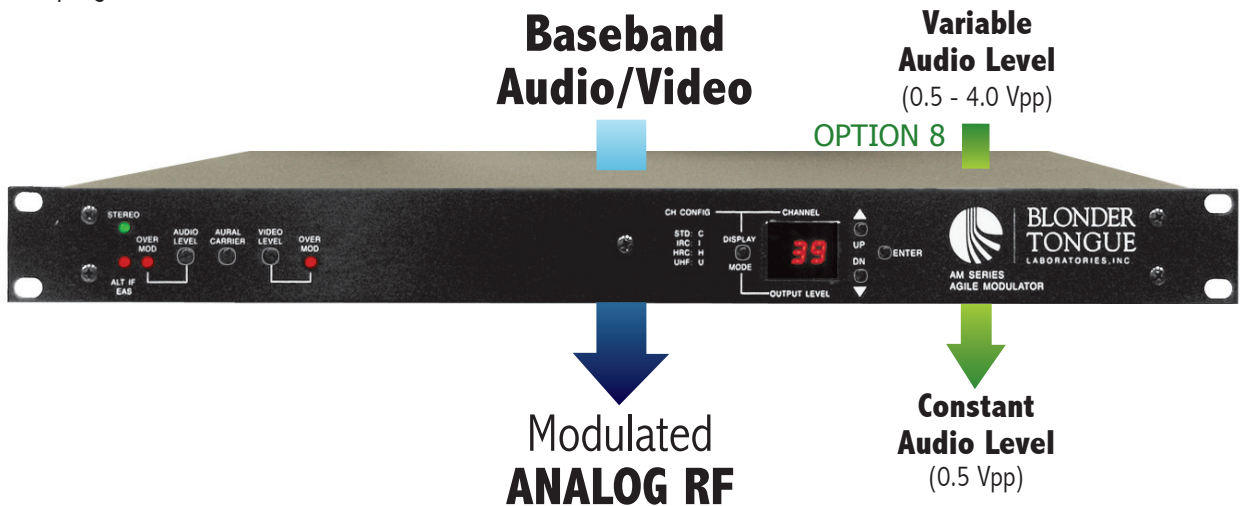




AM series is a family of frequency-agile analog audio/video modulators. AM-60-860, the flag-ship model, is available in NTSC channels 2-135 (54-860 MHz), and the PAL B, G, and I channels in the same frequency range.

More economical models are available in NTSC for the frequency ranges 54-550 MHz, or 54-806 MHz. EAS (Emergency Alert System) is standard on all models. Stereo Audio, SAP (Secondary Audio Programming), and several other optional features are also available.

**A "CALM" Solution:** When equipped with option 8, the modulator is compatible with the requirements of the CALM Act (Commercial Advertising Loudness Mitigation). Option 8 utilizes an Audio AGC (Automatic Gain Control) solution that is designed to preclude the commercials from being broadcast at louder volumes than the program they accompany. It also reduces the loudness variations that are experienced when changing from one channel to another, or the loudness variations among different programs on the same channel.



## ORDERING INFORMATION

Model	Stock #	Description
AM-60-860	59415A	Frequency-agile Audio/Video Modulator, +60 dBmV, 54-860 MHz (NTSC)
AM-60-860-BG	B59415A	Frequency-agile Audio/Video Modulator, +120 dBμV, 47-860 MHz (PAL)
AM-60-806	59419	Frequency-agile Audio/Video Modulator, +60 dBmV, 54-806 MHz (NTSC)
AM-60-550	59416	Frequency-agile Audio/Video Modulator, +60 dBmV, 54-550 MHz (NTSC)
AM-45-550	59404	Frequency-agile Audio/Video Modulator, +45 dBmV, 54-550 MHz (NTSC)

## OPTIONS

AM-OPT-02	BNC Video Input Connector
AM-OPT-04	Sub-Band Output (Available with AM-60-550 only)
AM-OPT-05	Integrated BTSC Stereo Audio
AM-OPT-06	SAP Audio/ BTSC Stereo (Available with AM-60-860 only)
AM-OPT-07	Video AGC
<b>AM-OPT-08</b>	<b>Audio AGC</b>
AM-OPT-09	Balanced Audio Input, 600 Ohm (Standard on AM-60-860)

## RELATED PRODUCTS

Model	Description
AMCM	Frequency-agile Audio/Video modulator, +45 dBmV, 54-860 MHz (NTSC & PAL), Twelve modulators in 2RU
ACM	Frequency-agile Audio/Video modulator, +45 dBmV, 54-806 MHz (NTSC only), Twelve modulators in 2RU
CAMS	Fixed-channel Audio/Video modulator, +60 dBmV, 54-860 MHz (NTSC only), 1RU
MAVM	Fixed-channel Audio/Video modulator, +60 dBmV, 54-860 MHz (NTSC only), 1RU
MICM	Fixed-channel Audio/Video modulator, +45 dBmV, 54-806 MHz (NTSC & PAL), Twelve modulators in 2RU

# SPECIFICATIONS

## INPUT

<b>Connector</b> <b>Standard:</b> "F" Female <b>Option 2:</b> BNC Female <b>Impedance:</b> 75 Ω <b>Return Loss:</b> 18 dB <b>Video Input Level</b> <b>Standard:</b> 0.7 volt Peak-to-Peak (87.5% depth of modulation) <b>Option 7 (Video AGC):</b> 0.4 to 2.5 volts Peak-to-Peak (87.5% ±2.5% depth of modulation) <b>Video-to-RMS Hum Ratio:</b> 65 dB Peak-to-Peak <b>Signal-to-Noise Ratio:</b> 58 dB (Weighted; at 4 MHz bandwidth) <b>Differential Gain:</b> 2.0% <b>Differential Phase:</b> 1.0 degree <b>Over-modulation Indicator:</b> 87 to 92% <b>Chrominance/Luminance Delay:</b> Per FCC Requirements	<b>Mono Audio (Standard) Connector</b> <b>AM-60-860 Model:</b> Terminal Strip <b>All other Models:</b> RCA <b>Option 9 (Balanced Audio Input):</b> Terminal Strip <b>Input Impedance</b> <b>AM-60-860 Model:</b> 600 Ω, balanced <b>All other Models:</b> Greater than 10 kΩ, unbalanced <b>Option 9 (Balanced Audio Input):</b> 600 Ω, balanced <b>Input Level</b> <b>Standard:</b> 0.5 to 4.0 volt Peak-to-Peak <b>Option 8 (Audio AGC):</b> 0.5 to 4.0 volt Peak-to-Peak (constant 25 kHz deviation) <b>Frequency Range:</b> 50 Hz to 15 kHz <b>Frequency Response:</b> ± 0.5 dB <b>Total Harmonic Distortion:</b> 1% @ 25 kHz deviation <b>Signal-to-Noise Ratio:</b> 59 dB <b>Over-modulation Threshold:</b> 25 ± 2 kHz peak deviation
<b>Stereo Audio (Option 5) Connector</b> <b>AM-60-860 Model:</b> Terminal Strip <b>All other Models:</b> RCA <b>Input Impedance</b> <b>AM-60-860 Model:</b> 600 Ω, balanced <b>All other Models:</b> Greater than 10 kΩ, unbalanced <b>Input Sensitivity</b> <b>Standard:</b> 1.0 volt Peak-to-Peak (55 kHz peak deviation with pilot tone) <b>Option 8 (Audio AGC):</b> 0.5 to 4.0 volt Peak-to-Peak (constant 55 kHz deviation with pilot tone) <b>Frequency Response:</b> ±0.75 dB (50 Hz to 14 kHz) <b>Separation:</b> 20 dB (50 Hz to 10 kHz) <b>Harmonic Distortion:</b> Less than 1% (@ 1 kHz)	<b>SAP Audio (Option 6) Connector:</b> Includes Stereo Audio (Option 5) <b>Connector:</b> RCA <b>Input Impedance:</b> Greater than 10 kΩ, unbalanced <b>Input Level:</b> 0.5 to 4.0 volt Peak-to-Peak <b>Frequency Range:</b> 50 Hz to 10 kHz <b>Frequency Response:</b> ±2 dB <b>Total Harmonic Distortion:</b> 1% <b>Signal-to-Noise Ratio:</b> 80 dB <b>Over-modulation Threshold:</b> 25 ±1 kHz peak deviation

## GENERAL

<b>Dimensions (W x D x H):</b>	19.0 x 14.25 x 1.75 in. (483 x 362 x 44 mm)
<b>Power:</b>	117 VAC ±10%; 60 Hz (Fuse: 0.40 Amp) Also available in 220 VAC; 50Hz
<b>Power Dissipation:</b>	28 W (max)
<b>Weight:</b>	7 lbs (3.18 kg)
<b>Operating Temperature:</b>	32 to 122 °F (0 to 50 °C)
<b>Storage Temperature:</b>	-13 to 158 °F (-25 to 70 °C)
<b>Operating Humidity:</b>	0 to 95% RH @ 35 °C max, non-condensing
<b>Storage Humidity:</b>	0 to 95% RH @ 35 °C max, non-condensing

## OUTPUT

<b>Connector:</b> "F" Female <b>Impedance:</b> 75 Ω <b>Return Loss:</b> 12 dB <b>Frequency Range</b> <b>AM-60-860 Model:</b> 54 to 860 MHz (NTSC CATV Ch. 2 -135) <b>AM-60-806 Model:</b> 54 to 806 MHz (NTSC CATV Ch. 2 -125) <b>AM-60-550 &amp; AM-45-550 Models:</b> 54 to 550 MHz (NTSC CATV Ch. 2 -78 & 95-99) <b>Option 4 (Sub-band):</b> 7 to 550 MHz (NTSC CATV Ch. T7 -78 & 95-99) <b>NTSC Channel Modes:</b> UHF, VHF, CATV (Standard, HRC, IRC) <b>Power Level</b> <b>AM-45-550 Model:</b> +45 dBmV <b>All other Models:</b> +60 dBmV <b>Power Level Range</b> <b>AM-45-550 Model:</b> +35 to +45 dBmV (in 0.2 dB increments) <b>All other Models:</b> +50 to +60 dBmV (in 0.2 dB increments) <b>Video Flatness:</b> fv-0.5 to fv+4.2 MHz (1.0 dB Peak-to-Valley) <b>Carrier-to-Noise: (In Channel)</b> 63 dB <b>Broadband Noise: (4 MHz bandwidth)</b> -77 dBc (@ +45/60 dBmV output level) <b>Spurious Outputs:</b> -63 dBc <b>Aural/Visual Carrier Ratio:</b> -15 ±5 dB <b>4.5 MHz Aural Inter-carrier Freq. Tolerance:</b> ±150 Hz; 32 to 122 °F (0 to 50 °C) <b>Channel Selectivity</b> <b>Adjacent Aural &amp; Below:</b> -40 dB <b>Adjacent Picture &amp; Above:</b> -40 ±5 dB <b>Visual Carrier Frequency Tolerance</b> <b>Standard Channels:</b> ±5.0 kHz; 32 to 122 °F (0 to 50 °C) <b>FCC Aeronautical Channels:</b> ±2.5 kHz; 32 to 122 °F (0 to 50 °C)	<b>IF (Intermediate Frequency)</b> <b>Input/Output Connector:</b> "F" Female / "F" Female <b>Aural Frequency:</b> 41.25 MHz <b>Visual Frequency:</b> 45.75 MHz <b>Composite IF Output</b> <b>Aural Carrier Level:</b> +20 dBmV <b>Visual Carrier Level:</b> +35 dBmV <b>Input/Output Impedance:</b> 75 Ω <b>Input/Output Return Loss:</b> 16/15 dB <b>EAS/Alternative IF</b> <b>Connector:</b> "F" Female <b>Input Level:</b> +38 dBmV @ 45.75 MHz <b>Switch Isolation:</b> Greater than 60 dB
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## ALARMS/MONITORING/CONTROL

<b>Front-Panel Indicators</b> <b>Channel / Mode / RF Output:</b> 3-Digit LED Display <b>Video Over-modulation:</b> Red LED <b>Audio Over-modulation:</b> Red LED <b>SAP Audio Over-modulation:</b> Red LED <b>EAS/Alternative IF:</b> Red LED <b>Stereo:</b> Green LED <b>Front-Panel Controls</b> <b>Channel / Mode / RF Output:</b> Navigation Key-pad <b>Video Level:</b> Potentiometer <b>Audio Level:</b> Potentiometer <b>Aural Carrier Level:</b> Potentiometer <b>SAP Audio Level:</b> Potentiometer	
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