Trigger Holdoff is not available for the BBIQ input
Settings conflict; Feature not supported for this measurement	Some functionality is available in one measurement, but not in another. (See the measurements under the Meas key.) This error occurs if you send a SCPI command or push a grayed-out key that is not available in the current selected measurement
Settings conflict; Feature not supported for this model number	This functionality is not a part of the instrument you are using but may be found in other models in the X-Series
Settings conflict; FFT IF Gain High not available when Swept IF Gain = Manual Low	When Swept IF Gain is manually set to Low, you cannot set the FFT IF Gain to High because that would make the Reference Level couplings wrong in FFT mode
Settings conflict; FFT is not available when Signal ID is on	When in external mixing, if you have signal identification on, then FFT sweep type cannot be selected
Settings conflict; FFT is not available when Signal ID is on	When in external mixing, if you have signal identification on, then FFT sweep type cannot be selected
Settings conflict; FFT is not available with EMI detector	FFT sweep type cannot be selected when the EMI detector is being used for a trace
Settings conflict; FFT method is unavailable for level gating	If you are using level gating, you cannot select the FFT Gate Method

3 Instrument Message Descriptions

3.2 Event Messages

Message	Verbose/Correction Information
Settings conflict; FFT sweep type is not available while in Gated LO	The gated LO function turns the LO on and off as it sweeps, so the FFT sweep type is not available if you have selected gated LO
Settings conflict; FFT sweep type is not available while in Gated Video	The FFT sweep type is not available if you have selected the gated video function
Settings conflict; FFT Sweeps unavailable in Tracking Source mode	Since FFTs do not sweep, you cannot use a Tracking Source while doing FFTs
Settings conflict; Fixed marker adjust not available while Marker Function is on	If a Marker Function is on for a Fixed marker, the marker's reported value is derived from the function. Therefore, you cannot directly set the X or Y value of a Fixed marker that has a marker function turned on
Settings conflict; Fixed Marker Y value is not adjustable with Normalize On	If Normalize is on, the Amplitude scale is in dB, so adjusting the Y value of a Fixed marker is not possible
Settings conflict; Freq > 1 GHz is not available while RF Input 2 enabled	Frequency is limited to 1GHz while RF Input 2 is enabled
Settings conflict; Freq > 3.6 GHz unavailable while electronic attenuator enabled	The electronic attenuator does not function above 3.6 GHz, so if you have that attenuator enabled, you cannot change the center frequency so that frequencies above 3.6 GHz are displayed/measured
Settings conflict; frequency is outside available range	The desired frequency is not a valid setting
Settings conflict; Function not available in Correction Trace Display	The correction trace for the selected range is turned on. There is no range to setup, If you want to edit the range, turn off correction trace display
Settings conflict; Function not available in External Mixing	The frequency offset feature cannot be used when you have selected a log scale for the frequency axis
Settings conflict; Function not available in Tracking Source mode	The feature cannot be used when you are using a Tracking Source
Settings conflict; Function not available while measurement is running	Settings change is not allowed while measurement is running. You must stop the current measurement if you wish to change the settings
Settings conflict; Function not available while running multirange scan	Settings change is not allowed while multirange scan is running. You must stop the current measurement if you wish to change the settings
Settings conflict; Function not available with current LISN Type	Not all functionality is available for all LISN types
Settings conflict; Function not available with time domain scan type	Scan Time and Points not supported in TDS
Settings conflict; Function only available in Tracking Source mode	The feature cannot be used unless you are using a Tracking Source
Settings conflict; Function unavailable with MW Presel off	You cannot center or adjust the preselector because the Microwave Preselector is currently off
Settings conflict; function unavailable with this EMC Standard	

Message	Verbose/Correction Information
Settings conflict; Function unavailable with this EMC Standard	Filter BW is auto-coupled when EMC Standard is set to CISPR or MIL. You must set the EMC standard to None if you are to change the Filter BW
Settings conflict; Gate control is Edge for Gated FFT	You cannot use level triggering to control the gate if you are using the FFT gating method
Settings conflict; Gate control must be Edge for this Gate Source	You cannot use level triggering to control the gate when you are using the currently selected gate source
Settings conflict; Gate is not available when Marker Count on	The gate function cannot be used while you have marker count turned on
Settings conflict; Gate Length is not settable in FFT sweeps	The sweep time for FFT sweeps is set by the calculations, so sweep time settings cannot be adjusted
Settings conflict; Gate Length is not settable in FFT sweeps	The sweep time for FFT sweeps is set by the calculations, so sweep time settings cannot be adjusted
Settings conflict; Gate Method is not compatible with current Sweep Type setting	If the Gate is On and you have the FFT Sweep Type manually selected, then the Gate Method cannot be selected
Settings conflict; Gate not available with external Tracking Source	The Gate functions are unavailable when Source Mode is Tracking with an external source. This is because the Gate circuitry is used to sync the external source
Settings conflict; Gate not available with Tracking Generator	If the Source Type is Tracking Generator, the Gate circuitry is used for TG sync and is not available for gating
Settings conflict; Gated FFT is not available while Sweep Type is set to Swept	The gated FFT function is not available if you have selected the swept type of sweep. You must be in the FFT sweep type
Settings conflict; Gated LO is not available while Sweep Type is set to FFT	The FFT sweep type moves the LO frequency in steps, so the gated LO function is not available if you have selected FFT sweep
Settings conflict; Gated Video is not available while Sweep Type is set to FFT	The gated video function is not available if you have selected the FFT sweep type
Settings conflict; Include Source is Yes. ARB memory operation is rejected	You tried to load or delete files to/from ARB memory in the Sequence Analyzer Mode when Include Source is set to Yes
	First set Include Source to No, then perform desired ARB memory operation
Settings conflict; Incorrect RBW for demod. Change RBW	
Settings conflict; Ind I/Q is not available for this measurement	The Independent I and Q setting is not available for the current measurement. Only some measurements (initially, only VXA) support this setting
Settings conflict; Input Port is not available while occupied by Output	The desired destination for the Input Port is already occupied by the Output Port. First set the Output to a different port or None. Note the Output must be OFF before it can be changed to a different port
Settings conflict; Input Port is not available while occupied by	You attempted to select a port as an Input for a mmWave Transceiver of a given frequency range, but the Output is already configured for a

3 Instrument Message Descriptions

3.2 Event Messages

Message	Verbose/Correction Information
Output of incompatible frequency	mmWave Transceiver of an incompatible frequency range. First set the Output Port to None and then select an Input port
Settings conflict; Input Port is not available while port bank is occupied by Output	The desired destination port bank for the Input Port is already occupied by the Output Port. First set the Output to a different port bank or None. Note the Output must be OFF before it can be changed to a different port
Settings conflict; Input Z unavailable when probe sensed	A probe is connected, and the Input Z is set based on the probe type. It cannot be changed manually
Settings conflict; Instrument Gain LOW is not supported when frequency > 3.6 GHz. Auto change it to ZERO, Acq=#	When the acquisition frequency is changed to be greater than 3.6 GHz, the Instrument Gain will be set to ZERO automatically if the current value is LOW This is a warning message; no action is required
Settings conflict; Internal Preamp is not available for this measurement	You are not allowed to change internal preamp in the current measurement
Settings conflict; Invalid trace number	The subopcode used to specify the trace number is invalid for this measurement or query
Settings conflict; Knob is not available to modify this function	You must select a specific value for this function. Scrolling through values with the knob is not allowed
Settings conflict; Last screen cannot be deleted	There must be at least one Screen configured, you cannot delete the last remaining screen
Settings conflict; Limit cannot be auto-coupled while freq is out of CISPR14 range	
Settings conflict; LO Phase Noise Adj not available	For instruments without the Dual-Loop LO, this feature is not available
Settings conflict; Log Percent Auto Step Rule does not apply in Swept Scan Type	The Log Percent rule is not available when Scan Type=Swept Scan because we are always doing linear sweep
Settings conflict; LPF 300 kHz setting is not available in Audio Measurement	You are not allowed to change LPF setting to 300 kHz in Audio Measurement because the input only can read until 200 kHz
Settings conflict; Manual RF Input Ranging is not available	You are not allowed to change the Input Attenuation in the current range
Settings conflict; Marker 1 Trace Update=off turns off Signal Track	Signal Track not available unless the trace containing Marker 1 is updating
Settings conflict; Marker cannot be relative to itself	A marker must be set relative to another marker, not to itself
Settings conflict; Marker Count is not available when Gate on	The marker count function cannot be used while you have gating turned on
Settings conflict; Marker Function is not available for a Fixed marker	If a Marker is FIXed type, the marker's value does not change from when it first became fixed. You cannot turn on or change a Marker Function because there is no ongoing measurement data to use for the marker function calculation

Message	Verbose/Correction Information
Settings conflict; Marker type must be delta	Mkr Δ -> Span and Mkr Δ -> CF require that the selected marker be a delta marker
Settings conflict; Marker-> function is not available in zero span	Most of the “Marker To” functions are not available if you are in zero span (span = 0 Hz, or time domain), so you cannot send the commands for these functions
Settings conflict; Mask unavailable for current Span. Increase to display mask	The current span setting is either narrower than the mask width or so wide that there are too few display points to allow the mask to be drawn. Increase or decrease the span to display the mask
Settings conflict; Meas Type was changed to Examine for Exp Avg Mode	Average Mode has been changed to Exponential. Full Meas Type is not available for Exponential Average Mode therefore Meas Type has been changed to Examine
Settings conflict; Meas Type was changed to Full for Repeat Avg Mode	Average Mode has been changed to Repeat. Examine Meas Type is not available for Repeat Average Mode therefore Meas Type has been changed to Full
Settings conflict; Measurement Bitmap *** not available in Radio Standard ***, Acq=#	The configured measurement is not supported by the current radio standard Remove this measurement from the current acquisition or change the radio standard of the current acquisition
Settings conflict; Minimum setting is only available when Modulation Mode is AM	You are not allowed to change IF BW Type setting to Minimum if you are not in AM Depth or Modulation Mode is not in AM
Settings conflict; MinPts/RBW limit not met	
Settings conflict; Mkr -> CF is not available when the x-axis is time domain	The marker to center frequency functionality does not work when the x-axis is in the time domain
Settings conflict; Mod Scheme AutoDet unavailable when Burst Sync=RF Amptd	The modulation scheme auto detection is unavailable when the burst sync is set to RF Amptd (GSM/EDGE)
Settings conflict; MPA GPS port power setting <n>dBm is lower than -130dBm minimum	Indicates that the power output setting (UI power + Amp Corr Value) on MPA GPS port is lower than supportable minimum -130 dBm Set power output setting to be larger than -130 dBm to eliminate this warning
Settings conflict; MPA TX port<n> amplitude correction delta exceeds <n>dB between port<n1> and port<n2>	Indicates that the amplitude correction delta value between MPA TX port<n1> and port<n2> for MXG mode (port difference) exceeds max loss delta value Set related amplitude correction delta value to be lower than the max loss delta value given in error message
Settings conflict; MPA TX port<n> amplitude correction value <n>dB is out of range. The valid range is <n> ~ <n>dB”	Indicates that the amplitude correction value of MPA TX port<n> for MXG mode is out of range Set related amplitude correction value within the valid range given in error message
Settings conflict; MPA TX port<n> power setting <n>dBm is lower than	Indicates that the power output setting (UI power + Amp Corr Value) on MPA TX port<n> is lower than supportable minimum -130 dBm

3 Instrument Message Descriptions

3.2 Event Messages

Message	Verbose/Correction Information
-130dBm minimum	Set power output setting to be larger than -130 dBm to eliminate this warning
Settings conflict; MS gain is not available in this Mode	Mobile Station gain correction is not available in some Modes, or in some measurements (for example, the SA measurement)
Settings conflict; Multi-Screen requires >1 screen	There must be more than one Screen configured for Multi-Screen to be enabled
Settings conflict; Must apply Amplitude Correction to make this unit available	These special units only apply when you are doing antenna measurements, so you must have a correction that includes Antenna Units enabled
Settings conflict; No Cal Factor for Power Sensor	The center frequency set has no cal factor data associated with it
Settings conflict; No meas frequencies are above 3.6 GHz	Optimize Preselector can only be performed on frequencies in high band, that is, freqs above 3.6 GHz. The current setup does not have input freqs (IF) in this range so an Optimize Preselector cannot be performed
Settings conflict; no source selected	You must select a source using Select Source before you can do this
Settings conflict; No Stepped Scan Type	Discrete Scan Type does not appear in this model
Settings conflict; Normalize is not available when Scale Type = Lin	Normalize does not support Linear amplitude scale, since the results are always presented as a dB ratio
Settings conflict; Normalize is not available while Demod View is on	The normalization (correction) function cannot be used if you are using the Demod View
Settings conflict; Normalize is not available while Trace Math is on	The Normalize function works by doing trace manipulation, so if trace math is on you cannot turn on normalization
Settings conflict; not available with Global EMC Standard	You cannot use this function. To enable this function, turn off Global EMC Standard
Settings conflict; Only active Antenna Unit available; no other Y axis units	When a correction with antenna units is turned on, the only available Y-Axis units are those that match the Antenna Unit. Turn off the Correction or the Antenna Unit under Input/Output, Corrections
Settings conflict; Option not available	You have attempted to perform an action for which a required option is not installed
Settings conflict; Output Port is not available while occupied by Input	The desired destination for the Output Port is already occupied by the Input Port. First set the Input to a different port or None
Settings conflict; Output Port is not available while occupied by Input of incompatible frequency	You attempted to select a port as an Output for a mmWave Transceiver of a given frequency range, but the Input is already configured for a mmWave Transceiver of an incompatible frequency range. First set the Input Port to None and then select an Output port
Settings conflict; Output Port is not available while port bank is occupied by Input	The desired destination port bank for the Output Port is already occupied by the Input Port. First set the Input to a different port bank or None

Message	Verbose/Correction Information
Settings conflict; Param only available when DUT is a freq converter	SCPI-only message. The sideband and freq context parameters are only available when a freq conversion setup is in use. Change setup to contain a freq conversion to use these parameters
Settings conflict; Param only available when External LO Mode is Fixed	SCPI-only message. This parameter is only available when the LO mode is set to Fixed. Change the Freq Mode to Fixed
Settings conflict; Param only available when External LO Mode is Swept	SCPI-only message. This parameter is only available when the LO mode is set to Swept. Change the LO Mode to Swept
Settings conflict; Param only available when Frequency Mode is Fixed	SCPI-only message. This parameter is only available when the Freq mode is set to Fixed. Change the Freq Mode to Fixed
Settings conflict; Param only available when Frequency Mode is Swept	SCPI-only message. This parameter is only available when the Freq mode is set to Swept. Change the Freq Mode to Swept
Settings conflict; Param only available when valid cal data exists	SCPI-only message. The 'Apply Calibration' parameter is only available when the stored cal data matches the current setup. Perform a fresh 'Calibrate Now' or change setup such that current cal data is valid
Settings conflict; PAVT step end time exceeds the analysis interval	The end time of PAVT measurement exceeds the analysis interval Decrease the end time of PAVT or increase the Analysis interval
Settings conflict; PAVT step start time is less than zero	The start time of PAVT measurement cannot be less than ZERO
Settings conflict; Phase Discontinuity measurement cannot be averaged, Acq=# Step=#	The average count of acquisition which contains Phase Discontinuity measurement cannot be greater than 1 Set the average count of current acquisition to 1. Or remove the Phase Discontinuity measurement from this analysis step
Settings conflict; Power search is not available when ALC is On	Cannot do power search when ALC is On
Settings conflict; Power search is not available when RF is Off	Cannot do power search when RF is Off
Settings conflict; Power search is not available when trigger type is not free-run	Cannot do power search when trigger type is not free-run
Settings conflict; Preamp gain is not available in this Mode	Preamp gain correction is not available in some Modes or Measurements
Settings conflict; Preamp unavailable with electronic attenuator on	The electronic attenuator is on. Internal preamp cannot be used while you are using the electronic attenuator
Settings conflict; Presel Center not available for unpreselected external mixers	The selected mixer type is Unpreselected. Preselector power centering cannot be done on an unpreselected mixer
Settings conflict; Preselector Adjust not available for unpreselected Ext mixer	The selected mixer type is Unpreselected. The preselector adjustment cannot be done on an unpreselected mixer
Settings conflict; Pre-trigger is insufficient for demod. Decrease	

3 Instrument Message Descriptions

3.2 Event Messages

Message	Verbose/Correction Information
Trig Delay	
Settings conflict; QPD + EMI Average + RMS Average is not allowed	You cannot turn on all 3 EMI detectors together. You must turn off one of the EMI Detectors before you turn this on
Settings conflict; Radio Band *** ** not available in Radio Standard ***, Acq=#	The radio band is not supported by the selected Radio Standard Change the radio band
Settings conflict; Radio Device BTS not supported, Acq=#	Sequence Analyzer does not support BTS Change the device type of the acquisition radio standard related mode to MS. For example: if acquisition 3 is configured as WCDMA, so you should change the device type of WCDMA mode to MS
Settings conflict; Radio Standard *** not available, Acq=#	The radio standard related application is not preloaded Manually switch to the radio standard related mode and switch back to Sequence Analyzer mode. Or select this mode as preloaded in configure-application panel and then restart
Settings conflict; Range <{\0}> is turned off as total range points > 4,000,001	Max of Total range points is 4,000,001. Reduce Scan Points or increase Step Size to turn on that range
Settings conflict; Reference marker must be in same window	A delta marker and its reference must be in the same window. This error occurs when you try to turn on a delta marker who's reference is in a different window
Settings conflict; Relative Trigger needs hardware support for this meas	To do Relative Triggering in this measurement requires optional hardware that is not present in this instrument
Settings conflict; Restart the measurement in Single mode to enable Continue Averaging	Message for 5G NR Continue Averaging Continue Averaging becomes available after the averaging is complete in Single mode
Settings conflict; Restart the measurement to enable Continue Averaging	Message for 5G NR Continue Averaging Continue Averaging becomes available after the averaging is complete in Single mode
Settings conflict; RF Envelope trace is not available without Basic IQ data measurement, Acq=# Step=#	RF envelope view is available only when the selected analysis step contains basic IQ data measurement Configure Basic IQ data measurement into current analysis step or switch the view to Result Metrics
Settings conflict; Sample Rate is fixed	You attempted to set the sample rate on a product with fixed sample rate
Settings conflict; Scale Type = Lin is not available when Normalize is on	Only the Log amplitude scale is available in Normalize, since the results are always presented as a dB ratio
Settings conflict; Scan Time & Points do not apply in current Step/Time Control	The Scan Time & Points are not available when Step/Time Control is set to Step & Dwell
Settings conflict; Screen limit reached	You requested to add another screen with the number of screens at the maximum

Message	Verbose/Correction Information
Settings conflict; Screen SCPI cannot be used when Display is disabled	The instrument is operating with display disabled (:DISPlay:ENABle OFF), you cannot create new Screens with the display disabled
Settings conflict; Sequence may have gaps when playing step <n>, if next step trigger comes later than current step expires	You set the step duration type of step n to Time or Play Count while the Step Trigger of step n+1 is not set to "Free Run", so if next step trigger comes later than the expiration of the current step play time, the ARB will stop playing and cause a gap between steps. This is a warning
Settings conflict; Sequence too long, Acq = #	The duration of the whole sequence is too long. With current configurations, The Sequence can only handle #-1 Acquisitions
Settings conflict; Set Averaging to ON and restart the measurement in Single mode to enable Continue Averaging	Message for 5G NR Continue Averaging Continue Averaging becomes available after the averaging is complete in Single mode
Settings conflict; Set Averaging to ON and restart the measurement to enable Continue Averaging	Message for 5G NR Continue Averaging Continue Averaging becomes available after the averaging is complete in Single mode
Settings conflict; Signal Track is not available with Continuous Peak	The signal tracking feature cannot be used while you are also using the continuous peak function
Settings conflict; Signal Track is only available in Swept SA measurement	The signal track functionality can be used when making a swept SA measurement. It is not available in the SA measurement when you are using FFT sweeps
Settings conflict; Signal Track is turned off when Zero Span is selected	Signal Track is not available when you have selected Zero Span. If Zero Span is entered while in Signal Track is On, Signal Track is turned off
Settings conflict; Source List Step<n> MPA GPS port power setting <n>dBm is lower than -130dBm minimum	Indicates that the power output setting (UI power + Amp Corr Value) on MPA GPS port on Source List Step<n> is lower than supportable minimum -130 dBm Set power output setting to be larger than -130 dBm to eliminate this warning
Settings conflict; Source List Step<n> MPA TX port<n> amplitude correction delta exceeds <n>dB between port<n1> and port<n2>	Indicates that the amplitude correction delta value between MPA TX port<n1> and port<n2> on Source List Step<n> (port difference) exceeds max loss delta value Set related amplitude correction delta value to be lower than the max loss delta value given in error message
Settings conflict; Source List Step<n> MPA TX port<n> amplitude correction value <n>dB is out of range. The valid range is <n> ~ <n>dB"	Indicates that the amplitude correction value of MPA TX port<n> on Source List Step<n> is out of range Set related amplitude correction value within the valid range given in error message
Settings conflict; Source List Step<n> MPA TX port<n> power setting <n>dBm is lower than -130dBm minimum	Indicates that the power output setting (UI power + Amp Corr Value) on MPA TX port<n> on Source List Step<n> is lower than supportable minimum -130 dBm Set power output setting to be larger than -130 dBm to eliminate this warning

3 Instrument Message Descriptions

3.2 Event Messages

Message	Verbose/Correction Information
Settings conflict; Source Output is not available while Output Port is None	You are attempting to enable the Source Output power while no Output Port is selected; first select the Output Port
Settings conflict; Span limited to XXX	
Settings conflict; Span Zoom is not available in Zero Span	Span Zoom does not work with a time domain x-axis. You must select a span greater than 0 Hz
Settings conflict; Step duration cannot be set to Play Count when the step is generating a CW tone	You tried to set the source list step duration type to Play Count while the waveform of the step is CW. Play Count only applies to ARB
Settings conflict; Step keys are not available to modify this function	You must select a specific value for this function. Using the Up/Down step keys to scroll through values is not allowed
Settings conflict; Step Size & Meas Time do not apply in current Step/Time Control	The Step Size & Meas Time are not available when Step/Time Control is set to Scan Time&Pts
Settings conflict; Sweep Setup only available in swept measurements	The current measurement uses FFT mode and so does not use the Sweep Setup menu
Settings conflict; Sweep Time cannot be auto-coupled in FFT sweeps	The sweep time for FFT sweeps is set by the calculations, so sweep time settings cannot be adjusted
Settings conflict; Sweep Time cannot be auto-coupled while in Zero Span	You cannot send the remote command to set the sweep time to auto while you are in zero span
Settings conflict; Sweep Time cannot be set while in FFT sweeps	The sweep time for FFT sweeps is set by the calculations. It cannot be manually controlled
Settings conflict; Swept IF Gain High not available when FFT IF Gain = Manual Low	When FFT IF Gain is manually set to Low, you cannot set the Swept IF Gain to High because that would make the Reference Level couplings wrong in swept mode
Settings conflict; Swept LO not available when freq mode is Fixed	SCPI-only message. The LO Mode cannot be set to Swept when the freq mode is set to fixed. Change the freq mode away from fixed, or perform the measurement at several fixed frequencies
Settings conflict; Swept Type=Swept is not available while in Gated FFT	If you have selected gated FFT then you are using the FFT sweep type and you cannot select the swept type of sweeping
Settings conflict; System Display Settings, Annotation is Off	This is an override that turns off many of the annotations. This is available as a security feature
Settings conflict; T hot must be greater than T cold	The Tcold value set under Meas Setup/ENR/Tcold, needs to be lower than the Thot value currently being set. Tcold is often taken as the ambient temperature of the noise source. If using an SNS the Tcold value may be read automatically before every sweep
Settings conflict; The number of input parameters is too large and is truncated to current list step number	An attempt was made to set list a sequence parameter whose index exceeds the "Number of Steps". Only those parameters whose indexes fall within number of steps will be accepted Reduce the number of parameters to be no large than "Number of

Message	Verbose/Correction Information
<p>Settings conflict; The parameter cannot be changed in FAST mode</p> <p>Settings conflict; The value of XXX was clipped to the maximum value of <n></p>	<p>Steps"</p> <p>Issued in the Group Delay measurement</p> <p>XXX is either Tone Spacing or Number of Tones</p> <p>If you set Tone Spacing after setting Number of Tones and Tone Spacing * Number of Tones * 1.25 exceeds the Max IF bandwidth, Number of Tones is clipped to the max value, and <i>vice-versa</i></p>
<p>Settings conflict; Time Domain Scan is not available with EMC "None" Standard</p>	<p>TDS only supports CISPR and MIL standards</p>
<p>Settings conflict; Too many points; Stop Freq clipped to nearest value allowed</p>	<p>Range Stop Frequency has been clipped to the nearest value</p>
<p>Settings conflict; Trace Math is not available while Normalize is on</p>	<p>The Normalize function works by doing trace manipulation, so trace math is not available while normalization is running</p>
<p>Settings conflict; Tracking Source unavailable in FFT Sweeps</p>	<p>Since FFTs do not sweep, you cannot use a Tracking Source while doing FFTs</p>
<p>Settings conflict; Transition time may be short on step <step number></p>	<p>An attempt was made to set the source step transition time to a value shorter than the hardware settling time</p> <p>This is provided as a warning. Instrument operation may not be impacted because the hardware could settle more quickly than is normal. You can eliminate this warning by setting a longer transition time</p>
<p>Settings conflict; Transition Time should be greater than # us, Acq=#</p>	<p>The transition time of acquisition # should be greater than physics required minimum time</p> <p>Increase the transition time</p>
<p>Settings conflict; Trigger Delay should be greater than # us, Acq=#</p>	<p>The trigger delay of acquisition # should be greater than physics required minimum time</p> <p>Increase the time of trigger delay</p>
<p>Settings conflict; Trigger input in use for source synchronization</p>	<p>If Point Trigger is being used with an external trigger input to synchronize an external source to the instrument, that trigger input is unavailable for triggering</p>
<p>Settings conflict; Trigger is not available with span > 0 Hz</p> <p>Settings conflict; Trigger Level is too low, Acq=#</p>	<p>The Trigger Level on the specified Acquisition is too low, so that the test-set cannot be triggered correctly</p> <p>Increase the trigger level</p>
<p>Settings conflict; Tx Band Spur meas does not support this frequency band</p>	<p>The transmit band spur measurement does not support all commercially available frequency bands. You need to change your selection under Mode Setup, Radio, Band to one of the supported bands</p>
<p>Settings conflict; Tx Band Spur measurement is not defined for</p>	<p>Only base station testing is available</p>

3 Instrument Message Descriptions
 3.2 Event Messages

Message	Verbose/Correction Information
mobiles	
Settings conflict; Wait until averaging is complete	Message for 5G NR Continue Averaging Continue Averaging becomes available when the averaging is complete
Settings conflict; X-Scale > 255 MHz unavailable in PvT	In the PvT window, X-Scale (Acq BW) cannot be greater than 255 MHz, even if Option B5X is installed

3.2.8 -200 to -299, Execution Errors

For -221 error messages, see the previous sections.

Note that Execution Errors are divided into subclasses:

- -21x – Trigger errors
- -22x – Parameter error
- -23x – Data corrupt or stale (invalid data)
- -24x – Hardware error
- -25x – Mass storage error
- -26x – Expression data error
- -27x – Macro error
- -28x – Program error (a downloaded program-related execution error)
- -29x – Memory use error

Err#	Message	Verbose/Correction Information
-294	Incompatible type	Indicates that the type or structure of a memory item is inadequate
-293	Referenced name already exists	
-292	Reference name does not exist; Waveform sequence contains an invalid waveform <filename>	A waveform sequence was selected for playback but not all the waveform segments in the waveform sequence are loaded into ARB memory Ensure that all the waveform segments are loaded into the ARB memory
-292	Referenced name does not exist	
-291	Out of memory	
-290	Memory use errors	

Err#	Message	Verbose/Correction Information
-286	Program runtime error	
-285	Program syntax error	Indicates that a syntax error appears in a downloaded program. The syntax used when parsing the downloaded program is device-specific
-284	Program currently running	Certain operations dealing with programs may be illegal while the program is running; for example, deleting a running program might not be possible
-283	Illegal variable name	An attempt was made to reference a nonexistent variable in a program
-282	Illegal program name	The name used to reference a program was invalid; for example, redefining an existing program, deleting a nonexistent program, or in general, referencing a nonexistent program
-281	Cannot create program	Indicates that an attempt to create a program was unsuccessful. A reason for the failure might include not enough memory
-280	Program error	There was an execution error in a down-loaded program. The exact problem cannot be specifically identified
-278	Macro header not found	Indicates that a syntactically legal macro label in the *GMC? query could not be executed because the header was not previously defined
-277	Macro redefinition not allowed	Indicates that a syntactically legal macro label in the *DMC command could not be executed because the macro label was already defined
-276	Macro recursion error	Indicates that a syntactically legal macro program data sequence could not be executed because the device found it to be recursive
-275	Macro definition too long	Indicates that a syntactically legal macro program data sequence could not be executed because the string or block contents were too long for the device to handle
-274	Macro parameter error	Indicates that the macro definition improperly used a macro parameter placeholder
-273	Illegal macro label	Indicates that the macro label defined in the *DMC command was a legal string syntax, but could not be accepted
-272	Macro execution error	Indicates that a syntactically legal macro program data sequence could not be executed due to some error in the macro definition
-271	Macro syntax error	Indicates a syntax error within the macro definition
-270	Macro error	Indicates that a macro-related execution error occurred
-261	Math error in expression	An expression that has legal syntax could not be executed because of a math error. For example, maybe you are dividing by zero
-260	Expression error	An error was found with an expression type of data element. The exact problem cannot be specifically identified
-258	Media Protected	A legal command or query could not be executed because the media was protected. For example, the write-protect was set

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Err#	Message	Verbose/Correction Information
-257	File name error;	A legal command or query could not be executed because there was an error with the file name on the device media. For example, maybe you tried to copy to a duplicate file name
-257	File name error; <filename> contains unrecognized file suffix	An attempt was made to load or save a file with a suffix other than "bin", "waveform", "wfm" or "seq" Ensure that the waveform file suffix and file format are consistent with "bin", "waveform", "wfm" or "seq"
-257	File name error; Allowable extension is .csv	You are using the wrong type of file extension for the current data/file type
-257	File name error; Allowable extension is .png	You are using the wrong type of file extension for the current data/file type
-257	File name error; Allowable extension is .state	You are using the wrong type of file extension for the current data/file type
-257	File name error; Invalid file name	The filename, directory name, or volume label syntax is incorrect
-257	File name error; name too long	
-257	File name error; Waveform file not selected	An attempted was made to turn the ARB player ON but a file has not been selected for playback Select a waveform first, and then turn on ARB state
-256	File name not found;	A legal command or query could not be executed because the file name was not found in the specified location
-256	File name not found; <file name>	A waveform file was specified and was not found <i>Or</i> A specified file is not at the specified location
-255	Directory full	A legal command or query could not be executed because media directory was full
-254	Media full	A legal command/query could not be executed because the media was full
-254	Media Full; <filename> cannot be loaded to ARB memory	The request to load a file to ARB memory failed because the ARB memory is full <i>Or</i> An attempt was made to load a set of waveforms and there was insufficient free ARB memory to load all the waveforms
-253	Corrupt media	A removable media was found to be bad or incorrectly formatted. Any existing data on the media may have been lost
-252	Missing media	A legal command or query could not be executed because missing media
-250	Mass storage error;	A problem was found with the mass storage device (memory, disk drive, etc.). The exact problem cannot be specifically identified
-250	Mass storage error; <directory> does not exist	An attempt was made to load all file from a directory while the specified directory does not exist on the instrument hard disk

Err#	Message	Verbose/Correction Information
		Create the specified directory and then load the files or load the files using an existing directory
-250	Mass storage error; <filename> cannot be deleted as it is currently in use	With ARB ON, an attempt was made to delete a waveform that was being played Turn ARB to Off first, then delete ARB file from ARB memory
-250	Mass storage error; <filename> cannot be deleted as it is used in sequencer	With the list sequencer state ON, an attempt was made to delete a waveform that was being used by the sequencer First turn the List Sequencer to Off, then delete the ARB file from ARB memory
-250	Mass storage error; <filename> used by sequencer is not in the ARB memory, cannot start sequencer	An attempt was made to start the sequencer without loading all the needed waveform files into ARB memory First load all necessary ARB files into ARB memory, then initiate the list sequence
-250	Mass storage error; Access denied	Access is denied
-250	Mass storage error; Bad path name	The specified path is invalid
-250	Mass storage error; Can only import single trace .csv files	Trace files containing multiple traces cannot be imported. However, if you need to recall multiple traces you can use the Save and Recall functions rather than the Import and Export functions
-250	Mass storage error; Can only load an Antenna Unit into Correction 1	The only Correction register that supports Antenna Units is number 1. You have attempted to load an Ampcor file which contains antenna units into another register
-250	Mass storage error; Can only load one file with Antenna Unit per range	You already have a Correction file with Antenna Unit in this range. Attempt to import more than one Corrections file with Antenna Unit is not allowed
-250	Mass storage error; Cannot make	The directory or file cannot be created
-250	Mass storage error; Create Directory Error: <directory> <err info>	An attempt was made to create a directory on the hard drive and failed
-250	Mass storage error; Delete File Error: <filename> <err info>	An attempt was made to save data to an existing file and an error occurred deleting the old file
-250	Mass storage error; Different Antenna Unit already in use	Attempt to import Corrections file with Antenna Unit that differs from an in-use correction
-250	Mass storage error; Different Antenna Unit already in used in another range	You have attempted to import a Corrections file with Antenna Unit different from another range
-250	Mass storage error; Directory not found	The system cannot find the path specified
-250	Mass storage error; Failed	The load trace operation could not be completed, as the input file

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Err#	Message	Verbose/Correction Information
	to Load trace. Bad file format	was not in the expected format. You can only load traces that were previously saved using the 'Save Trace' feature
-250	Mass storage error; File <filename> and instrument version mismatch	While opening a file, there was a mismatch between file version or model number with instrument version or model number. The import still tried to load as much as possible, but you should check it closely
-250	Mass storage error; File <filename> wrong type	Attempt to import a data file that is not the proper type for this operation
-250	Mass storage error; File <filename>. Model and serial number fields don't match selected sensor	The model and serial number fields don't match the selected sensor. Check cal factor .xml file content
-250	Mass storage error; File contains incorrect data for this operation	There is a mismatch between the file data type of the file specified and the destination indicated. For example, a correction set cannot be loaded/imported into a limit line
-250	Mass storage error; File empty	Cannot save trace because it contains no data. Check that the trace is turned on and contains some valid data
-250	Mass storage error; Invalid register number for *SAV or *RCL Mass Storage error	You have used *SAV to save a state to a nonexistent state register <i>Or</i> You have used *RCL to recall a state register that wasn't previously saved with *SAV
-250	Mass storage error; Lock violation	The process cannot access the file because another process has locked a portion of the file
-250	Mass storage error; Mkr Table must be on to save Mkr Table as Meas Results	You must have a Marker Table on the screen before you can save it. Turn on the Marker Table and try again
-250	Mass storage error; No file names available	Attempt to use the auto file name generation when all 10,000 file names are taken
-250	Mass storage error; Open failed	The system cannot open the device or file specified. This could be because the storage media is full, or possibly due to a filename error. If using an external storage device, check that the device is properly formatted
-250	Mass storage error; Pk Table must be on to save Pk Table as Meas Results	You must have a Peak Table on the screen before you can save it. Turn on the Peak Table and try again
-250	Mass storage error; Read fault	The system cannot read from the specified device
-250	Mass storage error; Register <number> empty	Attempt to recall a register with nothing in it
-250	Mass storage error; Sharing violation	The process cannot access the file because it is being used by another process
-250	Mass storage error; Spectrogram must be on to save as Meas Results	You must have a Spectrogram on the screen before you can save it. Turn on the Spectrogram and try again

Err#	Message	Verbose/Correction Information
-250	Mass storage error; Too many open files	The system cannot open the file
-250	Mass storage error; Write fault	The system cannot write to the specified device
-250	Mass storage error; Write File Error: <filename> <err info>	An attempt was made to save data to a file and an error occurred in writing the file
-241	Hardware missing	The operation could not be performed because of missing hardware; perhaps the optional hardware is not installed
-241	Hardware missing; Input not available	The hardware required is not part of this model or the option is not installed
-241	Hardware missing; Internal preamp not available at all frequency points	The Internal Preamp is currently turned on, but the measurement is being performed completely or partially outside the range of the preamp. It is recommended that the user turns preamp off to ensure consistent results across the entire measurement
-241	Hardware missing; not available for this model number	The hardware required is not part of this model
-241	Hardware missing; Option not installed	The optional hardware is not installed
-241	Hardware missing; Output not available	The hardware required is not part of this model or the option is not installed
-241	Hardware missing; Power sensor hardware is missing	There is no power sensor detected at the selected power meter. You need to setup the power sensor before proceed
-240	Hardware error	A legal program command or query could not be executed because of a hardware error. The exact problem cannot be specifically identified
-240	Hardware error; See details in Windows Event Log under SA	The internal data acquisition system detected a problem at startup and logged the details in the Windows Event Log
-233	Invalid version	A legal data element was found but could not be used because the version of the data is incorrect. For example, state data changes as new instrument features are added, so old state files may not work in an instrument with a newer version of software
-232	Invalid format	A data element was found but it could not be used because the data format or the data structure was not correct
-232	Invalid format; Map information not loaded	Instrument failed to load the burst mapping information from the selected file
-232	Invalid format; Syntax error on source step <step number>	An attempt was made to load in a list sequencer file that was incorrectly formatted
-232	Invalid format; Unable to open encrypted waveform file <filename>	An attempt was made to load, into ARB memory, a Signal Studio waveform file, but the file cannot be opened due to invalid file format
-232	Invalid format;<filename>	An attempt was made to load, into ARB memory, a Signal Studio

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Err#	Message	Verbose/Correction Information
	contains invalid waveform header and cannot be loaded into ARB memory	waveform file that contains an invalid waveform header
-232	Invalid format;<filename> has less than 1024 IQ samples	VXT models M9410A/11A/15A/16A and M9410E/11E/15E/16E: An attempt was made to load, into ARB memory, a waveform file, but the file does not contain enough IQ samples Load an ARB waveform with a sample number equal to or greater than 1024
-232	Invalid format;<filename> has less than 500 IQ samples	An attempt was made to load, into ARB memory, a waveform file, but the file does not contain enough IQ samples Load an ARB waveform with a sample number equal to or greater than 500
-231	Data questionable	Indicates that the measurement accuracy is suspect
-230	Data corrupt or stale;	A legal data element was found, but it could not be used because the data format or the data structure was not correct. Maybe a new measurement had been started but had not completed
-230	Data corrupt or stale; Measurement data is not available	Measurement data not available. The measurement that you are trying to get data from must be the current active measurement. Maybe you have not initiated the measurement, or it has not completed all the sweeps/averages needed
-230	Data corrupt or stale; Trace contains no data	Trace cannot be displayed because currently there is no data assigned to it. Use the functions under the Trace menu, or load a previously saved trace, to assign data to the trace
-230	Data corrupt or stale; Unable to load state from file	There is something wrong with the state data in the desired file. Maybe the file is corrupt, or it is from an instrument/version that is not recognized by the current instrument
-226	List not same length	You are using the LIST structure, but have individual lists that are not the same lengths
-225	Out of memory	There is not enough memory to perform the requested operation
-225	Out of memory; <details>	There is not enough available memory. The message will provide the details and possible actions
-225	Out of memory; Insufficient resources to load Mode <mode name>	If you attempt to load a mode via SCPI that will exceed memory capacity, the Mode does not load, and this message is returned. "mode name" is the SCPI parameter for the Mode in question, for example, SA for Spectrum Analyzer Mode. You can free up resources in the System, Power On, Configure Applications menu
-225	Out of memory; Memory limit caused Data Acquisition to be truncated	
-224	Illegal parameter value	An exact data value (from a list of the allowed values) was required - but not found. See the feature description for information about the expected parameter values
-224	Illegal parameter value;	The seconds parameter of an LXI time may not contain a fractional

Err#	Message	Verbose/Correction Information
	<Value> invalid. Fractional values are not allowed	portion. For example, 123456789.0 is valid, while 123456789.1 is not
-224	Illegal parameter value; <value> out of range	The value does not fall in the valid range
-224	Illegal parameter value; Cannot set waveform to continue previous waveform on the first step	An attempt was made to set the waveform for the first step in a sequence to "Continue Previous" while there is no previous waveform to continue playing back
-224	Illegal parameter value; Cannot set waveform to continue previous waveform when previous step is set to CW or Off	An attempt was made to set the step duration for a step in a sequence to "Continue Previous", but the previous step was outputting a CW tone or is Off, so there is no waveform to continue
-224	Illegal parameter value; Channel number is invalid for current band/link combination	An attempt was made to enter a channel number for a step within the List Sequencer, but the channel number is out of the valid range for the Band and Radio Band Link direction combination defined within the step
-224	Illegal parameter value; EMI Avg/RMS Avg and Average detector can't be used together	User is not allowed to turn on any EMI Avg/RMS Avg and Average detector together. They are always mutually exclusive
-224	Illegal parameter value; Exceeding the max list length	The list parameters have a maximum allowed length. You are trying to set a length longer than the maximum
-224	Illegal parameter value; existing Screen Name not found	An attempt was made to reference an existing Screen Name, but the text provided did not match an existing Screen Name
-224	Illegal parameter value; Gated FFT is not available while Sweep Type is set to Swept	The gated FFT function is not available if you have selected the swept type of sweep. You must be in the FFT sweep type
-224	Illegal parameter value; Gated LO is not available while Sweep Type is set to FFT	The FFT sweep type moves the LO frequency in steps, so the gated LO function is not available if you have selected FFT sweep
-224	Illegal parameter value; Gated Video is not available while Sweep Type is set to FFT	The gated video function is not available if you have selected the FFT sweep type
-224	Illegal parameter value; Index out of range	When querying the LXI Event Log or the Servo Log, an index may be used to look at a specific entry. This error occurs if the index provided does not point to a valid entry
-224	Illegal parameter value; Invalid list length	You are trying to set some list measurement settings, but the multiple lists that you sent were not all the same length. The number of settings must be consistent from list to list
-224	Illegal parameter value; Measurement not available	You tried to turn on a measurement that is not available in the current mode

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Err#	Message	Verbose/Correction Information
-224	Illegal parameter value; new Name already exists	An attempt was made to specify a new Name, but the name already exists; a unique name must be specified
-224	Illegal parameter value; QPD + EMI Average + RMS Average is not allowed	User is not allowed to turn on all 3 EMI detectors together. You must turn off one of the EMI Detectors before you turn this on
-224	Illegal parameter value; Res BW value not allowed with current Span	With Option B5X, with Spans greater than 255 MHz the Res BW desired is not available
-224	Illegal parameter value; This instrument is always DC coupled	You can't set AC coupling in this instrument
-224	Illegal parameter value; This model is always AC coupled	You can't set DC coupling in this instrument
-223	Too much data	A data element (of block, expression, array type, or string type) had more data than allowed by the command, or by the available memory
-223	Too much data; 200 spurs found. Additional spurs ignored	There are too many spurs for the table (the limit is 200), and any additional spurs that are found will be ignored
-222	Data out of range;	A data element was found but the instrument could not be set to that value because it was outside the range defined for the command. A descriptive message may be appended, such as "clipped to upper limit"
-222	Data out of range; Calibration Date (YYYYMMDD) is invalid	You have entered an invalid calibration date. The calibration date should be in the format of YYYYMMDD
-222	Data out of Range; clipped to source max/min	A source parameter has been entered that exceeds the range of the selected source. The parameter has been clipped to match the range of the source
-222	Data out of Range; Dwell Time clipped to minimum value allowed	The dwell time entered could not be set to. It is clipped to the minimum allowable value, which is determined by the smallest RBW set in Scan Table
-222	Data out of range; Invalid Correction Group range data	You tried to set the data for a Correction Group range which is not connecting to the range currently available
-222	Data out of range; Invalid list data	You tried to use a trace that has a number of sweep points that is different from the current setting of sweep points
-222	Data out of range; Invalid slice data at the number specified	You tried to query for an invalid range of time slice data
-222	Data out of Range; Scan Time limited, multiple CISPR det's in use for prescan	The scan time/ meas time entered could not be set to. Scan time is limited to 2.4 ks with multiple CISPR detectors turned on
-222	Data out of Range; Step Size clipped to nearest value allowed	The step size entered could not be set to. It is clipped to the nearest allowable value

Err#	Message	Verbose/Correction Information
-222	Data out of range; Two entries already exist at this x-axis value	When entering values for limit lines, you cannot have more than two y-axis (amplitude) values entered for a specific x-axis (frequency) value
-221	Settings conflict;	There are many types of Settings conflict errors See " -221 Settings Conflict Errors " on page 45 for information about these errors
-220	Parameter error	A problem was found with a program data element. The exact problem cannot be specifically identified
-220	Parameter error; <filename> is not loaded into ARB memory. Load the file before assigning to a multi-pack	An attempt was made to assign a multi-pack license to a waveform, while the waveform file has not been loaded into ARB memory Load ARB into ARB memory first then add the ARB in multi-pack license slot
-220	Parameter error; Cannot create directory to save waveform sequence file. <error info>	An attempt was made to create a directory to store new waveform sequence but failed Input correct directory path parameter
-220	Parameter error; Cannot find the first waveform file <filename>	An attempt was made to build a new waveform sequence while the first specified waveform file is not found Specify correct path for the first waveform segment
-220	Parameter error; Invalid waveform sequence file path	An attempt was made to build or query a waveform sequence while the waveform sequence file path is invalid or not specified Specify a correct path for the waveform sequence
-220	Parameter error; License slot <n> is already locked	An attempted was made to lock a slot while the slot was already locked
-220	Parameter error; License slot <n> is illegal, slot number must be positive	An attempt was made to input a slot number less than or equals 0 Waveform slot number must be positive
-220	Parameter error; License slot <n> is locked and cannot be cleared	An attempt was made to clear a slot while the slot was already locked
-220	Parameter error; License slot <n> is locked, therefore cannot be replaced	An attempt was made to replace a slot with another waveform while the slot was already locked
-220	Parameter error; License slot <n> is not assigned, therefore cannot be locked	An attempt was made to lock a slot while the slot was not assigned
-220	Parameter error; Nested sequence file is not supported	An attempt was made to add a sequence file as a waveform segment into another sequence file
-220	Parameter error; Nested sequence file is not supported	An attempt was made to build a new waveform sequence which contains another waveform sequence file Do not nest waveform sequence file (*.seq) into another waveform sequence file (*.seq)

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Err#	Message	Verbose/Correction Information
-220	Parameter error; No. <n> waveform file path is invalid	An attempt was made to build a new waveform sequence while the nth waveform file path is invalid or not specified Specify a correct path for the waveform
-220	Parameter error; Repetition value must be within 1 and 65535	An attempt was made to build a new waveform sequence with the repetition value set to less than 1 or greater than 65535
-220	Parameter error; Sequence will be stuck on step <step number>. Next step trigger cannot be free run when current step duration is continuous	An attempt was made to set the current step duration to continuous, while the step trigger of the next step is set to free run Make the next step trigger to be other than free run
-220	Parameter error; Suffix of waveform sequence file should be ".seq"	An attempt was made to build a new waveform sequence while the suffix of waveform sequence file is not ".seq" Ensure that the waveform sequence file suffix and file format is consistent with "seq"
-220	Parameter error; Transition time is longer than duration time on step<step number>	An attempt was made to set the source step transition time to a value that is longer than step duration time, when the step duration type is "Time" Make the transition time shorter than the duration time
-220	Parameter error; Unrecognized marker type: <marker>	An attempt was made to build a new waveform sequence while the marker type value is invalid Input correct maker type parameter
-220	Parameter error; Waveform <filename> is already assigned to a waveform slot	An attempt was made to assign a waveform to a slot while the waveform was already assigned to another waveform slot
-220	Parameter error; Waveform cannot be multi-pack licensed, no multi-pack slots available	An attempt was made to multi-pack license a waveform, but there are no free multi-pack license slots Install multi-pack licenses to get multi-pack license slots
-220	Parameter error; Waveform of that ID is already multi-pack licensed	An attempt was made to multi-pack license a waveform that was already licensed by a different multi-pack license slot
-220	Parameter error;<filename> does not have a unique id, therefore cannot be assigned to a multi-pack	An attempt was made to add a Signal Studio waveform to a license slot while the waveform unique id is zero Set the waveform unique ID to a value other than zero
-215	Arm deadlock	The arm source for the initiation of a measurement is set to GET and the following measurement query is received. The measurement cannot be started until a GET is received and the GET would cause an INTERRUPTED error
-214	Trigger deadlock	The trigger source for the initiation of a measurement is set to GET, and the following measurement query was received. The measurement cannot be started until a GET is received, but the GET would cause an INTERRUPTED error
-213	Init ignored	An initiate trigger/sweep request was received and ignored

Err#	Message	Verbose/Correction Information
		because another measurement was already in progress
-212	Arm ignored	An arming signal was received, but it was ignored
-211	Trigger ignored	A GET, *TRG or other triggering signal was received, but it was ignored because of timing considerations. For example, maybe the instrument was not ready to respond when the command was received
-210	Trigger error	A trigger error has occurred, but the exact problem cannot be specifically identified
-203	Command protected	The command could not be executed because it is disabled. It was disabled by licensing or password protection
-203	Command protected; feature not licensed	The specified feature, for example "N9073A-TR2" is not licensed. The license may have expired. You cannot use it until you get a license
-203	Command protected; Feature Not Supported. No appropriate waveform license installed for <filename>	An attempt was made to select a waveform while the required license is not installed Install necessary Signal Studio waveform licenses or multi-pack licenses
-202	Settings lost due to rtl	A "return to local" control was forced, and some settings were lost because of this
-201	Invalid while in local	The command cannot be executed while the instrument in Local control
-200	All ranges are off. Turn on at least a range	There are no range turn on in scan table. You need to turn on at least a range to initiate a scan
-200	At Full Zoom	Marker Zoom is not available as it has reached full zoom
-200	Cannot move marker outside of displayed frequency span	Meters frequency is out of displayed frequency range. You must extend the displayed range from the scan table if you wish to set the selected marker to this frequency on the graph display
-200	Disturbance List is Empty	Cannot perform the selected function because the disturbance list contains no data
-200	Disturbance selected is not in the Disturbance List	The user has selected an invalid disturbance (one that is not in the list)
-200	Execution Error	A program execution error has occurred. The exact problem cannot be specifically identified
-200	Execution error; Carrier frequency outside device's transmit band	The entered channel/carrier frequency is not within the range of your current mode setup selection of standard and device
-200	Execution Error; Data in Correction File Range x File x does not cover the range frequency span	You have tried to use a correction file that does not cover the frequency span of the correction range. Fix the file or select another file
-200	Execution error; Invalid GSM burst timing	A GSM-like burst was acquired, but its timing is not valid. Ensure the correct Burst Type has been selected
-200	Execution error; Invalid IP	The IP address supplied is either not valid or does not belong to a

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Err#	Message	Verbose/Correction Information
	address	compatible Signal Generator. Check the IP address and instrument connection then try again
-200	Execution error; Invalid Marker Trace	Cannot place markers on the reference trace, because the reference trace is currently turned off or has no data
-200	Execution error; Measurement time is too short	The specified measurement time is too short to analyze the data
-200	Execution Error; No peak found	No signal peak was found within the defined parameters of the search Note: for ESA/PSA compatibility, the Swept SA measurement uses 780 for this error number; all other measurements use -220
-200	Execution error; No ranges are defined. Activate a range	There are no active ranges in the range table. You will need to activate at least one range
-200	Execution Error; Preselector centering failed	Algorithm failed to center the preselector. This may be caused by the signal peak being too low in amplitude. Or it could be from excessive CW input signal, alignment error, or hardware failure
-200	Execution Error; Signal not stable enough to track	The signal that you have selected to track is changing too much for the function to track it properly
-200	Execution Error; Store ref trace before turning on Normalize	The Reference trace data must be stored in the Ref trace before you turn on the Normalization function
-200	Execution error; Sync word was not found	NADC & PDC: In an EVM measurement, the sync word is not found, and the synchronization cannot be established when Sync Word is selected in the Burst Sync menu Flexible Digital Demodulation: The sync word cannot be detected because of inappropriate parameter settings or incorrect signal
-200	Execution error; Trace file contains no compatible traces	The trace file may have been created by another version of the Phase Noise personality, which uses a different trace format that is incompatible with the version you are running. Check that you are running the most up-to-date version of the personality
-200	Execution error; Trace file created by incompatible version of Phase Noise App	The trace file may have been created by another version of the Phase Noise personality, which uses a different trace format that is incompatible with the version you are running. Check that you are running the most up-to-date version of the personality
-200	Function not available before Marker Zoom is performed	Function not available before perform Marker Zoom
-200	Function not available before perform Disturbance Zoom	Need to zoom in before you can zoom out
-200	Function not available before Signal Zoom is performed	Function not available before Signal Zoom is performed
-200	Must perform Scan before do Search	Cannot perform Search as the trace data is found empty

Err#	Message	Verbose/Correction Information
-200	No marked signal	Cannot perform the selected function because no signal was marked. You must mark the peak of interest before selecting the function
-200	No Measure At Marker Added to Signal List	No signal peak was added into Signal List as there is no valid measure to Marker result. You must perform Measure at maker before selecting Measure At Marker --> List
-200	No Peak Added to Signal List	No signal peak was added from the Search to Signal List as there is no signal peaks found within the defined parameters of the search criteria
-200	No unmarked signals	Cannot perform the selected function because no signal was unmarked. You must unmark the peak of interest before selecting the function
-200	Signal List is Empty	Cannot perform the selected function because the signal list contains no data
-200	Signal List is Full	Cannot perform the selected function because the signal list is full. Clear the list
-200	Signal Selected is not in the Signal List	The signal selected is not the list. You only can perform the operation on signal that is already available in the list
-200	Signal selected is out of display range	Signal selected is out of display range. You must extend the display range if you wish to view the selected signal on the graph display

3.2.9 -100 to -199, Command Errors

Err#	Message	Verbose/Correction Information
-184	Macro parameter error	Indicates that a command inside the macro definition had the wrong number or type of parameters
-183	Invalid inside macro definition	Indicates that the program message unit sequence, sent with *DDT or *DMC, is syntactically invalid
-181	Invalid outside macro definition	Indicates that a macro parameter placeholder was encountered outside of a macro definition
-180	Macro error	A problem was found with a macro element. The exact problem cannot be specifically identified
-178	Expression data not allowed	A legal expression data was found, but it is not allowed at this point in the parsing
-171	Invalid expression	An expression data element is not valid. For example, there may be unmatched parentheses or an illegal character
-170	Expression error	A problem was found with an expression data element. The exact problem cannot be specifically identified
-168	Block data not allowed	A legal block data element was found, but it is not allowed at this point in the

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Err#	Message	Verbose/Correction Information
		parsing
-161	Invalid block data	A block data element was expected, but it was invalid. For example, an END message was received before the end length was satisfied
-160	Block data error	A problem was found with a block data element. The exact problem cannot be specifically identified
-158	String data not allowed	A string data element that you sent is valid, but it is not allowed at this point in the parsing
-151	Invalid string data	A string type of data element was expected, but it is invalid for some reason. For example, an END message was received before the terminal quote character
-150	String data error	A problem was found with a string data element. The exact problem cannot be specifically identified
-148	Character data not allowed	A character data element that you sent is valid, but it is not allowed in this point in the parsing
-144	Character data too long	The character data element contains more than twelve characters
-141	Invalid character data	Either the character data element contains an invalid character or the element itself is not valid for this command
-140	Character data error	A problem was found with a character data element. The exact problem cannot be specifically identified
-138	Suffix not allowed	A suffix was found after a numeric element that does not allow suffixes (units)
-134	Suffix too long	The suffix contained more than twelve characters
-131	Invalid suffix	There is a syntax problem with the suffix. You need to use the suffix (units) that are allowed by this command
-130	Suffix error	A problem was found in a suffix (units). The exact problem cannot be specifically identified
-128	Numeric data not allowed	A legal numeric data element was found, but that is not a valid element at this position in the command
-124	Too many digits	The mantissa of a decimal-numeric contained more than 255 digits, excluding leading zeros
-123	Exponent too large	The magnitude of an exponent was greater than 32000
-121	Invalid character in number	A character was found that is not valid for the data type. For example, an alpha in a decimal numeric or a "9" in octal data
-120	Numeric data error	An error was found in a data element that appears to be numeric. The exact problem cannot be specifically identified
-115	Unexpected number of parameters	The number of parameters received does not correspond to the number of parameters expected
-114	Header suffix out of range	The value of a numeric suffix that is attached to a program mnemonic makes the header invalid. (A suffix is usually units, like Hz or DB)

Err#	Message	Verbose/Correction Information
-113	Undefined header	The command meets the SCPI syntax requirements, but is not valid in the current measurement environment
-112	Program mnemonic too long	The command contains a keyword that is more than twelve characters
-111	Header separator error	Illegal character in a command where a separator was expected
-110	Command header error	This is a general error that is generated when a problem is found in a command header, but we can't tell more specifically what the problem is
-109	Missing parameter	Fewer parameters were received than required for this command
-108	Parameter not allowed	More parameters were received than were expected for the command. For example, *ESE only accepts one parameter, so sending *ESE 0,1 is not allowed
-105	GET not allowed	A Group Execute Trigger was received within a program message
-104	Data type error	We found a data type different than what was expected. For example, numeric or string data was expected, but block data was found
-103	Invalid separator	The command was supposed to contain a separator, but an illegal character was detected. For example, the semicolon was omitted after a command string
-102	Syntax error	An unrecognized command or data type was found, for example a string was received for a command that doesn't accept strings
-101	Invalid character	An invalid character was found in part of the command
-100	Command error	There is a problem with the command. The exact problem cannot be specifically identified

3.2.10 0 No Error

Err#	Message	Verbose/Correction Information
0	No error	The queue is empty Either every error in the queue has been read, or the queue was cleared by power-on or *CLS

3.3 Condition Messages

Condition messages are classified as either “**Errors**” or “**Warnings**.” Condition messages are *not* defined in the [1999 SCPI Syntax & Style Standard](#), and have numbers greater than zero.

Every Condition has an associated Detected (Start) Event and Cleared (End) Event. The Condition itself has the same number as its Detected Event. The Detected Event has a number less than 1000, and the Cleared Event has the same number plus 1000.

In the tables in this section, an **E** in the Error or Warning column means that an Error is displayed on the front panel and sent out to SCPI when this condition is detected. A **W** in this column means that a Warning is displayed on the front panel, but nothing is sent to SCPI.

For each Condition Message, there is a corresponding bit in one of the SCPI status registers. These bits are listed in the **Bit in status register** column of the tables below. Some messages exist *only* as status bits; for these messages the **Error or Warning** column contains “Status bit only”.

The tables in this section are divided by number range, as follows:

- “1 to 99, Calibration” on page 76
- “101 to 199, Measurement Integrity” on page 81
- “201 to 259, Signal Integrity” on page 86
- “260 to 299, Output Integrity” on page 90
- “301 to 399, Uncalibrated Integrity” on page 91
- “401 to 499, Power” on page 93
- “501 to 599, Frequency” on page 95
- “601 to 699, Error Summaries” on page 96
- “701 to 799, Operation” on page 97
- “801 to 899, Temperature” on page 99

3.3.1 1 to 99, Calibration

These errors correspond to bits of the `:STATus:QUEStionable:CALibration` register, which accepts summary inputs from three sub-registers (`:SKIPped`,

:[EXTended:NEEDed](#), and :[EXTended:FAILure](#)). In general, each sub-register has its own range of error numbers.

3.3.1.1 6 to 34, Calibration Skipped

These errors correspond to bits in the [STATus:QUEStionable:CALibration:SKIPPed](#) sub-register. The second column in the table shows the corresponding bit.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated. These error numbers are displayed in the **Show Errors** screen, along with the DETECTED and CLEARED indicators.

For example, error 6 indicates that the “RF Alignment being skipped” condition has been detected, and error 1006 indicates that failure has been cleared.

This register is summarized as bit 11 of the [STATus:QUEStionable:CALibration](#) register.

Err#	Bit in status register	Message	Error or Warning	More Information
6	0	Align RF Skipped	W	
8	1	unused		
10	2	unused		
12	3	unused		
14	4	unused		
16	5	unused		
18	6	unused		
20	7	unused		
22	8	unused		
24	9	unused		
26	10	unused		
28	11	unused		
30	12	unused		
32	13	unused		
34	14	unused		

3.3.1.2 36 to 64, Calibration

These errors correspond to bits in the [STATus:QUEStionable:CALibration](#) register. The second column in the table shows the corresponding bit.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000

3 Instrument Message Descriptions
 3.3 Condition Messages

is generated. These error numbers are displayed in the Show Errors screen, along with the DETECTED and CLEARED indicators.

For example, error 42 indicates that the “RF Alignment Failure” condition has been detected, and error 1042 indicates that failure has been cleared.

Several bits in this register are “summary bits” for registers at a lower level. There are no error messages associated with these bits; they exist only as status bits, read with `:STATus:QUESTionable:CALibration?` or `:STATus:QUESTionable:CALibration:CONDition?`.

Note that these summary bits summarize the state and history of the event registers at the lower level. This is true even for bits in the `:STATus:QUESTionable:CALibration` Condition register. This means that:

- The summary bits read by `:STATus:QUESTionable:CALibration:CONDition?` are true if any event bits are set in any of the `:CALibration` sub-registers `:SKIPped`, `:EXTended:NEEDed` or `:EXTended:FAILure`
- The summary bits read by `:STATus:QUESTionable:CALibration?` are true if any event bit has undergone a false-to-true transition with the `PTRansition` filter set, or a true-to-false transition with the `NTRansition` filter set, in any of the `:CALibration` sub-registers `:SKIPped`, `:EXTended:NEEDed` or `:EXTended:FAILure`

Thus, the summary bits cannot be used to determine the current state of a lower-level condition bit; only the state and history of the lower-level event bits.

This register is itself summarized as bit 8 of the `STATus:QUESTionable` register.

Err#	Bit in status register	Message	Error or Warning	More Information
36	0	unused		
38	1	unused		
40	2	TG Alignment Failure	E	
42	3	RF Alignment Failure	E	
44	4	IF Alignment Failure	E	
46	5	LO Alignment Failure	E	
48	6	ADC Alignment Failure	E	

Err#	Bit in status register	Message	Error or Warning	More Information
50	7	FM Demod Alignment Failure	E	
52	8	Extended Align Needed Summary	status bit only	Summary bit for the <code>STATUS:QUESTIONABLE:CALibration:EXTended:NEEDed</code> sub-register
54	9	Extended Align Failure Summary	status bit only	Summary bit for the <code>STATUS:QUESTIONABLE:CALibration:EXTended:FAILURE</code> sub-register
56	10	unused		
58	11	Align Skipped Sum Summary	status bit only	Summary bit for the <code>STATUS:QUESTIONABLE:CALibration:SKIPPed</code> sub-register
60	12	Align Now, RF required	E	
62	13	unused		
64	14	Align Now, required	E	

3.3.1.3 65 to 92, Calibration Extended Needed

These errors correspond to bits in the `STATUS:QUESTIONABLE:CALibration:EXTended:NEEDed` sub-register. The second column in the table shows the corresponding bit.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated. These error numbers are displayed in the **Show Errors** screen, along with the DETECTED and CLEARED indicators.

For example, error 72 indicates that the “Input Attenuation not calibrated” condition has been detected, and error 1072 indicates that failure has been cleared.

This register is summarized as bit 8 of the `STATUS:QUESTIONABLE:CALibration` register.

Err#	Bit in status register	Message	Error or Warning	More Information
65	0	unused		
66	1	Align 9kHz-	E	An EMI conducted frequency range alignment

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Err#	Bit in status register	Message	Error or Warning	More Information
		30MHz required		is needed
68	2	Align 30MHz-1GHz required	E	An EMI radiated frequency range alignment is needed
72	4	Input Attenuation not calibrated	E	Corrected measurements have been requested and the required RF front-end setting of x dB has not been calibrated
74	5	Align current frequency range required	E	Alignment for current set frequency range is needed. It is suggested to process Align Selected Freq Range for the frequency range in use
74	5	unused		
76	6	unused		
78	7	unused		
80	8	MPA Align required	W	EXT only
82	9	unused		
84	10	unused		
86	11	Characterize Preselector required	W	Align
88	12	Characterize Noise Floor required	W	
90	13	unused		
92	14	unused		

3.3.1.4 67 to 95, Calibration Extended Failure

These errors correspond to bits in the `:STATus:QUESTionable:CALibration:EXTended:FAILure` sub-register. The second column in the table shows the corresponding bit.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated. These error numbers are displayed in the **Show Errors** screen, along with the DETECTED and CLEARED indicators.

For example, error 54 indicates that the Characterize Preselector Failure has been detected, error 1054 indicates that failure has been cleared.

This register is summarized as bit 9 of the `:STATus:QUESTionable:CALibration` register.

Err#	Bit in status register	Message	Error or Warning	More Information
52	14	Misc/System Alignment Failure	E	Miscellaneous/System alignments have failed
54	2	Characterize Preselector Failure	E	The preselector characterization routine failed
67	0	unused		
69	1	unused		
73	3	Align Preselector Failed		The alignment of the Preselector failed
75	4	unused		
77	5	Align Selected Freq Range failed	W	The alignment for selected frequency range failed
79	6	unused		
81	7	unused		
83	8	MPAdapter Preamp Charact Failure	E	Multiport adapter alignment failed, EXT only
85	9	RCal Apply Warning, Check RCal Status	W	The applying of the calibration data was not possible
87	11	RCal Calibrations Missing, Part of Trace	W	The calibration being applied is not being applied to all the trace for the current measurement
89	10	RCal Multiple Calibrations Applied, Part of Trace	W	More than one calibration is being applied to part of the trace for current measurement
91	12	RCal Multiple Groups Applied	W	More than one calibrated row is being applied to the current measurement
93	13	unused		

3.3.2 101 to 199, Measurement Integrity

These errors correspond to bits in the **STATUS:QUESTIONABLE:INTEGRITY** register. The second column in the table shows the corresponding bit.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated. These error numbers are displayed in the **Show Errors** screen, along with the DETECTED and CLEARED indicators.

For example, error 141 indicates an Input Overload condition has been detected, error 1129 indicates that failure has been cleared.

Two bits in this register are “summary bits” for registers at a lower level. There are no error messages associated with these bits; they exist only as status bits, read

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with `:STATus:QUESTionable:INTEgrity?` or
`:STATus:QUESTionable:INTEgrity:CONDition?`.

Note that these summary bits summarize the state and history of the event registers at the lower level. This is true even for bits in the `STATus:QUESTionable:INTEgrity` condition register. This means that:

- The summary bits read by `:STATus:QUESTionable:INTEgrity:CONDition?` are true if any event bits are set in any of the `:INTEgrity` sub-registers `:SIGNal` or `:UNCalibrated`
- The summary bits read by `:STATus:QUESTionable:INTEgrity?` are true if any event bit has undergone a false-to-true transition with the `PTRansition` filter set, or a true-to-false transition with the `NTRansition` filter set, in any of the `:INTEgrity` sub-registers `:SIGNal` or `:UNCalibrated`

Thus, the summary bits *cannot* be used to determine the current state of a lower-level condition bit; only the state and history of the lower-level event bits.

This register is itself summarized as bit 9 of the `STATus:QUESTionable` register.

Err#	Bit in status register	Message	Error or Warning	More Information
133	0	Signal Summary	status bit only	Summary bit for the <code>STATus:QUESTionable:INTEgrity:SIGNal</code> sub-register
135	1	No Result	E	
135	1	No Result; Meas invalid with I/Q inputs	E	The current measurement does not support I/Q input; switch to the RF or another input or select a different measurement
135	1	No Result; Meas/Radio Std incompatibility	E	The current measurement is incompatible with the current Radio Standard; change Radio Standard to use this measurement
135	1	No Result; Turn on MCE	E	To calculate Timing and Phase results in the Code Domain Power view of Mod Accuracy, the "Multi Channel Estimator" must be ON. Otherwise, these results are invalid
137	2	unused		
139	3	Uncalibrated Summary	status bit only	Summary bit for the <code>STATus:QUESTionable:INTEgrity:UNCalibrated</code> sub-register
141	4	Input Overload	E*	
141	4	Input Overload; ADC over range	E*	The signal at the input to the IF section is too high. You should increase the attenuation or lower the signal level
141	4	Input Overload; I/Q ADC over range	E*	The I or Q input exceeds the ADC upper limit

Err#	Bit in status register	Message	Error or Warning	More Information
141	4	Input Overload; I/Q Voltage over range	E*	The input voltage on the I or Q channel exceeds the channel limit. In differential mode the over voltage may occur without causing an ADC overload, for example, if I is at +5.01 V and I-bar is at +5.0 the ADC will be in range but both I and I-bar will exceed the voltage limit
141	4	Input Overload; RF Preselector Overload	E*	The level at the input of the MXE RF Preselector has exceeded tolerances. Reduce the input level
143	5	Over Range	Status Bit Only	The signal at the input for this measurement is too high. You should increase the attenuation or decrease the signal level
145	6	Under Range	Status Bit Only	The signal at the input for this measurement is too low. You should decrease the attenuation or increase the signal level
147	7	Insufficient Data	E	
147	7	Insufficient Data; ENR table empty	E	A measurement was attempted or a SCPI query of an ENR table was made and there were no entries in the relevant ENR table (Common, Meas or Cal)
147	7	Insufficient Data; frequency list empty	E	A measurement was attempted with List frequency mode or a SCPI query of the frequency list table was made, and the frequency list table is empty
147	7	Insufficient Data; Incr. Demod Time	E	There is insufficient acquisition data to provide accurate metrics. You should increase the Demod Time to acquire enough data
147	7	Insufficient Data; Loss table empty	E	A measurement is attempted or a SCPI query of a before or after loss table is made and there are no entries in the relevant loss table
147	7	Insufficient Data; trigger received before current segment is complete	E	In PAVT measurement with Meas Type of Triggered, a new trigger was received before processing of the current segment is complete. Shorten Meas Offset + Meas Interval or prevent trigger from occurring
149	8	Meas Error		
149	8	Meas Error; Power meter error		The power meter has returned an error. Details are in the error history This must be corrected so that the measurement can complete successfully
151	9	Memory Error	E	
151	9	Memory Error; Shorten capture interval	E	A shortage of free memory related to longer

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Err#	Bit in status register	Message	Error or Warning	More Information
				capture intervals has occurred. The measurement is aborted, and all results return invalid values
153	10	I/O Error	E	
153	10	I/O Error; Ext Source needs IP Addr	E	No IP address entered for external source and external LO control is ON
155	11	Trig Error	E	
157	12	Invalid Data	Status bit only	This is the “invalid data indicator”, same as the “**” in the upper right corner of the screen. It means that the on-screen annotation does not match the on-screen data, usually because a measurement is pending after a settings change. There is no message in the status line and nothing in the history queue, but there is an on-screen indication and a status bit
159	13	Settings Alert	W	
159	13	Settings Alert; Acquisition truncated	W	In the Analog Demod Mode, certain extreme settings combinations will result in a required acquisition length in excess of the capacity of the instrument Increase the AF Spectrum RBW or the RF Spectrum RBW, decrease the Channel BW, and/or decrease the Demod Waveform Sweep Time
159	13	Settings Alert; Analog Out Settings conflict	W	Analog Output under Input/Output has been manually set to a value that conflicts with the current measurement. There will be no output on the Analog Out port until this conflict is resolved. In most cases, simply set Analog Out to Auto for the optimal setting
159	13	Settings Alert; Delta too big between Loss Table entries	W	
159	13	Settings Alert; Diff probe mismatch; <I Q I,Q>	W	The attenuation values of the two probes on the I and/or Q channels differ by too much for a valid differential reading
159	13	Settings Alert; Freq>USB Preamp max	W	The highest analysis frequency exceeds the frequency range of the USB preamp used. In Noise Figure Mode, this situation will cause gradual degradation of uncertainty with increasing frequency. In Spectrum Analyzer Mode, this will cause rapidly declining amplitude accuracy with increasing frequency

Err#	Bit in status register	Message	Error or Warning	More Information
159	13	Settings Alert; I/Q mismatch:<Differential Input Z Attenuation>	W	The impedance, differential, or attenuation settings for the I and Q channels do not match. For valid I+jQ measurements the impedance and differential settings should be the same on both channels and the attenuation should match within 1 dB
159	13	Settings Alert; LO may overload IF	W	If the sweep type is Swept, the start frequency of the instrument is less than 10 MHz, and you put Swept IF Gain in Manual High, then a warning condition is generated and remains in effect as long as this condition exists
159	13	Settings Alert; M9300A Ext Ref Unlocked	W	You have set the M9300A Freq Reference to External but there is no valid reference signal
159	13	Settings Alert; Mechanical switch cycling	W	
159	13	Settings Alert; Minimum Jitter is not available	W	You have set the trigger Optimization mode to Minimum Jitter, but it is not in effect, or the optimization is unnecessary
159	13	Settings Alert; No preselection for freq above 88 GHz	W	Noise Figure Mode only. When using V3050A and using the Ext RF input port this advises you that there is no hardware preselection above 88 GHz
159	13	Settings Alert; Parm/data mismatch	W	For Bluetooth Mode, the detected parameters did not match the data
159	13	Settings Alert; Presel/Meas BW conflict	W	When <ul style="list-style-type: none"> - Info BW is wider than 40 MHz - Center frequency is in Band-1 or above - Pre-selector is <i>not</i> bypassed (regardless MPB option is installed)
159	13	Settings Alert; Presel/Meas BW Conflict	W	
159	13	Settings Alert; RBW Exceeds Maximum Available RBW	W	
159	13	Settings Alert; Set Auto Sweep Points to On	W	
159	13	Settings Alert; Span: RBW Ratio too big	W	The selected large ratio of span to RBW is not possible. Reduce the span or increase the RBW and/or FFT Width

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Err#	Bit in status register	Message	Error or Warning	More Information
159	13	Settings Alert; Spur Avoidance Off	W	Spur Avoidance is disabled or not functional with current parameters, this warning message appears. Thus, the feedthrough leakage of zero IF system might impact the measurement
159	13	Settings Alert; Src pwr ramp>ALC range	W	You have chosen a Power Sweep range that exceeds the ability of the External Source to follow without changing mechanical attenuation. Lower your Power Sweep range
159	13	Settings Alert; Sweep Rate Unavailable	W	The auto-coupled sweep time exceeds the maximum allowed. Therefore, full amplitude accuracy cannot be attained. Increase the RBW or reduce the span
161	14	Setting Modified	E	
161	14	Setting Modified; Filter not applied	E	The filter you have selected is larger than the sampling frequency. Select a different filter

*The Input Overload error is not reported to the SCPI queue unless `:SYSTEM:ERROR:OVERload ON` has been issued, however it always sets the status bit. See the command reference for details of `:SYSTEM:ERROR:OVERload`.

3.3.3 201 to 259, Signal Integrity

These errors correspond to bits in the `STATus:QUESTIONable:INTEgrity:SIGNa1` sub-register. The second column in the table shows the corresponding bit.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated. These error numbers are displayed in the **Show Errors** screen, along with the DETECTED and CLEARED indicators.

For example, error 207 indicates a Burst Not Found condition has been detected, error 1207 indicates that failure has been cleared.

This register is summarized as bit 0 of the `STATus:QUESTIONable:INTEgrity` register.

Err#	Bit in status register	Message	Error or Warning	More Information
203	0	unused	E	
205	1	unused	E	
207	2	Burst Not Found	E	The burst signal cannot be detected because of inappropriate parameter settings or incorrect signal content:

Err#	Bit in status register	Message	Error or Warning	More Information
				<ul style="list-style-type: none"> - An inappropriate parameter setting could cause the signal to be partially, rather than fully, on the display, Burst Search Threshold and/or Burst Search Length may need to be adjusted - An incorrect signal could have either insufficient power, the rising or falling edges cannot be detected, or the burst is less than 126 microseconds - Carrier signal might not actually be bursted <p>W-CDMA: Either the signal being analyzed has insufficient power, the rising or falling edges cannot be detected, or the burst is less than 126 μs</p> <p>W-CDMA: Cannot synchronize measurement with PRACH channel for Power Control measurement because the signal cannot be found. Make sure PRACH is present in the W-CDMA uplink signal, and that the preamble signature and scramble code are set correctly</p> <p>GSM/EDGE: Data was acquired but a GSM burst was not found, with the timeslot mode disabled</p> <p>Bluetooth: The burst that has been found does not correspond to the currently selected Bluetooth packet type (the burst length may be too short)</p> <p>WLAN: The instrument cannot find a valid WLAN burst. You may need to extend the search length</p>
207	2	Burst not found; with selected Time Slot	E	The selected timeslot does not contain the expected burst
209	3	Timing Error	E	
209	3	Timing Error: No time ref pilot burst	E	The pilot burst used for time reference is not active
211	4	Carrier(s) incorrect or missing	E	
213	5	Freq Out of Range	E	
213	5	Freq Out of Range; External LO	E	One or more external LO frequencies are out of range. Check that the LO frequency limits are set

3 Instrument Message Descriptions
3.3 Condition Messages

Err#	Bit in status register	Message	Error or Warning	More Information
213	5	Freq Out of Range; SA Ext RF	E	correctly and check the entered measurement frequencies and measurement mode Noise Figure measurement only. When using V3050A and using the Ext RF input port, if Freq is 50 GHz or below when insertion loss is too high to make a valid measurement
213	5	Freq Out of Range; System input (IF)	E	One or more system input frequencies are out of range. If using a frequency list, check that all entries are valid for current measurement mode
215	6	Sync Error	E	W-CDMA: Cannot sync DPCCH pilot Cannot synchronize measurement with DPCCH pilot for Power Control measurement because the pilot signal cannot be found. Make sure DPCCH is present in the W-CDMA uplink signal, and that the slot format and scramble code are set correctly
215	6	Sync Error; Midamble sync fail	E	Failed to find the uplink slot, which caused the synchronization with the midamble to fail
215	6	Sync Error; No freq ref pilot burst	E	The pilot burst used for frequency reference is not active
215	6	Sync Error; No pilot burst	E	There is no Pilot burst detected
215	6	Sync Error; Preamble length zero	E	Burst type is "Data" or "Preamble" and the measurement cannot find a Preamble
215	6	Sync Error; Sync code not found	E	Synchronization code is not found in the measured time slot
217	7	Demod Error	E	This error is normally generated because of one of the following reasons: <ul style="list-style-type: none"> 1. There is no carrier signal 2. Walsh channels other than the pilot are active 3. There is some other modulation problem that will prevent the measurement from being made <p>This problem must be corrected before the measurement can continue</p> <p>W-CDMA: Cannot correlate to the input signal and no active channel is found. (from composite EVM measurement) An active channel must meet the</p>

Err#	Bit in status register	Message	Error or Warning	More Information
				default threshold criteria that it is within 20 dB of the highest power code channel. The threshold can be changed using the active set threshold function in the Meas Setup menu
217	7	Demod Error; Acq Time too short	E	For Bluetooth, the detected packet type doesn't match the captured packet type because the payload start, end or data could not be found
217	7	Demod Error; Can't correlate	E	Cannot correlate to the input signal and no active channel is found. (from composite EVM measurement) An active channel must meet the default threshold criteria that it is within 20 dB of the highest power code channel. The threshold can be changed using the active set threshold function in the Meas Setup menu
217	7	Demod Error; Data interval too short	E	There are not enough input I/Q pairs for the measurement calculation. This may be caused by an incorrect data capture
217	7	Demod Error; Muxed bits not found	E	Multiplexed Data Demod Bits are not generated even though Data channel is selected, because all 16 data code channels are not active
217	7	Demod Error; No active channel	E	There is no active channel detected
217	7	Demod Error; No full subframe found	E	No sub-frame or only part of one sub-frame is detected
217	7	Demod Error; Not an active slot	E	There is no active slot detected
219	8	Signal Too Noisy	E	GSM/EDGE: In a GSM measurement, indicates that a burst could not be found in a signal that appears noisy
221	9	Slot Error	E	
221	9	Slot error; No active slot found	E	No valid active slot found in captured data, or no active slot found in captured interval. Synchronization may succeed and pilot found when this message is issued, but no results are included in peak/average calculation
221	9	Slot Error; No idle slot found	E	No valid idle slot found in captured data, or no idle slot found in captured interval. Synchronization may succeed and pilot found when this message is issued, but no results are included in peak/average calculation

3 Instrument Message Descriptions
3.3 Condition Messages

Err#	Bit in status register	Message	Error or Warning	More Information
223	10	unused	E	
225	11	unused	E	
227	12	unused	E	
229	13	unused	E	
231	14	unused	E	

3.3.4 260 to 299, Output Integrity

These errors correspond to bits in the [STATus:QUEStionable:INTEgrity:OUTPut](#) sub-register. The second column in the table shows the corresponding bit.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated. These error numbers are displayed in the **Show Errors** screen, along with the DETECTED and CLEARED indicators.

For example, error 260 indicates a ODI Connection Error condition has been detected; error 1260 indicates that failure has been cleared.

This register is summarized as bit 2 of the [STATus:QUEStionable:INTEgrity](#) register.

Err#	Bit in status register	Message	Error or Warning	More Information
260	0	ODI Connection Error	E	General ODI Connection error
260	0	ODI Connection Error, clocking error in transceiver	E	ODI Connection Error, clocking error in transceiver
260	0	ODI Connection Error, CRC error	E	ODI Connection Error, CRC error
260	0	ODI Connection Error, illegal framing	E	ODI Connection Error, illegal framing
260	0	ODI Connection Error, RX side not aligned	E	ODI Connection Error, RX side not aligned, check the connection and that the capture device is enabled
260	0	ODI Connection Error, TX error	E	ODI Connection Error, TX error
260	0	ODI Connection Error, Vita49 Buffer Overflow	E	ODI Connection Error, Vita49 Buffer Overflow
260	0	ODI Connection Error, Vita49 malformed packet error	E	ODI Connection Error, unable to decode packet

3.3.5 301 to 399, Uncalibrated Integrity

These errors correspond to bits in the `STATUS:QUESTIONABLE:INTEGRITY:UNCALIBRATED` sub-register. The second column in the table shows the corresponding bit.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated. These error numbers are displayed in the **Show Errors** screen, along with the DETECTED and CLEARED indicators.

For example, error 301 indicates a Meas Uncal condition has been detected, error 1301 indicates that failure has been cleared.

This register is summarized as bit 3 of the `STATUS:QUESTIONABLE:INTEGRITY` register.

Err#	Bit in status register	Message	Error or Warning	More Information
301	0	Meas Uncal	W	A Meas Uncal warning is visible. Generally, this means the sweep time must be reduced or the RBW increased
303	1	Signal ID on	W	In external mixing, the Sig ID function is on, which will impact the trace results
305	2	No Long Code Phase	W	The long code phase that identifies an access channel cannot be found (WCDMA)
307	3	AC coupled: Accy unspec'd <10 MHz	W	AC input coupling will function at lower frequencies, but the performance is not specified below 10 MHz
309	4	User cal	W	
309	4	User Cal; Adjusted for new RBW	W	The measurement RBW has been changed since the last calibration (~CAL)
309	4	User Cal; Cal invalidated	E,W	<p>The existing user cal has been invalidated for one of the following reasons:</p> <p>Frequency: Setting the frequency outside the current valid user cal set (for example: If the current sweep range is 2 to 3 GHz, then setting the start frequency to 1.9 GHz will invalidate the current user cal. Other frequency changes that will invalidate the user cal are:</p> <ul style="list-style-type: none"> - If the cal was performed at a fixed frequency and you change this frequency - If you are in "Freq List" mode and you change it to extend beyond the current

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3.3 Condition Messages

Err#	Bit in status register	Message	Error or Warning	More Information
				<p>user cal range. In this case you will see an error message</p> <p>DUT Type: If the DUT Type parameter changes, causing the measurement frequencies to be pushed outside the current cal</p> <p>Attenuation: If an attenuation setting is selected, but has not been calibrated</p> <p>Preamp: If set to condition different from current cal settings, for example: if calibrated with the preamp on, turning it off will invalidate the cal</p> <p>Points: Changing the number of measured frequency points can make the stored preselector offsets become inaccurate and hence invalidate the calibration. This occurs when the following conditions exist:</p> <ul style="list-style-type: none"> - A successful calibration has been performed - Some measured freq points are > 3.6 GHz - The new points > 3.6 GHz are located more than 50 MHz away from the current calibration points
309	4	User Cal; Cal will be interpolated	W	The measurement frequency range has been changed, such that it is a subset of the calibrated range (~CAL)
309	4	User Cal; Freq outside cal range	E	The existing user cal has been invalidated because the current measurement frequencies lie partially or wholly outside the range of frequencies used for user-cal (UNCAL)
311	5	Calibration	W	
311	5	Calibration; ENR table extrapolated	W	One or more calibration or measurement frequency points exceed the currently loaded Cal or Meas ENR Table frequency ranges. The corresponding ENR table's lowest frequency ENR value will be re-used for frequencies less than the table range, and the highest frequency ENR value will be re-used for frequencies greater than the table range (~ENR)
311	5	Calibration; No ENR data present	W	No ENR Data (ENR)

Err#	Bit in status register	Message	Error or Warning	More Information
313	6	Source Uncal	W	
313	6	Source Uncal; adj Start Freq or RBW	W	While using a Tracking Source, ensure that the Start Frequency is high enough to avoid capturing LO feedthrough in the trace. This depends on both Start Freq and RBW If you see this message, increase the Start Freq or narrow the RBW
313	6	Source Uncal; adjust Source Amplitude	W	While using a Tracking Source, source amplitude can be set at specific un-calibrated range, but the performance is not specified If you see this message, adjust source amplitude
315	7	Preamp: Accy unspec'd <10 MHz	W	You are trying to use the USB Preamp at a frequency below its specified range. The USB Preamp will function at lower frequencies, but the performance is not specified below 10 MHz
315	7	Preamp: Accy unspec'd <100 kHz	W	You are trying to use the Internal Preamp at a frequency below its specified range. The Internal Preamp will function at lower frequencies, but the performance is not specified below 100 kHz
315	7	Preamp: Accy unspec'd <30 MHz	W	You are trying to use the LNA at a frequency below its specified range. The LNA will function at lower frequencies, but the performance is not specified below 30 MHz in PXE
315	7	Preamp: Accy unspec'd <XX kHz	W	Preamp will function at lower frequencies, but the performance is not specified below XX kHz (XX is model number specific)
317	8	unused	W	
319	9	unused	W	
321	10	unused	W	
323	11	unused	W	
325	12	unused	W	
327	13	unused	W	
329	14	unused	W	

3.3.6 401 to 499, Power

These errors correspond to bits in the `:STATus:QUESTionable:POWer` register. The second column in the table shows the corresponding bit.

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 3.3 Condition Messages

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated. These error numbers are displayed in the **Show Errors** screen, along with the DETECTED and CLEARED indicators.

For example, error 409 indicates a 50 MHz Oscillator Unleveled condition has been detected, error 1409 indicates that failure has been cleared.

This register is summarized as bit 3 of the **STATus:QUEStionable** register.

Err#	Bit in status register	Message	Error or Warning	More Information
401	0	RPP Tripped	W	(not currently in use)
403	1	Source Unleveled	W	
405	2	Source LO Unleveled	E	(not currently in use)
407	3	LO Unleveled	E	(not currently in use)
413	6	Input Overload; Gen reverse power	E	Reverse power detected at the Gen output port. Remove the reverse power
413	6	Input Overload; T/R port	E	The maximum input power at the T/R port has been exceeded. Accurate measurements cannot be made until the input level is reduced
413	6	Input Port Overload		
419	9	Full Bypass Enabled, maximum safe input power reduced	W	Full Bypass Enable is selected, which means that when the Low Noise Path switches in (when Start Freq >3.6 GHz and the Preamp is either not licensed, set to Low Band or Off) and Attenuation is set to 0 dB, there will be a direct AC connection between the input and the first converter, which puts the first converter at high risk of being damaged by high AC power. Keep the power at the input below +20 dBm
421	10	Input caution	W	
421	10	Input caution; T/R unprotected	W	CAUTION: In this mode, high power at the T/R input can cause damage to the input circuitry
423	11	unused		
425	12	unused		
427	13	unused		
429	14	unused		

3.3.7 501 to 599, Frequency

These errors correspond to bits in the `STATUS:QUESTIONABLE:FREQUENCY` register. The second column in the table shows the corresponding bit.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated. These error numbers are displayed in the **Show Errors** screen, along with the DETECTED and CLEARED indicators.

For example, error 503 indicates a Frequency Reference Unlocked condition has been detected, error 1503 indicates that failure has been cleared.

This register is summarized as bit 5 of the `STATUS:QUESTIONABLE` register.

Err#	Bit in status register	Message	Error or Warning	More Information
501	0	Source Synth Unlocked	E	
503	1	Frequency Reference Unlocked	E	
505	2	2nd LO Unlocked	E	
507	3	unused		
509	4	LO Unlocked	E	
511	5	unused		
513	6	IF Synthesizer Unlocked	E	
515	7	Calibration Oscillator Unlocked	E	
517	8	unused		
519	9	Demodulation	E	
521	10	Ref missing or out of range	E	
521	10	Ref missing or out of range; External	E	The external frequency reference signal is missing or is not within the proper amplitude range
521	10	Ref missing or out of range; Pulse	E	The pulse reference signal is missing or is not within the proper amplitude range
523	11	unused		
525	12	unused		
527	13	unused		
529	14	unused		

3.3.8 601 to 699, Error Summaries

These errors correspond to bits in the `:STATUS:QUESTIONABLE` register, read with `:STATUS:QUESTIONABLE?` or `:STATUS:QUESTIONABLE:CONDITION?`.

The second column in the table shows the corresponding bit in the status register. These bits do not have any corresponding error messages, although error numbers have been reserved for them as seen in the Err# column; they are status bits only.

The bits in the `:STATUS:QUESTIONABLE` register are “summary bits” for registers at a lower level. Note that these summary bits summarize the state and history of the event registers at the lower level. This is true even for bits in the `STATUS:QUESTIONABLE` Condition register. This means that:

- The summary bits read by `:STATUS:QUESTIONABLE:CONDITION?` are true if any event bits are set in any of the `:QUESTIONABLE` sub-registers `POWER`, `TEMPERATURE`, `FREQUENCY`, `CALIBRATION` or `INTEGRITY`
- The summary bits read by `:STATUS:QUESTIONABLE?` are true if any event bit has undergone a false-to-true transition with the `PTRANSITION` filter set, or a true-to-false transition with the `NTRANSITION` filter set, in any of the `:QUESTIONABLE` sub-registers `POWER`, `TEMPERATURE`, `FREQUENCY`, `CALIBRATION` or `INTEGRITY`

Thus, the summary bits cannot be used to determine the current state of a lower-level condition bit; only the state and history of the lower-level event bits.

Err#	Bit in status register	Message	Error or Warning	More Information
601	0	unused		
603	1	unused		
605	2	unused		
607	3	<code>Power</code>	status bit only	Summary bit for the <code>STATUS:QUESTIONABLE:POWER</code> sub-register
609	4	<code>Temperature</code>	status bit only	Summary bit for the <code>STATUS:QUESTIONABLE:TEMPERATURE</code> sub-register
611	5	<code>Frequency</code>	status bit only	Summary bit for the <code>STATUS:QUESTIONABLE:FREQUENCY</code> sub-register
613	6	unused		
615	7	unused		
617	8	<code>Calibration</code>	status bit only	Summary bit for the <code>STATUS:QUESTIONABLE:CALIBRATION</code>

Err#	Bit in status register	Message	Error or Warning	More Information
619	9	Integrity	status bit only	sub-register Summary bit for the STATUS:QUESTIONABLE:INTEGRITY sub-register
621	10	unused		
623	11	unused		
625	12	unused		
627	13	unused		
629	14	unused		

3.3.9 701 to 799, Operation

These errors correspond to bits in the **:STATUS:OPERATION** register, read with **:STATUS:OPERATION?** or **:STATUS:OPERATION:CONDITION?**, or the "Operation Instrument" on page 98 Register below.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated.

For example, error 721 indicates that the DC Coupled condition has been detected; error 1721 indicates that condition has been cleared.

Unless otherwise noted in the Error or Warning column, these are status bits only, with no corresponding error message or number

Err#	Bit in status register	Message	Error or Warning	More Information
701	0	Calibrating	status bit only	
703	1	Settling	status bit only	
705	2	unused		
707	3	Sweeping	status bit only	
709	4	Measuring	status bit only	
711	5	Waiting for Trigger	status bit only	
713	6	Waiting for Periodic Sync	status bit only	Indicates that the instrument is waiting for the Sync Source of Periodic trigger. It is set when:

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Err#	Bit in status register	Message	Error or Warning	More Information
		Source		<ol style="list-style-type: none"> Pressing Reset Sync Monitor Sending TRIG:FRAM:SMON:RES Switch to a new Sync Source (not None) <p>This bit is cleared after successful synchronization, or Sync Source set to Off</p>
715	7	unused		
717	8	Paused	status bit only	
719	9	Source Sweeping	status bit only	<p>Indicates various conditions, depending on the Mode:</p> <ul style="list-style-type: none"> In List Sequencer Mode, used to indicate that the sequencer is running In EMI Receiver Mode, used to indicate that scan results are available from the Frequency Scan measurement
721	10	DC Coupled	W	
723	11	Instrument Summary	status bit only	
725	12	Source Waiting for Trigger	status bit only	
727	13	unused		
729	14	unused		

Operation Instrument

This is a sub-register of the Operation Register, which can be read with **:STATus:OPERation:INSTRument?** or **:STATus:OPERation:INSTRument:CONDition?**. This register feeds into bit 11 of the Operation Register.

Err#	Bit in status register	Message	Error or Warning	More Information
731	0	Instrument Locked	status bit only	
733	1	unused		
735	2	unused		
737	3	unused		
739	4	unused		
741	5	unused		

Err#	Bit in status register	Message	Error or Warning	More Information
743	6	unused		
745	7	unused		
747	8	unused		
749	9	unused		
751	10	unused		
753	11	unused		
755	12	unused		
757	13	unused		
759	14	unused		

3.3.10 801 to 899, Temperature

These errors correspond to bits in the `:STATus:QUESTionable:TEMPerature` register. The second column in the table shows the corresponding bit.

An event with the error number shown in the table means the condition has been detected. When the condition is cleared, an event with the error number plus 1000 is generated. These error numbers are displayed in the **Show Errors** screen, along with the DETECTED and CLEARED indicators.

For example, error 801 indicates that the Ref Osc Oven Cold condition has been detected; error 1801 indicates that condition has been cleared.

This register is summarized as bit 4 of the `:STATus:QUESTionable` register.

Err#	Bit in status register	Message	Error or Warning	More Information
801	0	Reference Oscillator Oven Cold	W	Reference Oscillator oven has not yet reached the correct temperature for the instrument to meet specifications
803	1	Over temperature	E	
803	1	Over temperature: let cool and reboot	E	The internal temperature of the instrument exceeds operating levels. The LO or the IF has signaled an overtemperature condition. Ensure proper airflow and reboot the instrument. See the Windows Event Log under SA for details
803	1	Over temperature; T/R port	E	High temperature detected, T/R input switched to open state, PXIe Chassis may power down
805	2	Over current: reboot	E	The IF has signaled an over-current condition. Reboot the instrument. See the Windows Event Log for details

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Err#	Bit in status register	Message	Error or Warning	More Information
807	3	unused		
809	4	unused		
811	5	unused		
813	6	unused		
815	7	unused		
817	8	unused		
819	9	unused		
821	10	unused		
823	11	unused		
825	12	unused		
827	13	unused		
829	14	unused		

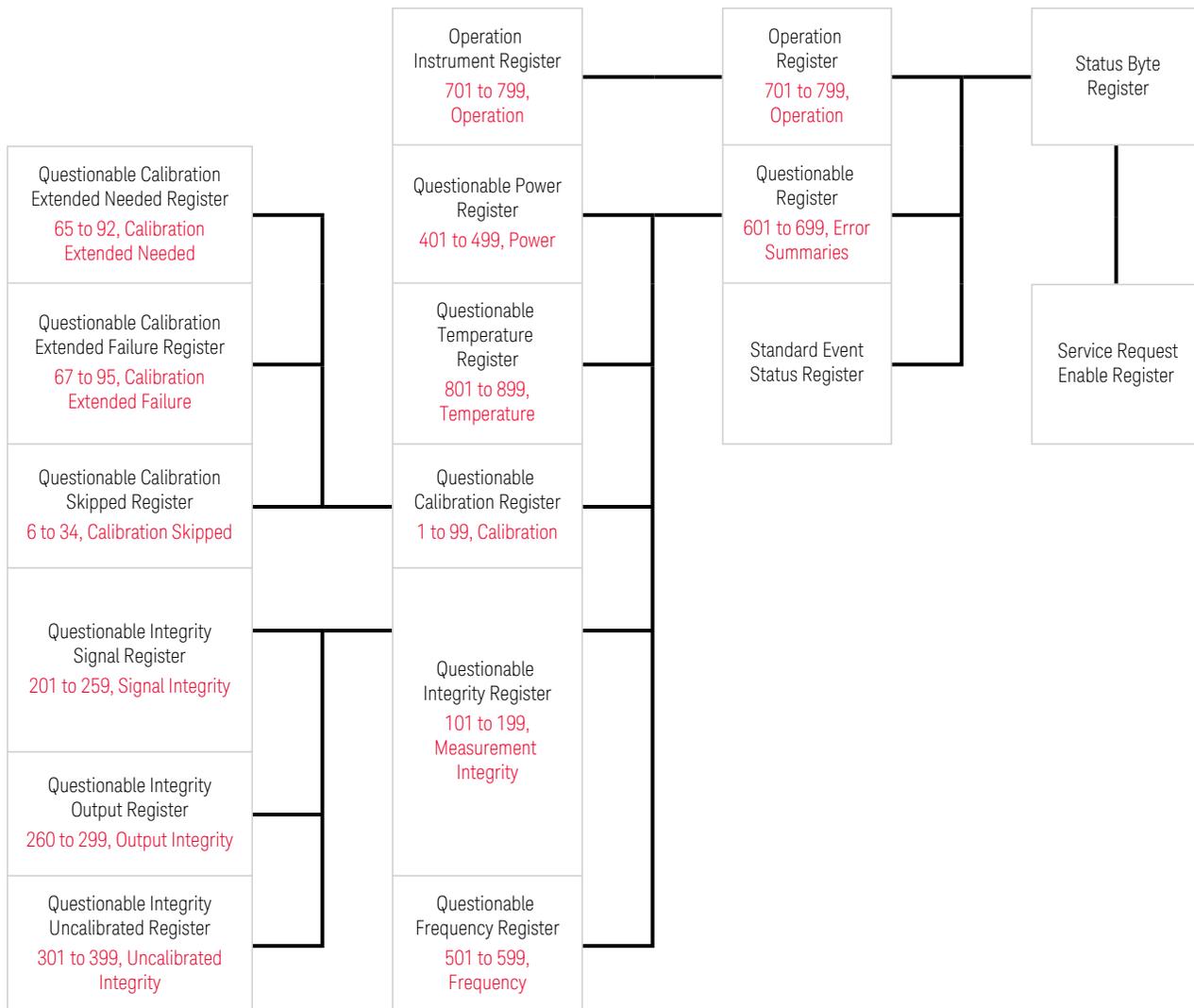
4 Status Register System & SCPI STATus Subsystem

Complete information about the Status Register System of X-Series instruments, including associated SCPI commands, can be found in the "Programming the Instrument" section of any of the following documents:

1. The online Help for any Measurement Application of any X-Series instrument
2. The [X-Series User's & Programmer's Reference](#) manual for the Mode or Measurement Application

4.1 Status Register System Diagram

The diagram below provides a top-level overview of the Status Registers and their interconnections, with cross-references to message descriptions in this document that relate to each register.



The fully-detailed diagram, which previously appeared in this document, has been moved to a separate PDF publication for improved readability. For the download link, see: ["Status Register System Diagram" on page 103.](#)

Appendix A: References

- 1999 SCPI Syntax & Style Standard**
Section 21.8 defines the :ERRor Subsystem and standard error messages
May be downloaded in Acrobat (PDF) format from:
<http://www.ivifoundation.org/docs/scpi-99.pdf>
- IEEE Standard 488.2-1992**
IEEE Standard Codes, Formats, Protocols, and Common Commands for Use With IEEE Std 488.1-1987, IEEE Standard Digital Interface for Programmable Instrumentation
May be downloaded in Acrobat (PDF) format from:
<https://ieeexplore.ieee.org/stamp/stamp.jsp?arnumber=213762>
- X-Series User's & Programmer's Reference**
There is one such manual, in PDF format, for each Measurement Application (Mode). There are separate sets of manuals for A-Series and B-Series instruments
You can download any User's & Programmers Reference in PDF format from the Keysight web site. For example, the manual for the B-Series Spectrum Analyzer Mode may be downloaded from:
<http://literature.cdn.keysight.com/litweb/pdf/N9060-90041.pdf>
- Status Register System Diagram**
This diagram is published separately, to improve readability. It may be downloaded from:
<https://www.keysight.com/us/en/assets/9922-01979/user-manuals/X-Series-Signal-Analyzers-Status-Register-Diagram.pdf>

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