



# Model R177M and R177S Baseband Switch

## Installation Guide

P/N 1340192  
082304

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Specifications subject to change without notice.  
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# WARRANTY

Monroe Electronics, Inc. warrants to the owners, each instrument and sub-assembly manufactured by them to be free from defects in material and workmanship for a period of one year after shipment from factory. This warranty is applicable to the original purchaser only.

Liability under this warranty is limited to service, adjustment or replacement of defective parts (other than fuses or batteries) on any instrument or sub-assembly returned to the factory for this purpose, transportation charges prepaid.

This warranty does not apply to instruments or sub-assemblies subjected to abuse, abnormal operating conditions, or unauthorized repair or modification.

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In the event of a breach of the foregoing warranty, the liability of Monroe Electronics shall be limited to repairing or replacing the non-conforming goods and/or defective work, and in accordance with the foregoing; Monroe Electronics shall not be liable for any other damages, either direct or consequential.

## RETURN TO FACTORY POLICY:

Materials returned to Monroe must have a Return Material Authorization number. To obtain a RMA number, contact our A/V Switching & Control Customer Service at 585-765-2254 or fax 585-765-9330. Customers have 30 days to determine that the product ordered fills their need and performs as described in Monroe's literature. Units returned for approved repair or credit, must be in the original packaging including all parts and paperwork plus be in very good physical condition. If not, the customer is billed the cost to refurbish the unit and for missing accessories and merchandise. No products may be returned for exchange or credit after 12 months of the shipment date. Monroe reserves the right to repair or replace units under warranty.

# General Description

Developed especially for the small cable operator, the model R177 offers inexpensive baseband switching for full screen and audio replacement in full compliance with FCC EAS requirements.

Available in two configurations; "Master" (R177M) and "Slave Monaural" (R177S), both units provide amplification and switching of baseband audio follow video signals and allow the insertion of audio and video from an EAS control system into all the channels at a cable headend.

When the proper alert codes are received by the EAS system, baseband video signals from each channel are switched from the programs they normally show to the alarm video provided by a character generator. Audio is similarly switched. When the EAS alert (or test) has concluded the unit(s) switch back to the program audio and video. Switching of the audio signals and video signals can be done independently if desired.

Each unit has eight audio and video switches. EAS Audio and Video signals are buffered with adjustable  $\pm 3$  dB amplifiers for isolation and signal quality. Individual test switches allow separate testing of the audio and video relays in the unit, allowing less intrusive testing when desired.

The modularity of the design, with 8 complete switch pairs per unit, allows the operator to mount the unit where he can minimize cable runs and complexity. Mounting it on the rear of the equipment rack saves valuable space for other uses.

## **R177M**

The Model R177M Master Baseband Switch is the "master" unit and provides balanced stereo audio follow baseband video switching on a contact closure. The baseband video, audio signals, and control signals are looped through to supply succeeding units.

High quality and long life RF and Audio switching relays ensure low loss and high isolation for reliable system performance.

Control of this unit to switch audio, video, or both, passes through to any succeeding units for EAS alarm switching.

The R177M can also be used as a "stereo slave" unit.

## **R177S**

The Model R177S Stereo Baseband Switch operates as a "slave" unit with the Model R177M unit. It provides balanced monaural audio and wide bandwidth baseband video switching.

The "loop through" video and audio signals are internally buffered with an audio gain adjustment.

Switching relays provide isolation and signal handling capabilities to satisfy any user requirements.

## Specifications

<b>Video Input Level:</b>	1 V p~p, (75 )
<b>Video Frequency Response:</b>	0 to 40 MHz, -3 db
<b>Video Output Level for Loop through:</b>	1 V p~p, 0 dB buffered
<b>Video Connectors:</b>	75 'F' connectors
<b>Audio Input Level:</b>	0 dB, ~.7 volts p~p nominal
<b>Audio Frequency Response:</b>	0 to 30 KHz, -3 dB, 600 Term In/Out
<b>Master Audio Output Level for loop through:</b>	Adjustable, $\pm 3$ dB nominally .7 volts p~p into 600 s buffered
<b>Audio Connectors:</b>	Detachable screw terminals
<b>Master Switch Control Inputs:</b>	Contact closure to Ground. Independent Video and Audio contact closure to GND or recessed push buttons on panel
<b>Slave Switching (or Master used as Slave)</b>	DC voltage on Audio Lines, or push buttons for testing Audio/Video for that unit only.
<b>Power Requirements:*</b>	16 VAC 50/60 Hz, $\pm 10\%$ , $\frac{1}{2}$ A AC
<b>Physical Size:</b>	19.0" W x 3.5" H x 5.0" D
<b>Weight:</b>	2 lbs.

**\*12 VAC power supplies will work provided the supply is stable at 12V under low line conditions. However, 16 VAC supplies are provided and are recommended for optimal reliability.**

# Installation

The R177 units are designed to mount on the rear of a standard 19-inch equipment rack.

Mount the Master Stereo unit, R177M, onto the equipment rack near the audio signal sources requiring stereo switching.

Mount the Slave Monaural units, R177S, onto to the equipment rack near the signal sources they will be switching.

Connect the wires from the power supplies to each unit, 12 or 16 VAC (Refer to \* note on page 4.) on the screw terminal header. **No specific polarity needs to be observed when connecting the first power supply, however, all subsequent supplies must be connected with the same wire orientation as the first supply.**

Connect the Audio Outputs from the MIP 921e to the Audio Inputs + and – on the screw terminal header of the Master unit. A Chassis Ground connection is supplied for a shield wire.

Connect the EAS Audio Out +, –, and GND connections on the screw terminal header of the Master unit to the EAS Audio In of the first Slave Monaural unit as detailed in Figure 1. If using a Master unit as a Slave Stereo unit refer to Figure 2 on the following page. Connect all remaining Slave units to each other in the same manner, as indicated in Figure 1 or 2 on the following page.

Connect the CEMS 0500 Character Generator Video Out to the EAS Video Loop input on the Master unit. Connect the Video Loop Output to the first Slave unit Video Loop Input. For all subsequent Slave units in the chain, connect the Output from the preceding unit to the Input of the unit being added.

Connect the program audio source inputs to the left and right Audio inputs for each switch set as labeled on the panel. Connect the Video Inputs and Outputs in the same manner. Refer to Figure 3 on page 7.

To complete the connection 600  $\Omega$  terminators or resistors must be installed across the EAS Audio In + and – terminals on the Master unit and also across the EAS Audio + and – terminals on the last Slave unit in the chain. Refer to Figures 1 and 2 on the following page.

Tie the VIDEO and AUDIO terminals at the end of the R-177M terminal strip together and connect to the CEMS 0500 Character Generator at RELAY 1 – NO. Connect GND on the terminal strip to RELAY 1 – COM on the CEMS 0500.

# Operation and Adjustments

Plug in all power supplies upon completion of all wiring.

Verify operation by pressing the Audio and Video Test pushbuttons recessed in the panel. All relays should switch for either Video or Audio subject to which pushbutton has been pressed.

Upon verifying operation, set the Audio Input from the EAS alarm source to 1 V p ~ p, maximum. Set the Video Input from the EAS alarm source to 1 V p ~ p, maximum.

Check the outputs to the Audio and Video switches. Adjust the Audio Gain potentiometer to obtain an output of the same level as the input.

Adjust the two Video Gain potentiometers in the same manner.

## Master/Slave EAS Audio Connections

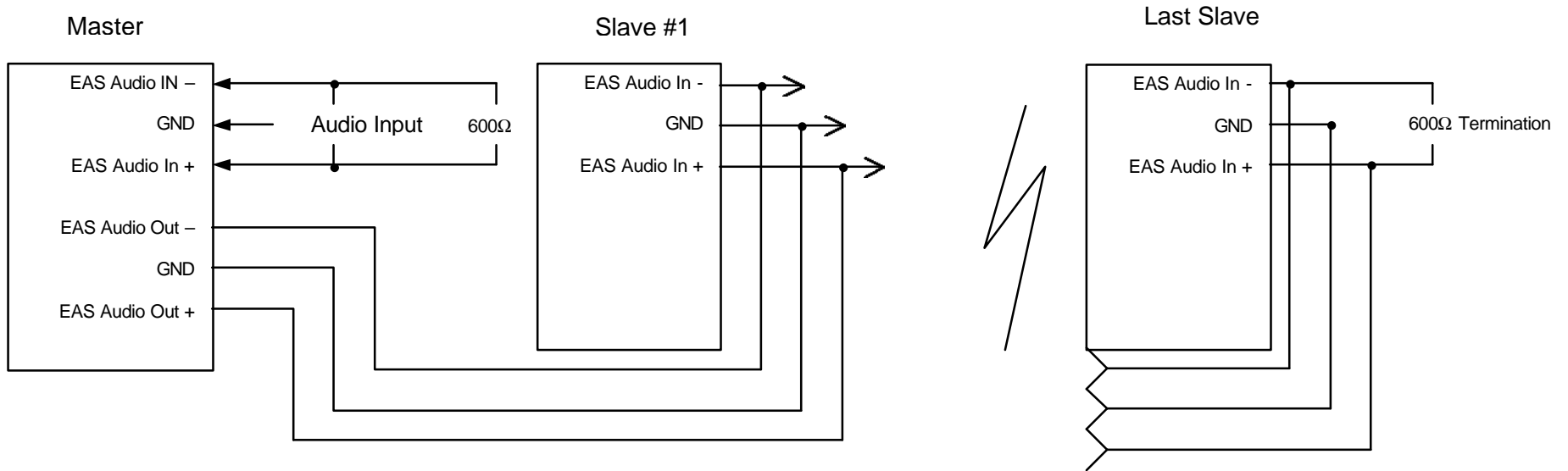


Figure 1

## Master/Slave EAS Audio Connections with a Master used as a Slave

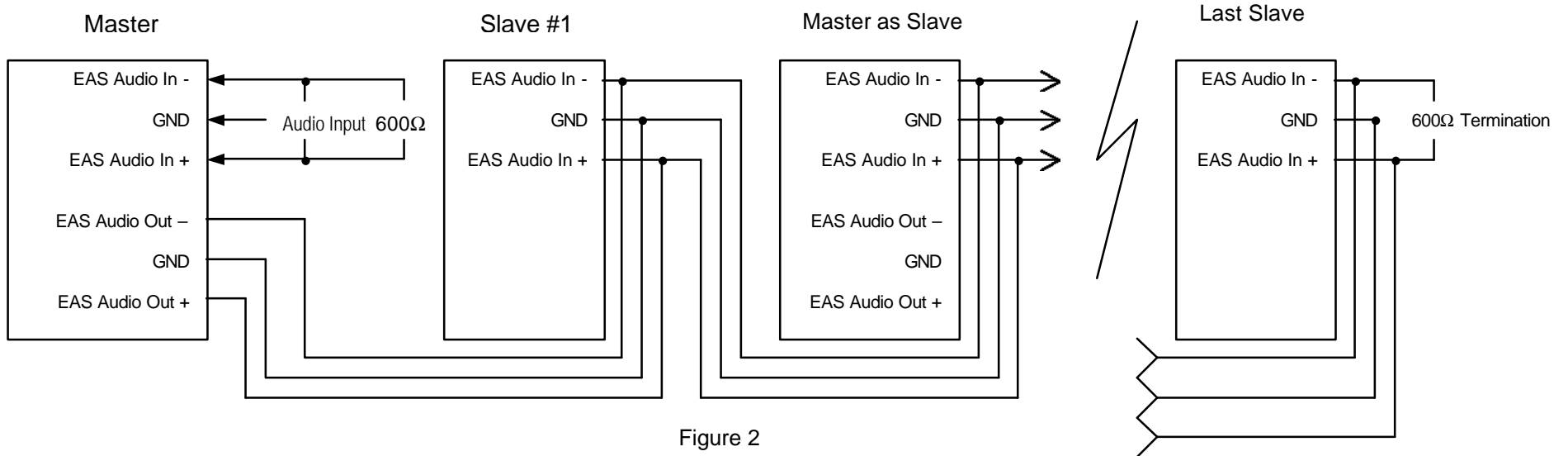


Figure 2



# Program Source to Controlling R177

Master is shown. For Slave Monaural connections, a single connector is provided. For connections to a Master used as a Slave, connect to left side connectors only. One set of Audio/Video switching connections are shown. All subsequent connections should be made in the same manner.

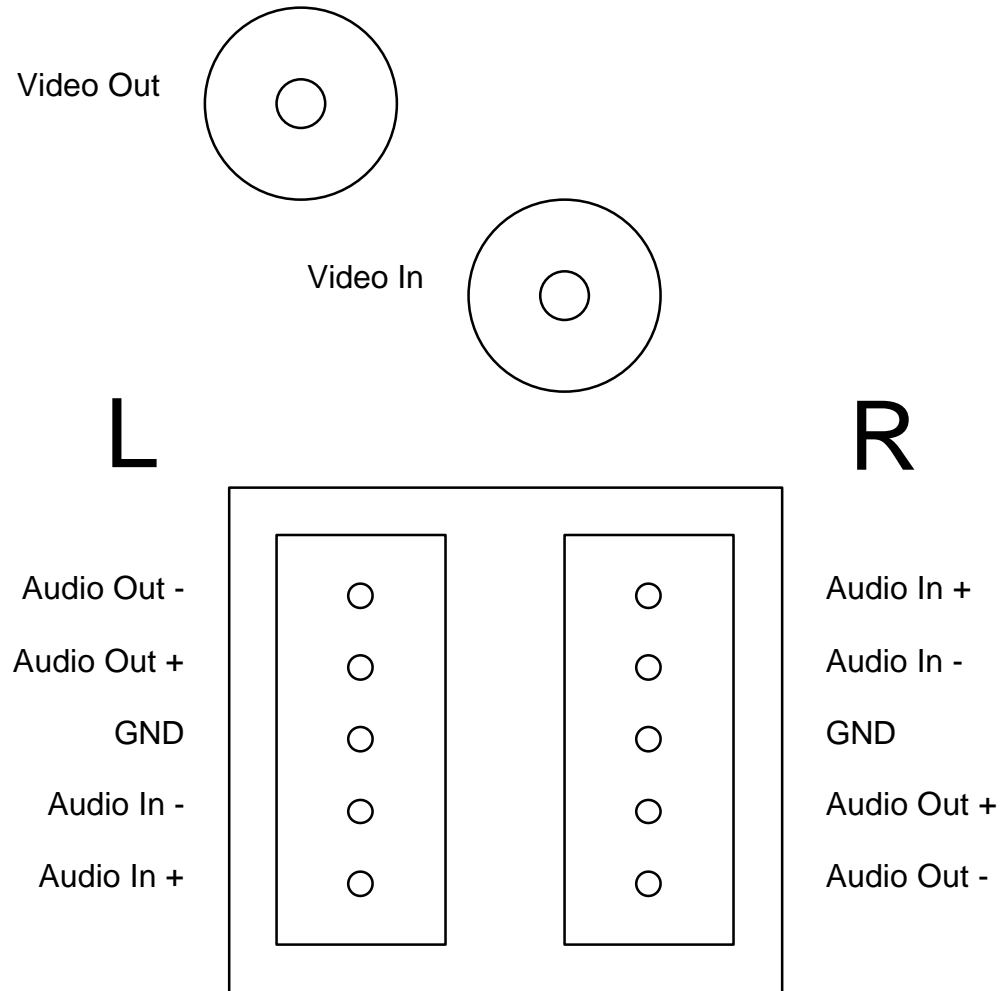
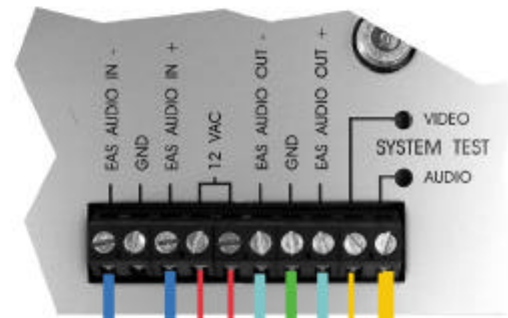
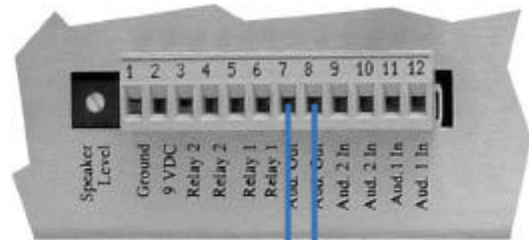


Figure 3

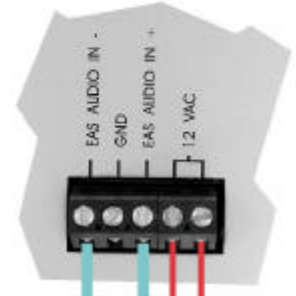


CX508S

C506S



Connect to Power Cube



Connect to Power Cube



SUPPLIED WITH C506S, CX508S



Terminate (75 ohm)

