

MDA Series

MINI DISTRIBUTION AMPLIFIERS
FOR COMPOSITE VIDEO, S-VIDEO,
SDI SERIAL DIGITAL VIDEO,
AND STEREO AUDIO

- 10 models for composite video, S-video, SDI, and stereo audio
- Compatible with NTSC, PAL, and SECAM video standards
- 435 MHz (-3dB) video bandwidth, fully loaded, for composite video models
- 270 MHz (-3dB) video bandwidth, fully loaded for S-video models
- 143 to 360 Mbps, cable EQ to 1,000 feet (300 meters), for SDI model
- Balanced or unbalanced audio
- Rack mountable 1U, quarter rack width metal enclosure
- Versatile mounting options
- External international power supply included



The Extron MDA Series Mini Distribution Amplifiers are a series of active signal splitters which distribute audio and video from one source to multiple destinations while keeping the integrity of the original signal. This series includes 10 models for composite video, S-video, SDI serial digital video, and stereo audio. Part of the VersaTools line, MDA Series distribution amplifiers are the ideal solution for easy integration into both new and existing A/V system designs.



Extron® Electronics

www.extron.com

DESCRIPTION

The Extron **MDA Series** of Mini Distribution Amplifiers includes 10 models for composite video, S-video, SDI serial digital video, and stereo audio. The MDA Series video DAs are compatible with NTSC, PAL, and SECAM video signals, and allow for cable runs up to 150 feet with analog video, and up to 1000 feet with SDI digital video signals. Audio-capable MDA models feature captive screw or RCA connectors for balanced/unbalanced or unbalanced, line level stereo audio signals.

Part of the VersaTools® line of economical, compact products, MDA Series distribution amplifiers are rack or under-desk mountable and include an external international power supply. Their small size makes them an ideal solution 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.

Composite Video Models

Unique Features

- 435 MHz (-3 dB) video bandwidth, fully loaded
- Accepts and distributes composite video on BNC connectors
- AV model supports balanced/unbalanced audio on captive screw connectors



MDA 3V Dual

| Model | Version Description | Part Number |
|-------------|---------------------------------|-------------|
| MDA 3V | 1x3 Composite Video | 60-439-01 |
| MDA 3V Dual | Dual 1x3 Composite Video | 60-439-10 |
| MDA 3AV | 1x3 Composite w/Stereo Audio... | 60-439-20 |
| MDA 5V | 1x5 Composite Video | 60-439-20 |

S-Video Models

Unique Features

- 270 MHz (-3 dB) video bandwidth, fully loaded.
- Accepts and distributes S-video on 4-pin mini-DIN connectors.
- AV model supports balanced/unbalanced audio on captive screw connectors



MDA 3 SVA

| Model | Version Description | Part Number |
|----------|----------------------------------|-------------|
| MDA 3SV | 1x3 S-Video | 60-444-01 |
| MDA 3SVA | 1x3 S-Video w/Stereo Audio | 60-444-20 |
| MDA 5SV | 1x5 S-Video | 60-447-01 |

Stereo Audio Models

Unique Features

- Available with either RCA connectors for unbalanced audio or captive-screw connectors for balanced/unbalanced audio.
- Captive screw model has selectable output gain via DIP switch.



MDA 5A RCA

| Model | Version Description | Part Number |
|------------|--------------------------------|-------------|
| MDA 3A | 1x3 Stereo Audio | 60-440-01 |
| MDA 5A RCA | 1x5 Stereo Audio on RCAs | 60-439-10 |

SDI Models

Unique Features

- Accepts SMPTE 259M Serial Digital Video
- Recognizes NTSC, PAL, component 4:2:2, and widescreen 4:2:2 digital video standards
- Automatic cable equalization typically equalizes greater than 1,000 feet (300 meters) at 270 Mbps



MDA 4V SDI

| Model | Version Description | Part Number |
|------------|--------------------------------|-------------|
| MDA 4V SDI | 1x4 SDI - Serial Digital | 60-448-01 |

VIDEO

Gain Unity
 Bandwidth
 MDA 3V/3AV/3V Dual, MDA 5V 435 MHz (-3 dB)
 MDA 3SV/3SVA, MDA 5SV 270 MHz (-3 dB)

VIDEO INPUT

Number/signal type
 MDA 3SV/3SVA, MDA 5SV 1 S-video
 MDA 3V/3AV, MDA 5V 1 composite video
 MDA 3V Dual 2 composite video
 Connectors
 MDA 3SV/3SVA, MDA 5SV (1) 4-pin mini DIN female
 MDA 3V/3AV, MDA 5V 1 BNC female
 MDA 3V Dual 2 BNC female
 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 for composite video or Y of S-video with no offset
 Impedance 75 ohms
 Return loss
 MDA 3SV/3SVA, MDA 5SV <-25 dB @ 0 to 10 MHz
 All other models <-27 dB @ 5 MHz
 DC offset (max. allowable) <0.2 V
 Input coupling AC

VIDEO OUTPUT

Number/signal type
 MDA 3SV/3SVA 3 buffered S-video
 MDA 5SV 6 S-video: 5 buffered for distribution, 1 passive loop-through
 MDA 3V/3AV 3 buffered composite video
 MDA 3V Dual 2 x 3 buffered composite video
 MDA 5V 6 composite video: 5 buffered for distribution, 1 passive loop-through
 Connectors
 MDA 3SV/3SVA (3) 4-pin mini DIN female
 MDA 5SV (6) 4-pin mini DIN female
 MDA 3V/3AV 3 BNC female
 MDA 3V Dual 6 BNC female
 MDA 5V 6 BNC female
 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 <-30 dB @ 5 MHz
 DC offset ±50 mV with input at 0 offset

SYNC

Standards NTSC 3.58, NTSC 4.43, PAL, SECAM

AUDIO – MDA 3AV, MDA 3SVA, MDA 3A, MDA 5A RCA

Gain

| DIP Switch Setting | Output Wiring | |
|--------------------|---------------|----------|
| | Unbalanced | Balanced |
| Balanced | 0 dB | -6 dB |
| Unbalanced | +6 dB | 0 dB |

AUDIO – MDA 3AV, MDA 3SVA, MDA 3A, MDA 5A RCA

Frequency response 20 Hz to 20 kHz, ±0.05 dB
 THD + Noise 0.03% @ 1 kHz at nominal level
 S/N
 MDA 5A RCA >90 dB, unbalanced, at maximum output
 All other models w/audio >90 dB, balanced at maximum output
 Stereo channel separation >80 dB @ 1 kHz; >60 dB @ 20 kHz
 CMRR >75 dB @ 20 Hz to 20 kHz

AUDIO INPUT – MDA 3AV, MDA 3SVA, MDA 3A, MDA 5A RCA

Number/signal type
 MDA 5A RCA 1 stereo unbalanced
 MDA 3AV, MDA 3SVA, MDA 3A 1 stereo balanced/unbalanced

Connectors
 MDA 5A RCA 2 RCA connectors
 MDA 3AV, MDA 3SVA, MDA 3A (1) 3.5 mm captive screw connector, 5 pole
 Impedance
 MDA 5A RCA >10k ohms unbalanced, DC coupled
 MDA 3AV, MDA 3SVA, MDA 3A >50k ohms unbalanced, >25k ohms balanced, DC coupled
 Nominal level +4 dBu (1.23V), 0 dBu (0.775 V), -10 dBV (316 mV), -20 dBV (100 mV) compatible

Maximum level
 MDA 5A RCA +17 dBu (unbalanced) at 1%THD+N
 All other models w/audio +24 dBu (balanced) at 1%THD+N
NOTE: 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu

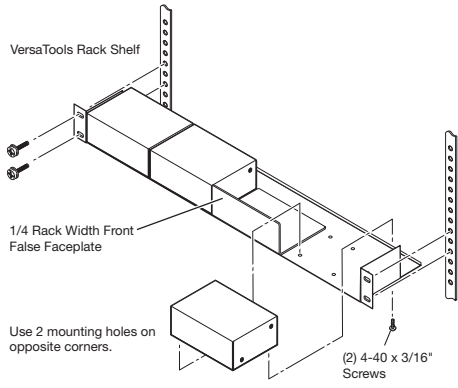
AUDIO OUTPUT – MDA 3AV, MDA 3SVA, MDA 3A, MDA 5A RCA

Number/signal type
 MDA 5A RCA 5 stereo, unbalanced
 MDA 3AV, MDA 3SVA, MDA 3A 3 stereo, balanced/unbalanced
 Connectors
 MDA 5A RCA 10 RCA connectors
 MDA 3AV, MDA 3SVA, MDA 3A (3) 3.5 mm captive screw connectors, 5 pole
 Impedance
 MDA 5A RCA 50 ohms unbalanced
 MDA 3AV, MDA 3SVA, MDA 3A 50 ohms unbalanced, 100 ohms balanced
 Gain error ±0.1 dB channel to channel
 Maximum level (Hi-Z)
 MDA 5A RCA +15 dBV, unbalanced, at 1%THD+N
 All other models w/audio >+24 dBu, balanced at 1%THD+N
 Maximum level (600 ohm)
 MDA 5A RCA >+14 dBm, unbalanced, at 1%THD+N
 All other models w/audio >+15 dBm, balanced or unbalanced, at 1%THD+N

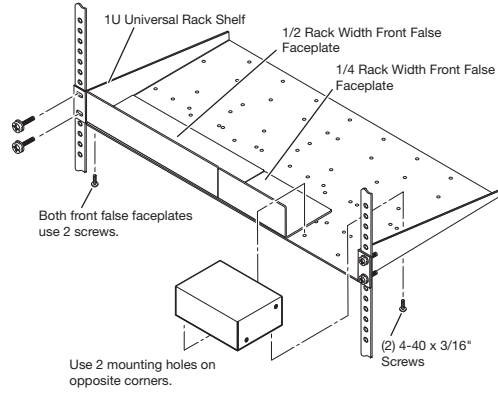
GENERAL

External power supply 100 VAC to 240 VAC, 50/60 Hz, 5 watts, external, autoswitchable; to 12 VDC, 1 A (max.), regulated
 Power input requirements
 MDA 3V/3SV/5V/5SV 12 VDC, 0.1 A (max.)
 MDA 3AV/3SVA 12 VDC, 0.3 A (max.)
 All other models 12 VDC, 0.2 A (max.)
 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 Yes, with optional 1U rack shelf, part #60-190-01, or 60-604-01; or the VersaTools® rack shelf, part #60-190-20, or 60-604-20
 Also furniture mountable with optional under desk mount kit, #70-212-01
 Enclosure type Metal
 Enclosure dimensions 1.7" H x 4.3" W x 3.0" D (1U high, quarter rack wide)
 4.2 cm H x 11.0 cm W x 7.6 cm D (Depth excludes connectors.)
 Product weight
 MDA 3V, MDA 3SVA 0.4 lbs (0.2 kg)
 MDA 3V Dual 0.7 lbs (0.3 kg)
 MDA 3AV 0.6 lbs (0.3 kg)
 MDA 5V, MDA 5SV 0.5 lbs (0.2 kg)
 MDA 3SV 0.4 lbs (0.2 kg)
 MDA 3A 0.5 lbs (0.2 kg)
 MDA 3A, MDA 5A RCA 0.4 lbs (0.2 kg)
 Shipping weight
 MDA 3V, MDA 3V Dual 3 lbs (2 kg)
 MDA 3AV, MDA 5V 3 lbs (2 kg)
 MDA 3SV 2 lbs (1 kg)
 MDA 3SVA, MDA 5SV 2 lbs (1 kg)
 MDA 3A, MDA 5A RCA 2 lbs (1 kg)
 Vibration ISTA 1A in carton (International Safe Transit Association)
 Listings UL, CUL
 Compliances 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%.

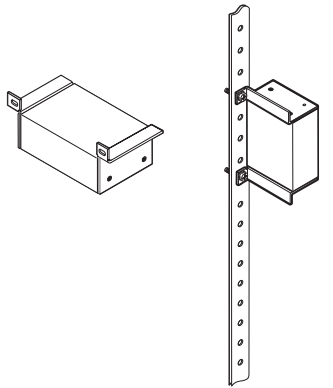
MOUNTING OPTIONS



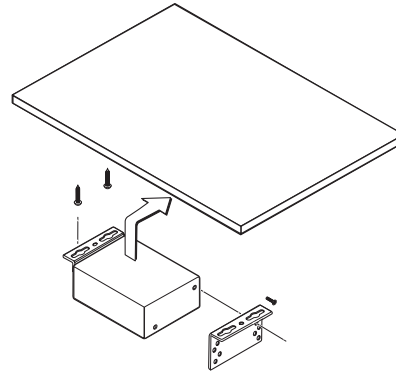
VersaTools Rack Shelf



1U Universal Rack Shelf

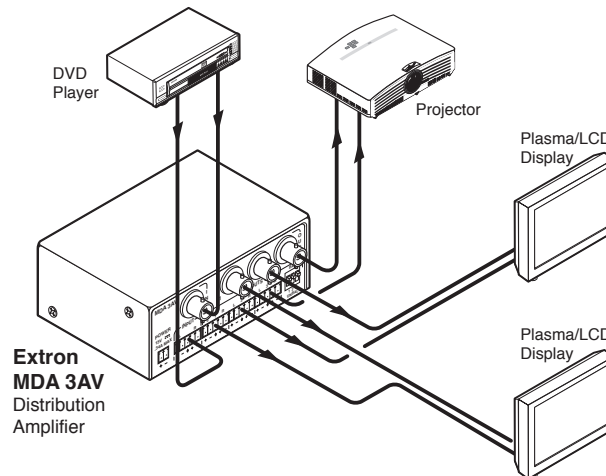


MBB 100
VersaTools Back of Rack Mounting Kit



MBU 123
VersaTools Mini Under-Desk Mount Kit

APPLICATION DIAGRAM



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