

## Annex B (Error Messages)

### Warnings, component failures and device-dependent info

Warnings (W) and component failures (CF) are messages displayed on the front panel. Each one of the two error channels can be switched on and off in the menu SETUP-MESSAGE. Some of the warnings and component failures are added to the remote error messages as device-dependent info. Messages that are only coming from the remote interface as device-dependent info are labelled with an R.

Error string	Description	Code
Backup LI-Battery low	The lithium backup battery for storing the parameters in the CMOS RAM is dead.	CF
Battery empty in less than 10 minutes	In less than 10 minutes the accumulator will be empty.	CF
Bandwidth not installed	This bandwidth cannot be selected.	R
Bandwidth too high with CW	CW cannot be done on bandwidths above 9 kHz.	W
Bandwidth too high with SSB	SSB cannot be done on bandwidths above 9 kHz.	W
Check external reference	The synthesizer cannot be synchronized with the reference frequency. The externally fed in reference signal does not exist or its specifications do not apply. Switch over to internal reference and try again.	CF
Communication error to DC Converter	An error occurred in the data traffic in reference to the DC/DC converter.	CF
DC Converter defective	The DC/DC converter (EB200-DC) indicates an error.	CF
DSP IF Section defective	The IF section (EB200-Z1) indicates an error.	CF
Front Panel defective	The front panel control unit (EB200-F1) indicates an error.	CF
Frontend defective	Frontend 1 (EB200-S1) or frontend 2 (EB200-S2) indicates an error.	CF
Frontend1 defective	Frontend 1 (EB200-S1) indicates an error.	CF
Frontend2 defective	Frontend 2 (EB200-S2) indicates an error.	CF
IF Panorama defective	The IF panorama (EB200-SU) indicates an error. EB200-SU is an option.	CF
IFPAN: Sensitivity out of range	The level of the test signal measured at the IF panorama is out of range.	CF
IF Prefilter narrow defective	The narrow-band IF prefilter in the IF section EB200-Z1 indicates an error.	CF
IF Prefilter wide defective	The broad-band IF prefilter in the IF section EB200-Z1 indicates an error.	CF
IF Section defective	The IF section EB200-Z1 indicates an error.	CF

<b>Error string</b>	<b>Description</b>	<b>Code</b>
Level too high at ...	The signal level at the current frequency is too high for Longtest.	CF
Level too low at ...	The signal level at the current frequency is too low for Longtest.	CF
Maximum length exceeded!	No more characters can be entered in the EDIT window.	W
Memory empty	Memory location is empty (eg RCL).	W
Memory index too high	The highest memory location number is 999.	W
More than 4 frequencies out of range	At Longtest the signal level of more than 4 frequencies is outside the tolerance.	CF
No AFC with SSB	AFC does not work with SSB.	W
No password active	An attempt to delete the password was made despite the fact that no password was active.	W
Not during BITE	The selected function does not work during the test run.	W
Not during memory scan	The selected function does not work during memory scan.	W
Not during digi scan	The selected function does not work during digi scan.	W
Not during scan	The selected function does not work while scanning.	W
Not installed	The selected function is not installed.	CF
Not with MGC	This function works only with AGC.	W
Password changed!	Confirmation of the password being changed.	W
Password not changed!	Password remains unchanged	W
Password deleted!	Confirmation of the password being deleted.	W
Preselector 0..20 MHz defective	The displayed preselector range indicates an error.	CF
Preselector 20..80 MHz defective	The displayed preselector range indicates an error.	CF
Preselector 80..200 MHz defective	The displayed preselector range indicates an error.	CF
Preselector 200..650 MHz defective	The displayed preselector range indicates an error.	CF
Preselector 650..1500 MHz defective	The displayed preselector range indicates an error.	CF
Preselector 1500..3000 MHz defective	The displayed preselector range indicates an error.	CF
Preselector defective	The preselector (EB200-V1) indicates an error.	CF
Preselector not installed	The preselector (EB200-V1) is not installed.	CF
Processor defective	The processor (EB200-P1) indicates an error.	CF

<b>Error string</b>	<b>Description</b>	<b>Code</b>
Remote Interface defective	The remote interface (EB200-R1 or -R2) indicates an error.	CF
Sensitivity out of range	The measured level of the test signal is out of the effective range.	CF
Span too low	A too small frequency value was entered which caused the span to become too small	W
Stop freq lower than start freq	The stop frequency is lower than the start frequency (eg FSCAN).	R
Suppress index too high	The max. index of the suppress table is 99.	W
Synthesizer unlocked at ...	The synthesizer did not lock at this specific frequency.	CF
Temperature too high	The temperature of the unit is too high.	CF
Test ok, signal path	No error was detected during the (quick) test.	CF
Test ok, RF range and signal paths	No error was detected during Longtest.	CF
Testgenerator defective	The test generator in the preselector section (EB200-V1) indicates an error.	CF
Value too high	The input value is too high.	R
Value too low	The input value is too low.	R
Wrong center/span combination	The input frequency value cannot be combined with the current span or center frequency	W
Wrong Password, try again!	Wrong password was entered.	W
Wrong numeric syntax!	The input in the EDIT window is not valid.	W

## Error messages of the queue query

The following list contains all error messages for errors occurring in the instrument. The meaning of negative error codes is defined in SCPI (Standard Commands for Programmable Instruments), positive error codes mark errors specific for the instrument.

In the left column the table contains the error text which is entered in the error/event queue. In the right column there is an explanation regarding the respective error.

For some errors, a so-called device-dependent info is added to the error message. It gives further information about the error source (eg. -222, "Data out of range", frequency too high).

## SCPI-specific error messages

No Error

Error code from queue query	Error explanation
0, "No error"	This message is output if the error queue does not contain entries.

Command Error - Faulty command; sets bit 5 in the ESR register

Error code from queue query	Error explanation
-100, "Command error"	The command is faulty or invalid.
-101, "Invalid character"	The command contains an invalid sign. Example: A header contains an ampersand, "SENSe &".
-102, "Syntax error"	The command is invalid. Example: The command contains block data the instrument does not accept.
-103, "Invalid separator"	The command contains an impermissible sign instead of a separator. Example: A semicolon is missing after the command.
-104, "Data type error"	The command contains an invalid value indication. Example: ON is indicated instead of a numeric value for frequency setting.
-105, "GET not allowed"	A Group Execute Trigger (GET) is within a command line.
-108, "Parameter not allowed"	The command contains too many parameters. Example: Command SENSe:FREQuency permits only one frequency indication.

<b>Error code from queue query</b>	<b>Error explanation</b>
-109,"Missing parameter"	The command contains too few parameters. Example: Command SENSE:FREQUENCY requires a frequency indication.
-111,"Header separator error"	The header contains an impermissible separator. Example: The header is not followed by a "White Space", "*ESE255"
-112,"Program mnemonic too long"	The header contains more than 12 signs.
-113,"Undefined header"	The header is not defined for the instrument. Example *XYZ is undefined for every instrument.
-114,"Header suffix out of range"	The header contains an impermissible numeric suffix. Example: SENSE9 does not exist in the instrument.
-121,"Invalid character in number"	A number contains an impermissible character.
-123,"Exponent too large"	The absolute value of the exponent is larger than 32000.
-124,"Too many digits"	The number contains too many digits.
-128,"Numeric data not allowed"	The command contains a number which is not allowed at this position. Example: Command SENSE:FREQUENCY:MODE requires the indication of a text parameter.
-131,"Invalid suffix"	The suffix is invalid for this instrument. Example: nHz is not defined.
-134,"Suffix too long"	The suffix contains more than 12 signs.
-138,"Suffix not allowed"	A suffix is not allowed for this command or at this position of the command.
-141,"Invalid character data"	The text parameter either contains an invalid sign or it is invalid for this command. Example: spelling mistakes during parameter indication; SENSE:FREQUENCY:MODE FIXEd.
-144,"Character data too long"	The text parameter contains more than 12 characters.
-148,"Character data not allowed"	The text parameter is not allowed for this command or at this position of the command.
-151,"Invalid string data"	The command contains a faulty character string. Example: An END message was received before the final apostrophe.
-158,"String data not allowed"	The command contains a valid character string at a position which is not allowed. Example: A text parameter is set in quotation marks, SENSE:FREQUENCY:MODE "FIXEd"

<b>Error code from queue query</b>	<b>Error explanation</b>
-161,"Invalid block data"	The command contains faulty block data. Example: An END message was received before the expected number of data had been received.
-168,"Block data not allowed"	The command contains valid block data at an impermissible position.
-171,"Invalid expression"	The command contains an impermissible mathematical expression. Example: The expression contains an uneven number of brackets.
-178,"Expression data not allowed"	The command contains an expression at an impermissible position.

Execution Error - Error in executing the command; sets bit 4 in the ESR register

<b>Error code from queue query</b>	<b>Error explanation</b>
-200,"Execution error"	Error during execution of the command.
-211,"Trigger ignored"	Trigger not possible or trigger rate exceeded.
-221,"Settings conflict"	There is a settings conflict between two parameters. Example: bandwidth 100 kHz and USB cannot be switched on at the same time.
-222,"Data out of range"	The parameter value is outside the permissible range of the instrument.
-223,"Too much data"	Trace length was exceeded. Example: command SWE:SUPP, if all 100 frequency pairs are already assigned.
-240,"Hardware error"	Hardware error is not further specified.
-241,"Hardware missing"	The command cannot be executed due to missing hardware. Example: An option is not installed.
-292,"Referenced name does not exist"	An unknown name was sent as a parameter. Example: An unknown antenna name is to be deleted, ROUTE:PATH:DELeTe Hase
-293,"Referenced name already exists"	The name is defined twice. Example: An antenna name already known is defined again.

Device Specific Error ; sets bit 3 in the ESR register

<b>Error code from queue query</b>	<b>Error explanation</b>
-300,"Device-specific error"	Some data in memory not valid.
-350,"Queue overflow"	This error code is entered into the queue instead of the actual error code if the queue is full. It indicates that an error has occurred but not been accepted. The queue can accept 5 entries.

Query Error ; ets bit 2 in the ESR register

<b>Error code from queue query</b>	<b>Error explanation</b>
-400,"Query error"	General error which is not further specified during data request by a query.
-410,"Query INTERRUPTED"	The query has been interrupted. Example: After a query, the instrument receives new data before the response has been sent completely.
-420,"Query UNTERMINATED"	The query is incomplete. Example: The instrument is addressed as a talker and receives incomplete data.
-430,"Query DEADLOCKED"	The query cannot be processed. Example: The input and output buffers are full, the instrument cannot continue the operation.



## Device-specific errors

Device-dependent Error; sets bit 3 in the ESR register.

Error code from queue query	Error explanation
1, "Device dependent error"	The EB200 error is not further specified.
2, "I <sup>2</sup> C-Bus error"	Error at I <sup>2</sup> C bus has been recognized.
10, "Component failure"	A component indicates an error..
200, "Temperature too high"	The internal temperature of the unit is too high.
300, "Power fail"	One of the internal ESMC-FE supply voltages is out of tolerance.

## System errors

Errors of this kind are signalled when impermissible states are detected within the operating software. After a system error has occurred manual operation is not possible any longer, and the unit must be restarted. In general, errors of this nature are very rare indeed. In the event that such an error does occur nonetheless, we kindly ask you to report the error number and circumstances to the Rohde & Schwarz Support Center.

An exception to this is System Error 7617 for which there is a simple explanation. This message means that the lithium battery in Processor EB200P1 is dead. This battery serves for backing up the setting parameters in the CMOS RAM. The conventional lithium battery (type CR2477) (R&S part no. 4052.5673.00) is plugged into a socket and therefore can be easily replaced. It has a service life of 2 to 5 years depending on operating cycles and ambient temperature.

## Message "OUT OF MEMORY"

This message may be displayed when units without expansion RAM are operated on the LAN remote-control interface and large amounts of data are transferred. Units from the first series were delivered without this memory expansion. If the Processor EB200P1 is equipped with an expansion RAM, the start-up screen or the RX-CONF – TEST menu shows **PROC/ERAM** instead of **PROCESSOR**. For instructions on how to install the RAM expansion see chapter "RAM expansion / Li-battery" on page 5.7.

This message may also be displayed if options "Coverage Measurement" (see Annex G (Coverage Measurement)) or "Field Strength Measurement" (see Annex H (Field Strength Measurement)) are installed without the "RAM EXPANSION MODULE" being in the EB200.

### Error hierarchy

