

### FM 5C - Technical Specifications : Technical Specifications

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#### RF SPECS

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**Output Power:****Range:**

2.5 kW to 5 kW

**Accuracy:**

10%

**Resolution:**

10 W

**PA Efficiency:**

82% typical at 5 kW (actual dependent on line voltage and carrier frequency)

**Overall AC Efficiency:**

64.9% typical at 5 kW (actual dependent on line voltage and carrier frequency)

**VSWR:**

Rated power into 1.35:1 maximum, capable of operating into higher VSWR with automatic power reduction, open and short circuit protected at all phase angles

**Impedance:**

50 Ohm

**Frequency:****Range:**

87.5 MHz to 108 MHz, tuned to specific operating frequency, exciter programmable in 10 kHz steps

**Stability:**

±300 Hz, 0° to 50° C

**RF Harmonics Suppression:**

Suppression meets all FCC/DOC requirements and CCIR recommendations

**Modulation:****Type:**

Direct frequency modulation of carrier frequency

**Capabilities:**

Greater than ±350 kHz

**Regulatory:**

Meets IEC 215 safety requirements

### STXE 500 EXCITER AUDIO SPECIFICATIONS

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**General****RF Power Output:**

25-550w

**Output Impedance:**

50 ohms nominal

**VSWR:**

Rated power into 1.5:1 VSWR. Open and short circuit protected at all phase angles

**Frequency Range:**

87.5MHz to 108MHz; 10kHz increments

**Frequency Stability:**

Internal TCXO: +/-100Hz factory calibration, +/-4ppm agin/temp, -10 degrees C to +50 degrees 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 digitally generated FM (no analog up-conversion); FM only

**Modulation Capability:**

# Broadcast Electronics

## Technical Specifications

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), and conducted immunity and conducted radiation

**Regulatory:**

FCC; IC; CE; BETS-6; IEC 215 Safety

**Operational Modes:**

Stereo, mono (L+R), L only, R only

**Stereo:**

**Connector Type:**

**AES:**

Wire – XLR

**L&R:**

XLR

**Input Level:**

**AES:**

-2 dBfs for 100% modulation; 16-24 bits (32, 44.1, 48 or 96 kHz typical rates for AES/EBU devices)

**L&R:**

+10 dBm for 100% modulation into 600 ohms

**Impedance:**

**AES:**

110 ohm balanced

**L&R:**

600 ohms or 10 k selectable; balanced

**Amplitude Response:**

**AES:**

±0.25 dB, 20 Hz to 15 kHz

**L&R:**

±0.25 dB, 20 Hz to 15 kHz

**THD + Noise:**

**AES:**

0.03 or better @400Hz measured 10 Hz-22Khz, 75 uS deemphasis

**L&R:**

0.005 typical @400Hz, measured 10 Hz-22Khz, 75 uS deemphasis

**S/N Ratio:**

**AES:**

95dB typical below 100% modulation @ 400Hz, 10Hz-22Khz bandwidth, A-weighted filter 100dB typical below 100% modulation @ 400 Hz, 10Hz-22Khz bandwidth, CCIR-468 filter

**L&R:**

86dB or better below 100% modulation @ 400Hz, 10 Hz-22Khz bandwidth, unweighted

**Analog:**

93dB typical below 100% modulation @ 400Hz, 10Hz-22Khz bandwidth, A-weighted filter 98dB typical below 100% modulation @ 400 Hz, 10Hz-22Khz bandwidth, CCIR-468 filter

**S/N Ratio Stereo::**



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80dB or better below 100% modulation @ 400Hz, unweighted

**Stereo Separation::**

70dB or better, 20Hz to 15kHz

**AES:**

80 dB, 20 Hz to 15 kHz

**L&R:**

70 dB, 20 Hz to 15 kHz

**Pilot Stability:**

±0.3 Hz, 0° C to +50° C

**Audio Overshoot::**

150% peak deviation max.

**Composite Performance:**

**Connector Type:**

BNC Unbalanced: BNC

**Input Level:**

3.5 V p-p for 100% modulation into 10 kOhms

**Impedance:**

Balanced: 10 kOhm or 50 ohm selectable, Unbalanced: 10 kOhm

**Amplitude Response:**

±0.03 dB 20 Hz to 53 kHz; 0.1 dB 53 kHz to 99 kHz

**Phase Response:**

±0.1° from linear phase; 53 kHz to 100 kHz

**THD + Noise:**

0.005% or less @ 400Hz, 10-22Khz bandwidth, 75 us deemphasis

**Intermod Dist:**

SMPTE: 0.01% or less (60/7000 Hz, 1:1 ratio) DIM-B: 0.005% typical (14Khz)

**FM S/N Radio:**

88 dB below 100% modulation @ 400 Hz, 10Hz-22Khz bandwidth, unweighted

**FM S/N Ratio:**

95dB typical below 100% modulation @ 400Hz, 10Hz-22Khz bandwidth, A-weighted filter

**FM S/N Ratio:**

100dB typical below 100% modulation @ 400 Hz, 10Hz-22Khz bandwidth, CCIR-468 filter

**SCA/SCA2/RDS:**

**Air Conditioning Sizing:**

5.41 ton A/C

**Impedance:**

10k ohms unbalanced

**Amplitude Response:**

+/- 0.1dB; 53Hz to 100kHz

**19kHz Output:**

19kHz synchronization clock for external RBDS/RDS operation 1V pp into high impedance

**Physical:**

**Height:**

3.5 inches (2 RU)

**Width:**

19" EIA rack mountable

**Depth:**

STXe 60 19.5 inches

**Weight:**

STXe 60 20lbs. unpacked

**MECHANICAL/PHYSICAL**



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**Size:****Unpacked:**

30.64" W x 64" H x 30" D (77.83cm W x 162.56cm H x 76.2cm D)

**Weight:****Unpacked:**

575 lbs (261 kg)

**Airflow:****Outlet Size:**

672 square inches (4362 square cm); top, back and front of unit

**RF Output Connector:**

1-5/8" EIA flange

### ENVIRONMENTAL

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**Temperature:**

0° to 50° C

**Altitude:**

10,000 ft (3,048 M) at 60 Hz; 7,500 ft (2,286 M) at 50 Hz

**Humidity:**

0% to 95% (non-condensing)

### ELECTRICAL

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**AC Input Voltage****3 Phase, Closed Delta: :**

196-252 VAC, 50/60 Hz

**3 Phase, 4 wire, WYE: :**

339-437 VAC, 50/60 Hz

**Single Phase::**

196-252 VAC, 50/60 Hz

**Disconnect Size:**

80 A Single Phase; 50 A Three Phase

**AC Wire Size:**

#3 Copper AWG Type THHN Single Phase; #6 Copper AWG Type THHN Three Phase

**Current Draw:**

60 A Max Single Phase; 35 A Max Three Phase

**Power Consumption:**

Typical at 5 kW RF Power Output: 7.7 kW

**Cooling Air Requirements:**

2200 CFM (62.3 M3/min) filter required

**Heat Dissipation:**

3 kW at 5 kW RF output into 50 Ohm load (Typical)

**BTU:**

10250 BTU/H at 5 kW RF output into 50 Ohm load

**Power Factor:**

0.99 at full load

**Surge Protection:**

275 V MOV

### ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

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