

FM 25T - Technical Specifications : Technical Specifications

RF SPECS

Output Power:**Range:**

25 kW (7.5 kW to 25.0 kW)

Efficiency:

67% @ 21 kW (actual dependent on line voltage and carrier frequency)

VSWR:

1.8:1 maximum (will operate into higher VSWR with automatic power reduction)

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 60 EXCITER AUDIO SPECIFICATIONS

General**RF Power Output:**

5-66W

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:

Up to 300kHz

Asynchronous AM S/N Ratio:

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

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: 85dB or better typical, low pass filter standard

AC Input:

90 to 264VAC; 47-63Hz

Power Factor:

0.99 typical at 110VAC, 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:

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:

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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

Size/Unpacked:

Transmitter:

56.5" W x 31.5" D x 70" H (143.5 W x 80 D x 177.8 H cm)

Power Supply:

34.5" W x 31/5" D x 70" H (87.6 W x 80 D x 177.8 H cm)

Weight/Unpacked:



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Transmitter:

1500 lbs. (682 Kg)

Power Supply:

1850 lbs. (839 Kg)

Cooling Air Requirements:**PA Cabinet:**

1200 CFM

Driver Cabinet:

500 CFM

High Voltage Power Supply:

natural convection

Air Outlet:

Air exhaust at top of cabinet

Primary:

Top of Power Amplifier Cabinet (33" X 30")

Secondary:

Top of Driver (22" X 30"), Power Supply Cabinet (33" X 30")

Heat Dissipation:

12.8 kW typical (43,690 BTU/hr) at 25 kW RF output

Air Conditioning Sizing:

3.65 ton

RF Output Connector:

3-1/8" EIA flange

ENVIRONMENTAL

Temperature Range:

-10° to +50° C

Altitude:

7500 ft. (2286 M) @ 50 Hz; 10,000 ft. (3048 M) @ 60 Hz

Humidity:

0-95% Non-Condensing

ELECTRICAL

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

240 VAC (196-252 VAC), 50/60 Hz

3-Phase WYE 3 Wire:

240 VAC (196-252 VAC), 50/60 Hz

3-Phase WYE 4 Wire:

400 VAC (339-4.7 VAC), 50/60 Hz

Disconnect Size:

300 A per phase, fused disconnect recommended

AC Wire Size:

400 KCMIL copper, THHN or equivalent

Current Draw at 25 kW:

155 A per phase average (actual determined by line voltage, carrier frequency, etc.)

AC Power Consumption:

37.8 kW typical at 25 kW RF output power

Surge Protection:

External surge suppressor



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ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

