Broadcast Electronics

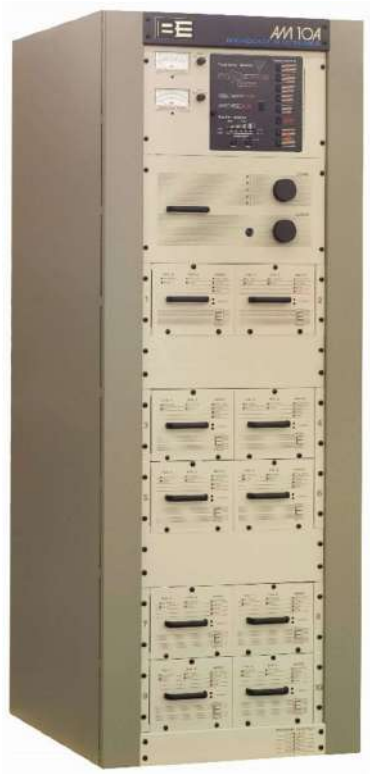
Tomorrow's Radio Today

AM Analog Solid State

"A" and "E" Series

A SERIES

AM 10A



"A" Series transmitters pack huge features into small packages, freeing up valuable floor space, lowering shipping costs, and placing them well ahead of the competition!

Power levels 500 W to 10.8kW

Model	Description
AM-500A	5W to 550W AM Transmitter
AM-1A	5W to 1.1kW AM Transmitter
AM-6A	25W to 6.6kW AM Transmitter
AM-10A	50W to 10.8kW AM Transmitter

Key Features & Benefits

- Small footprint
- Redundant regulated power supply for enhanced reliability (AM 6A and AM 10A)
- Operates at 5 user-defined power levels
- Range in power from 500W to 10.8kW

Broadcast Electronics' "A" Series AM transmitters produce superior audio quality for your listeners while maximizing reliability and redundancy, protecting your revenue stream from unexpected downtime.

The "A" Series transmitters incorporate multiple regulated power supplies, allowing you to achieve uncompromised redundancy for ultimate on-air reliability. Patented class E power modules save money and add to the bottom line, by achieving unequaled power economy to reduce your overall operational expenses.

With more flexibility than ever before, "A" Series transmitters also give you the ability to operate at 5 user-defined power levels. One transmitter can handle all your power needs, providing the most cost-efficient transmitter in its class. "A" Series transmitters can operate efficiently at both high and lower power levels, maintaining unparalleled performance to accommodate all your day and nighttime power needs.

AM Analog Solid State

"A" and "E" Series

E SERIES

E Series transmitters pack huge features into small packages, freeing up valuable floor space, lowering shipping costs, and placing them well ahead of the competition!

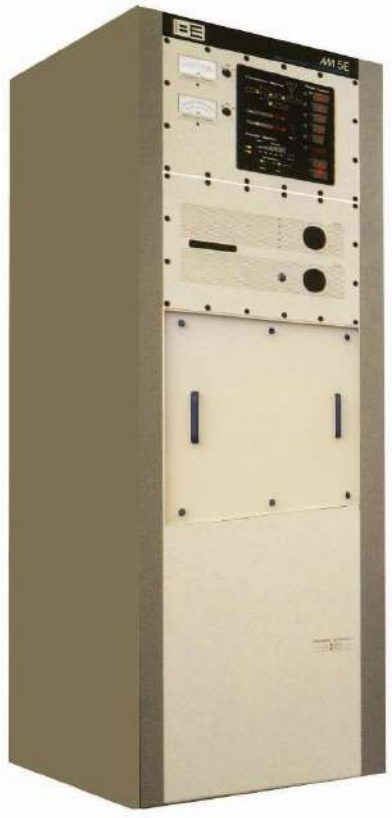
Key Features & Benefits

- Delivers the highest audio quality available
- Low noise super cooling system
- Redundant regulated power supply for enhanced reliability
- Operates at 5 user-defined power levels
- Available in 2.5kW and 5kW

Available in power levels ranging from 2.5kW to 5kW!

Model	Description
AM-2.5E	2.5kW AM Transmitter
AM-5E	5kW AM Transmitter

AM 5E



Broadcast Electronics' E Series transmitters incorporate our patented class "E" power modules, allowing you to achieve unequaled power economy and efficiencies for ultimate reliability and overall cost savings.

The "E" Series AM Transmitters give you more flexibility than ever before. With the ability to operate at 5 user-defined power levels, one transmitter can handle all your power needs, providing the most cost-efficient transmitter in its class. The "E" Series transmitters can operate efficiently at both high and low power levels, maintaining unparalleled performance to accommodate all your day and nighttime power needs.

In addition to producing superior audio quality for your listeners, the "E" Series exceeds expectations for reliability and redundancy, protecting your revenue stream from unexpected downtime.

AM Analog Solid State

“A” and “E” Series

On air redundancy protects your revenue stream!

- Electronically regulated power supplies avoid the need to purchase an external voltage regulator
- Redundant PA amplifiers plug in from the front panel
- Redundant independent power supplies (AM 6A, AM 10A, AM 2.5E and AM 5E)
- Front panel modulation metering eliminates the need to purchase an outboard modulation monitor
- Output tuning network compensates for daily variations of antenna loads and even serves as an output coupler for an emergency antenna

Enhanced listening quality will impress your listeners and the competition!

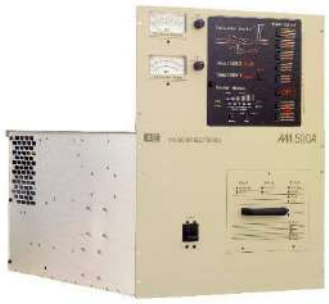
- Superior audio quality at all output levels
- Provides enhanced bass response and lower distortion when operating into real-world antenna loads

Operating at reduced power? One transmitter does it all!

- Achieves unprecedented low power levels for all your power needs, day and night
- Eliminates need to dump any excess power or purchase costly power dividers
- No need to purchase a separate nighttime transmitter
- Excellent audio performance maintained at full and reduced power levels

Plans to go digital? We’re ready when you are!

- Designed with digital in mind
- Accomodates both current and future versions of HD Radio™
- Provides the flexibility of changing transmission between analog only mode and analog+HD mode of the fly either locally or remotely
- Digital ready – just add an external HD Radio signal generator



AM-500A

AM 1A

AM 6A

AM 2.5E

AM Analog Solid State

“A” and “E” Series

Specifications

RF SPECS	
Impedance	50 Ohm
Range (Frequency)	522 kHz to 1705 kHz, supplied on one frequency (synthesized), as ordered; accommodates 9 kHz or 10 kHz channel spacing
Stability	+/- 3ppm, 0° to 50° C
RF Harmonies Suppression	Meets or exceeds FCC, DOC, & CCIR requirements, when preceded by external NRSC-1 compatible audio low pass filter(s)
Type (Modulation)	Pulse width modulation of L+R envelope with optional integrated C-QUAM AM stero, an RN input connector (BNC) is also provided for an external RF or stereo exciter
Capabilities (Modulation)	>145% peak positive capability at rated nominal output power into 50 Ohm load
Carrier Shift (Modulation)	<1% at 95% negative modulation at 1 kHz
Regulatory	Meets or exceeds FCC and DOC technical requirements, meets ENG0215 safety requirements
AM AUDIO SPECS	
Modes	Stereo (with optional stereo card), Mono L+R, Mono L, Mono R
Connector Type (Stereo with Optional Stereo Card)	3 position terminal block (2)
Input Level (Stereo with Optional Stereo Card)	10 dBm, +/- dB, L+R (or mono) to produce 100% L+R envelope modulation, other input levels accomodated by internal resistor selection
Impedance (Stereo with Optional Stereo Card)	600 Ohm; inputs are balanced, transformerless, and resistive with passive RFI filtering; other impedances can be accomodated
Squarewave Overshoot (Stereo with Optional Stereo Card)	1% or less at 400 Hz, 50% single channel modulation with high frequency boost disabled
Squarewave Tilt (Stereo with Optional Stereo Card)	1% or less at 40 Hz, 1.5% or less at 20 Hz, measured with 90% begative modulation
Incidental Phase Modulation (Stereo with Optional Stereo Card)	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 evelope modulation at 1 kHz (9.5 dBm)
Connector Type (Mono)	3 position terminal block
Input Level (Mono)	10 dBm, +/- dB, L=R (or mono) to produce 100% L+R envelope modulation; other input levels accommodated by internal resistor selection
Impedance (Mono)	600 Ohm; inputs are balanced, transformless, and resistive with passive RFI filtering; other impedances can be accomodated
Intermod Dist (Mono)	1.2% or less 1:1 ratio, 1.7% or less 4:1 ratio. 60/7000 hz SMPTE standards with 85% modulation rated power
S/N Radio (Mono)	>65 dB below a reference level equivalent to 100% negative modulation in a 22 Hz to 30 kHz bandwidth, unweighted
Squarewave Overshoot (Mono)	0.1% or less at 400 Hz, 90% modulation (linear phase mode)
Squarewave Tilt (Mono)	1% or less at 40 Hz, less than 1.5% at 20 Hz, 90% negative modulation
ENVIRONMENTAL	
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	
AC Input Voltage	196V to 252V

AM Analog Solid State

“A” and “E” Series

Specifications Continued

	AM 500A	AM 1A	AM 2.5E	AM 5E	AM 6A	AM 10A
RF SPECS						
Range (Output Power)	5 W to 500 W	5 W to 1.1 kW	12.5 W to 2.5 kW	25 W to 5 kW	25 W to 6.6 kW	50 W to 10.8 kW
Accuracy (Output Power)	2% full scale	2% full scale	1% full scale	1% full scale	1% full scale	1% full scale
Efficiency	60% or better at 0% modulation. 45% or better at 100% modulation.	60% or better at 0% modulation. 45% or better at 100% modulation.	75% or better at 0% modulation. 50% or better at 100% modulation.	75% or better at 0% modulation. 50% or better at 100% modulation.	75% or better at 0% modulation. 50% or better at 100% modulation.	75% or better at 0% modulation. 50% or better at 100% modulation.
VSWR	Nominal 1.3:1 at full carrier power; will operate into higher VSWR with automatic power reduction, open and short circuit protected	Nominal 1.3:1 at full carrier power; will operate into higher VSWR with automatic power reduction, open and short circuit protected	Nominal 1.5:1 at full carrier power; will operate into higher VSWR with automatic power reduction, open and short circuit protected	Nominal 1.5:1 at full carrier power; will operate into higher VSWR with automatic power reduction, open and short circuit protected	Nominal 1.5:1 at full carrier power; will operate into higher VSWR with automatic power reduction, open and short circuit protected	Nominal 1.4:1 at full carrier power; will operate into higher VSWR with automatic power reduction, open and short circuit protected
AM AUDIO SPECS						
Amplitude Response (Stereo with Optional Stereo Card)	+/- 1 dB, 20 Hz to 10 kHz	+/- 0.5 dB, 20 Hz to 10 kHz	+/- 0.5 dB, 20 Hz to 10 kHz	+/- 0.5 dB, 20 Hz to 10 kHz	+/- 0.5 dB, 20 Hz to 10 kHz	+/- 0.5 dB, 20 Hz to 10 kHz
THD + Noise (Stereo with Optional Stereo Card)	<2% at 50% single channel modulation, 50 Hz to 10 kHz at rated power	<1.5% at 50% single channel modulation, 50 Hz to 10 kHz at rated power	<1.5% at 50% single channel modulation, 50 Hz to 10 kHz at rated power	<1.5% at 50% single channel modulation, 50 Hz to 10 kHz at rated power	<1.5% at 50% single channel modulation, 50 Hz to 10 kHz at rated power	<1.5% at 50% single channel modulation, 50 Hz to 10 kHz at rated power
S/N Radio (Stereo with Optional Stereo Card)	>55 dB below a reference level equivalent to 100% negative modulation of either left or right channel in a 22 Hz to 30 kHz andwidth, unweighted	>65 dB below a reference level equivalent to 100% negative modulation of either left or right channel in a 22 Hz to 30 kHz andwidth, unweighted	>55 dB below a reference level equivalent to 100% negative modulation of either left or right channel in a 22 Hz to 30 kHz andwidth, unweighted	>55 dB below a reference level equivalent to 100% negative modulation of either left or right channel in a 22 Hz to 30 kHz andwidth, unweighted	>55 dB below a reference level equivalent to 100% negative modulation of either left or right channel in a 22 Hz to 30 kHz andwidth, unweighted	>55 dB below a reference level equivalent to 100% negative modulation of either left or right channel in a 22 Hz to 30 kHz andwidth, unweighted
Separation (Stereo with Optional Stereo Card)	-25 dB or better, 50 Hz ro 10 kHz, at 50% single channel modulation into a 50 Ohm resistive load, at rated power	-30 dB or better, 50 Hz ro 10 kHz, at 50% single channel modulation into a 50 Ohm resistive load, at rated power	-30 dB or better, 50 Hz ro 10 kHz, at 50% single channel modulation into a 50 Ohm resistive load, at rated power	-30 dB or better, 50 Hz ro 10 kHz, at 50% single channel modulation into a 50 Ohm resistive load, at rated power	-30 dB or better, 50 Hz ro 10 kHz, at 50% single channel modulation into a 50 Ohm resistive load, at rated power	-30 dB or better, 50 Hz ro 10 kHz, at 50% single channel modulation into a 50 Ohm resistive load, at rated power
Amplitude Response (Mono)	+/- 1 dB, 20 Hz to 10 kHz at 90% negative modulation (linear phase mode), +0.1 dB -3, 20 Hz to 10 kHz at 90% negative modulation, standard	+/- 0.5 dB, 20 Hz to 10 kHz at 90% negative modulation (linear phase mode), +0.1 dB -3, 20 Hz to 10 kHz at 90% negative modulation, standard	+/- 0.5 dB, 20 Hz to 10 kHz at 90% negative modulation (linear phase mode), +0.1 dB -3, 20 Hz to 10 kHz at 90% negative modulation, standard	+/- 0.5 dB, 20 Hz to 10 kHz at 90% negative modulation (linear phase mode), +0.1 dB -3, 20 Hz to 10 kHz at 90% negative modulation, standard	+/- 0.5 dB, 20 Hz to 10 kHz at 90% negative modulation (linear phase mode), +0.1 dB -3, 20 Hz to 10 kHz at 90% negative modulation, standard	+/- 0.5 dB, 20 Hz to 10 kHz at 90% negative modulation (linear phase mode), +0.1 dB -3, 20 Hz to 10 kHz at 90% negative modulation, standard
THD + Noise (Mono)	<1.2%, 20 Hz to 10 kHz at rated power	<0.8%, 20 Hz to 10 kHz at rated power	<0.8%, 20 Hz to 10 kHz at rated power	<0.8%, 20 Hz to 10 kHz at rated power	<0.8%, 20 Hz to 10 kHz at rated power	<0.8%, 20 Hz to 10 kHz at rated power

AM Analog Solid State

“A” and “E” Series

Specifications Continued

	AM 500A	AM 1A	AM 2.5E	AM 5E	AM 6A	AM 10A
MECHANICAL/PHYSICAL						
Size (Unpacked)	ECU: 19” W x 14.4” D x 10.5” H (48.0 x 36.6 x 26.7 cm) Output Network: 19” W x 27.1” D x 14” H (48.3 x 68.8 x 35.6 cm)	ECU: 19: W x 14.4” D x 10.5” H (48 x 36.6 x 26.7 cm) Output Network: 19” W x 27.1” D x 14” H (48.3 x 68.8 x 35.6 cm)	24.82” W x 31.55” D x 71.32” H (63.0 x 80.1 x 181.2 cm)	24.82” W x 31.55” D x 71.32” H (63.0 x 80.1 x 181.2 cm)	27.3” W x 37.0” D x 73.5” H (69.3 x 94.0 x 186.7 cm)	27.3” W x 37.0” D x 73.5” H (69.3 x 94.0 x 186.7 cm)
Weight (Unpacked)	90.6 lbs (41.1 kg)	90.6 lbs (41.1 kg)	410 lbs (186 kg)	525 lbs (238 kg)	442 lbs (200 kg)	635 lbs (288 kg)
Airflow (Outlet Size)	ECU: 9.5” x 14” (24.1 x 35.6 cm) Output Network: 6.5” x 4.0” (16.5 x 10.2 cm)	ECU: 9.5” x 14” (24.1 x 35.6 cm) Output Network: 6.5” x 4.0” (16.5 x 10.2 cm)	9.86” x 15.18” (0.25m x 0.38m)	9.86” x 15.18” (0.25 x 0.38m)	15.69” x 24.38” (39.85 x 61.93 cm)	15.69” x 24.38” (39.85 x 61.93 cm)
RF Output Connector	Type N Female	Type N Female	Clamp and lug	Clamp and lug	Clamp and lug	1 5/8” EIA Flange
ELECTRICAL						
AC Input Voltage	196-252 VAC, 50/60HZ, single phase	196-252 VAC, 50/60HZ, single phase	96-252 VAC, 50/60HZ, single phase	196-252 VAC, 50/60HZ, single phase	196-252 VAC Delta/Wye or 339-437 WAC Wye, 50/60 Hz, three phases; 196-252 VAC, 50/60Hz, single phase	196-252 VAC Delta/Wye or 339-437 WAC Wye, 50/60 Hz, three phases; 196-252 VAC, 50/60Hz, single phase
Disconnect Size	20 A	20 A	40 A	60 A	175A three phase, 125A single phase	150A three phase, 225A single phase
AC Wire Size	#12 Copper AWG, THHN	#12 Copper AWG, THHN	#8 Copper AWG, THHN	#6 Copper AWG, THHN	#4 Copper AWG THHN, three phase; #1 Copper AWG THHN, single phase	2/0 Cooper AWG THHN, three phase; #250MCM Cooper AWG THHN, single phase
Current Draw	9.5 A max	18 A max	35 A max	58 A max	52 A max three phase, 90 A max phase	100A Max three phase, 150A Max single phase
Power Consumption	1.25 kW at 125% sinusoidal modulation of 500 Watt carrier	2.05 kW at 125% sinusoidal modulation of 1 kW carrier	6.05 kW at 100% modulation of 2500 Watts carrier	10 kW at 100% modulation of 5 kW carrier	13.2 kW at 125% sinusoidal modulation of 6.6 kW carrier	23 kW at 125% sinusoidal modulation of 10.8 kW carrier
Cooling Air Requirements	250 CFM (7.08 M3/min)	250 CFM (7.08 M3/min)	500 CFM (14.16 M3/min)	500 CFM (14.16 M3/min)	720 CFM (20.4 M3/min)	1200 CFM (34.0 M3/min)
Heat Dissipiation	600 Watts maximum for 500W RF output at 125% audio tone modulation	850 Watts maximum for 1.1 kW RF output at 125% audio tone modulation	1650 Watts maximum for 2.5 kW RF output at 125% audio tone modulation	450 Watts maximum for 5 kW RF output at 125% audio tone modulation	4200 Watts maximum for 6.6 kW RF output at 125% audio tone modulation	6000 Watts maximum for 10.8 kW RF output at 125% audio tone modulation
BTU	2,000 BTU/H for 500 W RF Output at 125% audio tone modulation	2,900 BTU/H for 1.1 kW RF Output at 125% audio tone modulation	5,500 BTU/H for kW RF Output at 125% audio tone modulation	10,800 BTU/H for 5 kW RF Output at 125% audio tone modulation	14.360 BTU/H for 6.6 kW RF Output at 125% audio tone modulation	20,525 BTU/H for 10.8 kW RF Output at 125% audio tone modulation
Power Factor	>0.75 at full load	>0.75 at full load	>0.85 at full load	>0.85 at full load	>0.75 at full load	>0.75 at full load

The E series models are CE certified.

AM Analog Solid State

“A” and “E” Series

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

www.bdcast.com

elenos group

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

Broadcast Electronics

Tomorrow’s Radio Today