

# EX-100LD 100W FM TRANSMITTER

The **EX-100LD** solid state VHF FM Transmitter is a new compact 2U, versatile and economical unit with an R.F. output in excess of 100W, utilizing highly efficient and robust LDMOS amplifier for extreme reliability in high temperature and high VSWR conditions.

The **EX-100LD** includes a LED digital display showing the main parameters of the transmitter, to improve on-site reliability, and studio style Left and Right VU meters for indication of the transmitted audio modulation levels, achieved by use of an integrated "stereo decoder".

The unit also provides exceptional stereo audio performance.

The **EX-100LD** includes an agile PLL synthesizer with local and remote frequency control making it suitable for 1+1 and N+1 operation.

The **EX-100LD** has an optional digital "stereo encoder" which includes an integrated audio limiter (supplied as Option 1). The audio inputs utilize professional balanced line XLR's.

The **EX-100LD** includes an external wideband composite input and auxiliary input for RDS/SCA, both with external rear panel adjustment OR (Option 2 ) internally supplied RDS encoder factory Programmed.



**EX-100LD** 100W FM Transmitter

## Features

- RF amplifier utilizing highly efficient, robust LDMOS device
- Modulation Monitoring with studio style L & R VU meters
- Integrated Stereo Encoder and audio limiter (option 1)
- Wideband (MPX), SCA / RDS auxiliary I/P (standard)
- 2U rack mount lightweight (7kg), Forced air cooled
- Internal RDS Encoder (option 2)
- IP SNMP or GSM monitoring external Interface (option 3)

# TECHNICAL SPECIFICATIONS

## PARAMETER

### RF SPECIFICATION

Frequency range	87.5 to 108 MHz
Modulation type	F3E and F8E (direct carrier)
Frequency synthesizer	PLL with Local/Remote control
Frequency increments	100 kHz
Frequency stability	2ppm
RF output power	> 100W
RF spurious/harmonics	< -75dBc / -70dBc
Asynchronous AM	< -60dB
Synchronous AM	< -50dB
RF output connector	N (female) 50 Ohm,
RF monitor connector	BNC (female) 50 ohm
Max VSWR	2:1 (Internally adjustable)

### POWER SUPPLY

AC power input	90V to 264V @ 47-63Hz
SMPS Rating	456W @ 90 % efficiency
Power Factor	>0.95
Consumption	355VA Nominal

### ENVIRONMENTAL

Operating temperature	-10 to +45 °C
Operating altitude	<3000 metres
Humidity	<90% (non condensing)

### PHYSICAL

Dimensions (mm)	485W x 515D x 82H (2U)
Weight	7kg

### TELEMETRY

Alarms (voltage free)	Forward, Reflected, Temp, PSU
Command inputs	Mono/Stereo, RF enable
IP SNMP (RJ45)	RF Forward, RF Reflected, Temp, PA Current, Deviation + Alarms

## PARAMETER

### COMPOSITE SPECIFICATION

W/B amplitude response	+/- 0.15dB (30Hz to 100kHz)
W/B stereo separation	>60dB (30Hz to 15kHz)
W/B stereo crosstalk	>50dB (30Hz to 15kHz)
Total harmonic distortion	<0.1% (30Hz to 15kHz)
FM S/N ratio (stereo)	>75dB (30Hz to 15kHz)
I/P impedance	10k ohm unbalanced
Deviation sensitivity	3.5V p-p (adjustable)
Low pass Filter	>200Hz @ -12dB/Octave

### STEREO OPERATION (with 50uS de-emphasis)

AF amplitude response	+/-0.15dB (30Hz to 15kHz)
Stereo separation	>60dB (30Hz to 15kHz)
Mono/Stereo crosstalk	>50dB (30Hz to 15kHz)
Stereo distortion	<0.1% (30Hz to 15kHz)
Stereo S/N ratio	>75dB (30Hz to 20kHz)
Input impedance	600 ohm balanced (XLR)
Deviation sensitivity	+6dBm for +/-40kHz deviation
Pre-emphasis	50 or 75uS (internal link)
38kHz suppression	>55dB

### STEREO LIMITER (Option 1)

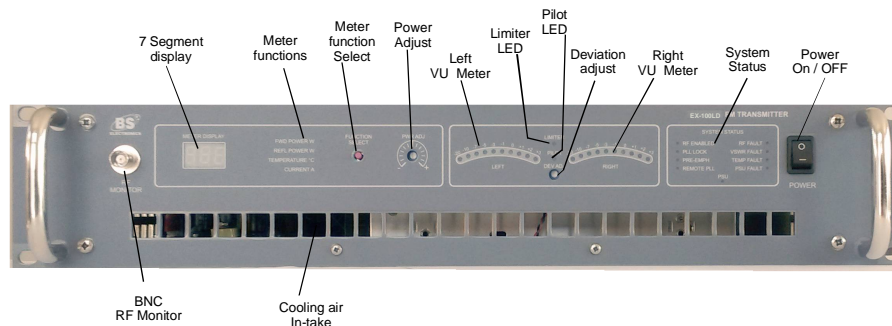
Audio limiter sensitivity	10dBm nom. for 68kHz deviation
Attack time	< 2mS for increased 10dB I/P step
Decay time	>80mS for decreased 10dB I/P step
Limiter distortion	< 0.25% (10dB into limiting)
Limiter threshold	Internally adjustable

### RDS ENCODER

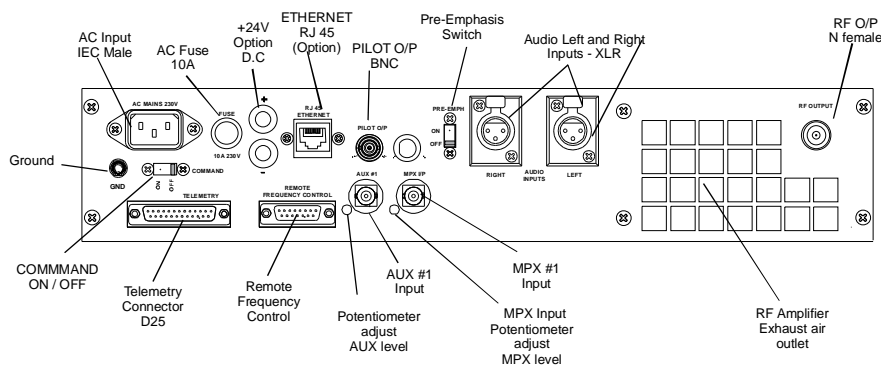
Factory Programmed	PI, PS, AF only
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### STANDARDS

Complies with CCIR Recommendation BS.450-1 (1), 412-5 (3), 468-4 ETS 300, 384. FCC Certified for the USA market.



EX-100LD 100W FM TRANSMITTER  
FRONT PANEL



EX-100LD 100W FM TRANSMITTER  
REAR PANEL