

Inovonics 520

An off-air AM Mod-Monitor of exceptional accuracy and value

A VERSATILE MONITOR WITH TUNABLE PRESELECTOR FOR MONO-AM MEASUREMENTS

Inovonics' Model 520 brings simplicity, accuracy and reliability to the everyday verification of AM transmitter performance. It has an easy-to-read display of total modulation, plus two sets of peak flashers, alarms for loss of carrier and program audio.

A novel outdoor active antenna and the Monitor's built-in preselector allow off-air measurements in many split studio/transmitter situations. Modulation information is available through an RS-232 port for remote readout or statistical analysis.



Inovonics 520

Features & Specifications

- Tunes off-air signals with built-in preselector.
- Independent indication of positive and negative carrier modulation.
- Multiple Peak Flashers - two preset at absolute limits, two user-adjustable.
- Remote alarm outputs for overmodulation, loss of carrier and loss of program audio.
- Balanced program audio output.
- RS-232 bus enables remote modulation analysis with IBM-compatible PC.

TUNING RANGE

530kHz to 1710kHz in 1kHz increments; programmed with a DIP-switch under the top cover.

TOTAL MODULATION MEASUREMENT

The front-panel bargraph readout is peak-responding and incorporates a "floating" peak-hold display. It may be switched between positive or negative carrier modulation and indicates modulation peaks from 22% to 130% in 2% increments. The display also indicates incoming RF carrier level.

PEAK FLASHERS

Preset "absolute limit" flashers are factory calibrated at -100% and +125% carrier modulation. Separate POS and NEG flashers may be set by the user at values ranging from 80% to 130%.

ACCURACY AND CALIBRATION

Modulation readings are referenced to the incoming unmodulated carrier level, obviating the need for an internal calibration source. RF gain for off-air measurements is servo-stabilized, and a relative measurement of the RF input level may be monitored on the front-panel bargraph readout.



Rear view

OPTIONAL ANTENNA

The optional outdoor antenna is a compact, broadband ferrite-rod design with an integral preamplifier powered by the Model 520. The antenna is completely weatherproof and attaches easily to an existing mast or roof-vent pipe. The antenna may be located up to 100 feet from the Monitor. Cabling is not included. (The antenna uses common 75-ohm coax cable fitted with "F" connectors on both ends.)

RF INPUTS

- a: The 75-ohm antenna input (F connector) is phantom-powered for the optional active antenna. A random "longwire" antenna may prove adequate in high-signal areas with low levels of interference.
- b: A high-level input (BNC connector) accepts a direct RF sample in the 1V-10V r.m.s. level range.

MEASUREMENT BANDWIDTH

Carrier amplitude demodulation extends to 10kHz, ± 0.2 dB.

AUDIO RESPONSE

± 0.5 dB, 20Hz-10kHz; follows NRSC de-emphasis.

AUDIO DISTORTION

Less than 0.5% THD at 100% modulation

AUDIO NOISE

Better than 50dB below 100% modulation.

AUDIO OUTPUTS

- a: Active-balanced program audio output (XLR connector) on rear panel; 200-ohm resistive source.
- b: Front-panel headphone jack.

ALARM OUTPUTS

Open-collector transistor saturations to ground for -100% modulation, +125% modulation, loss of carrier and loss of program audio.

DATA OUTPUT

An RS-232 serial data port (DB9 connector) supplies raw modulation information for remote analysis or archiving.

POWER REQUIREMENT

105-130VAC or 210-255VAC, 50/60Hz; 10W

SIZE AND WEIGHT

1 $\frac{3}{4}$ "H x 19"W x 7"D (1U); 7 lbs.