

User's Manual



DAV101CM Series, DAS101CM Series VGA Line Drivers and Audio Buffers

Precautions

Safety Instructions • English



This symbol is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.



This symbol is intended to alert the user of the presence of uninsulated dangerous voltage within the product's enclosure that may present a risk of electric shock.

Caution

Read Instructions • Read and understand all safety and operating instructions before using the equipment.

Retain Instructions • The safety instructions should be kept for future reference.

Follow Warnings • Follow all warnings and instructions marked on the equipment or in the user information.

Avoid Attachments • Do not use tools or attachments that are not recommended by the equipment manufacturer because they may be hazardous.

Consignes de Sécurité • Français



Ce symbole sert à avertir l'utilisateur que la documentation fournie avec le matériel contient des instructions importantes concernant l'exploitation et la maintenance (réparation).



Ce symbole sert à avertir l'utilisateur de la présence dans le boîtier de l'appareil de tensions dangereuses non isolées posant des risques d'électrocution.

Attention

Lire les instructions • Prendre connaissance de toutes les consignes de sécurité et d'exploitation avant d'utiliser le matériel.

Conservier les instructions • Ranger les consignes de sécurité afin de pouvoir les consulter à l'avenir.

Respecter les avertissements • Observer tous les avertissements et consignes marqués sur le matériel ou présents dans la documentation utilisateur.

Éviter les pièces de fixation • Ne pas utiliser de pièces de fixation ni d'outils non recommandés par le fabricant du matériel car cela risquerait de poser certains dangers.

Sicherheitsanleitungen • Deutsch



Dieses Symbol soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.



Dieses Symbol soll den Benutzer darauf aufmerksam machen, daß im Inneren des Gehäuses dieses Produktes gefährliche Spannungen, die nicht isoliert sind und die einen elektrischen Schock verursachen können, herrschen.

Achtung

Lesen der Anleitungen • Bevor Sie das Gerät zum ersten Mal verwenden, sollten Sie alle Sicherheits- und Bedienungsanleitungen genau durchlesen und verstehen.

Aufbewahren der Anleitungen • Die Hinweise zur elektrischen Sicherheit des Produktes sollten Sie aufbewahren, damit Sie im Bedarfsfall darauf zurückgreifen können.

Befolgen der Warnhinweise • Befolgen Sie alle Warnhinweise und Anleitungen auf dem Gerät oder in der Benutzerdokumentation.

Keine Zusatzgeräte • Verwenden Sie keine Werkzeuge oder Zusatzgeräte, die nicht ausdrücklich vom Hersteller empfohlen wurden, da diese eine Gefahrenquelle darstellen können.

Instrucciones de seguridad • Español



Este símbolo se utiliza para advertir al usuario sobre instrucciones importantes de operación y mantenimiento (o cambio de partes) que se desean destacar en el contenido de la documentación suministrada con los equipos.



Este símbolo se utiliza para advertir al usuario sobre la presencia de elementos con voltaje peligroso sin protección aislante, que puedan encontrarse dentro de la caja o alojamiento del producto, y que puedan representar riesgo de electrocución.

Precación

Leer las instrucciones • Leer y analizar todas las instrucciones de operación y seguridad, antes de usar el equipo.

Conservar las instrucciones • Conservar las instrucciones de seguridad para futura consulta.

Obedecer las advertencias • Todas las advertencias e instrucciones maradas en el equipo o en la documentación del usuario, deben ser obedecidas.

Evitar el uso de accesorios • No usar herramientas o accesorios que no sean específicamente recomendados por el fabricante, ya que podrían implicar riesgos.

Warning

Power sources • This equipment should be operated only from the power source indicated on the product. This equipment is intended to be used with a main power system with a grounded (neutral) conductor. The third (grounding) pin is a safety feature, do not attempt to bypass or disable it.

Power disconnection • To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).

Power cord protection • Power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them.

Servicing • Refer all servicing to qualified service personnel. There are no user-serviceable parts inside. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.

Slots and openings • If the equipment has slots or holes in the enclosure, these are provided to prevent overheating of sensitive components inside. These openings must never be blocked by other objects.

Lithium battery • There is a danger of explosion if battery is incorrectly replaced. Replace it only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Avvertimento

Alimentazione • Non fare funzionare ce matériel qu'avec la source d'alimentation indiquée sur l'appareil. Ce matériel doit être utilisé avec une alimentation principale comportant un fil de terre (neutre). Le troisième contact (de mise à la terre) constitue un dispositif de sécurité: n'essayez pas de la contourner ni de la désactiver.

Déconnexion de l'alimentation • Pour mettre le matériel hors tension sans danger, déconnectez tous les cordons d'alimentation de l'arrière de l'appareil ou du module d'alimentation de bureau (s'il est amovible) ou encore de la prise secteur.

Protection du cordon d'alimentation • Achémener les cordons d'alimentation de manière à ce que personne ne risque de marcher dessus et à ce qu'ils ne soient pas écrasés ou pincés par des objets.

Réparation-maintenance • Faire exécuter toutes les interventions de réparation-maintenance par un technicien qualifié. Aucun des éléments internes ne peut être réparé par l'utilisateur. Afin d'éviter tout danger d'électrocution, l'utilisateur ne doit pas essayer de procéder lui-même à ces opérations car l'ouverture ou le retrait des couvercles risquent de l'exposer à de hautes tensions et autres dangers.

Fentes et orifices • Si le boîtier de l'appareil comporte des fentes ou des orifices, ceux-ci servent à empêcher les composants internes sensibles de surchauffer. Ces ouvertures ne doivent jamais être bloquées par des objets.

Lithium Batterie • Il a danger d'explosion s'il y a un remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

Vorsicht

Stromquellen • Dieses Gerät sollte nur über die auf dem Produkt angegebene Stromquelle betrieben werden. Dieses Gerät wurde für eine Verwendung mit einer Hauptstromleitung mit einem geerdeten (neutralen) Leiter konzipiert. Der dritte Kontakt ist für einen Erdschluß, und stellt eine Sicherheitsfunktion dar. Diese sollte nicht umgangen oder außer Betrieb gesetzt werden.

Stromunterbrechung • Um das Gerät auf sichere Weise vom Netz zu trennen, sollten Sie alle Netzkabel aus der Rückseite des Gerätes, aus der externen Stromversorgung (falls dies möglich ist) oder aus der Wandsteckdose ziehen.

Schutz des Netzkabels • Netzkabel sollten stets so verlegt werden, daß sie nicht im Weg liegen und niemand darauf treten kann oder unmittelbar dagegen gestellt werden können.

Wartung • Alle Wartungsmaßnahmen sollten nur von qualifiziertem Servicepersonal durchgeführt werden. Die internen Komponenten des Gerätes sind wartungsfrei. Zur Vermeidung eines elektrischen Schocks versuchen Sie in keinem Fall, dieses Gerät selbst öffnen, da beim Entfernen der Abdeckungen die Gefahr eines elektrischen Schlags und/oder anderer Gefahren bestehen.

Schlitze und Öffnungen • Wenn das Gerät Schlitze oder Löcher im Gehäuse aufweist, dienen diese zur Vermeidung einer Überhitzung der empfindlichen Teile im Inneren. Diese Öffnungen dürfen niemals von anderen Objekten blockiert werden.

Lithium-Batterie • Explosionsgefahr, falls die Batterie nicht richtig ersetzt wird. Ersetzen Sie verbrauchte Batterien nur durch den gleichen oder einen vergleichbaren Batterietyp, der auch vom Hersteller empfohlen wird. Entsorgen Sie verbrauchte Batterien bitte gemäß den Herstelleranweisungen.

Advertencia

Alimentación eléctrica • Este equipo debe conectarse únicamente a la fuente/tipo de alimentación eléctrica indicada en el mismo. La alimentación eléctrica de este equipo debe provenir de un sistema de distribución con conductor neutro a tierra. La tercera pata (puesta a tierra) es una medida de seguridad, no puentearla ni eliminarla.

Desconexión de alimentación eléctrica • Para desconectar con seguridad la conectada de alimentación eléctrica al equipo, desenchufar todos los cables de alimentación en el panel trasero del equipo, o desenchufar el módulo de alimentación (si fuera independiente), o desenchufar el cable del receptáculo de la pared.

Protección del cables de alimentación • Los cables de alimentación eléctrica se deben instalar en lugares donde no sean pisados ni apretados por objetos que se puedan apoyar sobre ellos.

Reparaciones/mantenimiento • Solicitar siempre los servicios técnicos de personal calificado. En el interior no hay partes a las que el usuario debe acceder. Para evitar riesgo de electrocución, no intentar personalmente la reparación/mantenimiento de este equipo, ya que al abrir o extraer las tapas puede quedar expuesto a voltajes peligrosos u otros riesgos.

Ranuras y aberturas • Si el equipo posee ranuras o aberturas en su caja/alojamiento, es para evitar el sobrecalentamiento de componentes internos sensibles. Estas aberturas nunca se deben obstruir con otros objetos.

Batería de litio • Existe riesgo de explosión si esta batería se coloca en la posición incorrecta. Cambiar esta batería únicamente con el mismo tipo (o su equivalente) recomendado por el fabricante. Desachar las baterías usadas siguiendo las instrucciones del fabricante.

安全须知 • 中文



这个符号提示用户该设备用户手册中有重要的操作和维护说明。



这个符号警告用户该设备机壳内有暴露的危险电压，有触电危险。

注意

阅读说明书 • 用户使用该设备前必须阅读并理解所有安全和使用说明。

保存说明书 • 用户应保存安全说明书以备将来使用。

遵守警告 • 用户应遵守产品和用户指南上的所有安全和操作说明。

避免追加 • 不要使用该产品厂商没有推荐的工具或追加设备，以避免危险。

警告

电源 • 该设备只能使用产品上标明的电源。设备必须使用有地线的供电系统供电。第三条线（地线）是安全设施，不能不用或跳过。

拔掉电源 • 为安全地从设备拔掉电源，请拔掉所有设备后或桌面电源的电源线，或任何接到市电系统的电源线。

电源线保护 • 妥善布线，避免被踩踏，或重物挤压。

维护 • 所有维修必须由认证的维修人员进行。设备内部没有用户可以更换的零件。为避免出现触电危险不要自己试图打开设备盖子维修该设备。

通风孔 • 有些设备机壳上有通风槽或孔，它们是用来防止机内敏感元件过热。不要用任何东西挡住通风孔。

锂电池 • 不正确的更换电池会有爆炸的危险。必须使用与厂家推荐的相同或相近型号的电池。按照生产厂的建议处理废弃电池。

FCC Class A Notice

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. The Class A limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

NOTE *This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance with FCC emissions limits.*



Quick Start — DAV/DAS101CM Series

CAUTION

Installation and service must be performed by authorized personnel only. These units must be installed in accordance with national and local electrical codes.

To install the DAV101CM and DAS101CM modules, see the appropriate section of this manual and follow these steps:

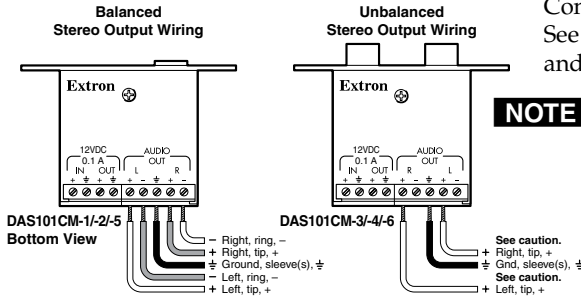
Step 1

Install an electrical box or wall bracket (if applicable) and cables. Use cable clamps to hold cables in place for strain relief. Trim back or insulate exposed cable shields with heat shrink to prevent short circuits. See [pages 2-2 to 2-3](#).

Step 2

Attach cables to the rear panel. Ensure that power and output cables have been fed through the wallbox/furniture and out the front of the faceplate, frame, or panel. Connect modules to each other (if applicable) and to the power supply, but do not apply power yet.

Connect output cables. See the diagrams here and on [pages 2-4 to 2-6](#).



NOTE

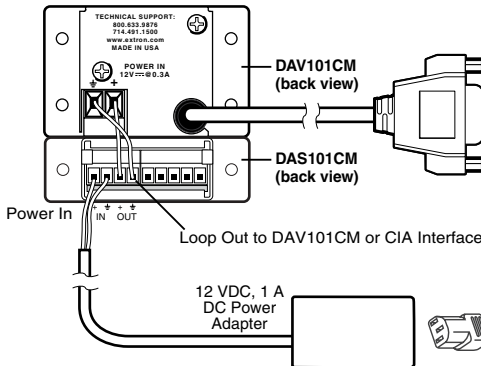
The channels of the DAS101CM-3/4 are reversed (R-L instead of L-R) relative to the DAS101CM-1/-2.

CAUTION

For unbalanced output, connect the sleeve to ground (Gnd, \perp). Connecting the sleeve to a negative (-) terminal will damage the audio output circuits.

CAUTION

The pin assignments of the DAS's power input and power loop-through ports are different from those of the DAV's power input.



Double-check your work against the wiring diagrams. Power wires must be attached to the correct terminals on each connector or these products can be damaged.

Quick Start Guide — DAV/DAS101CM, cont'd

Step 3

For wall/furniture or rack installations, attach the module(s) to a CPM Series mini architectural adapter plate (MAAP) frame or to a rack-mountable frame. See [pages 2-3 and 2-4](#).

Step 4

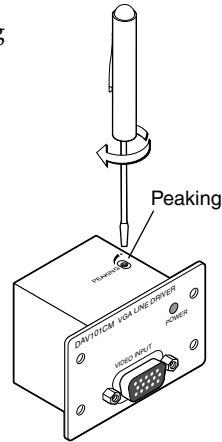
Attach the front panel input cable(s).

Step 5

Verify correct cabling and connector wiring and test the system: power on all the devices and monitor the audio/video output. Each DAV module's Power LED is lit while the unit receives power. If needed, power off the devices, disconnect the modules' power supply, correct cabling or wiring errors, then restore power.

Step 6

For a DAV101CM, set the sharpness/peaking control using a small screwdriver, as shown at right. See [page 2-8](#).



Step 7

Disconnect power from the module(s) and other devices.

Step 8

For wall or furniture mounting, mount the modular connector frame and module(s) to the wall or furniture.

For device mounting, mount the module(s) to the device's faceplate.

For rack mounting, mount the rack-mountable frame to the equipment rack.

See [pages 2-9 and 2-10](#). For all installations, place the connector plate onto/against the mounting surface and secure it to wall, furniture, device, or rack with the provided screws or bolts. Be careful not to damage the cables.

Step 9

Restore power to the devices. You have completed the installation.

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DAV101CM, DAS101CM

1

Chapter One

Introduction

About This Manual

About the DAV/DAS101CM Series

Features

Introduction

About this Manual

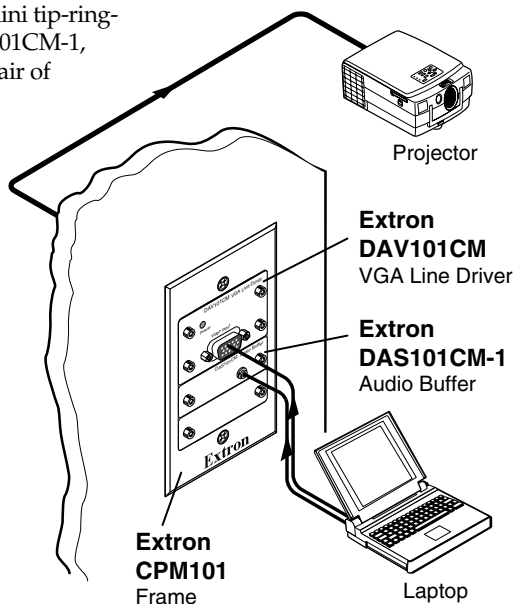
This manual contains information about the Extron DAV101CM VGA–QXGA line drivers and DAS101CM Series audio buffers and on how to install them.

About the DAV/DAS101CM Series

The Extron DAV101CM Series modules are compact, one input, one output, 400 MHz (-3 dB) bandwidth, VGA–QXGA line drivers that amplify the signal from a laptop, desktop, or other computer-video source. Each DAV101CM module buffers and equalizes RGB and sync signals so they can be output on one set of five BNC connectors (DAV101CM-3, -4, or -6) or one 15-pin HD connector (DAV101CM-1, -2, or -5) and sent 150 feet or more on Extron Mini HR cable.

The Extron DAS101CM Series modules are compact audio buffers. Each module accepts one unbalanced audio input (on either a 3.5 mm mini tip-ring-sleeve jack [DAS101CM-1, -2, or -5] or on a pair of RCA connectors [DAS101CM-3, -4, or -6]) and provides one balanced or unbalanced audio output (on a 3.5 mm, 5-pole captive screw connector).

A typical application



Features

Compact design and light weight — These modules can be easily packed into a laptop case, portable projector case, or technician's tool kit.

Furniture- and rack-mountable design — The DAV/DAS101CM modules can be mounted in a wall or furniture using a connector module frame and a junction box or a wall bracket. They can also be mounted in products with openings that accommodate this style of connector module or mounted to a CPM Series rack-mountable frame.



Choice of colors — The modules are available with black, white, or RAL9010 white faceplates.

DAV101CM Series



DAV101CM-3 (black)
-4 (white)
-6 (RAL 9010)

DAV101CM-1 (black)
-2 (white)
-5 (RAL9010)

Adjustable peaking control — High frequency equalization compensates for signal losses that occur in long cable runs. The DAV101CM can drive signals for up to 150 feet of Extron Mini HR cable or 250 feet of Extron SHR cable. The variable sharpness control lets you select the best peaking setting for the resolution and cable length.

Sync signal buffering with AGC — These modules provide sync signal buffering and automatic gain control (AGC) to restore sync signals to proper TTL levels for enhanced stability and reliability over extended cable runs.

DAS101CM Series



DAS101CM-1 (black)
-2 (white)
-5 (RAL9010)

DAS101CM-3 (black)
-4 (white)
-6 (RAL9010)

Balanced or unbalanced audio output — Unbalanced, line level stereo audio inputs can be output as balanced or unbalanced stereo audio.

Power loop-through for a paired DAV101CM — A DAS101CM can be mounted in a faceplate together with a DAV101CM and share a single power supply so audio and computer

Introduction, cont'd

video can be input, buffered, and driven from the same location.



DAV101CM, DAS101CM

2

Chapter Two

Installation and Operation

Installing a Wall Box or Wall Bracket

Mounting the Module Into a Connector Module Frame
or Rack-mountable Frame

Rear Panel Features and Cabling

Front Panel Features and Cabling

Adjusting Sharpness (DAV Modules)

Mounting the Modules

Installation and Operation

The DAV/DAS101CM modules can be attached to a CPM mini architectural adapter plate (MAAP) mounting frame and mounted in a wall or furniture using either a one-gang wall box or a wall bracket. Alternatively they can be mounted in the chassis of a device (such as a CIA Series interface) that accommodates connector modules, or attached to a CPM Series rack-mountable frame for mounting in a standard equipment rack.

Installing a Wall Box or Wall Bracket

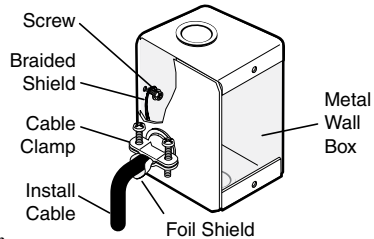
For wall and furniture mounting installations, the installation site must be deep enough for both the wall box (or the DAV/DAS, if using a wall bracket) and the cables. The box should be at least 2.5" (6.4 cm) deep. Install cables into the wall, furniture, or conduits before installing a wall box or bracket.

1. Place the wall box or mounting bracket against the installation surface; mark the guidelines for the opening on the wall or furniture.
2. Cut out the material from the marked area.
3. Insert the wall box/bracket to check the opening's size and fit. Enlarge or smooth the edges of the opening if needed.
4. Feed cables through the wall box's punch-out holes, ground shields, and secure cables with cable clamps to provide strain relief.

Grounding shields →

WARNING

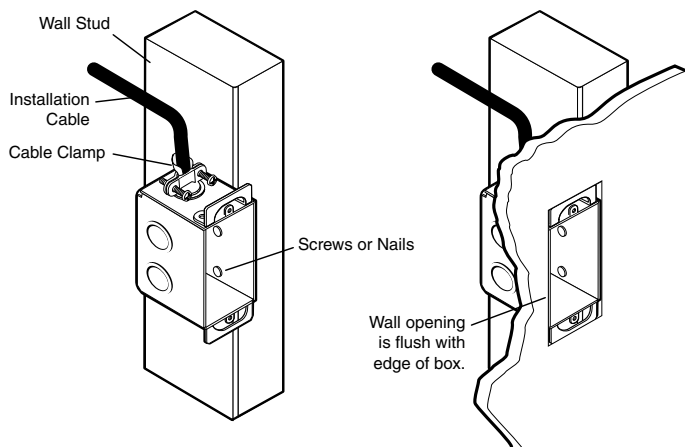
To prevent short circuits, the outer foil shield can be cut back to the point where the cable exits the cable clamp. Connect both braided and foil shields to an equipment ground at the other end of the cable. Insulate any exposed shields with heat shrink



5. Insert the wall box or wall bracket into the opening, and attach it to the wall, stud, or furniture, leaving the front edge flush with the outer wall or furniture surface.

To attach a wall box to wood, use four #8 or #10 screws or 10-penny nails. A minimum of 1/2 inch (1.3 cm) of screw threads must penetrate the wood.

To attach a wall box to metal, use four #8 or #10 self-tapping sheet metal screws or machine bolts with matching nuts.



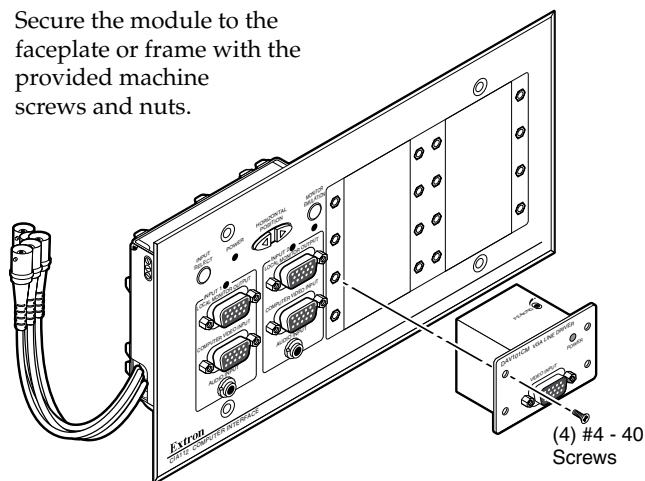
Attaching a wall box to a wall stud

7. Mount the module(s) onto a mounting frame, then cable and test the DAV/DAS before fastening it into the wall box or bracket. The cables are inaccessible after installation.

Mounting the Module Into a Connector Module Frame or Rack-mountable Frame

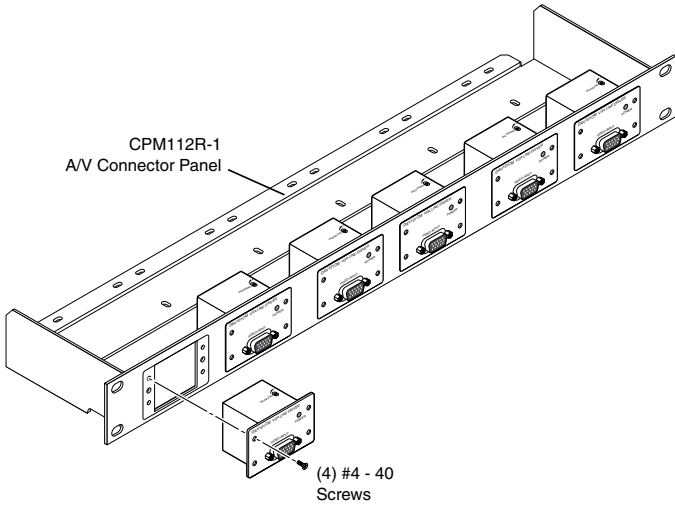
For wall, furniture, or rack mounting installations. DAV and DAS modules must be attached to a faceplate, frame, or CPM Series rack-mountable frame and cabled before being installed.

1. Insert the module into the faceplate's or frame's opening.
2. Secure the module to the faceplate or frame with the provided machine screws and nuts.



Attaching a DAS/DAV101CM to a device's faceplate

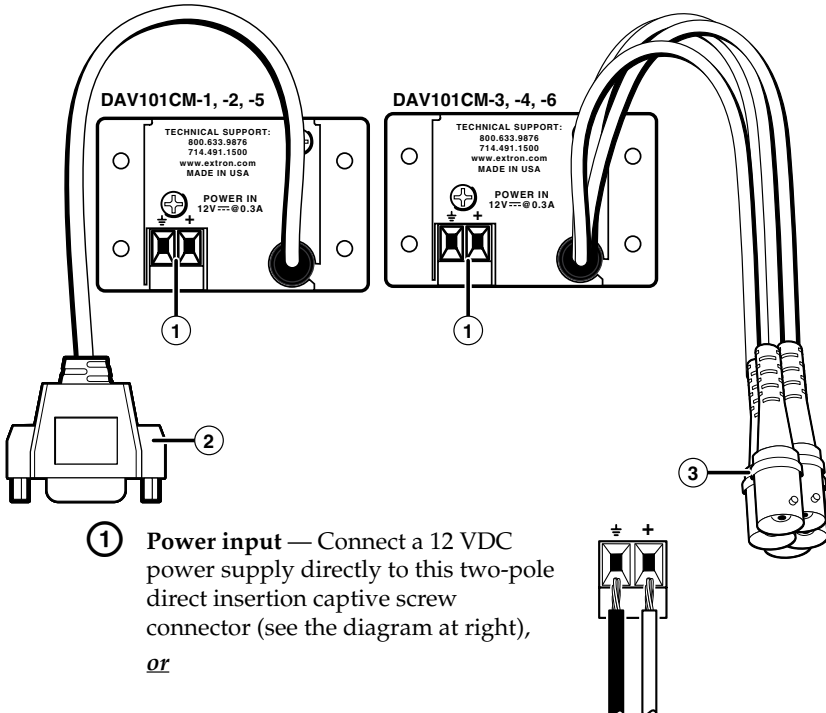
Installation and Operation, cont'd



Attaching a DAS/DAV to a CPM rack-mountable frame

Rear Panel Features and Cabling

DAV101CM Series



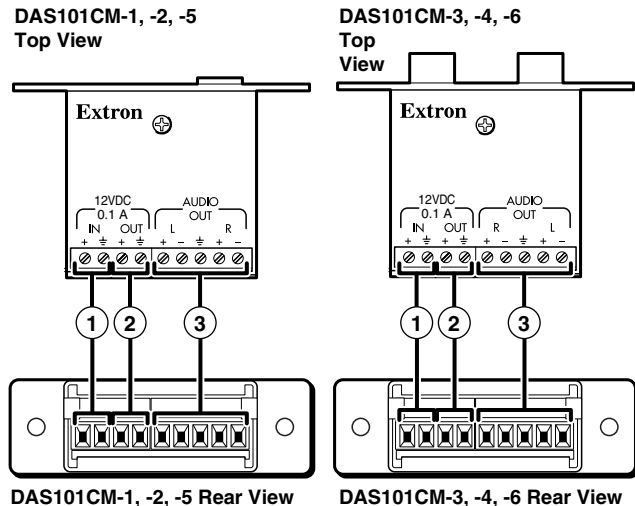
connect the power supply to a DAS101CM module's 12 VDC In port and loop the power through to the DAV101CM via the DAS101CM's 12 VDC Out port (see [page 2-6](#)).

NOTE Do not tin the stripped power supply leads before installing the captive screw connector.

CAUTION Correct polarity is important! The power wires must be attached to the correct terminals or the module can be damaged.

- ② **15-pin HD computer-video output** (DAV101CM-1, -2, -5) — Attach this connector to the display's 15-pin HD input connector.
- ③ **BNC computer-video output** (DAV101CM-3, -4, -6) — Attach these five male BNC connectors to the display's BNC input connectors.

DAS101CM Series, and DAV-DAS interconnection



- ① **12 VDC, 0.1 A In (power input)** — Connect a 12VDC, 1 A power supply to these two poles of the DAS's 4-pole direct insertion captive screw connector for power input.

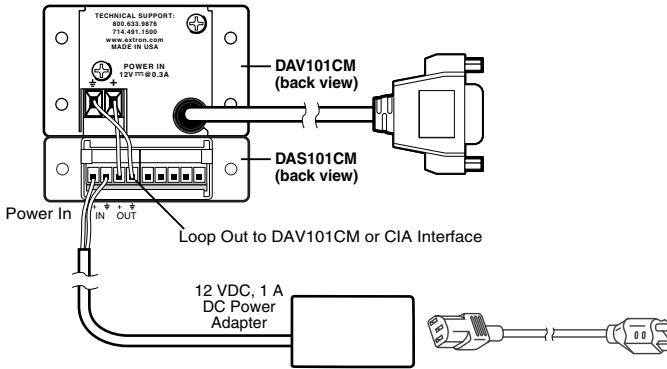
CAUTION Correct polarity is important! The power wires must be attached to the correct terminals or the module can be damaged.

- ② **12 VDC, 0.1 A Out (power loop-through for DAV101CM modules)** — This port allows power to be looped through to a DAV101CM. See the wiring diagram on the next page.

Installation and Operation, cont'd

CAUTION

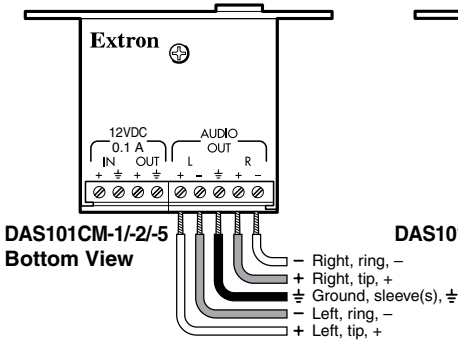
The pin assignments of the DAS's power input and power loop-through ports are different from those of the DAV modules' power input. Double-check your work against the wiring diagram. Power wires must be attached to the correct terminals on each connector or these products can be damaged.



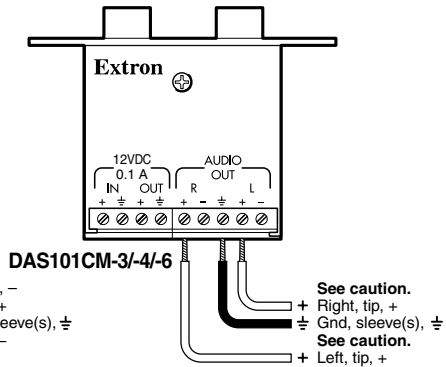
DAV-DAS power interconnection

- ③ **Audio output** — Wire this 5-pole, 3.5 mm, direct insertion captive screw connector as shown below for either balanced or unbalanced stereo audio output.

Balanced Stereo Output Wiring



Unbalanced Stereo Output Wiring



NOTE

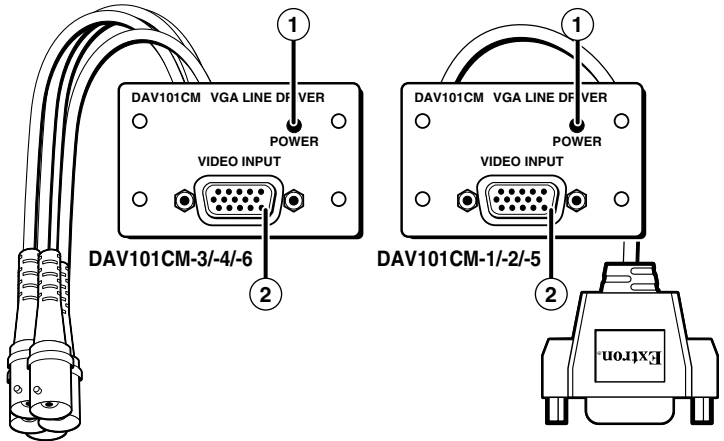
The left and right channels of the DAS101CM-3/-4/-6 are reversed (R-L instead of L-R) relative to the DAS101CM-1/-2/-5, as shown above.

CAUTION

For unbalanced output, connect the sleeve to ground (Gnd, ⊖). Connecting the sleeve to a negative (-) terminal will damage the audio output circuits.

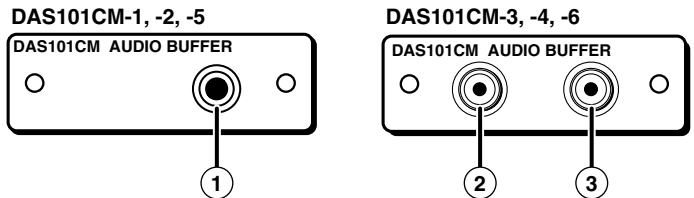
Front Panel Features and Cabling

DAV101CM Series

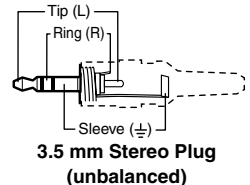


- ① **Power LED** — This indicator remains lit while the DAV is receiving power.
- ② **Video Input** — Connect a cable from the source computer to the DAV via this 15-pin HD connector, which provides ID bit termination on pins 4 and 11.

DAS101CM Series

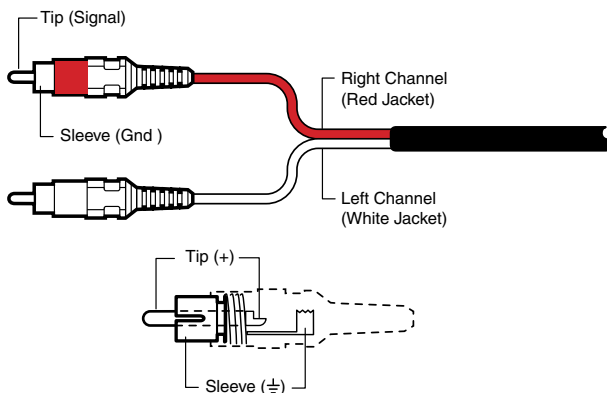


- ① **Stereo audio input (DAS101CM-1, -2, -5)** — Connect an unbalanced, line level stereo audio source to this mini stereo jack using a 3.5 mm tip-ring-sleeve connector wired as shown at right.
- ②, ③ **Left and right audio inputs (DAS101CM-3, -4, -6)** — Connect an unbalanced, line level, stereo audio source to these RCA (tip-ring) jacks.



Wire the plugs as shown in the following diagram.

Installation and Operation, cont'd



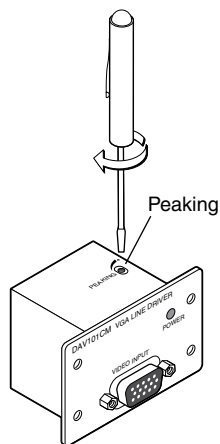
RCA connector wiring for DAS101CM-3,-04 audio input

Adjusting Sharpness (DAV Modules)

The longer the cable being used, the greater the signal loss. The DAV101CMs have an adjustable sharpness/peaking control that equalizes the video signal to compensate for signal losses. The DAV101CM can drive signals for up to 150 feet of Extron mini HR cable or 250 feet of Extron SHR cable.

While viewing the output image, use a small screwdriver to rotate this potentiometer to select the setting that gives the clearest pictures.

CAUTION *Using a larger screwdriver can break the potentiometer.*



Mounting the Modules

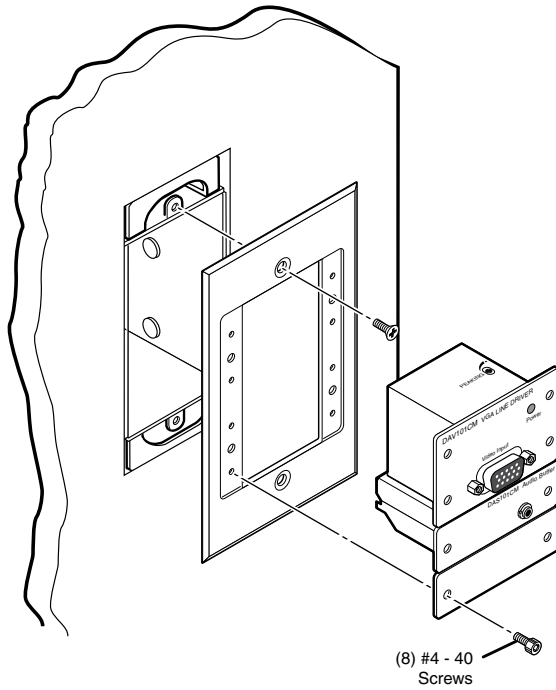
Test the system. Adjust the sharpness (see "Adjusting Sharpness") or disconnect the power and correct any cabling or wiring errors before mounting the modules.

CAUTION *To avoid the risk of electrical shock, disconnect power from the DAV or DAS module before mounting it.*

For all installations, place the DAV's or DAS's faceplate (or the mounting frame it is attached to) onto/against the mounting surface and secure it with the provided screws or bolts. Be careful not to damage the cables.

Wall/furniture mounting

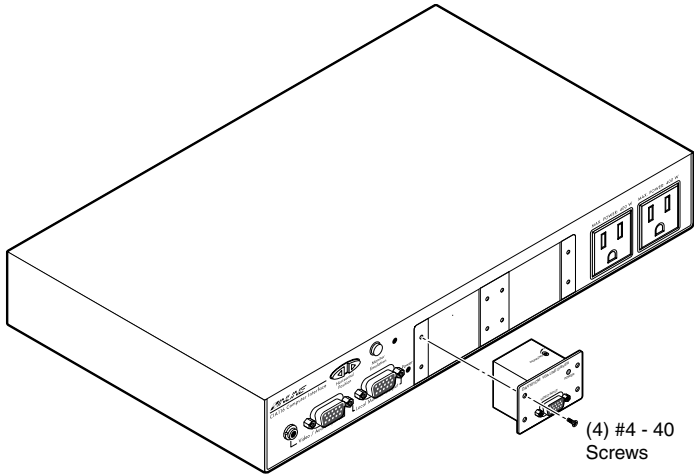
Mount the frame and module(s) to the wall or furniture, as shown below.



Installation and Operation, cont'd

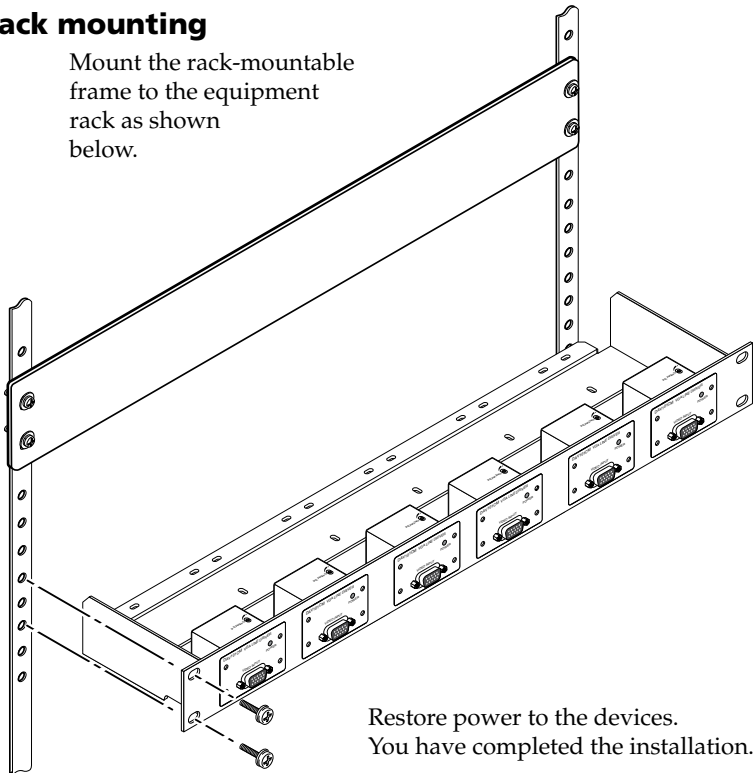
Device mounting

Mount the module(s) to the device's faceplate, as shown below.



Rack mounting

Mount the rack-mountable frame to the equipment rack as shown below.





DAV101CM, DAS101CM

A

Appendix A

Specifications, Part Numbers, and Accessories

Specifications

Included Parts

Accessories

Cables

Specifications, Part Numbers, and Accessories

Specifications

Video— DAV101CM

Gain	Unity
Bandwidth.....	400 MHz (-3 dB)

Video input— DAV101CM

Number/signal type.....	1 VGA–QXGA RGBHV, RGBS, RGsB, RsGsBs, or HDTV component video
Connectors	(1) 15-pin HD female
Nominal level	1 Vp-p for Y of component video 0.7 Vp-p for RGB and for R-Y and B-Y of component video
Minimum/maximum levels.....	Analog: 0.3 V to 1.5 Vp-p with no offset
Impedance.....	75 ohms
Horizontal frequency.....	15 kHz to 175 kHz
Vertical frequency.....	30 Hz to 150 Hz
Return loss.....	<-40 dB @ 5 MHz

Video output— DAV101CM

Number/signal type.....	1 VGA–QXGA RGBHV, RGBS, RGsB, RsGsBs, or HDTV component video
Connectors	
DAV101CM-1, -2, -5	(1) 15-pin HD female on a 6" (15 cm) pigtail
DAV101CM-3, -4, -6	(1) set of 5 BNC female on 6.25" to 7" (15.9 to 17.8 cm) pigtails
Nominal level	1 Vp-p for Y of component video 0.7 Vp-p for RGB and for R-Y and B-Y of component video
Minimum/maximum levels.....	Analog: 0.3 V to 1.5 Vp-p (follows input)
Impedance.....	75 ohms
Return loss.....	<-40 dB @ 5 MHz
DC offset.....	±50 mV with input at 0 offset

Sync— DAV101CM

Input type.....	RGBHV, RGBS, RGsB, RsGsBs, bi-level and tri-level sync
Output type.....	RGBHV, RGBS, RGsB, RsGsBs, bi-level and tri-level sync (follows input)
Input level	1.7 V to 5.0 Vp-p
Output level	TTL: 5.0 Vp-p, unterminated

Input impedance	510 ohms
Output impedance	<50 ohms
Max. propagation delay	<25 ns
Max. rise/fall time	<5 ns
Polarity.....	Positive or negative (follows input)

Audio— DAS101CM

Gain	Unbalanced output: 0 dB; Balanced output: +6 dB
Frequency response	20 Hz to 20 kHz, ± 0.5 dB
THD + Noise.....	<0.025% @ 1 kHz, <0.020% @ 20 kHz at nominal level
S/N.....	>100 dB at maximum output (unweighted)
Stereo channel separation	
DAS101CM-1, -2, -5.....	>56 dB @ 20 Hz to 10 kHz
DAS101CM-3, -4, -6.....	>75 dB @ 20 Hz to 10 kHz

Audio input— DAS101CM

Number/signal type.....	1 stereo, unbalanced, line level
Connectors	
DAS101CM-1, -2, -5.....	(1) 3.5 mm mini audio jack (tip-ring-sleeve), female
DAS101CM-3, -4, -6.....	1 pair of RCA (tip-ring) jacks, female
Impedance.....	>10 kohms unbalanced, DC coupled
Nominal level	-10 dBV (316 mVrms)
Maximum level.....	+6 dBu, (balanced or unbalanced) at 1% THD+N

NOTE $0 \text{ dBu} = 0.775 \text{ Vrms}$, $0 \text{ dBV} = 1 \text{ Vrms}$, $0 \text{ dBV} \approx 2 \text{ dBu}$

Audio output— DAS101CM

Number/signal type.....	1 stereo, balanced/unbalanced
Connectors	(1) 3.5 mm direct insertion captive screw connector, 5 pole
Impedance.....	50 ohms unbalanced, 100 ohms balanced
Nominal level	-2 dBu (0.632 Vrms) for balanced output
Maximum level (Hi-Z)	>+15 dBu, balanced or unbalanced at 1% THD+N
Maximum level (600 ohm).....	>+13 dBm, balanced or unbalanced at 1% THD+N

Specifications, Part Numbers, Accessories, cont'd

General

External power supply	100 VAC to 240 VAC, 50/60 Hz, 3 watts, external, to a 12 VDC, 1 A power supply (#70-055-01 included for the DAV101CM, optional for the DAS101CM).
Power input requirements	
DAV101CM	12 VDC, 0.3 A
DAS101CM.....	12VDC, 0.1 A
Temperature/humidity	Storage: -40 to +158 °F (-40 to +70 °C) / 10% to 90%, noncondensing Operating: +32 to +113 °F (0 to +45 °C) / 10% to 90%, noncondensing
Cooling	Convection, unvented
Rack mount	Yes, with optional rack shelf and face plates. Also wall or furniture mountable with optional faceplates
Enclosure type	Metal
Enclosure dimensions	
DAV101CM	
Faceplate.....	1.4" H x 2.2" W x 0.1" D (3.6 cm H x 5.6 cm W x 0.2 cm D)
Device	1.4" H x 1.4" W x 1.2" D (3.6 cm H x 3.6 cm W x 3.0 cm D)
DAS101CM	
Faceplate.....	0.7" H x 2.2" W x 0.1" D (1.8 cm H x 5.6 cm W x 0.2 cm D)
Device	0.7" H x 1.4" W x 1.3" D (1.8 cm H x 3.6 cm W x 3.3 cm D)
Product weight	0.2 lbs (0.1 kg)
Shipping weight	1 lb (1 kg)
Regulatory compliance	
Safety.....	CE, ETL (UL1950)
EMI/EMC	CE, FCC Class A
MTBF.....	30,000 hours
Warranty	3 years parts and labor

NOTE All nominal levels are at $\pm 10\%$.

NOTE Specifications are subject to change without notice.

Included Parts

These items are included in each order for a DAS/DAV101CM:

Included parts	Replacement part number
DAV101CM-1, -2, -5 (15-pin HD output [black, white, RAL9010 white])	60-612-11, -21, -51
DAV101CM-3, -4, -6 (BNC output [black, white, RAL9010 white])	60-613-11, -21, -51
DAS101CM-1, -2, -5 (mini jack input [black, white, RAL9010 white])	60-610-11, -21, -51
DAS101CM-3, -4, -6 (RCA input [black, white, RAL9010 white])	60-611-11, -21, -51
12VDC, 1 A external power supply (DAV only)	70-055-01
3/32" hex wrench	
4-40 hex socket cap screws (4 per DAV, 2 per DAS)	
User's manual	

Accessories

Accessories	Part number
12 VDC, 1 A external power supply (optional for DAS models)	70-055-01
CPM112R 1U high, full rack width frame	60-584-12
CPM 133 1U high, one-third rack width frame	60-584-15
CPM120 connector frame	60-588-11
CIA111, CIA112, CIA116 interfaces	same as model name

Cables

Male-to-female VGA cables w/audio	Part number
VGA 3' HRA, VGA 6' HRA	26-491-01, -02
VGA 12' HRA, VGA 25' HRA	26-491-03, -04
VGA 35' HRA, VGA 50' HRA	26-491-07, -08

Specifications, Part Numbers, and Accessories

Extron's Warranty

Extron Electronics warrants this product against defects in materials and workmanship for a period of three years from the date of purchase. In the event of malfunction during the warranty period attributable directly to faulty workmanship and/or materials, Extron Electronics will, at its option, repair or replace said products or components, to whatever extent it shall deem necessary to restore said product to proper operating condition, provided that it is returned within the warranty period, with proof of purchase and description of malfunction to:

**USA, Canada, South America,
and Central America:**

Extron USA
1001 East Ball Road
Anaheim, CA 92805
U.S.A.

Japan:

Extron Japan
Kyodo Building, 16 Ichibancho
Chiyoda-ku, Tokyo 102-0082
Japan

Europe, Africa, and the Middle East:

Extron Europe
Hanzeboulevard 10
3825 PH Amersfoort
The Netherlands

China:

Extron China
686 Ronghua Road
Songjiang District
Shanghai 201611
China

Asia:

Extron Asia
135 Joo Seng Road #04-01
PM Industrial Bldg.
Singapore 368363
Singapore

Middle East:

Extron Middle East
Dubai Airport Free Zone
F12, PO Box 293666
United Arab Emirates, Dubai

This Limited Warranty does not apply if the fault has been caused by misuse, improper handling care, electrical or mechanical abuse, abnormal operating conditions or non-Extron authorized modification to the product.

If it has been determined that the product is defective, please call Extron and ask for an Applications Engineer at (714) 491-1500 (USA), 31.33.453.4040 (Europe), 65.6383.4400 (Asia), or 81.3.3511.7655 (Japan) to receive an RA# (Return Authorization number). This will begin the repair process as quickly as possible.

Units must be returned insured, with shipping charges prepaid. If not insured, you assume the risk of loss or damage during shipment. Returned units must include the serial number and a description of the problem, as well as the name of the person to contact in case there are any questions.

Extron Electronics makes no further warranties either expressed or implied with respect to the product and its quality, performance, merchantability, or fitness for any particular use. In no event will Extron Electronics be liable for direct, indirect, or consequential damages resulting from any defect in this product even if Extron Electronics has been advised of such damage.

Please note that laws vary from state to state and country to country, and that some provisions of this warranty may not apply to you.

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