

**AUTOMATIC MODULATION METER**
**Automatic Modulation Meter 4561D**

4561D is an Automatic AM-FM Modulation Meter designed for extensive use in accurate AM-FM measurements in development, production, testing, servicing and maintenance of static and mobile communication systems. This instrument provides high sensitivity of the order of 10mV up to 2 GHz with useful response up to 4 GHz. De-emphasis facility is also provided. Eliminating the need to manually tune a local oscillator and make level adjustments, this instrument speeds up measurement and improves accuracy. Being compact, lightweight and portable it is an ideal instrument for field work.



- Frequency Range 1.5 MHz to 2 GHz
- AM and FM measurement over full range
- Automatic tuning and level setting
- LED lock indication
- Weighted measurements
- Overload protection
- Compact and light weight

Specifications	
Frequency Range	1.5 MHz to 2 GHz continuous coverage. Useful response up to 4 GHz
Input Level	10 mV to 1 Volt.
Overload	up to 7 volts. (rms)
Input Impedance	50 ohms (nominal)
Acquisition Time	1 sec. (Typical)
Lock Indication & Level Monitor	LED
Display	3 digit LED display
Display overload	Fully protected against over load
<b>Audio Filters</b>	
Ranges	25 Hz - 60 kHz / 25 Hz – 15 kHz / 300 Hz - 3 kHz
Response	+ 0.5 dB with respect to 1 kHz
De-emphasis	Selectable 50µs, 75µs or 650µs
<b>FM Measurements</b>	
FM Ranges	10 kHz, 100 kHz
FM Resolution	0.01 kHz for 10 kHz range; 0.1 kHz for 100 kHz range
Accuracy	+1% of FS +2% of reading at 1 kHz rate, plus deviation error of approximately +20 Hz at carrier frequencies up to 100 MHz and thereafter increasing at 6 dB per octave (over the temperature range 5°C to 45°C)
Residual FM	Less than 100 Hz at 500 MHz
Distortion	Less than 1% for 100 kHz deviation at 1 kHz rate.
AM Rejection	At least 80% in FM mode with 100 kHz deviation at 1kHz rate.
Measurement	Peak Positive deviation
Modes	Peak Negative deviation; Mean of positive and negative measurements.
	Difference between positive and negative measurements.
	Speech average to indicate relative loudness of audio. Selection of Psophometric filter (CCITT)
<b>Signal Output</b>	
IF Output	420 kHz, 100mV (Nominal) through 50 Ohms BNC Connector on rear panel.
AF Output	0.5V at FS, 600 Ohms BNC Connector on front panel for 10 and 100 AM/FM range.
Power Requirement	230V AC + 10%. 5VA typical
Dimensions (Approx.)	112mm x 226mm x 303mm ( H x W x D )
Operating Temperature	0°C to 55°C
Humidity	95% RH at 40°C
Weight (approx.)	3 Kg.
Accessories	N to BNC Adaptor, BNC-BNC cable
<b>AM Measurement</b>	
AM Ranges	10%, 100%
AM Resolution	0.01% for 10% FS range; 0.1 % for 100% FS range
Accuracy	+1% of FS, +2% of reading & residual AM (over the temperature range 5°C to 45°C)
Residual AM	Less than 0.5% with a 15 kHz bandwidth selected
Distortion	Less than 1%for 80% at 1KHz
Measurement - Peak Modes	Trough; Mean between peak & trough; Difference between peak & trough; Speech average to indicate relative loudness of audio; Selection of Psophometric filter (CCITT)
Optional Features	200 KHz FM range, Dual Battery operation

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