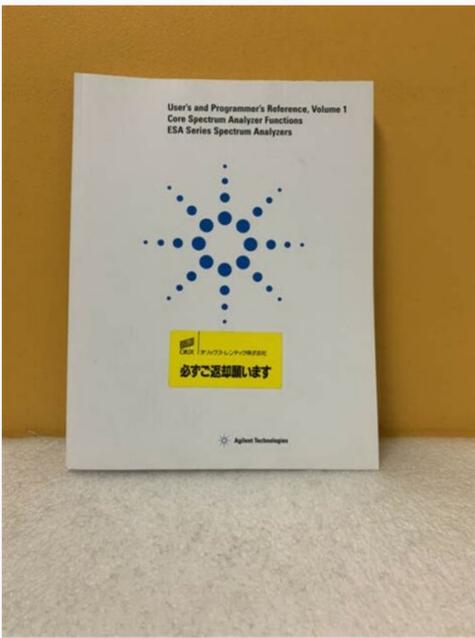


I'm not robot  reCAPTCHA

**Continue**



Seahorse XFe Analyzer  
Operating Manual



Agilent e4407b spectrum analyzer manual. Agilent e4407b spectrum analyzer.

The VOLUME knob adjusts the volume of the internal speaker. HI SWP IN (TTL) can be grounded to stop and reset the sweep. The data controls will change the active function in a manner prescribed by that function. The next key you press will remove the help window from the display. For example, the units keys for frequency span are GHz, MHz, kHz, and Hz, whereas the units for reference level are +dbm, dbm, mv, and  $\mu$ v. Refer to Table 2-5 on page 2-16 for other valid annunciators for the first letter. Alternatively, an externally installed switch or circuit breaker (which is readily identifiable and is easily reached by the operator) may be used as a disconnecting device. Most of the labeled keys on the analyzer front panel (also called front-panel keys) access menus of keys having related functions. In this chapter you will: Get acquainted with the front-panel and rear-panel features. The second letter C indicates the spectrum analyzer is in continuous-sweep mode. Where to Find the Latest Information Documentation is updated periodically. **WARNING** For continued protection against fire hazard, replace the line fuse only with the same type and rating. However, Buyer shall pay all shipping charges, duties, and taxes for products returned to Agilent Technologies from another country. **NOTE** To avoid damage to the analyzer, always turn off power before plugging a keyboard into the instrument. For those parameters with fixed values (resolution bandwidth), the next value in a sequence is selected each time a step key is pressed. Option 1DN or 1DQ only. Keep the container and cushioning material until you have inspected the analyzer. ESA Spectrum Analyzers, 9 kHz-1.5/3.0/6.7/13.2/26.5 GHz 1 User's Guide Agilent Technologies ESA Spectrum Analyzers This guide documents firmware revision A.05.xx This manual provides documentation for the following instruments: Agilent Technologies ESA-E Series E4401B (9 kHz 1.5 GHz) E4402B (9 kHz 3.0 GHz) E4404B (9 kHz 6.7 GHz) E4405B (9 kHz 13.2 GHz) E4407B (9 kHz 26.5 GHz) and Agilent Technologies ESA-L Series E4411B (9 kHz 1.5 GHz) E4403B (9 kHz 3.0 GHz) E4408B (9 kHz 26.5 GHz) Manufacturing Part Number: E Supersedes E Includes changes documented in E Printed in USA August 2000 Copyright 2000 Agilent Technologies 2 The information contained in this document is subject to change without notice. Refer to Table 2-1 and Table 2-2 for card slot versus option card compatibility information MHz REF IN accepts an external frequency source to provide the 10 MHz, 15 to +10 dbm as a timebase MHz REF OUT provides a 10 MHz, 0 dbm minimum, timebase reference signal. This fuse may be used with input line voltages of 115 V or 230 V. If you should ever need to call Agilent Technologies for service or with any questions regarding your analyzer, it will be helpful to have the firmware revision number readily available. See the label on the rear panel Chapter 232 Getting Started Display Annotation Display Annotation Here is an example of the annotation that may appear on an analyzer display. 3 Line Fuse. Insert the main power cable plug only into a socket outlet that has a protective earth contact. After turning on the analyzer, allow 5 minutes of warm-up time to ensure the analyzer will meet all specifications. 12 Key menu title Dependent on key selection. **CAUTION** If the tracking generator output power is too high, it may damage the device under test. Table 1-1 contains the accessories shipped with the analyzer. Learn about analyzer accuracy and the internal alignment process. 13 Key menu See key label descriptions in Chapter 6, Front-Panel Key Reference. AUX IF OUT is a 50  $\Omega$ , 21.4 MHz IF output that is the down-converted signal of the RF input of the analyzer. Output is from 0 V to 1 V. 7 SYSTEM Requirements Voltage Power Consumption. On Power Consumption. Standby Vrms (47 to 440 Hz) Vrms (47 to 66 Hz) less than 300 W less than 5 W Table 1-3 DC Power Requirements Voltage Power Consumption Vdc less than 200 W Checking the Fuse Where IEC regulations apply. use a 5 by 20 mm, rated F5A, 250 V IEC approved fuse. The Print key immediately sends hardcopy data to the printer. Warranty This Agilent Technologies instrument product is warranted against defects in material and workmanship for a period of three years from date of shipment. Be sure the supply voltage is within the specified range. The following safety symbols are used throughout this manual. For more information on how often to perform Align Now All when the Auto Alignment function is off, refer to the appropriate Specifications and Characteristics chapter in the Agilent Technologies ESA Spectrum Analyzer Specifications Guide. Preparing for Use Initial Inspection Power Requirements Checking the Fuse AC Power Cable Preparation Turning On the Analyzer for the First Time Getting Started What You Will Find in This Chapter Front-Panel Features Rear-Panel Features Display Annotation Key Overview Making a Measurement Measurement Summary Analyzer Accuracy and the Internal Alignment Process Warm-up Time File Menu Functions Locate and view files in the catalog Creating a directory Format a Floppy Disk Save a File Load a File Rename a File Copy a File Delete a File Printer Setup and Operation Equipment Interconnection and Setup Testing Printer Operation Analyzer Battery Information Functional Testing What You Will Find in This Chapter What Are the Functional Tests? Power cable See the table after page 1-5. 9 FM Demod (Option BAA) allows you to demodulate, display, and measure deviation on FM signals. Refer to Table 2-6 on page 2-16 for other valid annunciators for the second letter. 22 RF OUT 50 $\Omega$  (for Option 1DN) or RF OUT 75 $\Omega$  (for Option 1DQ) is the source output for the built-in tracking generator. The speaker is turned on and off with the Speaker On Off key in the Dev/Demod menu. Item 10 refers to the data invalid indicator. If the analyzer is an Agilent Technologies E4402B, E4403B, E4404B, E4405B, E4407B, or E4408B, connect a BNC cable from the AMPD REF OUT to INPUT 50  $\Omega$  using an adapter. **NOTE** This screen may be displayed for as long as 1 minute before the initialization process is complete. **ii 3 WARNING** If this product is not used as specified, the protection provided by the equipment could be impaired. The PWR ALWAYS ON setting turns the analyzer on whenever external power is applied. 2 DC Power is the input for the DC power source. **CAUTION** When operating in DC coupled mode on spectrum analyzers with Option UKB, take care to protect the input mixer by limiting the input level to 0 VDC, +30 dbm. For slow sweeps, the analyzer uses a smooth panning feature which is designed to move the trace display to the latest function value as the knob is turned. **NOTE** If an entry from the numeric keypad does not coincide with an allowed function value (for example, that of a 12 MHz bandwidth), the analyzer defaults to the nearest allowable value. 2-8 Chapter 228 Getting Started Rear-Panel Features 4 Service Connector. **CAUTION** Caution denotes a hazard. 24 Trace mode Trace See below for more information. The Print Setup menu keys allow you to configure hardcopy outputs. (Refer to the Agilent Technologies ESA Spectrum Analyzer Specifications Guide.) **CAUTION** Ventilation Requirements: When installing the product in a cabinet, the convection into and out of the product must not be restricted. The EXT KEYBOARD connector is a 6-pin mini-din connector. An asterisk is placed in the message block (the upper right-hand corner of the analyzer display) to indicate that the data on the screen does not reflect data at the current setting. 11 Card Slot Identification Numbers. It calls attention to a procedure which, if not correctly performed or adhered to, could result in injury or loss of life. An instrument alignment is performed (if Auto Align is on) every time the analyzer is turned on. Refer to Chapter 6, Front-Panel Key Reference for more information on a specific function key. A parallel port is included for printing only. 2 Esc. To remove the fuse, first disconnect the power cord from the instrument. The trace mode annotation for trace 3 is displayed under the trace mode annotation of trace 1. 13 PROBE POWER provides power for high-impedance AC probes or other accessories. Each press results in a single step change. **AGILENT TECHNOLOGIES SHALL NOT BE LIABLE FOR ANY DIRECT, INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES, WHETHER BASED ON CONTRACT, TORT, OR ANY OTHER LEGAL THEORY.** Cable, SMA (m) to Type-N (m), 220 mm Shipped only with Option 1DN for Agilent E4402B, E4403B, E4404B, E4405B, E4407B and E4408B. The Frequency Extension Assembly comes standard with the Agilent E4408B. Then insert the tip of a screwdriver into the slot at the middle of the fuse holder, and turn counterclockwise to extend the fuse holder. When the (\*) is displayed, it means that some or all trace data may not match the annotation due to possible changes in instrument settings. Refer to Table 2-1 if you have an Agilent ESA-L Series spectrum analyzer. Learn about display annotation. GATE TRIG/EXT TRIG IN (TTL) accepts the positive edge of an external voltage input that triggers the analyzer internal sweep source or the gate function (Time Gate, Option 1D6). Out-of-range values or out-of-sequence values will not occur using these keys. Refer to Table 2-2 if you have an Agilent ESA-E Series spectrum analyzer. This fuse may only be used with an input line voltage of 115 V. **NOTE** Printing is only supported from the parallel port. 8 MARKER functions control the markers, read out frequencies and amplitudes along the analyzer trace, automatically locate the signals of highest amplitude, and access functions like Marker Noise and Band Power. 7 RS-232 and parallel (Option 1AX) is an optional interface. 10 Data invalid indicator Sweep (Single) or View/Trace 11 Status Information messages See Chapter 4, Troubleshooting. 14 Frequency span or stop frequency Span or Stop Freq 15 Sweep time/points Sweep Time Auto Man, Sweep Points 16 Video bandwidth Video BW Auto Man 17 Frequency offset Freq Offset 18 Display status line Displays instrument status and error messages. You may include a decimal point in the number portion. This product must be used in a normal condition (in which all means for protection are intact) only. Numeric entries must be terminated with a units key. Chapter 1 1-7 18 Preparing for Use Turning On the Analyzer for the First Time Turning On the Analyzer for the First Time Before using your analyzer, plug the power cord

