

FM TRANSMITTERS

SIMPLICITY • RELIABILITY • MODULARITY • SERVICEABILITY

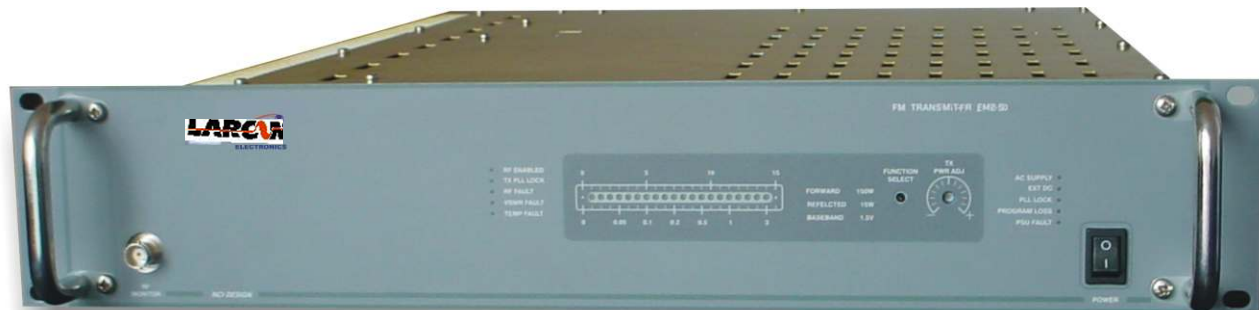
FM-50 50W FM **Exciter**

The EX2-50 solid state 50W low cost FM transmitter designed for community broadcasting applications. Even with its reduced cost, the audio and RF performance is not compromised. The features not offered compared to the EX2-100 professional FM transmitter are: No Audio PPI displays, No remote frequency control, no ALC metering etc.

The Exciter includes a frequency synthesizer, phase locked for optimum frequency Stability.

The Exciter, includes a wideband (100kHz) input and one auxiliary wideband inputs. As an option, built-in stereo encoder with audio limiter.

Multifunction front panel display for monitoring of forward, reflected power, deviation and heatsink temperature.



FEATURES

- Superior audio performance
- Built-in Stereo Encoder and audio limiter (option 1)
- SCA or RDS Operation (Standard)
- Built-in forced air cooling fans
- A.C. and D.C. (+24V 120W optional)
- Modular design
- Wideband operation (100kHz baseband)

LARCAN
An ISO 9001 Certified Facility

TECHNICAL SPECIFICATION

PARAMETER

RF SPECIFICATION

Frequency Range	87.5 to 108 MHz (F5E/F8E)
RF Output Power	50W
RF Spurious Emission	<-75dBc
RF Harmonics	<-70dBc
Asynchronous AM	<-60dB(filtered 20Hz to 20kHz)
Synchronous AM	<-60dB(filtered 20Hz to 20kHz)
Frequency Synthesizer	PLL (Direct Modulation)
Frequency Steps	50kHz
Frequency Stability	+/- 2ppm
Frequency Deviation	+/- 75kHz Peak
RF output connector	N Type (Female) 50 Ohm
RF Monitor Connector	BNC 50 ohm

POWER SUPPLY

AC Power Input	230V single phase 150VA
DC Power Input	+24V (optional)
Mains Variation	+10% - 10%
Mains Frequency	50Hz +/-1Hz (60Hz optional)

ENVIRONMENTAL

Operating Temperature	-10 to +45 degrees C
Operating altitude	<2300 metres
Humidity	<90% (non condensing)

PHYSICAL

Dimensions (mm)	485W x 480D x 89H (2U)
Weight	10kg

TELEMETRY

Alarms (Voltage Free)	Forward, Reflected, Temp.,PSU
------------------------	-------------------------------

PARAMETER

COMPOSITE SPECIFICATION

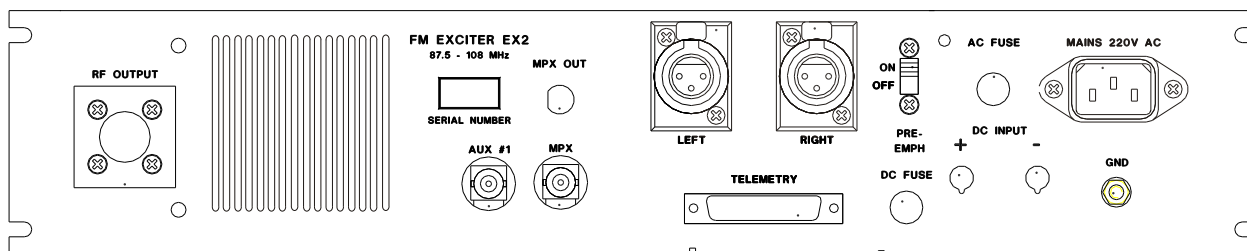
W/B Amplitude Response	+/- 0.2dB (30Hz to 100kHz)
W/B Stereo Separation	>50dB (typical 67dB) 30Hz to 15kHz (decoded)
W/B Stereo Cross Talk	>50dB (30Hz to 15kHz) L+R into L-R
Total Harmonic Distortion	<0.1% (Typical 0.035%) 30Hz to 15kHz (decoded)
FM S/N Ratio Stereo	>70dB (30Hz to 20kHz) 50us de-emph. Ref. To +/- 75kHz deviation
I/P Impedance	1k2 ohms balanced
Deviation Sensitivity	3.5V p-p for +/- 75kHz deviation (adj)

STEREO OPERATION (Option 1)

AF Amplitude Response	+/-0.2dB (30Hz to 15kHz)
Stereo Separation	>60dB (typical 66dB) 30Hz to 15kHz (decoded)
Mono/Stereo Cross Talk	>50dB (30Hz to 15kHz) L+R into L-R
Stereo Distortion	<0.1% (Typical 0.035%) 30Hz to 15kHz (decoded)
Stereo S/N Ratio	>70dB (30Hz to 20kHz) 50us de-emph. Ref. To +/- 75kHz deviation
Input Impedance	600 ohms balanced (XLR)
Deviation Sensitivity	+6dBm for +/-40kHz deviation (adj)

STEREO LIMITER (Option 1)

Audio Limiter Sensitivity	10dBm nom. For 62.5kHz deviation
Attack Time	< 2mS for increased 10dB I/P step
Decay Time	>80mS for decreased 10dB I/P step
Limiter Distortion	< 0.35% (10dB into Limiting)
Limiter Threshold	Internally adjusted



EX2-50 50W STEREO EXCITER REAR PANEL LAYOUT

