

### AM 5E - Technical Specifications : Technical Specifications

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#### RF SPECS

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

25 W to 5 kW

**Accuracy:**

1% full scale

**Efficiency:**

75% or better, 100% sinusoidal modulation of 5 kW carrier into 50 Ohm load

**VSWR:**

Nominal 1.5:1 at full carrier power; will operate into higher VSWR with automatic power reduction, open and short circuit protected

**Impedance:**

50 Ohm

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

522 kHz to 1700 kHz, supplied on one frequency (synthesized), as ordered; accommodates 9 kHz or 10 kHz channel spacing

**Stability:**

±3ppm, 0 to 50° C

**RF Harmonics Suppression:**

Meets or exceeds FCC, DOC, and CCIR requirements, when preceded by external NRSC-1 compatible audio low pass filter(s)

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

Pulse width modulation of L+R envelope with optional integrated C-QUAM AM stereo; an RF input connector (BNC) is also provided for an external RF or stereo exciter

**Capabilities:**

>145% peak positive capability at rated nominal output power into 50 Ohm load

**Carrier Shift:**

<1% at 95% negative modulation at 1 kHz

**Regulatory:**

Meets or exceeds FCC and DOC technical requirements, meets ENG0215 safety requirements

#### AM AUDIO SPECS

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**Modes:**

Stereo (with optional stereo card), Mono L+R, Mono L, Mono R, HD with external ASi 10; not compatible with analog stereo

**Stereo (with optional stereo card):****Connector Type:**

3 position terminal block (2)

**Input Level:**

10 dBm, ±1 dB, L+R (or mono) to produce 100% L+R envelope modulation; other input levels accommodated by internal resistor selection

**Impedance:**

600 Ohm; inputs are balanced, transformerless, and resistive with passive RFI filtering; other impedances can be accommodated.

**Amplitude Response:**

±0.5 dB, 20 Hz to 10 kHz

**THD + Noise:**

<1.5% at 50% single channel modulation, 50 Hz to 10 kHz at rated power

**S/N Radio:**

>55 dB below a reference level equivalent to 100% negative modulation of either left or right channel in a 22 Hz to 30 kHz bandwidth, unweighted

**Separation:**

-30 dB or better, 50 Hz to 10 kHz, at 50% single channel modulation into a 50 Ohm resistive load, at rated power

**Squarewave Overshoot:**

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1% or less at 400 Hz, 50% single channel modulation with high frequency boost disabled

**Squarewave Tilt:**

1% or less at 40 Hz, 1.5% or less at 20 Hz, measured with 90% negative modulation

**Incidental Phase Modulation:**

Less than 2° (0.035 radians) average, or 30 dB (typical 40 dB) below equivalent 100% L-R C-QUAM modulation 50 Hz to 10 kHz, at rated power; measured with an audio input level which generates 95% negative L+R envelope modulation at 1 kHz (9.5 dBm)

**Mono:****Connector Type:**

3 position terminal block

**Input Level:**

10 dBm,  $\pm 1$  dB, L=R (or mono) to produce 100% L+R envelope modulation; other input levels accommodated by internal resistor selection

**Impedance:**

600 Ohm; inputs are balanced, transformerless, and resistive with passive RFI filtering; other impedances can be accommodated

**Amplitude Response:**

$\pm 0.5$  dB, 20 Hz to 10 kHz at 90% negative modulation (linear phase mode), +0.1 dB -3 dB, 20 Hz to 10 kHz at 90% negative modulation, standard configuration

**THD + Noise:**

<0.8%, 20 Hz to 10 kHz at rated power

**Intermod Dist:**

1.2% or less 1:1 ratio, 1.7% or less 4:1 ratio. 60/7000 hz SMPTE standards with 85% modulation at rated power

**S/N Radio:**

>65 dB below a reference level equivalent to 100% negative modulation in a 22 Hz to 30 kHz bandwidth, unweighted

**Squarewave Overshoot:**

0.1% or less at 400 Hz, 90% modulation (linear phase mode)

**Squarewave Tilt:**

1% or less at 40 Hz, less than 1.5% at 20 Hz, 90% negative modulation

## MECHANICAL/PHYSICAL

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

24.82" W x 31.55" D x 71.32" H (63.0 x 80.1 x 181.2 cm)

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

525 lbs (238 kg)

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

9.86" x 15.18" (0.25m x 0.38m)

**RF Output Connector:**

Female 7/16" DIN

## 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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# Broadcast Electronics

## Technical Specifications

**AC Input Voltage:**

196-252 VAC, 50/60Hz, single phase

**Disconnect Size:**

60 A

**AC Wire Size:**

#6 Copper AWG, THHN

**Current Draw:**

58 A max

**Power Consumption:**

10 kW at 100% modulation of 5 kW carrier

**Cooling Air Requirements:**

500 CFM (14.16 M3/min)

**Heat Dissipation:**

450 Watts maximum for 5 kW RF output at 125% audio tone modulation

**BTU:**

10,800 BTU/H for 5 kW RF Output at 125% audio tone modulation

**Power Factor:**

> 0.85 at full load

**Surge Protection:**

275 V MOV

**ALL SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE**

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