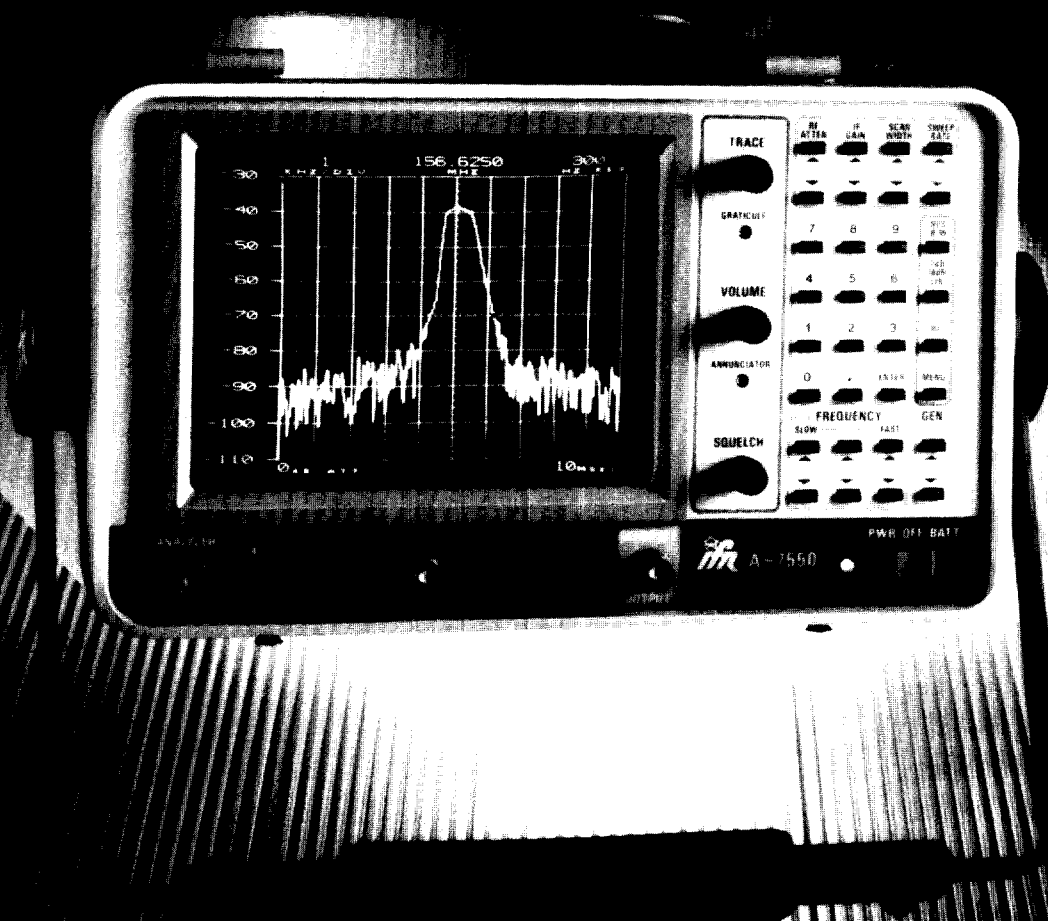


# The A-7550 Spectrum Analyzer

10 kHz to 1 GHz



## Impressive Standard Features Include:

- Fully synthesized RF systems
- 10 kHz to 1 GHz frequency coverage
- Direct center frequency entry
- Accurate center frequency readout
- 70 dB dynamic range
- 300 Hz resolution bandwidth
- Menu driven display modes
- VRS™ (Vertical Raster Scan) CRT display
- Single function keyboard entry
- Automatically scaled electronic graticule
- Variable top scale reference (+30 to -95 in 1 dB steps)
- IF gain in 1 dB steps
- 50/75Ω selectable input impedances (*optional*)
- Automatic optimization
- Automatic amplitude calibration
- Selectable linear/log display modes
- Digital storage of all displayed parameters
- Average, compare, reference, and peak hold display modes
- 300 Hz and 30 kHz video filters

A-7550

# performance specifications (after 15 minutes operation)

## FREQUENCY

<b>Range:</b>	10 kHz to 1 GHz in 100 Hz steps
<b>Readout Accuracy:</b>	3% of frequency display span plus time base accuracy
<b>Time Base Stability:</b>	$\pm 25$ ppm
<b>Frequency Span Ranges:</b>	1 kHz to 100 MHz/DIV in 1-2-5 sequence plus zero span
<b>Sweep Rates:</b>	5mS to 2 sec/DIV
<b>Frequency Span Accuracy:</b>	< 5% of the indicated frequency separation
<b>Resolution Bandwidth:</b>	300 Hz, 3 kHz, 30 kHz, 300 kHz and 3 MHz
<b>Residual FM:</b>	< 100 Hz peak to peak at span widths below 200 kHz/DIV
<b>Noise Sidebands (3 kHz Resolution Bandwidth):</b>	> 65 dB below peak CW signal at 5 x resolution bandwidth setting from CW signal (with 300 Hz video filter)

## AMPLITUDE

<b>Frequency Range:</b>	100 kHz to 1 GHz
<b>Measurement Range:</b>	-120 dBm to +30 dBm
<b>Dynamic Range:</b>	70 dB in 10 dB/DIV log scale 16 dB in 2 dB/DIV log scale 8 division with linear amplitude scale
<b>3rd Order Intermodulation Products:</b>	< -70 dBc for two signals displayed 10 dB down from top reference level
<b>Amplitude Scale Linearity:</b>	<b>10 dB/DIV log</b> — within 0.15 dB/dB, but not more than 2.5 dB over 70 dB dynamic range <b>2 dB/DIV log</b> — $\pm 0.4$ dB/2 dB, but not more than 1.5 dB over 14 dB dynamic range <b>Linear</b> — demodulation linearity 3% of full scale
<b>Amplitude Units:</b>	dBm, dBv, dB $\mu$ v, dBmV, dB $\mu$ W
<b>Bandwidth Switching Error:</b>	$\pm 1$ dB ( $\pm 2$ dB for 300 Hz RBW)
<b>Maximum Input Levels:</b>	4 volts DC or +30 dBm with maximum input attenuation. +20 dBm for all other conditions.
<b>RF Input Attenuator:</b>	60 dB range in 10 dB steps
<b>Accuracy:</b>	$\pm 0.5$ dB/10 dB step
<b>Impedance:</b>	50 $\Omega$ nominal, 75 $\Omega$ optional with adapter

## GENERAL CHARACTERISTICS

<b>Dimensions:</b>	33.3cm (13.1") wide, 18.5cm (7.3") high, 49.8cm (19.6") deep
<b>Weight (approximate):</b>	12.6 kg (28 lbs) without options
<b>Temperature Range:</b>	0° to 50° C
<b>Power Requirements:</b>	<b>Line:</b> 106 to 266 VAC, 50 to 400 Hz 60 watts typical at 115 VAC (without options) <b>External D.C.:</b> 12 to 30 VDC nominal 4.0 amps at 12V typical (without options) 2 amps at 28V typical (without options)

## TRACKING GENERATOR (optional)

<b>Frequency Range:</b>	100 kHz to 1 GHz
<b>Output Level:</b>	0 dBm to -70 dBm in 1 dB steps
<b>Flatness:</b>	$\pm 2$ dB
<b>Residual FM:</b>	< 100 Hz
<b>Output Impedance:</b>	50 $\Omega$ nominal (75 $\Omega$ optional with adapter)
<b>Spurious:</b>	Harmonics < 20 dBc Non-harmonics < 30 dBc

## RECEIVER (optional)

<b>Range:</b>	100 kHz to 1 GHz												
<b>Center Frequency Resolution:</b>	100 Hz												
<b>Sensitivity:</b>	2 $\mu$ V typical												
<b>Selectivity (at 3 dB):</b>	<table> <tr> <th>Mode</th><th>Receiver Bandwidth</th></tr> <tr> <td>FM 2</td><td>200 kHz</td></tr> <tr> <td>FM 1</td><td>15 kHz</td></tr> <tr> <td>SSB</td><td>6 kHz</td></tr> <tr> <td>AM 1</td><td>6 kHz</td></tr> <tr> <td>AM 2</td><td>15 kHz</td></tr> </table>	Mode	Receiver Bandwidth	FM 2	200 kHz	FM 1	15 kHz	SSB	6 kHz	AM 1	6 kHz	AM 2	15 kHz
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## QUASI-PEAK DETECTOR (optional)

Frequency Range	Bandwidth at 6 dB	Charge Time Constant (mS)	Discharge Time Constant (mS)
< 150 kHz	200 Hz	TC1 45 mS	TC1 500
150 kHz to 30 MHz	9 kHz	TC2 1 mS	TC2 160
30 MHz to 1 GHz	120 kHz	TC3 1 mS	TC3 550



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