

Low Power Transmitter 10W-6kW



Designed to provide broadcasters with a product that will meet their needs like no other solution on the market, this new low to medium power transmitter line uses the latest LDMOS devices for broadband operation across the entire UHF band. This allows users to minimize spare parts stock, which is especially important to group owners and networks, and also enables simple and inexpensive channel changes.

The very compact and completely modular design uses a chassis/backplane configuration with parallel amplifier and power supply modules that can be removed and replaced while the transmitter is on the air. Additionally, the Innovator LX series was designed to be field upgradable to digital operation.

Configurations are available in power levels from 10 watts to 6 kilowatts analog and up to 3 kilowatts DTV, and all are manufactured in the USA by Axcera - *The RF Experts*.

Low Power Transmitter 10W - 6kW

Visual Performance

Frequency Range	470 to 806 MHz
Carrier Stability (<i>Transmitters</i>)	
Standard	±1 kHz
Optional w/PFC	±350 Hz
Frequency Translation Stability (<i>Translators</i>)	
Standard	±1 kHz
Optional w/PFC	±350 Hz
Regulation of RF Output Power	3%
Output Variation (<i>Over 1 Frame</i>)	2%
Sideband Response	
-1.25 MHz and below	-20 dB
-0.75 to -0.5 MHz	+0.5 db, -2 dB
-0.5 to +3.58 MHz	±0.5 dB
+3.58 MHz to +4.18 MHz	+0.5, -1.0 dB
Freq Response vs. Brightness	±0.5 dB
Visual Modulation Capability	1%
Differential Gain	5%
Incidental Phase Modulation	±3°
Linearity (<i>Low Frequency</i>)	5%

Visual Performance (*continued*)

Differential Phase	±3°
Signal-to-Noise Ratio	55 dB
2t K-Factor	2%
Noise Factor (<i>Translators</i>)	5 dB (<i>Max</i>)
w/Input Preamp	3 dB (<i>Max</i>)
Input Dynamic Range (<i>Translators</i>)	-60 dB to -15 dBm
w/Input Preamp	-75 dBm to -30 dBm
Env. Delay (<i>Transmitters</i>)	Per FCC Standard
Video Input (<i>Transmitters</i>)	75 ohms (Loop through)
Harmonics	-60 dB or better
Intermodulation Products	-52 dB or better
Spurious (<i>±3 MHz from channel edge</i>)	
100W and lower	-50dB or better
Greater than 100W	-60dB or better

Aural Performance

Frequency Deviation Capability (<i>Transmitters</i>)	±75 kHz
Distortion	0.5%
FM Noise	-60 dB
AM Noise	-55 dB
Aural to Visual Separation	4.5 MHz ± 100Hz
Composite Audio Input (<i>Multi-channel sound Transmitters</i>)	
Input Level	1V peak, nominal
Input Impedance	75 ohms, unbalanced
Frequency Range	
±0.1 dB response	50 Hz to 50 kHz
±0.5 dB response	30 Hz to 120 kHz
Monaural Audio Input (<i>Transmitters</i>)	
Input Level	0 to +10 dBm
Input	600 ohms, balanced
Freq Range (<i>±0.5 dB resp.</i>)	30 Hz to 15 kHz
Pre-emphasis	75µs
Subcarrier Input (<i>Transmitters</i>)	
Input Level	1V peak, nominal
Input Impedance	75 ohms, unbalanced
Freq Range (<i>±0.5 dB resp.</i>)	20 kHz to 120 kHz

General

Model Number*	LU10Ax	LU100Ax	LU250Ax	LU500Ax	LU1000Ax	LU2000Ax	LU3000Ax	LU4000Ax	LU5000Ax	LU6000Ax
Power Output (<i>Watts</i>)										
Visual (<i>Peak</i>)	10	100	250	500	1000	2000	3000	4000	5000	6000
Aural (<i>Avg.</i>)	1	10	25	50	100	200	300	400	500	600
Output Connector	N	N	7/8" EIA	7/8" EIA	7/8" EIA	7/8" EIA	3 1/8" EIA	3 1/8" EIA	3 1/8" EIA	3 1/8" EIA
Power Consumption (<i>Watts</i>)	250	675	1100	1900	3500	6700	10,250	13,500	16,700	19,900
Input Power										
Line Voltage (<i>Volts</i>)	117/230 ±10%		230 ± 10%							
Power Requirements	Single Phase, 50 or 60 Hz									
Size (<i>H x W x D</i>)	8.75"x19"x23" <i>(Chassis Only)</i>		55"x22"x34"				76"x22"x34"		76"x44"x34"	
Weight (<i>lbs.</i>)	45	45	340	360	400	550	700	1030	1180	1330
Operational Temperature Range	0 to +50°, derate 2°C/1000 ft.									
Maximum Altitude ³	8500 feet (2600m) AMSL									
Operational Humidity Range	0% to 95% non-condensing									
RF Load Impedance	50 Ω									

* For transmitters use "T" suffix, translators use "L" suffix (ex. LU100AT - 100W Transmitter)

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