

1.1 TX 150/300 FM TRANSMITTER

The Broadcast Warehouse TX 150/300 is a high specification FM broadcast transmitter. Its broadband “no-tune” design allows 87.5-108 Mhz operation from internal direct reading rotary switches or the front panel LCD frequency control system if enabled. Digital PWM techniques provide an easily adjustable and accurate automatic level controlled R.F. output of the Mos-Fet power amplifier stage.

R.F., Audio and other parameters are shown on the LCD graphics display. This display offers a very easy method of transmitter parameter monitoring and a new level of ease for setup and installation, with metering accuracy normally only found on expensive test equipment. Local and remote personal computer control and metering are achievable via the innovative dual method RS232 interface.

The FM modulator section employs a dual speed “virtual VFO” system for extremely low audio distortion and excellent stereo performance.

A built in high specification stereo encoder provides crystal clear stereo sound and combined with the internal limiter a fully compliant “plug and play” all in one low power broadcast transmitter.

For future compatibility all settings are switchable with on board jumpers. The stereo and/or limiter settings can be switched in and out to suit the requirements of any external broadcast equipment you may have now and in the future.

The lightweight universal mains input design ensures a high reliability efficient design compatible with any mains system in the world.

3.1 SPECIFICATIONS

RF

Power	20-175 (TX150) 30-300 (TX300)
Connector	N type 50 ohm
Harmonics	better than 65 dbc
Spurious	< -75 dbc
Frequency range	87.5 - 108 MHz
Frequency steps	100KHz from LCD or 12.5 KHz from internal switches
Frequency selection	Internal switches or LCD system
Frequency control type	Dual speed Phase locked loop
Frequency stability	< +/- 500 Hz (fine adjustment available)
MPX input	BNC
MPX input level	MPX input level -10dB to +10dB (adjustable)
MPX input response	MPX input response +/- 0.3 dB, 5 Hz to 100 KHz
Modulation	Modulation direct frequency modulation

STEREO

Subcarrier generation	Microprocessor generated 8x over-sampled
Pilot	19KHz +/- 1 Hz (adjustable)
pilot generation	Microprocessor generated 16x over-sampled
Output level (BNC)	(BNC) 0dB
15 KHz filtering	>40db at 19KHz
15KHz overshoot filter clipping	On or off
Spurious	
> 80 KHz	> -60dBr
>160 KHz	> -80dBr
Stereo separation	>55db (20hz-15KHz)

LIMITER

Audio input levels	-10db - +18dB for limiting
Audio input connectors	XLR balanced (RF shielded)
Input cmrr	>60dB
Audio distortion	
Tone	<.1% at limiting 1 KHz (clarity mode)
Program material	program dependent
Frequency response	20 Hz to 20KHz +/- 0.5dB (pre-emphasis off)
Limiter control range	Limiter control range >24dB (pre-emphasis off)
Input impedance	10k
pre-emphasis	50uS,75uS and 0uS(off)
Process modes	Clarity and loud
Clipping	On or off

OTHER

Control system	3 buttons, 122x32 graphics display
External control/monitor	15 way D-type, Female
Size	475mm x 44mm x 300mm
Weight	1.5kg
Voltage input	85-260 VAC
Current input	110V-4A / 220V-2A
Power connector	IEC,FUSED and switchable
Switched mode approvals	UL / TUV / CE