

TABLE 1-1. PERFORMANCE SPECIFICATIONS.

<b>RF INPUT</b>	
<b>Frequency Range</b>	: 10 MHz to 1.3 GHz
<b>Sensitivity</b>	: 10 millivolts, Frequency < 520 MHz. : 15 millivolts, Frequency < 1000 MHz. : 28 millivolts, Frequency < 1300 MHz.
<b>Maximum input</b>	: 1 watt ( 7 V rms ) RF fuses may be installed for protection above 1 W; however, RF level measurement accuracy and sensitivity specifications are degraded.
<b>Input impedance</b>	: 50 ohms nominal.
<b>VSWR</b>	: < 1.50
<b>FREQUENCY MODULATION</b>	
<b>Measurement</b>	: + peak, -peak, peak average, and rms.
<b>Rates</b>	: 20 Hz to 220 kHz.
<b>Range</b>	: 0 to 500 kHz peak.
<b>Resolution</b>	: 1 Hz, 0.000 to 5.000 kHz deviation. : 10 Hz, 5.00 to 50.00 kHz deviation. : 100 Hz, 50.0 to 500.0 kHz deviation.
<b>Accuracy(1) (2)</b>	: 1% of reading, 30 Hz to 100 kHz. : 2% of reading, 100 kHz to 150 kHz
<b>Distortion</b>	: < 0.1% for deviations < 100kHz.
<b>Residual FM (3 kHz filter)</b>	: < 15 Hz rms at 1300 MHz carrier, decreasing linearly with frequency. : < 1 Hz rms at 100 MHz. ( floor )
<b>Residual FM (15 kHz filter)</b>	: < 30 Hz rms at 1300 MHz carrier, decreasing linearly with frequency. : < 2 Hz rms at 100 MHz. ( floor )
<b>Incidental FM</b>	: < 20 Hz peak deviation at 50% AM, 30 Hz to 3 kHz measurement bandwidth.
<b>AMPLITUDE MODULATION</b>	
<b>Measurement</b>	: + peak, -peak, peak average, and rms.
<b>Rates</b>	: 20 Hz to 220 kHz.
<b>Range</b>	: 0 to 99.9%.

TABLE 1-1. PERFORMANCE SPECIFICATIONS CONTINUED.

<b>Resolution</b>	: 0.001% from 0.000 to 5.000% AM. : 0.01% from 5.00 to 50.00% AM. : 0.1% from 50.1 to 99.9% AM.
<b>Accuracy(1) (2)</b>	: 1% of reading, 30 Hz to 100 kHz. : 2% of reading, 100 kHz to 150 kHz.
<b>Distortion</b>	: < 0.3% for depths up to 90%
<b>Residual AM(3)</b>	: 0.02% rms, 30 Hz to 3 kHz bandwidth. : 0.05% rms, 30 Hz to 15 kHz bandwidth.
<b>Incidental AM</b>	: < 0.2% AM peak at 50 kHz peak deviation.
<b>PHASE MODULATION</b>	
<b>Measurement</b>	: + peak, -peak, peak average, and rms.
<b>Rates</b>	: 20 Hz to 30 kHz.
<b>Range(4)</b>	: 0 to 500 RAD peak.
<b>Resolution(5)</b>	: 0.001 RAD, 0.000 to 5.000 RAD deviation. : 0.01 RAD, 5.00 to 50.00 RAD deviation. : 0.1 RAD, 50.0 to 500.0 RAD deviation.
<b>Accuracy(1) (2)</b>	: 3% of reading, 200 Hz to 30 kHz.
<b>Distortion</b>	: < 0.1% for deviations < 100 RAD.
<b>Residual PM</b>	: < 0.1 RAD rms.
<b>Incidental PM</b>	: < 0.02 RAD peak at 50 % AM, 3 kHz bandwidth.
<b>CARRIER LEVEL</b>	
<b>Range</b>	: -27.0 to +19.0 dBm, Frequency Range: 0.1 to 520 MHz. : -17.0 to +19.0 dBm, Frequency Range: 520 to 1300 MHz.
<b>Frequency Range</b>	: 10 MHz to 1300 MHz.
<b>Resolution</b>	: 0.01 dB
<b>Accuracy</b>	: ± 1 dB, Frequency Range: 0.1 to 520 MHz. : ± 2.0 dB, Frequency Range: 520 to 1300 MHz.

TABLE 1-1. PERFORMANCE SPECIFICATIONS CONTINUED.

<b>AUDIO FILTERS</b>	
<b>High-pass</b>	: < 10 Hz Gaussian. : 30, 300 , and 3000 Hz, 3-pole Butterworth.
<b>Low-pass</b>	: 3 and 15 kHz, 3-pole Butterworth. : 50 and 220 kHz, 7-pole Butterworth. : 20 kHz, 3-pole Bessel.
<b>De-emphasis</b>	: 25, 50, 75, and 750 $\mu$ s.
<b>Accuracy</b>	: $\pm$ 4 % , 3 dB corner and time constant.
<b>AM CALIBRATOR</b>	
	: internal, 50.00% depth, 0.1% accuracy.
<b>FM CALIBRATOR</b>	
	: internal, 125.0 kHz deviation, 0.1% accuracy.
<b>GENERAL</b>	
<b>Power Requirements</b>	: 100, 120, 220, or 240 volts, 50-400 Hz, single phase, approx. 65 VA.
<b>Operating Temperature</b>	: 0 to 55 degrees C continuous, operating.
<b>Dimensions</b>	: 17.25 inches (43.8 cm) wide, 5.75 inches (14.6 cm) high, 18.75 inches (47.6 cm) deep
<b>Weight</b>	: 28 lbs (12.7 kg)
<b>Accessories Included</b>	: Spare input fuses, fuse replacement wrench, and rack mounting hardware.
<b>SUPPLEMENTAL SPECIFICATIONS</b>	
<b>AF OUT</b>	: Uncalibrated, approx. 1 V into 600 ohms at 5000 counts on display. Source impedance 600 ohms.
<b>IF OUT</b>	: Approximately 0 dBm into 50 ohms, frequency 1.21 MHz nominal. Source impedance 50 ohms.
<b>AM OUT</b>	: 0.02 volts peak-to-peak per 1% AM depth, dc coupled. Source impedance 600 ohms.
<b>FM OUT</b>	: 2 volts peak-to-peak per $\pm$ 100 kHz deviation, dc coupled. Source impedance 600 ohms.

TABLE 1-1. PERFORMANCE SPECIFICATIONS CONTINUED.

<b>IEEE-488</b>	<b>: Complies with IEEE-488-1978. Implements AH1, SH1, T6, TE0, L4, LE0, SR1, RL1, PP0, DC1, DT1, C0, and E1.</b>
<b>Stereo Separation</b>	<b>: &gt; 48 dB, 50 Hz to 15 kHz, &lt; 10 and 220 kHz filters.</b>
<b>AVIONICS AM CALIBRATION ( optional )</b>	
<b>Accuracy</b>	<b>: <math>\pm 0.7\%</math>, 20 to 40% AM, at 30 Hz to 3 kHz rates, &lt; 10 to 15 kHz filters.</b>
<b>Flatness</b>	<b>: <math>\pm 0.4\%</math> for constant AM between 20 and 40%, and 90 and 150 Hz rates.</b>
<b>POWER REFERENCE ( optional )</b>	
<b>Frequency</b>	<b>: 50 MHz, <math>\pm 1\%</math>.</b>
<b>Power Accuracy</b>	<b>: 0.7% initial accuracy. : <math>\pm 1.2\%</math> over 1 year.</b>
<b>CCITT FILTER ( optional )</b>	
	<b>: bandpass filter, CCITT recommendation P.53.</b>
<b>CCIR FILTER ( optional )</b>	
	<b>: bandpass filter, CCIR recommendation 468-3 (DIN 45404).</b>
<b>C-MSG FILTER ( optional )</b>	
	<b>: bandpass filter, Bell System Technical Reference 41009.</b>
<b>AUDIO LOOP THRU ( optional )</b>	
<b>Frequency range</b>	<b>: &lt; 10 Hz to &gt; 220 kHz.</b>
<b>Input impedance</b>	<b>: 1 Megohm, shunted by approximately 50 pF.</b>
<b>Output impedance</b>	<b>: 600 ohms</b>

TABLE 1-1. PERFORMANCE SPECIFICATIONS CONTINUED.

**NOTES**

- (1) **Peak residual must be accounted for.**
- (2) **For rms add  $\pm 1\%$  of reading.**
- (3) **Level > 100 millivolts, Frf < 520 MHz.**  
**Above 520 MHz, residual increases linearly with frequency.**
- (4) **Up to 1 kHz modulation rate. Above 1 kHz range decreases linearly with modulation frequency.**
- (5) **Up to 1 kHz modulation rate. Above 1 kHz resolution is determined by the product of deviation and modulation rate.**