



Tomorrow's Radio Today



Digital Exciter / Transmitter STXe-60 and STXe-500

STXe60



STXe500



The STXe series of direct to channel excitors has eclipsed even our own legendary exciter predecessors in audio quality. The STXe is a digital exciter that can produce the best AES audio but is also capable of broadcasting in HD or DRM+. The STXe series of excitors include as standard an RDS generator and multi-program inputs with silence sensor. Also included is a built-in audio delay for HD Radio operation. The system also includes SNMP Level III Control and Security and is perfect for translator operation with a built in FSK-ID generator. AES over Composite / Baseband 192 Capable allows excellent audio quality and as with all BE transmitters uses the latest in transistor amplifier technology offering the highest AC to RF efficiency.

Key Features and Benefits

- RDS Generator built-in with Dynamic RDS
- Multiple Program Inputs with silence sensor and auto failover
- Single Frequency Network capable with built-in Audio delay
- N+1 Capable, Main/Alternate Capable
- SNMP Level 3 Security and Control

Power Options

60W

500W



Unparalleled Graphical
User Interface!

Digital Exciter / Transmitter

STXe-60 and STXe-500



Specifications

GENERAL	
RF Power Output	STXe-500: 25 – 550 W STXe-60: 6 – 70 W
Output Impedance	50 ohms nominal
VSWR	Rated power into 1.5:1 VSWR. Open and short circuit protected at all phase angles
Frequency Range	875 MHz to 108 MHz; 10 kHz increments
Frequency Stability	Internal TCXO: +/- 4ppm agin/temp, -10°C to +50°C; External Input: +/- accuracy of reference source
Audio Inputs	AES, L&R analog, Unbalanced composite, SCA audio inputs, RDS input
Modulation Type	Direct-to-channel
Modulation Capability	Up to 300kHz
Asynchronous AM S/N Ratio	64dB 75dB below rated power reference carrier with 100% AM modulation at 400Hz, with no FM modulation present
Synchronous AM S/N Ratio	60dB below rated power reference carrier with 100% AM modulation at 400Hz, with FM modulation +/- 75kHz at 400Hz
Spurious and Harmonic	85dB or better typical, low pass filter standard
AC Input	90 to 264VAC; 47-63Hz
Power Factor	0.95 typical at 220VAC
AC Inputs Testing	Tested to EN 301 489-1, including Voltage Dips and Dropouts (Section 9.7B), Voltage Surges (Section 9.8), conducted immunity and conducted radiation
Regulatory	FCC; IC; CE; BETS-6; IEC 215 Safety

ENVIRONMENTAL	
Temperature Range	-10°C to +50°C
Altitude	10,000 ft (3048 m)
Humidity	95% maximum, non-condensing
Air Capacity	160 CFM (22.7 m3/min)
Heat Dissipation	270 W at Rated Output
BTU	927 BTU/H at Rated Output

STEREO PERFORMANCE	
Operational Modes	Stereo, mono (L+R), L only, R only
Input Level	AES: -2dBfs for 100% modulation; 16-24 bits (32, 44.1, 48 or 96kHz typical rates for AES/EBU devices)
Impedance	AES: 110 ohms balanced; balanced
Connector	AES: Wire-XLR
Amplitude Response	+/- 0.25dB, 20Hz to 15kHz
THD + Noise	0.03 or better @400Hz, measured 10Hz-22kHz, 75 uS deemphasis Stereo: 0.01 typical @ 400Hz, measured 10Hz-22kHz, 75 uS deemphasis
S/N Ratio	AES: 95dB typical below 100% modulation @ 400Hz-22kHz bandwidth, A-weighted filter 100dB typical below 100% modulation @ 400Hz, 10Hz-22kHz bandwidth, CCIR-468 filter Analog: 93dB typical below 100% modulation @ 400Hz, 10Hz-22kHz bandwidth, A-weighted filter 98dB typical below 100% modulation @ 400Hz, 10Hz-22kHz bandwidth, CCIR-468 filter Stereo: 80dB or better below 100% modulation @ 400Hz, unweighted
Stereo Separation	70dB, 20Hz to 15kHz
Linear Crosstalk	70dB below 100% modulation, 20Hz to 15kHz, main to sub and sub to main
Pilot Stability	+/-0.3Hz, 0°C to +50°C
Audio Overshoot	150% peak deviation max

Digital Exciter / Transmitter

STXe-60 and STXe-500



MONO PERFORMANCE

Operational Modes	Mono (L+R), L only, R only
Input Level	L&R: +10dBm for 100% modulation into 600 ohms
Impedance	600 ohms or 10k selectable
Connector	XLR
Amplitude Response	+/-0.25dB, 20Hz to 15kHz
THD + Noise	0.005 typical @ 400Hz, measured 10Hz-22kHz, 75 uS deemphasis
IMD Distortion	20Hz to 15kHz
FM S/N Ratio	86dB or better below 100% modulation @ 400Hz, 10Hz-22kHz bandwidth, unweighted

COMPOSITE PERFORMANCE

Input Level	3.5V p-p for 100% modulation into 10k ohms
Impedance	Balanced: 10k ohms or 50 ohms selectable Unbalanced: 10k ohms
Connector	Balanced: BNS Unbalanced: BNC
Amplitude Response	+/- 0.03dB; 20Hz to 53kHz; 0.1 dB; 53kHz to 99kHz
Phase Response	+/-0.1 degree from linear phase, 53kHz to 100kHz
THD + Noise	0.005% or less @ 400Hz, 10-22Khz bandwidth, 75 uS deemphasis
IMD Distortion	SMPTE: 0.01% or less (60/7000HZ; 1:1 ratio) DIM-B: 0.005% typical (14 Hhz)
FM S/N Ratio	88dB or better below 100% modulation @ 400Hz, 10Hz-22kHz bandwidth, unweighted 95dB typical below 100%

SCA 1&2 PERFORMANCE (INTERNAL)

Input Level	3.5V p-p for 10% deviation
Impedance	10k ohms unbalanced
Connector	BNC
Amplitude Response	+/-0.1dB; 53Hz to 100kHz
19kHz Output	19kHz synchronization clock for external RBDS/RDS operation 1V pp into high impedance

MECHANICAL/PHYSICAL

Height	2RU, 3.5" (8.89 cm)
Width	19" (48.3 cm) EIA Rack Mount
Depth	22" (55.9 cm) with connectors, 21" chassis, 25.5" rack
Weight	25 lbs (11.3 kg) unpacked
Outlet Size	66.5in2 (492 cm2), rear of unit

Digital Exciter / Transmitter STXe-60 and STXe-500



Taking the next step is easy with Broadcast Electronics. Contact your sales representative today to discuss solutions that will work for you and your station(s).

To contact your BE sales representative, simply visit our website at bdcast.com or call 217.224.9600 and learn more about what BE has to offer.

BE manufactures complete RF systems for radio and TV. Our products encompass program generation, audio and data management, interfacility transport and analog and digital (*HD Radio and DRM transmission*).

They are used daily in more than 40,000 installations in nearly 100 countries. For over sixty years, BE pioneering developments have set industry standards for innovation and reliability, while providing broadcasters with new options for operational productivity and income generation. BE is headquartered in Quincy, Illinois, USA, and is represented worldwide by a network of local representatives.

Telephone (217) 224-9600
4100 North 24th Street – Quincy, Illinois 62305-3606 U.S.A

©2019 Broadcast Electronics. All rights reserved. Specifications are subject to change without notice. Broadcast Electronics and the BE logo are registered trademarks of BEI Electronics LLC. All other trademarks are property of their respective owners.

www.bdcast.com



BE - Broadcast Electronics is part of Elenos Group
more information www.elenosgroup.com
Headquarters in Italy



Broadcast Electronics

Tomorrow's Radio Today



Digital STXe-60 & 500 Exciter / Transmitter Brochure V1.2