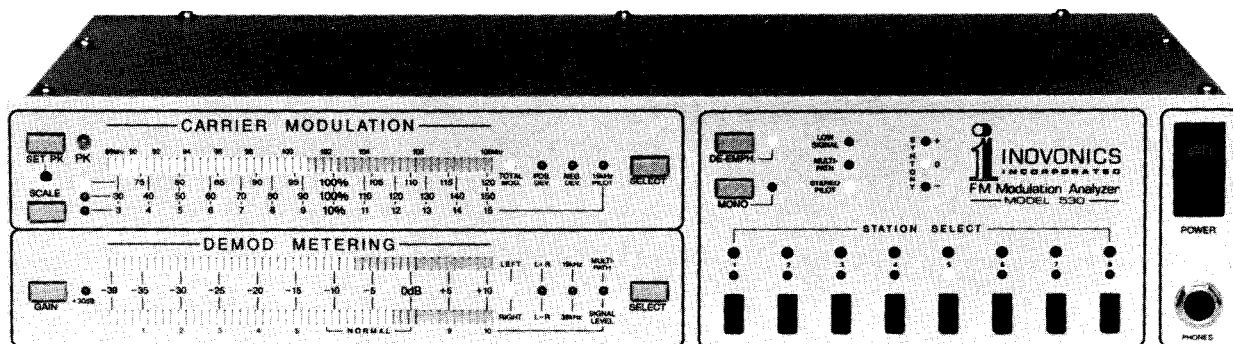


Accurate, affordable  
FM modulation measurement.

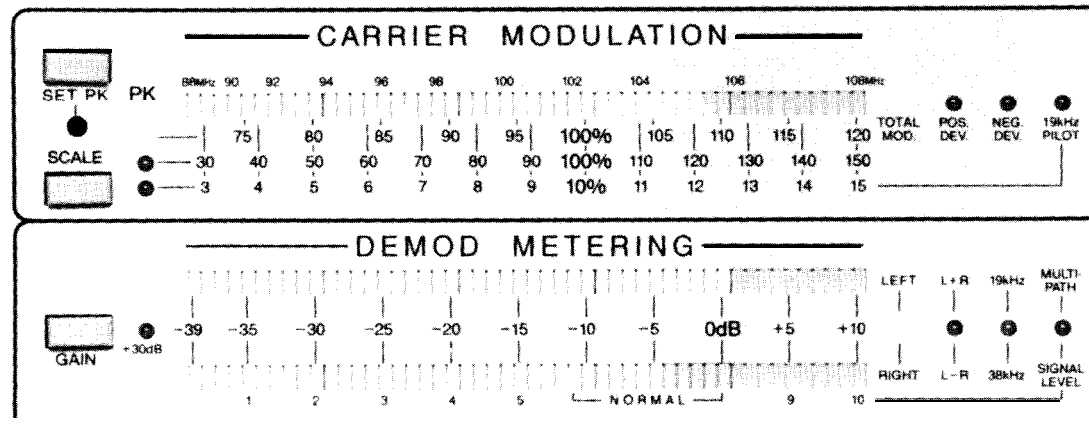


...The 530 - by Inovonics



Inovonics' 530 answers the very real need for a simple, yet accurate and affordable FM "Mod-Monitor." It combines a wideband FM receiver with very linear demodulation and metering circuitry for precise measurement of FM broadcast carrier modulation.

High-resolution displays give reliable readings of Total Modulation, demodulated Program Audio, and Pilot/Subcarrier injection levels. The incoming RF signal and multipath distortion components are also monitored to ensure that indicated measurements are truly valid.

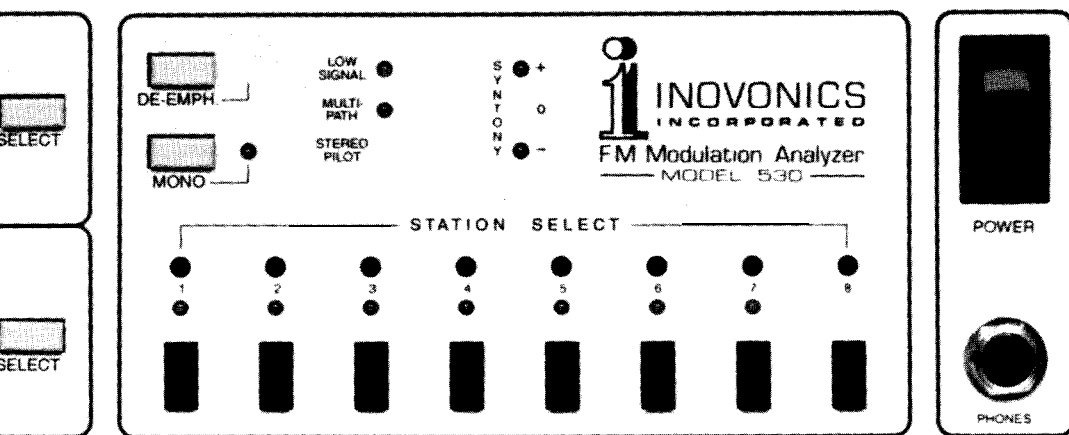


### ACCURATE, EASY-TO-READ BAR GRAPH METERING

- ▶ Carrier Modulation scale displays Total Mod. or independent positive/negative deviation in three ranges and resolutions. The display incorporates a peak-hold function, and program peak measurement integration may be selected by the user.
- ▶ Adjustable Peak Flasher is easily set in one-percent increments. The flasher logic output can drive an external indicator and/or a gated event counter.
- ▶ Stereo Pilot injection level is shown in percent and dB
- ▶ Demodulated Stereo Program metering has an 80dB range and 1dB resolution for level and noise measurements of the Left, Right, Sum and Difference channels.
- ▶ Reception Conditions also may be displayed as an aid in proper antenna alignment, and to verify sufficient RF level and freedom from multipath effects.

The 530 accepts both an antenna feed and a directly-coupled RF sample. We've provided balanced program audio outputs, a composite baseband in/out, and connections for remote readout of all panel displays, the Peak Flasher, plus Dead Air and Carrier Loss alarms.

Because regulations pertaining to FM deviation may be subject to interpretation, the frequency-agile 530 has eight station presets, or tuning memories, to allow the broadcaster to compare his own modulation with that of market companions and competitors.



#### FREQUENCY-AGILE, WIDEBAND FM RECEIVER

- ▶ Tunable Receiver has eight presets (station memories) to facilitate comparative modulation measurement. Automatic switchover to direct RF sample (if desired) at the user's own frequency.
- ▶ Continuous Coverage of the FM broadcast band, with a sensitive tuning indicator and an aggressive AFC.
- ▶ Preset Alarm indicators warn the user of poor reception conditions which may invalidate modulation readings.
- ▶ Manual Selection of forced-Mono mode and program de-emphasis. Front-panel headphone jack.

**"Accurate, affordable FM modulation measurement."**

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**TUNING RANGE:**

- 87-108MHz continuous coverage with 8 station presets.

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**RECEIVER SENSITIVITY:**

- 25 $\mu$ V (40dBf) for 20dB mono quieting
- 250 $\mu$ V (60dBf) required for valid Total Modulation reading.

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**RF INPUTS**

- 1. "F" connector for 75-ohm antenna.
- 2. "BNC" connector for alternate 50-ohm RF sample; 10 volts r.m.s.. max.

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**CARRIER MODULATION DISPLAY:**

- Quasi-peak response with peak-hold display. User-selectable integrations of 0.1ms, 0.2ms, 0.5ms, 1ms. Bargraph display monitors +peaks, -peaks,  $\pm$ peaks and 19kHz Stereo Pilot. Scaling is selectable at 75% to 120% in 1% Increments, 30% to 150% in 2.5% Increments, and 3% to 15% in 0.25% Increments. 100% modulation corresponds to  $\pm$ 75kHz carrier deviation. Total Modulation measurement accuracy is  $\pm$ 1%,  $\pm$ 1 metering division.

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**PEAK FLASHER:**

- Adjustable between 90% and 120%.
- Remote flasher output.

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**COMPOSITE INPUT/OUTPUT:**

- Rear-panel BNC connector and IN/OUT switch permit external monitoring of baseband signal from off-air source, or provide input to stereo demod and metering for external baseband feed. Approx. 2 volts p-p corresponds to 100% modulation. 75-ohm output Impedance; 10k-ohm input characteristic.

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**BASEBAND RESPONSE:**

- Amplitude response of demodulated Composite signal: +0, -0.5dB, 10Hz-60kHz; less than 1.5dB down at 100kHz.

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**DEMOM METERING:**

- Dual displays show Left, Right, Stereo Sum, Stereo Difference, 19kHz Pilot, 38kHz Residual, Multipath Distortion and RF Signal Level. Quasi-peak response on +10dB to -39dB scale, averaging response with additional 30dB gain on -20dB to -69dB scale. 1dB/step metering resolution.

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**STEREO DEMOD PERFORMANCE:**

- PROGRAM AUDIO RESPONSE:  $\pm$ 0.5dB, 20Hz-15kHz
- NOISE: Unmodulated (stereo) carrier noise better than 70dB below 100% modulation with de-emphasis.
- STEREO SEPARATION (COMPOSITE INPUT): better than 50dB, 50Hz-15kHz
- STEREO SEPARATION (OFF-AIR): better than 40dB, 50Hz-10kHz; 35dB or better at 15kHz.
- CROSSTALK MEASUREMENT: M/S and S/M crosstalk measurement by stereo sum/difference method and limited by stereo decoder circuitry. 50dB measurement resolution. 20Hz-5kHz.

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**PROGRAM SIGNAL DE-EMPHASIS:**

- Switchable IN/OUT from front panel.
- May be jumpered for 75 $\mu$ s or 50 $\mu$ s.

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**AUDIO OUTPUTS:**

- 1. Front-panel headphone jack monitors program audio.
- 2. OdBu unbalanced outputs at rear-panel BNC test connectors.
- 3. OdBm, 600-ohm balanced program line outputs at rear-panel USER INTERFACE connector.

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**USER INTERFACE:**

- Measurements, Indicators and alarms are brought-out to a rear-panel DB-25 connector so that any monitoring function may be duplicated at a remote location.

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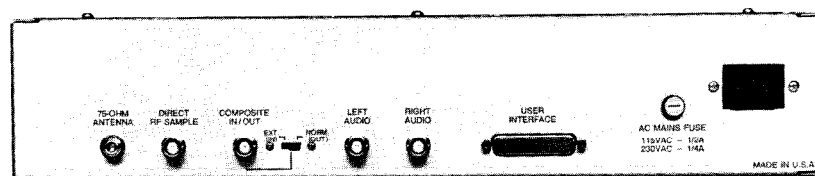
**POWER REQUIREMENTS:**

- 105-130VAC and 210-260VAC, 50/60Hz; 15W.

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**SIZE AND SHIPPING WEIGHT:**

- 3.5"H x 19"W x 12"D (2U): 11 lbs.



Rear View



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