

# Extron® Electronics

INTERFACING, SWITCHING AND DISTRIBUTION



Video bandwidth:  
435 MHz (-3db) on  
composite models

Video bandwidth:  
270 MHz (-3db) on  
S-video models

Quarter rack width  
metal enclosure

Versatile mounting  
options including rack  
and under-desk mounts

Unity audio gain:  
selectable output audio  
gain (captive screw  
models only)

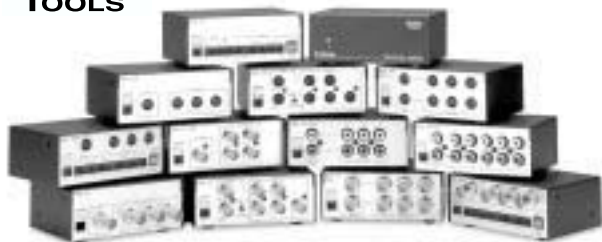
100-240VAC external  
international power  
supply



[www.extron.com](http://www.extron.com)

# DESCRIPTION

## VERSA™ TOOLS



Extron VersaTools™ is a new line of compact, versatile solution products designed for high-quality performance. VersaTools' small, quarter rack width enclosures, flexible mounting options (rack, under-desk, or stand-alone), and adaptable, external international power supply allow for easy integration into both new and existing A/V systems including boardrooms, training facilities, home theater, command and control centers, and rental and staging environments. The VersaTools line offers twelve affordable models of Mini Distribution Amplifiers for the distribution of a single source input to multiple outputs.

### Composite Video Models



MDA 3AV

Composite models have 435 MHz (-3dB) bandwidth to maintain signal integrity. Video input and outputs are on female BNC connectors.

Balanced/unbalanced stereo audio is accepted on captive screw connectors.

	AUD IN	AUD OUT	VID IN	VID OUT
MDA 3V	—	—	1	3
MDA 3V Dual	—	—	2	6
MDA 5V	—	—	1	5
MDA 3AV	1	3	1	3

### S-Video Models



MDA 3SVA

S-video models have 270 MHz (-3dB) bandwidth to maintain signal integrity. Video input and outputs are on female 4-pin mini-DIN connectors.

Balanced/unbalanced stereo audio is accepted on captive screw connectors.

	AUD IN	AUD OUT	VID IN	VID OUT
MDA 3SV	—	—	1	3
MDA 3SV Dual	—	—	2	6
MDA 5SV	—	—	1	5
MDA 3SVA	1	3	1	3

### Stereo Audio Models



MDA 3A

Audio models are available with either unbalanced RCA connectors or with captive screw connectors (balanced/unbalanced).

Captive screw models have selectable output gain via DIP switch. This feature provides unity gain for balanced or unbalanced audio signals.

	AUD IN	AUD OUT
MDA 3A	1	3
MDA 3A RCA	1	3
MDA 5A RCA	1	5

### SDI Model



MDA 4V SDI

SDI model accepts and distributes 4fsc PAL, 4fsc NTSC, component 4:2:2, and widescreen 4:2:2 standard SDI signals on female BNC connectors.

	VID IN	VID OUT
MDA 4V SDI	1	4

# SPECIFICATIONS

## Video

Gain .....	Unity
Bandwidth	
MDA 3SV/3SVA/3SV Dual,	
MDA 5SV .....	270 MHz (-3dB)
MDA 3V/3AV/3V Dual,	
MDA 5V .....	435 MHz (-3dB)
Differential phase error.....	0.05%, 0 to 50 MHz
Differential gain error.....	<0.05%, 0 to 50 MHz
K factor .....	<0.05%

## Video input

Number/signal type	
MDA 3SV/3SVA, MDA 5SV .....	1 NTSC/PAL/SECAM S-video
MDA 3SV Dual.....	2 NTSC/PAL/SECAM S-video
MDA 3V/3AV, MDA 5V .....	1 NTSC/PAL/SECAM composite video
MDA 3V Dual.....	2 NTSC/PAL/SECAM composite video

## Connectors

MDA 3SV/3SVA, MDA 5SV .....	1 4-pin mini DIN female
MDA 3SV Dual.....	2 4-pin mini DIN female
MDA 3V/3AV, MDA 5V .....	1 BNC female
MDA 3V Dual.....	2 BNC female

## Minimum/maximum levels

MDA 3SV/3SVA/3SV Dual,	
MDA 5SV .....	Y: 0.4 to 2.0V p-p with no offset
MDA 3V/3AV/3V Dual,	
MDA 5V .....	0.4 to 2.0V p-p with no offset at
Impedance .....	75 ohms
Return loss .....	-40dB @ 0 to 10 MHz
Maximum DC offset .....	1.0V

## Video output

Number/signal type	
MDA 3SV/3SVA .....	3 S-video
MDA 3SV Dual.....	6 S-video
MDA 5SV .....	6 S-video: 5 amplified for distribution, 1 passive loop-through
MDA 3V/3AV .....	3 composite video
MDA 3V Dual.....	6 composite video
MDA 5V .....	6 composite video: 5 amplified for distribution, 1 passive loop-through

## Connectors

MDA 3SV/3SVA .....	3 4-pin mini-DIN
MDA 3SV Dual.....	6 4-pin mini-DIN
MDA 5SV .....	6 4-pin mini-DIN
MDA 3V/3AV .....	3 BNC female
MDA 3V Dual.....	6 BNC female
MDA 5V .....	6 BNC female
Minimum/maximum level(s) .....	0.4V to 2.0V p-p
Impedance .....	75 ohms
Return loss .....	-30dB @ 5 MHz
DC offset .....	±5mV maximum with input at 0 offset

## Sync

Standards .....	NTSC 3.58, NTSC 4.43, PAL, SECAM
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## Audio — MDA 3AV, MDA 3SVA, MDA 3A/3A RCA, MDA 5A RCA

Gain (RCA models) .....	Unity
Gain (Captive screw models) .....	Selectable (via DIP switch)
Unbalanced out .....	0dB = unbalanced -6dB = balanced
Balanced out .....	+6dB = unbalanced 0dB = balanced
Frequency response.....	20 Hz to 20 kHz, ±0.05dB
THD + Noise.....	0.03% @ 1 kHz at rated maximum output drive
S/N .....	>90 dB, balanced at rated maximum output drive

Stereo channel separation .....	>80 dB @ 1 kHz; >60 dB @ 20 kHz
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CMRR.....	>75 dB @ 20 Hz to 20 kHz
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## Audio input — MDA 3AV, MDA 3SVA, MDA 3A/3A RCA, MDA 5A RCA

Number/signal type	
MDA 3A RCA, MDA 5A RCA....	1 stereo unbalanced
MDA 3AV, MDA 3SVA, MDA 3A..	1 stereo balanced/unbalanced
Connectors	
MDA 3A RCA, MDA 5A RCA....	2 RCA connectors
MDA 3AV, MDA 3SVA, MDA 3A..	1 3.5 mm captive screw connector, 5 pole

## Impedance

MDA 3A RCA, MDA 5A RCA....	>50 kohms unbalanced, DC coupled
MDA 3AV, MDA 3SVA, MDA 3A..	>50 kohms unbalanced, >25 kohms balanced, DC coupled
Maximum level.....	+24 dBu (balanced or unbalanced) at stated %THD+N

## Audio output — MDA 3AV, MDA 3SVA, MDA 3A/3A RCA, MDA 5A RCA

Number/signal type	
MDA 5A RCA.....	5 stereo, unbalanced
MDA 3A RCA.....	3 stereo, unbalanced
MDA 3AV, MDA 3SVA, MDA 3A..	3 stereo, balanced/unbalanced

## Connectors

MDA 5A RCA.....	10 RCA connectors
MDA 3A RCA.....	6 RCA connectors
MDA 3AV, MDA 3SVA, MDA 3A..	3 3.5 mm captive screw connectors, 5 pole

## Impedance

MDA 3A RCA, MDA 5A RCA....	50 ohms unbalanced
MDA 3AV, MDA 3SVA, MDA 3A..	50 ohms unbalanced, 100 ohms balanced

Gain error .....	±0.1dB channel to channel
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Maximum level (Hi-Z).....	>+24dBu, balanced or unbalanced at stated %THD+N
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Maximum level (600 ohm).....	>+15dBm, balanced or unbalanced at stated %THD+N
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NOTE: 0dBu = 0.775 volts (RMS).

## General

Power .....	100VAC to 240VAC, 50/60 Hz, 5 watts, external, auto-switchable; to 12VDC, 1 A (max.) power supply. Product requires 0.4 A.
Rack mount .....	Yes, with optional 1U rack shelf, part #60-190-01, or the VersaTools rack shelf, part #60-190-20
Enclosure type .....	Metal
Enclosure dimensions .....	1.7" H x 4.3" W x 3.0" D (1U high, quarter rack width) 4.2 cm H x 11.0 cm W x 7.6 cm D (Depth excludes connectors and knobs.)
Product weight: .....	0.7 lbs (0.3 kg)
Shipping weight: .....	3 lbs (1.4 kg)
Listings.....	UL, CUL
Compliances.....	CE, FCC Class A, VCCI, AS/NZS, ICES

## MDA 4V SDI Distribution Amplifiers

### Video

Gain .....	Unity
Resolution .....	8 or 10 bits, automatic
Operation standards .....	143 Mb/s (4fscNTSC) 177 Mb/s (4fscPAL) 270 Mb/s (4:2:2 component video) 360 Mb/s (4:2:2 widescreen component video), autoselected
Equalization and relocking .....	Automatic for up to 30dB of cable loss

# SPECIFICATIONS (Cont.)

## Video input

Number/signal type .....	1 SMPTE-259M serial digital component video
Connectors .....	1 BNC female
Minimum/maximum levels .....	0.5V to 1V p-p with no offset
Impedance .....	75 ohms
Return loss .....	-15dB @ 5 to 270 MHz
Maximum DC offset .....	5V

## Video output

Number/signal type .....	4 reclocked SMPTE-259M serial digital component video
Connectors .....	4 BNC female
Minimum/maximum levels .....	0V to 1.0V p-p
Impedance .....	75 ohms
Return loss .....	-30dB @ 5 MHz
DC offset .....	±5mV maximum with input at 0 offset

## Sync

Standards .....	4fscNTSC, 4fscPAL, SMPTE-259M
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## General

Power .....	100VAC to 240VAC, 50/60 Hz, 5 watts, external, auto-switchable; to 12VDC, 1 A (max.) power supply. Product requires 0.4 A.
Rack mount .....	Yes, with optional 1U rack shelf, part #60-190-01, or the VersaTools™ rack shelf, part #60-190-20
Enclosure type .....	Metal
Enclosure dimensions .....	1.7" H x 4.3" W x 3.0" D (1U high, quarter rack width) 4.2 cm H x 11.0 cm W x 7.6 cm D
Product weight .....	0.5 lbs (0.2 kg)
Shipping weight .....	2 lbs (0.9 kg)
Listings .....	UL, CUL
Compliances .....	CE, FCC Class A, VCCI, AS/NZS, ICES
Warranty .....	3 years parts and labor

Composite Video Models	Part Number
MDA 3V .....	60-439-01
MDA 3AV .....	60-439-20
MDA 3V DUAL .....	60-439-10
MDA 5V .....	60-446-01

## S-Video Models

MDA 3SV .....	60-444-01
MDA 3SVA .....	60-444-20
MDA 3SV DUAL .....	60-444-10
MDA 5SV .....	60-447-01

## Stereo Audio Models

MDA 3A .....	60-440-01
MDA 3A RCA .....	60-440-30
MDA 5A RCA .....	60-441-01

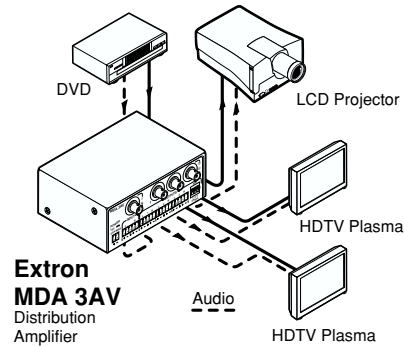
## SDI Models

MDA 4V SDI .....	60-448-01
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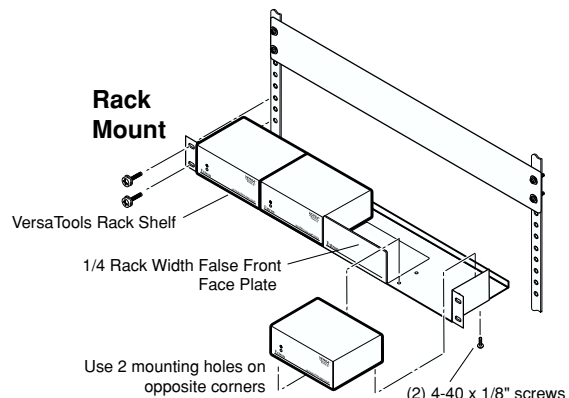
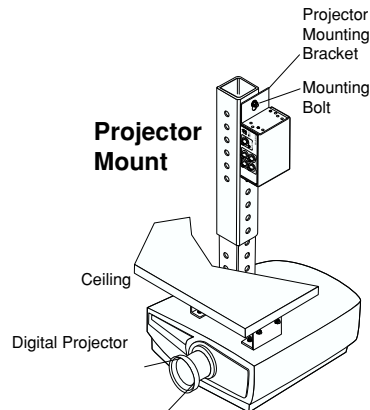
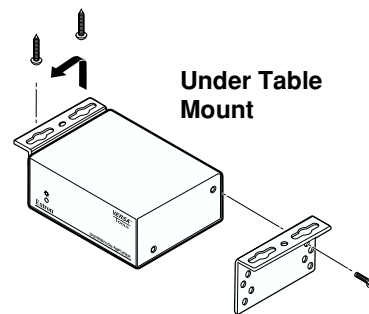
## Accessories

P/S 100 .....	60-357-01
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# APPLICATION DIAGRAMS



## Mounting Options



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