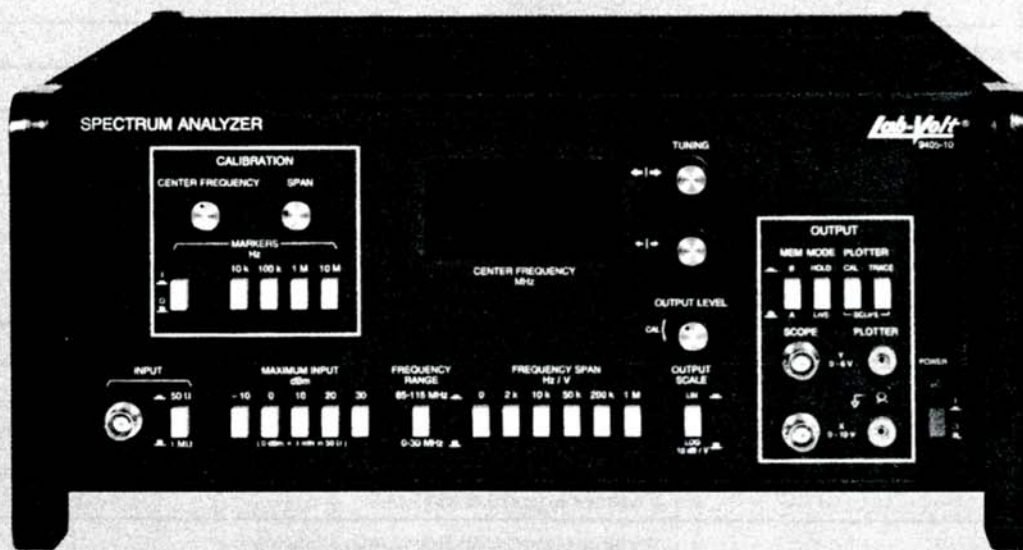


Lab-Volt®

SPECTRUM ANALYZER MODEL 9405-1

Telecommunications



Model 9405-1

GENERAL DESCRIPTION

The Lab-Volt Model 9405-1 Spectrum Analyzer is an educational instrument designed for frequency domain analysis. It can be used for both audio and radio frequency (RF) analyses: it can display signal spectra in the 0- to 30- and 85- to 115-MHz ranges.

The spectrum analyzer output can be displayed on an oscilloscope set to X-Y mode and/or on an X-Y plotter if hard copy is needed. (Both the oscilloscope and the plotter are optional.) Calibration facilities are provided for the oscilloscope and the plotter, including accurate crystal-controlled frequency markers used in measuring spectral component frequencies. Two digital memories allow storage and comparison of spectra. Both linear and logarithmic output scales are provided, along with a variable output control with a CAL position.

Input impedance can be switched to 50Ω for RF measurements or to 1 MΩ for in-circuit measure-

ments. Switches are used to select the input signal level range. All input and output connections are made with BNC connectors [except for the plotter output, which is connected with mini-banana (2 mm) connectors].

Six frequency span settings can be selected using switches. Depending on the frequency span, the same switches automatically select the resolution from 100 Hz to 50 kHz. A 3-½ digit display indicates the analyzer's center frequency, which is tuned using course and fine tuning controls that are continuously variable over the selected frequency band.

The spectrum analyzer is housed in a rugged, steel case. A circuit breaker provides protection at the power input. A comprehensive instruction manual containing operating instructions, maintenance and calibration information, parts lists, and schematics is also provided.

SPECTRUM ANALYZER

MODEL 9405-1

SPECIFICATIONS

	120 V/60 Hz	220 V/50 Hz	240 V/50 Hz
Ordering Number ¹	9405-10	9405-15	9405-1A
Input Frequency Ranges	0-30 MHz and 85-115 MHz (switch selectable)		
Input Impedance	50 Ω or 1 M Ω (switch-selectable)		
Input Signal Level	-70 to +30 dBm		
Maximum Input Signal Levels	7 V (peak ac + dc) at 50- Ω impedance		
	15 V (peak ac + dc) at 1-M Ω impedance		
Frequency Span (oscilloscope/plotter at 1 V/div.)	0 Hz; 2, 10, 50, 200 kHz; 1 MHz/div.		
Resolution Bandwidth (3 dB)	100, 500 Hz; 2, 20, 50 kHz (automatically selected)		
Frequency Markers	10, 100 kHz; 1, 10 MHz		
Marker Frequency Stability	$\pm 0.003\%/^{\circ}\text{C}$		
Frequency Measurement Resolution	1 kHz (using 10-kHz markers)		
Dynamic Range (input signal measurements)	60 dB		
Selectivity (60 dB/3 dB)	Better than 13:1		
Output Display	External oscilloscope set to X-Y mode at 1 V/div. and/or X-Y plotter (oscilloscope and plotter not supplied)		
Output Scale	Linear or Log (10 dB/V)		
Output Level	Variable up to 10 dB from CAL position		
Memories (A & B)	1024 vertical points x 256 horizontal levels		
Oscilloscope Outputs	X: 0 to 10 V;		
	Y: 0 to 6 V		
Plotter Outputs	X: 0 to 10 V;		
	Y: 0 to 6 V;		
	ground		
Input/Output Signal Connectors	BNC [except plotter output, which is mini-banana (2 mm jacks)]		
Power Requirement (see Ordering Number)	120/220/240 Vac; 50/60 Hz; 12 W		
Physical Characteristics	Dimensions: 29 (11.4) H x 87 (34.3) W x 42 (16.5) D mm (in.)		
	Weight: Net: 9.4 kg (20.7 lbs); Shipping: 11.8 kg (26 lbs)		
Accessories	Two 120-cm (4-ft) BNC/BNC cables.		
	One 2-mm (6.5-ft) plotter connection cable		
	Instruction manual (P/N 27546-D0)		

¹ Ordering numbers shown are for English versions. Other languages are available. Consult your Lab-Volt representative for ordering information.