

Rear Panel Connections



Common Specifications

AUDIO LIMITER

Audio Input Levels	-10dB to +18dB for limiting
Audio Input Connectors	XLR Balanced (RF shielded)
Input CMRR	> 60dB
Audio Distortion	< 0.1% at limiting 1 kHz (clarity mode)
Frequency Response	20Hz to 20kHz +/- 0.5dB (0 µs Pre-emphasis)
Limiter Control Range	>22dB (0 µs Pre-emphasis)
Input Impedance	10k Ohm
Pre-Emphasis	0.50 and 75 µs (Jumper selectable)
Audio Process Modes	Clarity and Loud (Jumper selectable)
Clipping	On or Off (Jumper selectable)

STEREO ENCODER

Subcarrier Generation	Microprocessor Generated (oversampled)
Pilot	19kHz +/- 1 Hz (adjustable)
Pilot Generation	Microprocessor Generated (oversampled)
MPX Output	BNC
Output Level	0dB
15 kHz Filtering	>40dB at 19kHz
15kHz Overshoot Filter	Clipping On or Off
Spurious Signals	>80 kHz >60dB; >160 kHz >80dB
Stereo Separation	>60dB (20Hz-15kHz)

RF

Frequency Range	87.5 - 108 MHz (steps 100kHz from front panel, 12.5kHz from internal switches)
Frequency Selection	Internal switches, Front Panel control menu or RS232 control menu
Frequency Stability	+/- 200 Hz (fine adjustment available)
Frequency Control Type	Dual Speed Phase Locked Loop (PLL)
Connector	N-Type 50 Ohm
Harmonics	<70 dBc
Spurious	<85 dBc
VSWR Fold Back	above 2.1
MPX Input	BNC Connector
MPX Input Response	+/- 0.3dB 5 Hz to 100 kHz
MPX Input Level	-10dB to +10dB (adjustable)
Modulation	Direct Frequency Modulation

OTHER

Control System	3-Buttons, 128x32 Graphics Display
External Control/Monitor	15-Way D-Type
Voltage Input	85-260 VAC
Power Connector	IEC FUSED and Switchable
SMPS Approvals	UL/TUV/CE

Model Specifications

TX1

Size	480mm x 44mm x 305mm
Weight	1990g
Cooling	None Required
Power Output	1W or 10mW Fixed
Power Consumption	5W

TX5

Size	480mm x 44mm x 305mm
Weight	2220g
Cooling	None Required
Power Output	50mW - 5W Adjustable
Power Consumption	13W

TX25

Size	480mm x 44mm x 305mm
Weight	3370g
Cooling	40mm Depressed Fan
Power Output	2W - 25W Adjustable
Power Consumption	45W

TX50

Size	480mm x 44mm x 305mm
Weight	3280g
Cooling	40mm Depressed Fan
Power Output	2W - 50W Adjustable
Power Consumption	88W

TX150

Size	480mm x 88mm x 305mm
Weight	5kg
Cooling	80mm Depressed Fan
Power Output	15W - 150W Adjustable
Power Consumption	260W

TX300

Size	480mm x 88mm x 305mm
Weight	6kg
Cooling	80mm Depressed Fan
Power Output	10W - 300W Adjustable
Power Consumption	485W

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TX1-TX5-TX25-TX50-TX150-TX300 STEREO FM TRANSMITTERS

- Configurable Limiter/Compressor, Clipper
- High quality Stereo Generator
- Ultra Low Distortion FM Modulator
- Adjustable Power Output
- Thermal and SWR Protection
- Easy 3-Button Controller
- RS232 Control
- Stylish Chassis with Blue LCD Screen
- Universal Power Supplies



TX1-TX5-TX25-TX50-TX150-TX300



BW Stereo FM Transmitters

Audio Circuits

Each TX transmitter has an in-built limiter/compressor with signal clipper and a high performance stereo encoder. The audio circuits are fully configurable via on-board jumpers allowing the limiter and stereo encoder to be switched in and out of operation depending on your requirements. On-board jumpers also allow you to adjust the pre-emphasis, clipping and processing mode.

Audio input is via balanced XLR sockets with level controls. Two rear panel BNC connectors provide an insertion point for connecting external processing equipment or an RDS encoder.

FM Modulator

The FM modulator circuit is based on a dual speed 'Virtual VFO' oscillator with performance specifications that put some of the more expensive transmitters to shame. Boasting one of the lowest distortion levels available on the market, this exciter ensures a clean and accurate signal across the entire commercial FM band.

The 'Virtual VFO' dual loop PLL system allows you to lock on to your chosen frequency quickly and then automatically adjusts to allow modulation with perfect audio flatness to below 10 Hz. AFC bounce and modulator overshoot are a thing of the past. You now can pass that low bass without distortion or overshoots and obtain that extra low frequency stereo separation.

Power Amplifier

Each TX transmitter has a BW designed broadband amplifier that allows 'no-tune' operation across the entire FM band while the internal harmonic filtering keeps your RF signal clean and compliant to FCC/DTR standards. A central 'wind tunnel' ensures maximum airflow through the unit keeping the amplifier cool and your transmitter on-air for longer. The amplifier is protected from damage by temperature and SWR monitoring systems. In the unlikely event of a fault occurring the power will be reduced to a safe level, keeping you on air, rather than shutting down completely.

Power Supply

The transmitter contains fully approved efficient switched mode power supply modules with a universal input voltage range from 85-260 volts AC, ensuring compatibility with any mains system WORLD-WIDE.

Control and Monitoring

The front panel has a three-button LCD control screen that allows simple control of RF power and frequency and the ability to monitor all important operating variables: frequency, forward and reverse power, circuit operating voltages, modulation level and the gain reduction of the internal audio limiter.



The rear panel has a 15-Way D-Type connector for remote RS232 connection (using optional adaptor), fault monitoring and external control of RF output. The RS232 protocol allows the transmitter to be controlled and monitored from a standard terminal program or our custom windows application.



The transmitter frequency can be set using the front panel controls or internal direct reading switches. Setting the internal switches disables the front panel frequency control option ensuring no unauthorised changes.

The BW range of transmitters have been designed to offer a selection of products that encompass all of the high quality audio, RF and control circuits you have come to expect from BW. These FM transmitters are a popular choice for stand-alone FM broadcasting (e.g. RSL, LPFM, Drive-Ins, Cable FM and Community Broadcasting) and are also used as high quality exciters in more powerful FM broadcasting environments.

- Configurable Compressor/Limiter
- High Performance Stereo Encoder
- Jumper Selectable Operation

TX150
TX300



TX300 - TX150

- Ultra Low Distortion FM Modulator
- Dual Loop 'Virtual VFO' Exciter

TX25
TX50



TX50 - TX25

- Modern Broadband Amplifier Design
- VSWR Safety Circuits
- Thermal Safety Circuits

TX5

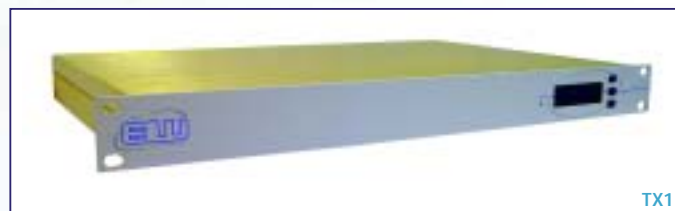


TX5

- Universal Power Supply Modules

- Simple Front Panel Control
- RS232 Control
- Secure Frequency Settings

TX1



TX1

The Perfect Choice

If you have the requirement for a high quality, fully integrated FM transmitter that allows you simple control and monitoring,you don't have to look any further than BW.

