

# Specifications — MAV Series Matrix Switchers

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## Video — composite video and S-video models

### Routing

MAV 44 Series .....	4 x 4 matrix
MAV 48 Series .....	4 x 8 matrix
MAV 62 Series .....	6 x 2 matrix
MAV 84 Series .....	8 x 4 matrix
MAV 88 Series .....	8 x 8 matrix

Gain ..... Unity

Bandwidth ..... 150 MHz (-3 dB), fully loaded

Differential phase error ..... <0.1° at 3.58 MHz and 4.43 MHz

Differential gain error ..... <0.1% at 3.58 MHz and 4.43 MHz

Crosstalk ..... <-50 dB @ 5 MHz

Switching speed ..... 20 ms (max.)

## Video input — composite video and S-video models

### Number/signal type

MAV 44 AV, MAV 44 AV RCA, MAV 48 AV, MAV 48 AV RCA	4 composite video
MAV 44 SVA, MAV 44 SVA RCA, MAV 48 SVA, MAV 48 SVA RCA	4 S-video
MAV 62 Composite Video	6 composite video
MAV 62 S-video .....	6 S-video
MAV 84 AV, MAV 84 AV RCA, MAV 88 AV, MAV 88 AV RCA, MAV 88 V	8 composite video
MAV 84 SVA, MAV 84 SVA RCA, MAV 88 SVA, MAV 88 SVA RCA	8 S-video

### Connectors

MAV 44/48 composite video models	4 female BNC
MAV 44/48 S-video models	4 female 4-pin mini DIN
MAV 62 Composite Video	6 BNC female
MAV 62 S-video .....	6 female 4-pin mini DIN
MAV 84/88 composite video models	8 female BNC
MAV 84/88 S-video models	8 female 4-pin mini DIN

Nominal level ..... 1 Vp-p for Y of S-video, and for composite video  
0.3 Vp-p for C of S-video

Minimum/maximum levels ..... Analog: 0.4 V to 2.0 Vp-p with no offset at unity gain

Impedance ..... 75 ohms

### Return loss

MAV 62 Series .....	<-30 dB @ 5 MHz
All other models .....	Composite video: <-38 dB @ 0 to 10 MHz S-video: <-25 dB @ 0 to 10 MHz

### DC offset (max. allowable)

MAV 62 Series .....	1.5 V
All other models .....	5 V

External sync (genlock)..... 0.2 V to 0.4 Vp-p

Input coupling..... AC coupling only (for models other than the MAV 62 Series)

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## Video output — composite video and S-video models

MAV 44 AV, MAV 44 AV RCA, MAV 84 AV, MAV 84 AV RCA	4 composite video
MAV 44 SVA, MAV 44 SVA RCA, MAV 84 SVA, MAV 84 SVA RCA	4 S-video
MAV 62 Composite Video	2 composite video
MAV 62 S-video .....	2 S-video
MAV 88 AV, MAV 88 AV RCA, MAV 88 V, MAV 48 AV, MAV 48 AV RCA	8 composite video
MAV 88 SVA, MAV 88 SVA RCA, MAV 48 SVA, MAV 48 SVA RCA	8 S-video
Connectors	
MAV 62 Composite Video	2 female BNC
MAV 62 S-video .....	2 female 4-pin mini DIN
MAV 44/84 composite video models	4 female BNC
MAV 44/84 S-video models	4 female 4-pin mini DIN
MAV 48/88 composite video models	8 female BNC
MAV 48/88 S-video models	8 female 4-pin mini DIN
Nominal level .....	1 Vp-p for Y of S-video, and for composite video 0.3 Vp-p for C of S-video
Minimum/maximum levels .....	0.4 V to 2.0 Vp-p (follows input)
Impedance .....	75 ohms
Return loss	
MAV 62 Series .....	<-30 dB @ 5 MHz
All other models .....	S-video: <-25 dB @ 5 MHz Composite video: <-40 dB @ 5 MHz
DC offset	
MAV 62 Series .....	±5 mV maximum with input at 0 offset
All other models .....	15 mV typical (per output enabled with 70 ohm termination) with input at 0 offset
Switching type .....	Vertical interval

## Sync — composite video and S-video models

Genlock connectors .....	2 BNC female
Standards .....	NTSC 3.58, NTSC 4.43, PAL, SECAM

## Audio — audio models

Routing	
MAV 44 Series .....	4 x 4 stereo matrix
MAV 48 Series .....	4 x 8 stereo matrix
MAV 62 Series .....	6 x 2 stereo matrix
MAV 84 Series .....	8 x 4 stereo matrix
MAV 88 Series .....	8 x 8 stereo matrix
Gain .....	Adjustable; the default is unity. Unity gain occurs for all RCA connector models and in MAV 62 Series models configured for unbalanced output. In all other models with captive screw connectors, unity gain occurs when the switcher is configured for balanced output.
Frequency response .....	20 Hz to 20 kHz, ±0.5 dB
THD + Noise .....	1% @ 1 kHz, 0.3% @ 20 kHz at nominal level
S/N .....	90 dB at maximum output (unweighted)
Crosstalk .....	<-65 dB @ 20 kHz, <-80 dB @ 1 kHz or below 60 Hz, fully loaded

# Specifications — MAV Series Matrix Switchers (continued)

Stereo channel separation	
MAV 62 Series .....	>80 dB @ 1 kHz
All other models .....	>80 dB @ 20 Hz to 20 kHz
CMRR .....	>75 dB @ 20 Hz to 20 kHz

## Audio input — audio models

Number/signal type	
MAV 44 AV, MAV 44 SVA, MAV 48 AV, MAV 48 SVA	4 stereo, balanced/unbalanced
MAV 44 AV RCA, MAV 44 SVA RCA, MAV 48 AV RCA, MAV 48 SVA RCA	4 stereo, unbalanced
MAV 62 .....	6 stereo, balanced/unbalanced
MAV 84 AV, MAV 84 SVA, MAV 88 AV, MAV 88 SVA	8 stereo, balanced/unbalanced
MAV 84 AV RCA, MAV 84 SVA RCA, MAV 88 AV RCA, MAV 88 SVA RCA	8 stereo, unbalanced

Connectors	
MAV 44 AV, MAV 44 SVA, MAV 48 AV, MAV 48 SVA	(4) 3.5 mm captive screw connectors, 5 pole
MAV 44 AV RCA, MAV 44 SVA RCA, MAV 48 AV RCA, MAV 48 SVA RCA	4 pairs of RCA female connectors
MAV 62 .....	(6) 3.5 mm captive screw connectors, 5 pole
MAV 84 AV, MAV 84 SVA, MAV 88 AV, MAV 88 SVA	(8) 3.5 mm captive screw connectors, 5 pole
MAV 84 AV RCA, MAV 84 SVA RCA, MAV 88 AV RCA, MAV 88 SVA RCA	8 pairs of RCA female connectors

Impedance	
MAV 62 Series .....	>10k ohms unbalanced/balanced, DC coupled
All other models .....	>18k ohms unbalanced, 24k ohms balanced, DC coupled

Nominal level	
MAV 62 Series .....	-10 dBV (316 mV, consumer level)
All other models .....	Configurable: +4 dBu (1.23 V, professional level) or -10 dBV (316 mV, consumer level)

Maximum level	
MAV 62 Series .....	+19.5 dBu (balanced or unbalanced) at 1% THD+N
All other models .....	>+20 dBu (captive screw models) at 1% THD+N >+14 dBu (RCA models) at 1% THD+N

Input gain adjustment .....	-18 dB to +10 dB, adjustable per input; default = 0 dB. (This is referenced to the internal bus signal level. It can be verified by measuring the unbalanced output level when the output level is set to “Consumer”.)
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**NOTE** 0 dBu = 0.775 V(rms), 0 dBV = 1 V(rms), 0 dBV ≈ 2 dBu

## Audio output — audio models

Number/signal type	
MAV 44 AV, MAV 44 SVA, MAV 84 AV, MAV 84 SVA	4 stereo, balanced/unbalanced
MAV 44 AV RCA, MAV 44 SVA RCA, MAV 84 AV RCA, MAV 84 SVA RCA	4 stereo, unbalanced
MAV 62 Series .....	2 stereo, balanced/unbalanced
MAV 88 AV, MAV 88 SVA, MAV 48 AV, MAV 48 SVA	8 stereo, balanced/unbalanced
MAV 88 AV RCA, MAV 88 SVA RCA, MAV 48 AV RCA, MAV 48 SVA RCA	8 stereo, unbalanced

## Connectors

MAV 44 AV, MAV 44 SVA, MAV 84 AV, MAV 84 SVA	(2) 3.5 mm captive screw connectors, 10 pole
MAV 44 AV RCA, MAV 44 SVA RCA, MAV 84 AV RCA, MAV 84 SVA RCA	4 pairs of RCA female
MAV 62 Series .....	(2) 3.5 mm captive screw connectors, 5 pole
MAV 88 AV, MAV 88 SVA, MAV 48 AV, MAV 48 SVA	(4) 3.5 mm captive screw connectors, 10 pole
MAV 88 AV RCA, MAV 88 SVA RCA, MAV 48 AV RCA, MAV 48 SVA RCA	8 pairs of RCA female
Impedance .....	50 ohms unbalanced, 100 ohms balanced
Gain error .....	<±0.1 dB channel to channel
Nominal level .....	Configurable: +4 dBu (1.23 V, professional level) or -10 dBV (316 mV, consumer level)
Maximum level (Hi-Z)	
MAV 62 Series .....	>+18 dBu, balanced; >+12 dBu, unbalanced at 1% THD+N
All other models .....	>+24 dBu, balanced; >+18 dBu, unbalanced at 1%THD+N
Maximum level (600 ohm)	
MAV 62 Series .....	>+16 dBm, balanced; >+10 dBm, unbalanced at 1% THD+N
All other models .....	>+19 dBm, balanced; >+13 dBm, unbalanced at 1%THD+N

## Control/remote — switcher

Serial control port .....	RS-232, 9-pin female D connector
Baud rate and protocol .....	9600, 8 data bits, 1 stop bit, no parity
Serial control pin configurations	
MAV 62 Series .....	2 = TX, 3 = RX, 5 = GND
All other models .....	2 = TX, 3 = RX, 5 = GND, 9 = hardwired IR
IR controller module (all models except MAV 62 Series)	IR 501 remote control (optional)
Program control .....	Extron's control/configuration program for Windows® Extron's Simple Instruction Set (SIS™)

## General

Power .....	100 VAC to 240 VAC, 50/60 Hz, 15 watts, internal, autoswitchable
Temperature/humidity .....	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +122 °F (0 to +50 °C) / 10% to 90%, noncondensing
Rack mount	
MAV 62 Series .....	Yes, with optional 1U rack shelf, part #60-190-01 or 60-604-01
All other models .....	Yes, with included brackets, part #70-077-03 Also furniture mountable with an optional under-desk mounting kit, part #70-222-01
Enclosure type .....	Metal
Enclosure dimensions	
MAV 62 Series .....	1.75" H x 8.75" W x 9.5" D (1U high, half rack wide) 4.4 cm H x 22.2 cm W x 24.1 cm D
All other models .....	1.75" H x 17.4" W x 8.5" D (1U high, full rack wide) 4.4 cm H x 44.2 cm W x 21.6 cm D (Depth excludes connectors. Width excludes rack ears.)
Product weight	
MAV 62 Series .....	3.3 lbs (1.5 kg)
All other models .....	7.0 lbs (3.2 kg)
Shipping weight	
MAV 62 Series .....	6 lbs (3 kg)
All other models .....	10 lbs (5 kg)

# Specifications — MAV Series Matrix Switchers (continued)

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Vibration .....	ISTA 1A in carton (International Safe Transit Association)
Listings .....	UL, CUL
Compliances	
MAV 62 Series .....	CE
All other models .....	CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF .....	30,000 hours
Warranty .....	3 years parts and labor

**NOTE** *All nominal levels are at ±10%.*

**NOTE** *Specifications are subject to change without notice.*

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