

# Agile Audio/Video Modulator

HE-12/HE-4 Series - AMCM-860 Series



The AMCM-860 Series provides modulated aural and visual carriers on any channel in the 54 to 860 MHz range. Standard CATV, IRC, HRC and Broadcast channel frequency plans are all accommodated. Pre-programmed FCC 21006 offsets provides frequency compliance on all mandated channels automatically.

Setting the desired output channel is easily accomplished with the LED channel display and using push button up/down switches. Once the desired channel is reached on the display the "enter" push button must be depressed to evoke the change. This feature prevents interference to other channels in the headend by going directly to the desired output channel rather than stepping through channels as indicated on the display. The enter button feature also guards against accidental up/down button touches that would otherwise cause inadvertent channel change. Should the "enter" button not be pushed within 30 seconds, the display will return to the original channel in memory.

The modulator utilizes SAW filtering with FCC group delay pre-distortion to provide true vestigial sideband selectivity and superior adjacent channel performance. The AMCM-860 Series takes baseband audio and video from any standard source such as satellite receivers, video tape recorders, DVD players or television demodulators and modulates to the desired output channel.

## ○ Features & Benefits

- Meets FCC Docket 21006 Aeronautical Frequency Offset Requirements
- Front Panel Accessible Level Controls for Easy Set-Up and Adjustments
- Die-Cast Chassis Offers Superior Protection Against Ingress or Egress
- Supports All Broadcast and CATV Channels, Including HRC and IRC Assignments from 54 to 860 MHz
- Integrated Stereo Encoder Available

## ○ Specifications

### RF

Frequency Range: 54-860 MHz  
Channels: CATV, VHF, UHF (STD, HRC, IRC)  
FCC Offset (pre-programmed):  
0, +12.5, or 25 kHz  
Output Level - Min: +45 dBmV  
Output Level Adjust: 15 dB  
Aural/Visual Carrier Ratio: -10 to -17 dB  
Visual Carrier Frequency Tolerance  
Standard Channels:  $\pm 5$  kHz  
FCC Aeronautical Channels:  $\pm 3$  max kHz  
4.5 MHz Aural Inter Carrier Frequency:  
 $\pm 150$  Hz  
Channel Selectivity:  
Adjacent Aural and Below: -40 dB  
Adjacent Picture and Above: -50 dB  
Spurious Outputs: -60 dBc  
C/N Ratio In Channel: 65 dB  
Broadband Noise: -76 dBc  
Output Impedance: 75  $\Omega$   
Output Return Loss: 12 dB

### Video

Input Level: 1.0 V p-p  
Frequency Response  
fv-0.5 MHz to fv+4.2 MHz:  $\pm 1.0$  dB  
P-P Video to RMS Hum Ratio: 65 dB  
Video Signal-to-Noise Ratio,  
NTC-7 Weighted: 62 dB  
Differential Gain: 2.0 %  
Differential Phase: 1.0 °  
Over Modulation Indicator: 87.5,  $\pm 2.5$  %  
Input Impedance: 75  $\Omega$   
Input Return Loss: 24 min, dB

### Audio

Input Level: 140 mV RMS minimum  
Input Impedance: 10k  $\Omega$ , Unbalanced  
Total Harmonic Distortion (%): 1.0  
Stereo Separation (AMCM 860S):  
50 Hz - 100 Hz: 15 dB  
100 Hz - 1 kHz: 25 dB  
12 kHz: 18 dB

### General

Power Requirement: 5 W  
Voltage:  
12 VDC @ 280 mA  
5 VDC @ 470 mA  
Temperature Range: 0 to +50 ° C

### Mechanical

Dimensions (W x H x D):  
1.15 x 3.5 x 7.5 in.  
29 x 89 x 191 mm  
Weight: .8 lbs., .36 kg

### Connectors

Video Input: "F" Female  
L/R Audio Input: RCA Phono (2)  
RF Output: "F" Female

### Controls

Channel Selection:  
Push-Button Switches, UP/DOWN  
Video Level: Control  
A/V Ratio: Control  
Audio Level: Control  
RF Output Level: Control  
Channel Enter: Push Button

### Indicators

Channel Indicator: 2 Digit LED, Red  
Video Over Modulation: LED, Red  
Audio Over Modulation: LED, Red  
Stereo Indicator: LED, Green

Refer to product instruction manual for additional specification measurements and notes.

## ○ Ordering Information

Model	Stock No.	Description
AMCM-860	7766B	Modular Agile Audio/Video Modulator (HE 12 Series) +45 dBmV, 54-860 MHz Agile
AMCM-860S	7766S	Modular Agile Stereo Audio/Video Modulator (HE 12 Series) +45 dBmV, 54-860 MHz Agile