



Broadband - AM

Agile AM Television Modulator

Model ATM 1550



The Meret ATM Series Agile Television Modulators is a general purpose unit used to convert baseband video and audio signals into standard AM television signals. It has many applications, including modulation of signals from video cameras and microphones, satellite receivers and VCRs for use in any broadband coaxial or fiber optic network.

The Meret ATM-1550 modulator is a frequency agile, SAW filter unit and is compatible with either monaural or BTSC audio. The unit provides a modulated output on any TV channel within the 50 to 550 MHz AM frequency band. The ATM-1550, when equipped with option 4, provides a modulated output on any TV channel within the 7 to 550 MHz AM frequency band, extending operation to include sub-band channels T7 through T13.

The unique tuning circuitry of this modulator enables any special frequency to be selected, including HRC and IRC. Channel assignment is selectable by front panel DIP switches. Where channels are subject to FCC mandated frequency control, offset selection is tunable from the modulator front panel. The switches are recessed behind a front panel cover plate to avoid accidental channel changes. The ATM Series modulator has a video IF loopthrough with +28 dBmV output. An RF output level of +60 dBmV eliminates the need for additional amplifiers when combining. The ATM Series modulator also features low out-of-band noise (78dBc) which allows for combination of channels without external bandpass filters.

The unit is self-contained, including the power supply, and occupies only 1¾" of rack space. Maximum power consumption of 16 watts assures economical operation and high reliability.

APPLICATIONS

- CCTV surveillance
- CATV headends
- SMATV distribution
- Campus ETV networks
- Distance learning networks

FEATURES

- Frequency agile tuning
- +60 dBmV output level
- SAW filter for quality performance
- BTSC stereo compatible
- Compact size
- Low power consumption
- Sub-band output option

BENEFITS

- Front panel frequency selection
- Compatible levels
- Adjacent channel operation
- Selectable audio
- Compact and efficient

Specifications

Video

Video	Composite NTSC video, sync negative
Level	0.5 V p-p minimum for 87.5% modulation; front panel adjustable
Impedance	75 ohms, unbalanced
Connector	Type F
Frequency Response	±1.5 dB, 30 Hz - 4.2 MHz, typical
Differential Gain	5% @ 87.5% modulation
Differential Phase	1.5° @ 87.5% modulation, typical
Hum & Noise	60 dB below 87.5% modulation

Audio

Audio	Baseband mono or BTSC baseband composite audio
BTSC/Mono	Internal defeat of audio pre-emphasis for BTSC baseband inputs
Level	140 mV RMS typical for 25 kHz deviation. Front panel adjustable
Impedance	Hi-Z
Frequency Response	±1.0 dB, 20 Hz to 20 kHz, referenced to 75 μsec pre-emphasis
Stability	4.5 MHz, adjustable within ±1 kHz

IF Output

IF Loop	+28 dBmV @ 45.75 MHz
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RF Output

Frequency Range	Selectable in 250 kHz steps ATM-1550 50 MHz to 550 MHz ATM-1550/4 7 MHz to 550 MHz
Frequency Stability	Within ±5.0 kHz of selected channel frequency
FCC Offset	+12.5 & +25.0 kHz, tunable
Impedance	75 ohms
Connector	Type F
Level	+60 dBmV, typical
Control Range	10 dB, adjustable from front panel
Aural Control	-9 to -22 dB, adjustable by the front panel A/V ratio control
Carrier to Out-Channel Noise	78 dBc within a 4.0 MHz of bandwidth, nominal
Spurious	>58 dB below output visual carrier

Electrical/Mechanical

Power	105-125 VAC, 50/60 Hz, 16W Maximum (220 VAC not available)
Temperature	0 to +50°C.
Humidity	0 to 95%, non-condensing
Size	19"W x 1¾"H x 14½"D 483mm x 44.45mm x 238mm
Weight	7 lb. (3.18 kg.)

Specifications are subject to change without notice