

TX02-202F

TX02-152F

TX02-102F

TX02-501F



2kW VHF FM TRANSMITTER
1,5kW VHF FM TRANSMITTER
1kW VHF FM TRANSMITTER
0.5kW VHF FM TRANSMITTER

Compact Line

General information

The series belongs to the Low Power VHF product family of FM Radio Transmitters fully solid state technology air cooled.

The **TX02** low power family is operating in the Band II or Band I (OIRT) for FM stereo sound broadcasting, with 0,5 to 2kW output power capability and exciter built-in

The equipment is fully compliant with the personnel safety requirements as specified in EC 215.

The transmitters have been designed to offer to the customer high performances, high reliability and great simplicity in their operation and maintenance procedures.



Very compact design technology allows 2kW output power with exciter built-in contained in only 19" drawer two units high.

Key Features (referred to 2kW output)

- **BROADBAND** frequency synthesizer, without any other tuning or alignment.
- **MONOPHONIC & STEREOHONIC** according to the CCIR rec. 450-2 standard.
- **RDS & SCA** subcarriers input capability
- **HI-FI quality** modulated signal, with low residual noise and distortion.
- **AES-EBU digital interface** (Option)
- **RDS encoder** (Option)
- **RF Signal** free from spurious and harmonic signals
- **LD-MOS** devices in order to have wide band, reliability and high efficiency ($\geq 74\%$).
- **Redundant 2x1,2kW** RF power amplifiers modules
- **Dual Drive** , **1+1** and **N+1** redundancy configuration capability
- **High Tolerance** mains voltage ($\pm 20\%$) is accepted by the transmitter
- **Mains Protection System** by means of Surge Arrester System (option)
- **Remote Operation** compliant to IEC 864-1 rule (all option are available)
- **Control System** with full micro controlled adjustment, including fault finding
- **Protection and Control System**
 - Block against emission on spurious frequencies
 - Reflected power
 - Modulation limiter
- **High Capacity Air cooling system** fully integrated
- **Ultra Compact design** only 2 Rack Units (19") and 14kg weigh

Technical Specifications

GENERAL

• Frequency range	87.5 to 108 MHz
• Class of emission	F3E (Monophonic) ; F8E (Stereophonic)
• Stereo system	According to C.C.I.R. rec.450-2
• Frequency deviation	±75 kHz nominal
• Frequency control	Built-in Frequency Synthesiser
• Resolution	10 kHz step programmable
• Frequency stability	± 500 Hz / 6 months
• Output power	0,5 ; 1 ; 1,5 or 2 kW (±0.5dB) dependent of version
• Harmonic emission	≤ 70 dBc
• Spurious emission	≤ 90 dBc
• Residual AM noise level	≤ 60 dB
• Synchronous AM	≤ 50 dB
• RF output impedance	50 Ω (7/16" EIA unflanged connector)

ENVIRONMENTAL

• Operating temperature	0°C to +45°C (others on request)
• Relative humidity	20% to 90% non-condensing
• Altitude	up to 2500 m.

PROGRAM INPUT

• Mono/Stereo	L & R program input
• Connector	XLR type
• Impedance	600Ω balanced (others selectable)
• Level	-4 to +12dBm
• Preemphasis	50 or 75µs selectable
• Audio frequency response	40 to 15000 ±0.3dB
• 19 kHz suppression	≥ 50 dB
• RDS and AUX	Subcarrier program input
• Connector	BNC
• Impedance	≥ 2 kΩ unbalanced
• Frequency range	67 to 100 kHz
• Nominal input level	-10dBm (±7.5 kHz deviation)

TRANSMISSION CHARACTERISTICS

Mono operation ±75 kHz deviation

• Total harmonic distortion	≤ 0.1%
• Intermodulation	≤ 60 dB
• Signal to noise unweighted	≥ 80 dB
• Signal to noise weighted (CCIR 468-3)	≥ 78 dB

Stereo operation ±75 kHz deviation

• Total harmonic distortion	≤ 0.1%
• Intermodulation	≤ 60 dB
• Signal to noise unweighted	≥ 75 dB
• Signal to noise weighted (CCIR 468-3)	≥ 72 dB
• Crosstalk L & R (40 to 15000 Hz)	≥ 50 dB
• 38 kHz subcarrier suppression	≥ 50 dB
• Attenuation above 53 kHz	≥ 50 dB

METERING

The following parameters can be read on front display

- Forward power (FWD)
- Reflected power (REF)
- DC Supply voltage
- Frequency (active channel)
- Frequency (stored channels 1 to 6)
- Mono and stereo sensitivity (0,25 dB step)
- Programmed output power
- MPX peak modulation
- L & R peak level
- RDS, SCA, Aux, MPX external modulation
- Programmed audio parameters (+L or -L, +R or -R, L on/off, R on/off, Pre-emphasis lin. 50, 75 μ sec, Limiter on/off, Input Impedance $Z=10k\Omega / 600\Omega$)
- Alarm status
- Memory status
- Internal voltage
- Serial Number

REMOTE CONTROL

Parallel interface: start, stop, standby, alarms, status, interlock, recall memory
WEB interface: TCP/IP Telemetry (option)

GENERAL

Voltage power supply: 220 VAC $\pm 15\%$ (others on request)
Frequency: 50-60Hz $\pm 5\%$
Power consumption: 700W to 2,7kW dependent by model
Power factor: ≥ 0.9
Cooling: forced air
Dimensions: 483 x 600 x 84H mm
Weight: 14 kg. (2kW model)

OPTION

Digital audio Input: AES-EBU facilities XLR balanced (S/PDIF)
RDS: RDS simple coder programmable via PC
OIRT Version: band of frequency 65.80 to 74.00 MHz

How to Order (others version on request):

TX02-501F – 500W Transmitter
TX02-102F – 1kW Transmitter
TX02-152F – 1,5kW Transmitter
TX02-202F – 2kW Transmitter
-D – AES/EBU Digital I/O Board
-R – RDS Coder Board
-W – Web GUI Interface Board

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