



R180/av Series 50/70/ob78 Installation Manual

50, 71 & 78 Channel
Audio /Video Comb Generator
w/ Trunk Switch

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Product Overview

This new Monroe Electronics R180/av Series Audio/Video Comb Filter Generator offers economical, high quality, full screen replacement for EAS systems.

Approved for small cable systems, the R180/av Series Audio/Video Comb Filter Generator features improved picture quality, and is compatible with all headends. New "Lykinsor" circuitry renders the inherent beats nearly invisible. Adapted for digital cable programming with the guard band (72MHz - 76MHz) baseline noise level greater than 40dB down. No additional filtering is required. The unit's smaller size minimizes the required rack space.

The R180/av Series Audio/Video Comb Filter Generator meets all FCC aeronautical band offset requirements.

This instruction manual is intended for use with the R180/av50 (50 channels), R180/av70 (71 channels) and R180/av70/o78b (78 channels) instruments.

Specifications

Audio/Video	R180/av50 on all channels 2 through 50 (380 MHz) R180/av70 on all channels 2 through 71 (500 MHz) R180/av70/o78b on all channels 2 through 78 (550 MHz)	
Video	Input level:	0.5 to 2 Volts p ~ p
	Frequency response:	± 1 dB, 10 Hz – 4.2 MHz
	Standard:	U.S. System NTSC sync negative
	Input Type:	Clamped video, negative sync
Audio	Audio carrier level:	-16 dB below video carrier
	Automatic Gain Control:	30 dB
	FM Deviation:	± 25 KHz automatic
	Input Level:	0.3 to 3 Volts p ~ p
	Frequency Stability:	± 1 KHz
	Frequency Response:	± 1 dB 30 Hz to 15 KHz
Adjustable RF Output Control	up to 40 dBmV	
Trunk Switch		
	Insertion Loss:	.3 dB max.
	Return Loss:	20 dB min.
	Impedance:	75 Ω
	Isolation:	70 dB min.
FCC Offset	± 3 KHz in the aeronautical band	
Channel Flatness	3 dB	
Power Requirements	110 VAC, 30 Watts	
Physical Specifications	19" W x 3.5" H x 13.5" D	
Equipment Supplied:	Line Cord Manual Mounting Kit	

Installation

Use with reference to the R180/av70 back panel graphic and installation diagram on the next two pages. *All subsequent references to the R180/av Series Audio/Video Comb Filter Generator will use the R180av/70 model number.

- Connect the R180/av70 Series Audio/Video Comb Filter Generator terminal block on the rear panel to the SAM-MIP 921e block using two 2 conductor cables with stripped ends as follows:

R180/av70 **GROUND** to MIP-921e **AUDIO OUT & KEY**
R180/av70 **KEY** to CEMS 0500 **NO & COM**
R180/av70 **AUDIO** to MIP-921e **AUDIO OUT**

- Connect **COMM 2** of the MIP-921e to the CEMS 0500 **EAS DATA** port using the CX506S cable supplied with the CEMS 0500.
- Connect **VIDEO OUT** of the CEMS 0500 to **VIDEO IN** of the R180/av70 (To acquire the best possible picture adjust the video level on the back of the R180/av70 with the **VIDEO LEVEL** control.
- Loop the headend output through the R180/av70 using the **RF IN** and **OUT** ports.
- Adjust the output level of the R180/av70 to match the output of the headend using the **OUTPUT LEVEL** control on the rear of the R180/av70. The output level is factory preset to +33 dB. To activate the unit during testing, place a jumper between **KEY** and **GROUND** in the R180/av70 terminal block on the rear of the unit.



VIDEO IN – Video input from the character generator.

VIDEO LEVEL – Video input level adjustment.

SWITCHED DC – Switched DC to control external trunk switches.

OUTPUT LEVEL – Output adjust of the R180/av70 to match the headend output.

AUDIO LEVEL – Audio level input adjustment

EAS CONTROLLER BLOCK – Connections to the MIP-921e and CEMS 0500.

RF IN/OUT – High isolation trunk switch.

POWER – AC power input, 120VDC, 60Hz.



Comb System w/ CEMS 0500

