

# FM Broadcast Transmitters mod. ITBFM500

- Excellent audio performance
- Compact size in relation to the RF power
- Range in power from 10W to 5KW
- Best low power consumption achievable today
- Last generation of RF power devices
- Front panel control and metering via Oled Display interface by only one rotary knob
- Quick and easy to use and immediate learning menu
- IP Connectivity for anywhere access
- Ready for N+1 system
- Quick and easy routine maintenance

Options:

- High quality Stereocoder
- RDS Coder
- Telemetry via IP



**GENERAL**

Power Output:.....from 0 to max. continuously adjustable from front panel.  
 Frequency Range:.....87.5+108.00 MHz, [ 66+74 MHz (OIRT), 76+90 MHz (JPN)]  
 Type of Modulation:.....Direct frequency modulation of carrier, F3E stereo and mono.  
 RF Output Impedance:.....50 ohm.  
 RF Output Connector: .....NF type  
 RF Output setting:.....to 100W 1W step, to 500W 1/10W step, to 5KW 10/100W step  
 VSWR: .....1.5:1 Max with automatic fold-back VSWR prot. at all phase angles  
 Frequency Stability: .....Internal TCXO ±2 ppm from -5 to +50°C (better on request)  
 Modulation Capability:.....over ±200 KHz  
 Audio Inputs: .....L&R analog balanced, Unbalanced composite, AES, SCA, RDS  
 Operator interface setting:.....Encoder Push-Rotary  
 LCD Display:.....Oled hi-definition graphic type  
 Frequency Control: .....Synthesizer uprocessor controlled.  
 Programming step:.....10 KHz increments  
 Interface remote control:.....N°2 RS485 ports RJ45 back panel  
 PC Interface: USB: .....connector Type B female front panel  
 Telemetry:.....RJ45 LAN connection with WEB-Server  
 Monitor RF:.....-10 dBm, BNC-F connector  
 Off Lock RF Muting: .....< -80 dBc.  
 RF Harmonics: .....Exceeds ETSI/CCIR/FCC requirements.  
 RF Spurious: .....Exceeds ETSI/CCIR/FCC requirements.  
 Preemphasis: .....Flat/50/75µs selectable from front panel.  
 Asynchronous AM S/N Ratio:.....-65 dB below ref. 100% AM modulation @ 400 Hz.  
 Synchronous AM S/N Ratio: .....-60 dB below ref. 100% AM mod. 400 Hz with FM 100%  
 AC Power Factor:.....0.95 typical at 220VAC  
 Operating temperature: .....-10°C to +50°C.  
 Max Operating Altitude: .....> 3000 mt.  
 Relative Humidity Range: .....0 to 95% non condensing.

**MONAURAL PERFORMANCE**

Operational Modes: .....Mono (L+R)  
 Input Impedance: .....600 ohm or 10 Kohms balanced.  
 Input Level: .....-6 to +12 dBm in 0,5dB step (Other range on request)  
 Input Connector:.....XLR female - balanced.  
 Audio Frequency Response:.....±0.15 dB, 30 Hz to 15 KHz.  
 Preemphasis setting:.....0, 50µs, 75µs  
 Audio Filter Attenuation:.....< -55 dB @ 19 KHz, < -50 dB 20 KHz to 100 KHz  
 TH Distortion + Noise:.....< 0.05% @ 400 Hz  
 FM S/N Ratio:.....better than -80 dB RMS ref. ±75 KHz 50µs deemphasis.

**MULTIPLEX PERFORMANCE**

Composite Input Impedance:.....600 ohm or 10 Kohms balanced.  
 Composite Input Level:.....-12 to +6 dBm in 0,5dB step (Other range on request)  
 Input Connector:.....BNC female.  
 AES/EBU Input Connector:.....BNC female  
 Composite Response:.....±0.2 dB, 30 Hz to 100 KHz.  
 THDistortion + Noise:.....0.05% @ 400 Hz  
 Intermodulation Distortion:.....0.05%, 1 KHz/1.3 KHz, 1:1 ratio  
 FM S/N Ratio:.....better than -80 dB RMS ref. ±75 KHz 50 µs de-emph. decoded.

**STEREO CODER PERFORMANCE**

Audio Input Impedance:.....600 ohm balanced, 15 Kohm unbalanced.  
 Audio Input Level:.....-6 to +6 dBm in 0,5dB step (Other range on request)  
 Input Connector:.....XLR female.  
 Audio Frequency Response:.....±0.15 dB, 30 Hz to 15 KHz.  
 Preemphasis setting:.....0, 50µs, 75µs  
 THDistortion + Noise:.....0.05% @ 400 Hz  
 Intermodulation Distortion:.....0.05%, 1 KHz/1.3 KHz, 1:1 ratio  
 FM S/N Ratio:.....-80 dB RMS at ±75 KHz 50 µs de-emphasis.  
 Pilot Frequency: .....19 KHz ± 1 Hz  
 38 KHz Suppression:.....-60 dB (typ. -70 dB)  
 Audio Filter Attenuation:.....< -55 dB @ 19 KHz, < -50 dB 20 KHz to 100 KHz  
 Stereo Separation:.....30+100 Hz = -50 dB, 100Hz+15 KHz = -60 dB  
 Crosstalk attenuation:.....Main to Sub -50 dB 30 Hz to 15 KHz below 100% Mod.

**SCA-RDS 1&2 PERFORMANCE**

Input Level:.....-6 to +6 dBm in 0,5dB step (Other range on request)  
 Impedance:.....10k ohms unbalanced  
 Connector:.....BNC female  
 Amplitude Response:.....+/- 0.1dB; 53Hz to 100kHz

**MECHANICAL/PHYSICAL**

Height: .....1HE 44.1mm (1.75") 2HE 88.2mm (3.5")  
 Width: .....19" (48.3 cm) EIA Rack Mount  
 Depth: .....22" (55.9 cm) with connectors, 21" chassis, 25.5" rack  
 Weight:.....11.3 kg 25 lbs unpacked