



POWER



Amigo AM™

Audio Processing for C-QUAM



PROCESSING ADJUST

NRSC



Stereo



Learn... & Real Loud



The Amigo AM Stereo / Mono Processor

- Easy to Install & Operate
- A Complete Audio Processing System
- Quality Stereo or Mono for Your Listeners

Easy to Install and Operate

Installing AM Stereo audio processing has never been easier. A handy input meter allows quick adjustment of the input level. Next, turn all of the processing and stereo controls to 12 o'clock. It's easy! Transmitter modulation is adjusted with the output level and symmetry controls. Stereo adjustments are fine tuned. Finally, the processing controls can be fine tuned. That's it! Just about anybody at your station can install the Amigo AM for stereo!

A Complete Audio Processing System

CRL has taken all its best technology, combined it into one high performance unit. The Amigo Am was designed with your station in mind, economical, powerful, yet simple to use! The Amigo Am is a complete audio processing system. Included are Dual Band AGC, patented 3-Band Stereo Matrix Limiter, Single Channel Output Limiting, NRSC Output Filtering plus a full set of processing controls to customize your station's sound.

A wide range dual-band AGC ensures consistent station loudness, even when the disk jockeys do not watch audio levels closely. When changing from one audio source to another and during "voice overs", the dual band design produces a very natural sound, even with sudden changes in audio levels.

Stereo and mono loudness is produced by a powerful 3-Band Matrix Limiter. First, a matrix divides the audio into mono and stereo. These are further divided into 3 bands – bass, mid-range and treble. Next, each band is separately processed to increase stereo and mono loudness. The result is outstanding quality with loud and dynamic bass, mid-range and treble for your stereo *and* mono listeners.

NRSC Compliance is guaranteed by CRL's patented output filter. This filter exceeds all NRSC-1 standards for the control of your station's occupied bandwidth.

A full set of processing controls is included to adjust your station's sound. Low, mid-range and high frequency equalizer controls allow you to set equalization just the way you want it. Loudness is adjusted with the Limiter Drive control.



Quality Stereo or Mono for Your Listeners

The decision to broadcast AM Stereo is very important. Protect your investment by treating your listeners with the best quality stereo possible. CRL AM Stereo products are known worldwide as the best sounding products. With Amigo AM, your station will stand out on the dial!

If you are thinking about going stereo in the future, but need to improve your processing now – the Amigo AM is for you. The Amigo Am can drive 2 mono transmitters, now. When you upgrade to stereo, the Amigo AM can drive your main stereo transmitter plus a mono standby transmitter.

More Features

The Amigo AM has a number of features that let you take full control of your station's sound. Our exclusive stereo enhancement circuit lets you broaden your station's stereo image without affecting voice or mono program material. If you have an older transmitter, or narrow bandwidth antenna system, the Amigo AM has several correction controls that can greatly improve your station's performance and coverage area!

The CLEAR Choice!

The Amigo AM is by far the best performing processor in its class. Powerful yet simple! Discover how good your station can sound!



**CRL is an acknowledged leader
in AM audio processing
since 1974. Our engineering
team continues to produce audio
processing equipment that
reflects innovative technology,
that sets endurance and quality
standards throughout the industry.**

TECHNICAL SPECIFICATIONS

INPUT

(Reference 0 dBm = 0.775 VRMS)
TYPE: Active balanced (differential)
IMPEDANCE: 600 ohms termination or 10 k ohms balanced bridging (selectable)
LEVEL CONTROL: -10 dBm to +20 dBm range
BALANCE CONTROL: +/- 2dB range
METERING: Dual 10 segment LED input level meter with 28 dB dynamic range

STEREO OUTPUT

TYPE: Active balanced (differential)
IMPEDANCE: < 100 ohms balanced (for 600 ohm loads)
LEVEL CONTROL: -5 dBm to +12 dBm for 100% modulation
MODE: Internal jumpers select stereo or L+R (mono) / L-R outputs.

MONAURAL OUTPUT

Provides an auxiliary monaural output to drive a standby transmitter. Separate rear panel Output Level Control (-20 dBm to +18 dBm) and internal Tilt Correct Control included.

FREQUENCY RESPONSE

(0 dB ref. at 400 Hz, +10 dBm input/output)
9.5 kHz FILTER: 50 Hz to 8 kHz; +0/-1.5 dB -3 dB at 9.5 kHz, > 30 dB atten. at 10.5 kHz, > 40 dB atten. at 11.0 kHz. Conforms to NRSC-1 standard using required dynamic measurement method
11 kHz FILTER: 50 Hz to 10 kHz; +0/-1.5 dB -3 dB at 11 kHz, > 30 dB atten. at 13.5 kHz
PROOF MODE: 50 Hz to 15 kHz, +0/-1.0 dB

HARMONIC DISTORTION

(+10 dBm input/output, 20 kHz bandwidth)
9.5 or 11 kHz BW: < 0.25% over selected operating bandwidth at or below 100% negative modulation level
PROOF MODE: < 0.1 %

S+N/N

(+10 dBm input/output, 20 kHz bandwidth)
> 60 dB in operate mode, > 65 dB in proof mode

STEREO SEPARATION and CROSSTALK

OPERATE MODE: > 25 dB over selected operating bandwidth
PROOF MODE: > 40 dB

INPUT COMPRESSION

Input leveling dual band AGC. Range is internally selectable in 3 dB increments, 0 dB to 15 dB. Overall range > 25 dB. Gating internally selectable for -10 dB or -20 dB. Dual band crossover frequency is 340 Hz. Attack times are program dependent. Release times for Low, High and Wide bands are internally selectable (Slow, Medium or Fast).

STEREO ENHANCE

Internally selectable amount of enhancement and threshold level

LOW FREQUENCY ENHANCE

Adjustable boost from 0 to +5 dB via front adjustment. Band center at 100 Hz.

MID RANGE PRESENCE

Adjustable boost from 0 to +5 dB via front adjustment. Band center at 3.1 kHz.

HIGH FREQUENCY EQUALIZATION

Adjustable boost from 0 to over +10 dB at 10 kHz via front panel adjustment. A detent position at 12 o'clock is calibrated for NRSC-1 standard pre-emphasis.

LIMITING

Adjustable from 0 dB to +5 dB via front panel adjustment. Control adjusts drive level into a 3-band limiter. Limiter crossover frequencies are 1 kHz and 4 kHz.

ASYMMETRY

Adjusts positive peak modulation from 95% to +140% via front panel adjustment

TILT CORRECT

Adjusts phase shift correction for pre-1980 transmitters (plate modulated) via front panel control. For solid state and PWM type transmitters, an OFF position defeats the correction.

L-R LEVEL

Adjustable from -6 dB to +3 dB via front panel adjustment. Used to adjust stereo channel balance, or to reduce the amount of transmitted stereo information.

L-R BANDWIDTH

Internally selectable 4th order low pass filter to reduce L-R (stereo) bandwidth to 4.5 kHz. A companion all pass filter is selectable in the L+R path to maintain channel separation specifications. This feature is very useful for stations that have a narrow band directional antenna system.

SINGLE CHANNEL LIMITER

Adjustable from -60% to -80% via front panel adjustment. Used to prevent more than -70% envelope modulation produced by a single channel (required by Motorola C-QUAM[®] System).

MODE SWITCH

Rear panel switch selects Operate, Proof, Reverse, and Left Only for test and set up.

BANDWIDTH SWITCH

Rear panel switch selects either a 9.5 kHz (NRSC) or 11 kHz bandwidth.

GENERAL SPECIFICATIONS

POWER REQUIREMENTS: 100-130 or 200-250 VAC, 48-440 Hz, 25 VA maximum. EMI suppressed, IEC connector standard.
OPERATING TEMPERATURE RANGE: 0 to 50 degrees C (32-122 degrees F).
OPERATING HUMIDITY: 0 to 95% relative humidity, non-condensing.
OPERATING ALTITUDE: 0 to 4,572 meters (0-15,000 feet) AMSL
DIMENSIONS: 48.3 cm W, 4.5 cm H, 40.6 cm D (19" x 1.75" x 16") including protruding controls and connectors.
SHIPPING WEIGHT: 8.2 kg (18 lbs.) including standard accessories.

C-QUAM[®] is a registered Trademark of Motorola, Inc.



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