

Specifications — MAV Series Matrix Switchers

Video

Routing

MAV 62	6 x 2 matrix
MAV 84 RCA	8 x 4 matrix
MAV 128 RCA	12 x 8 matrix
MAV 168 Series	16 x 8 matrix
MAV 1616 Series	16 x 16 matrix
MAV 2412 Composite Video, MAV 2412 Composite Video and Audio	24 x 12 matrix
MAV 2424 Composite Video, MAV 2424 Composite Video and Audio	24 x 24 matrix
MAV 3216 Composite Video, MAV 3216 Composite Video and Audio	32 x 16 matrix
MAV 3232 Composite Video, MAV 3232 Composite Video and Audio	32 x 32 matrix
Gain	Unity
Bandwidth	150 MHz (-3dB), fully loaded
	0 - 10 MHz no more than 0.1dB to -0.1dB
	0 - 30 MHz no more than 0.5dB to -0.5dB
Phase between I/Os	<1.28° at 3.58 MHz
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
Max. propagation of delay	5 ns typical (±1 ns)
Crosstalk	-50dB @ 5 MHz
Switching speed	200 ns (max.)

Video input

Number/signal type

MAV 62 Composite Video	6 composite video
MAV 62 S-video	6 S-video
MAV 84 RCA	8 composite video
MAV 128 RCA	12 composite video
MAV 168/1616 Series	16 RGsB, RsGsBs, component video (Y, R-Y, B-Y), HDTV, S-video, composite video
MAV 2412/2412 Composite Video or Composite Video and Audio	24 composite video
MAV 3216/3232 Composite Video or Composite Video and Audio	32 composite video

Connectors

MAV 62 Composite Video	6 BNC female
MAV 62 S-video	(6) 4-pin mini DIN female
MAV 84/128 RCA	8 or 12 RCA female
MAV 168/1616 Series	16 x 1, 2, or 3 BNC female
MAV 2412/2424 Composite Video or Composite Video and Audio	24 BNC female
MAV 3216/3232 Composite Video or Composite Video and Audio	32 BNC female
Nominal level	1V p-p for Y of component video and S-video, and for composite video
	0.7V p-p for RGB
	0.3V p-p for R-Y and B-Y of component video, and for C of S-video
Minimum/maximum levels	Analog: 0.5V to 2.0V p-p with no offset
Impedance	75 ohms
Return loss	<-30dB @ 5 MHz
Maximum DC offset	1.5V
External sync (genlock)	0.3V to 0.4V p-p

Video output

Number/signal type

MAV 62 Composite Video	2 composite video
MAV 62 S-video	2 S-video
MAV 84 RCA	4 composite video
MAV 128 RCA	8 composite video
MAV 168 Series	8 RGSB, RsGsBs, component video (Y, R-Y, B-Y), HDTV, S-video, composite video
MAV 1616 Series	16 RGSB, RsGsBs, component video (Y, R-Y, B-Y), HDTV, S-video, composite video
MAV 2412 Composite Video or Composite Video and Audio	12 composite video
MAV 2424 Composite Video or Composite Video and Audio	24 composite video
MAV 3216 Composite Video or Composite Video and Audio	16 composite video
MAV 3232 Composite Video or Composite Video and Audio	32 composite video

Connectors

MAV 62 Composite Video	2 BNC female
MAV 62 S-video	(2) 4-pin mini DIN female
MAV 84/128 RCA	4 or 8 RCA female
MAV 168/1616 Series	(8 or 16) x 1, 2, or 3 BNC female
MAV 2412/2424 Composite Video or Composite Video and Audio	12 or 24 BNC female
MAV 3216/3232 Composite Video or Composite Video and Audio	16 or 32 BNC female

Nominal level	1V p-p for Y of component video and S-video, and for composite video 0.7V p-p for RGB 0.3V p-p for R-Y and B-Y of component video, and for C of S-video
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Minimum/maximum levels	0.5V to 2V p-p
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Impedance	75 ohms
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Return loss	-30dB @ 5 MHz
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DC offset	±5mV maximum with input at 0 offset
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Switching type	Vertical interval
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Sync

Input type	RGSB, RsGsBs
Output type	RGSB, RsGsBs
Standards	NTSC 3.58, NTSC 4.43, PAL, SECAM
Input impedance	75 ohms
Output impedance	75 ohms
Max. propagation delay	5 ns

Audio

Routing

MAV 62	6 x 2 stereo matrix
MAV 84 RCA	8 x 4 stereo matrix
MAV 128 RCA	12 x 8 stereo matrix
MAV 168 audio	16 x 8 stereo matrix
MAV 1616 audio	16 x 16 stereo matrix
MAV 2412 Composite Video with Audio, MAV 2412 Audio	24 x 12 stereo matrix
MAV 2424 Composite Video with Audio, MAV 2424 Audio	24 x 24 stereo matrix

Specifications — MAV Series Switchers (continued)

MAV 3216 Composite Video with Audio, MAV 3216 Audio
32 x 16 stereo matrix

MAV 3232 Composite Video with Audio, MAV 3232 Audio
32 x 32 stereo matrix

Gain

6-, 8-, 12-, 16-input models Unbalanced output: 0dB; balanced output: +6dB

24- and 32-input models Unbalanced output: -6dB; balanced output: 0dB

Frequency response 20 Hz to 20 kHz, ± 0.05 dB

THD + Noise 0.03% @ 1 kHz at rated nominal level

S/N >90dB, output 21dBu, balanced, at rated maximum output

Crosstalk <-80dB @ 1 kHz, fully loaded

Stereo channel separation >80dB @ 1 kHz

CMRR >75dB @ 20 Hz to 20 kHz

Audio input

Number/signal type

MAV 62 6 stereo, balanced/unbalanced

MAV 84 RCA 8 stereo, unbalanced

MAV 128 RCA 12 stereo, unbalanced

MAV 168/1616 Series 16 stereo, balanced/unbalanced

MAV 2412/2424 Composite Video with Audio, MAV 2412/2424 Audio
24 stereo, balanced/unbalanced

MAV 3216/3232 Composite Video with Audio, MAV 3216/3232 Audio
32 stereo, balanced/unbalanced

Connectors

MAV 62 (6) 3.5 mm captive screw connectors, 5 pole

MAV 84/128 RCA (8 or 12) x 2 RCA female plugs

MAV 168/1616 Series (16) 3.5 mm captive screw connectors, 5 pole

MAV 2412/2424 Composite Video with Audio, MAV 2412/2424 Audio
(24) 3.5 mm captive screw connectors, 5 pole

MAV 3216/3232 Composite Video with Audio, MAV 3216/3232 Audio
(32) 3.5 mm captive screw connectors, 5 pole

Impedance >10 kohms unbalanced/balanced, DC coupled

Nominal level -10dBV (316mV)

Maximum level +19.5dBu, (balanced or unbalanced) at 1%THD+N

Input gain adjustment

6-, 8-, 12-, 16-input models -15dB to +9dB, adjustable per input via RS-232/422 or front panel

24- and 36-input models . -18dB to +24dB, adjustable per input by RS-232/422 or front panel

Audio output

Number/signal type

MAV 62 2 stereo, balanced/unbalanced

MAV 84 RCA 4 stereo, unbalanced

MAV 128 RCA 8 stereo, unbalanced

MAV 168 Series 8 stereo, balanced/unbalanced

MAV 1616 Series, MAV 3216 Composite Video with Audio, MAV 3216 Audio
16 stereo, balanced/unbalanced

MAV 2412 Composite Video with Audio, MAV 2412 Audio
12 stereo, balanced/unbalanced

MAV 2424 Composite Video with Audio, MAV 2424 Audio
24 stereo, balanced/unbalanced

MAV 3232 Composite Video with Audio, MAV 3232 Audio
32 stereo, balanced/unbalanced

Connectors

MAV 62	(2) 3.5 mm captive screw connectors, 5 pole
MAV 84/128 RCA	(4 or 8) x 2 RCA female jacks
MAV/MSA 168/1616	(8 or 16) 3.5 mm captive screw connectors, 5 pole
MAV 2412/2424 Composite Video with Audio, MAV 2412/2424 Audio	(12 or 24) 3.5 mm captive screw connectors, 5 pole
MAV 3216/3232 Composite Video with Audio, MAV 3216/3232 Audio	(16 or 32) 3.5 mm captive screw connectors, 5 pole

Impedance

MAV 84/128 RCA	50 ohms unbalanced; capable of 600 ohms drive
All other audio models ...	50 ohms unbalanced, 100 ohms balanced

Gain error ±0.1dB channel to channel

Maximum level (Hi-Z) >+21dBu, balanced or unbalanced at stated %THD+N

Maximum level (600 ohm) >+15dBm, balanced or unbalanced at stated %THD+N

NOTE 0dBu = 0.775 volts (RMS).

Control/remote — switcher

Serial control port

MAV 62	RS-232, 9-pin female D connector
All other models	RS-232 or RS-422, 9-pin female D connector

Baud rate and protocol 9600, 8-bit, 1 stop bit, no parity

Serial control pin configurations 2 = TX, 3 = RX, 5 = GND

Program control Extron's control program for Windows®
Extron's Simple Instruction Set™ – SIS™

General

Power 100VAC to 240VAC, 50/60 Hz, internal, autoswitchable

MAV 168/1616 S-video/Component Video Series 40 watts

MAV 168/1616 Series (other than S-video or composite) .. 65 watts

MAV 2412/2424 Series 100 watts

MAV 3216/3232 Series 120 watts

All other models 15 watts

Temperature/humidity Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing
Operating +32° to +104°F (0° to +40°C) / 10% to 90%, non-condensing

Rack mount Yes (MAV 62 requires an optional 1U rack shelf, part #60-190-01)

Enclosure type Metal

Enclosure dimensions

MAV 62 1.75" H x 8.75" W x 9.5" D (1U high, half rack width)
4.4 cm H x 22.2 cm W x 24.1 cm D

MAV 84/128 RCA,
MAV 168/1616 audio only,

MAV 168/1616 composite .. 3.5" H x 17.0" W x 9.4" D (2U high, full rack width)
8.9 cm H x 43.2 cm W x 23.9 cm D
(Depth excludes connectors and controls. Width excludes rack ears.)

MAV 168/1616 S-video .. 5.25" H x 17.0" W x 9.4" D (3U high, full rack width)
13.3 cm H x 43.2 cm W x 23.9 cm D
(Depth excludes connectors and controls. Width excludes rack ears.)

MAV 168/1616 component
7.0" H x 17.0" W x 9.7" D (4U high, full rack width)
17.8 cm H x 43.2 cm W x 24.6 cm D
(Depth excludes connectors and controls. Width excludes rack ears.)

MAV 2412/2424 Series, MAV 3216/3232 Series
8.75" H x 17.0" W x 12.25" D (5U high, full rack width)
22.2 cm H x 43.2 cm W x 31.1 cm D
(Depth excludes connectors and controls. Width excludes rack ears.)

Specifications — MAV Series Switchers (continued)

Shipping/product weight

MAV 62	6 lbs (3 kg)/3.3 lbs (1.5 kg)
MAV 84/128 RCA	15 lbs (7 kg)/8.9 lbs (4.0 kg)
	DIM weight 25 lbs
MAV 168/1616 2U models .	15 lbs (7 kg)/9.4 lbs (4.3 kg)
	DIM weight 25 lbs
MAV 168/1616 3U models .	18 lbs (9 kg)/11.9 lbs (5.4 kg)
	DIM weight 25 lbs
MAV 168/1616 4U models .	22 lbs (10 kg)/14.4 lbs (6.5 kg)
	DIM weight 25 lbs
MAV 2412/3216 Series ..	24 lbs (11 kg)/19.4 lbs (8.8 kg)
	DIM weight TBD
MAV 2424/3232 Series ...	26 lbs (12 kg)/17.5 lbs (7.9 kg)
	DIM weight TBD

Vibration ISTA/NSTA 1A in carton (International Safe Transit Association)

Listings UL, CUL

Compliances

MAV 84/128 RCA	CE, FCC Class A & B, , VCCI, AS/NZS, ICES
MAV 2412/2424/3216/3232	CE, FCC Class A, VCCI, AS/NZS, ICES
All other models	CE

Warranty 3 years parts and labor

NOTE *Specifications are subject to change without notice.*

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