

ECOM BROADCASTING EQUIPMENT

ECOM FM 650 STEREO FM BROADCAST TRANSMITTER

Radio and Television is a part of every man's life today; **East West Infiniti** drawing on its long radio engineering experience introduces medium power FM broadcast transmitter to enable FM broadcasters to operate in smaller cities, with assured quality & technical support.

ECOM FM 650 is a high quality integrated 650 Watt Output FM broadcast transmitter covering 88~108 MHz broadcast band. These transmitters are integrated units combing a high quality Stereo encoder, Exciter, Limiter and RF Amplifier in one compact 19" desktop rack cabinet.



EXCITER

- **Broadband, dual phase locked loop system**
- **Built in low pass harmonic filter**
- **Microprocessor controlled PLL**
- **XLR balanced input connectors and BNC multiplex connectors**
- **60db + stereo separation; 15 kHz low phase stereo mux filtering**
- **Switchable pre emphasis, base band & filter clipping and loudness modes**
- **Switchable limiter, stereo and mono switches**

The exciter combines a high quality PLL exciter, a high quality stereo encoder and an audio limiter. The modern innovative design allows unparalleled audio and RF performance, providing audio flatness to 1 Hz with superior AFC control. The low bass and highs are modulated without distortion with perfect stereo separation with the built in harmonic filter which keep the signal clean. The system is broadband and requires no tune up, the frequency is pre-set with decimal dip switches.

The stereo encoder section is microcomputer controlled to combine the best of analog and digital techniques for superior performance. Designed for optimum stereo separation and excellent spectral cleanliness it provides that extra performance for radio stations with an edge. A system switch allows control of the sound to suit your program content; the **loud** mode provides a more aggressive processed sound while the **Clarity** mode keeps the sound more true to the original. On board pre emphasis switching makes selection for the mood of your station

Audio base band filtering combined with the latest digital techniques and post MPX filtering makes these units easily conform to the most stringent broadcast regulations, giving the extra loudness inside your bandwidth limits, the limiter ensures maximum clarity at maximum deviation. The low distortion pilot tone allows compatibility with sub-carrier services such as the radio data system (RDS). An external multiplex input is available for out board processors and encoders.

Front panel metering is available to monitor Power Output, VSWR, Modulation and Power Supply voltages. This ensures trouble free operation. The system operates of single phase mains 110~220VAC mains suitable for operation even in rural areas.



RF AMPLIFIER

The exciter drives an integrated compact 650 Watt RF amplifier employing latest MOSFET semiconductors and RF techniques for a stable high efficiency performance, the amplifier has a rugged design to protect against antenna mismatch. A large heat sink ensures 24 hour continuous operation.

ECOM FM-650 is an all round winner when you want high power, clean and undistorted sound without sacrificing loudness – all in one compact cost effective package

TECHNICAL SPECIFICATIONS

GENERAL	
Frequency Coverage	88 ~108 MHz pre-set by PLL control switches
Size & Weight	19" wide x 16" high x 24" deep: 30 Kgs
Power Source & Consumption	110/220 VAC 1800 Watts Max
Operating Temperature	- 15 ~ + 45 deg C
EXCITER	
Distortion	<0.1%
Out of lock RF power down	<-50dBc
Freq. stability	+/- 200Hz
Audio input level	Adjustable - 4dbu to +16dbu
Audio response	1Hz-100kHz
S.N.R.	>80dB
Multiplex input	BNC unbalanced 10K
STEREO ENCODER	
Sub carrier generation	Microprocessor generated 8x over sampled
Pilot	19kHz +/- 2 Hz
Pilot generation	Microprocessor generated 16x over sampled
Output level	(BNC) 0db
15 kHz filtering	>40db at 19kHz
15kHz overshoot filter clipping	ON or OFF (user selectable)
Spurious Radiation @ >80 kHz/>160KHz	>60dbr / 80dbr
Stereo separation	>60db (20hz-18kHz)
Multiplex output	BNC unbalanced 75 ohms
LIMITER	
Audio input levels	-10db ~ +18db for limiting
Audio input connectors	XLR balanced
Input cmrr	>60db
Audio distortion	<.1% at limiting 1 kHz (clarity mode)
Frequency response	20 Hz to 20kHz +/- 0.5db (0 us Pre emphasis)
Limiter control range	>22db (0 us pre emphasis)
Input impedance	10k
Pre emphasis depth and modes	0,50 and 75 uS / Clarity and Loud
Clipping	ON or OFF
RF POWER AMPLIFIER	
Power output	Factory preset to 500 ~ 650 Watts
Harmonic output	-45dBc
Spurious output	-60dBc
	Specification subject to change without notice or obligation

East West Infiniti (Pvt) Ltd has its foundations going back to 1984; the company activities encompass professional and defense electronics, navigation, communications, data transmission, simulation, training and aviation products. A comprehensive in-house research and development is supported by a production facility for electronic equipment.

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