



FM Radio FM Stereo Generator/Modulator

Model FMS-2000B



The Meret FMS-2000B FM Stereo modulator is a high quality frequency agile unit used to convert baseband left and right audio signals into standard FM stereo radio broadcast signals. Field selectable choice of stereo or monaural operation offers many applications for providing FM radio signals in CATV or private broadband systems.

The FMS-2000B combines a full stereo generator with a frequency agile FM modulator in a single self-powered, compact package. The unit occupies only 1 $\frac{3}{4}$ " of rack space.

The stereo generator produces a L-R double sideband suppressed carrier signal, a L+R signal and a crystal controlled 19 kHz pilot signal. The signal is multiplexed and FM modulated in the 87-108 MHz band. Optionally, the frequency range may be set to cover the 108-120 MHz band. DIP switch frequency selection allows the user to select any output channel in the FM band. The output frequency is selectable in steps of 100 kHz. To safeguard against accidental change, channel output selection switches are located inside the unit.

Set-up, operation and maintenance of the FMS-2000B is simplified by the use of front panel controls for setting deviation and RF output level. LED indicators provide visual status for power on and audio deviation from -20 dB to +3 dB. A BNC output test connector allows access for adjustments at any time.

Excellent performance characteristics in frequency response of 20 Hz to 15 kHz and stereo separation from 50 Hz to 10 kHz allows the FMS-2000B to be used in quality stereo applications.

The FMS-2000B can be used in monaural operations; internal jumpers reconfigure the input and disable the 19 kHz pilot. In either stereo or monaural mode of operation, the unit includes an input port for the addition of an SCA signal to the primary carrier. The SCA input is fully compatible with standard SCA generators operating in the 62 to 90 kHz range. The input provides for direct modulation of the signal by a supplemental service. Typical +50 dBmV output level provides compatibility with other headend components, eliminating the need for additional amplifiers.

APPLICATIONS

- Low power broadcast
- CATV
- CCTV

FEATURES

- Frequency agile
- High level RF output signal
- Excellent channel separation
- Auxiliary SCA input
- Field selectable for stereo or mono
- Front panel monitoring

BENEFITS

- Convenient integration
- Compatible levels
- Full performance
- SCA compatible
- Choice of operating modes

Specifications

Input

Audio	Baseband left and right, or baseband monaural audio
Impedance	600 ohm, balanced or unbalanced, or high impedance
Connector	Screw type terminal strip
Level	-10 dBm (APL), 0 dBm (PPL)
Pre-emphasis	75 μ sec nominal; 50 μ sec or no pre-emphasis optional
Response	\pm 0.5 dB, 20 Hz to 15 kHz
Stereo Separation	>35 dB, 50 Hz to 10 kHz >30 dB, 10 Hz to 15 kHz
Distortion	<0.4% @ 1 kHz
Signal-to-Noise	>60 dB

SCA Input

Signal	SCA FM carrier
Impedance	High impedance
Connector	Screw terminal or type F
Frequency	62 kHz - 90 kHz, 67 kHz nom.
Level	2.0 V p-p @ 67 kHz nominal 4.0 V p-p maximum

Specifications are subject to change without notice

RF Output

Frequency	88-108 MHz or 108-120 MHz, selectable in 100 kHz steps
Impedance	75 ohms unbalanced
Return Loss	16 dB
Connector	Type F
Level	+30 to +50 dBmV, adjustable
Deviation	\pm 75 kHz, adjustable
Stability	\pm 0.002%
Spurious	>60 dBc inband >55 dBc out-of-band

Electrical/Mechanical

Power	115 VAC, 60 Hz, 10 Watts 230 VAC, 50 Hz
Temperature	0° to 50° C
Size	19"W x 1 $\frac{3}{4}$ "H x 9"D 483mm x 44.5mm x 229mm
Weight	7 lbs. (3.18 kg)