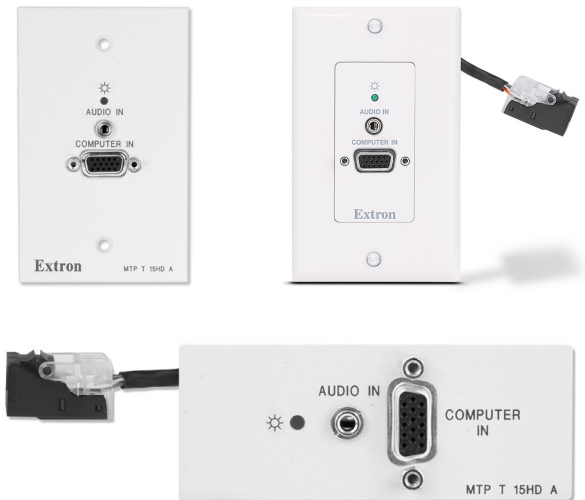


## User's Manual



## *MTP T 15HD A WM, MTP T 15HD A D, MTP T 15HD A AAP*

### MTP T 15HD A Architectural Twisted Pair Transmitters

68-1241-01

Rev. B

11 09

# 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.

**Conservé 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.

### Precaución

**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 marcadas 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** • Ne faire fonctionner 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 le contourner ni de le 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 y 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 type 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. Dieses 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 Objekte darauf- 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 general 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 alimentación 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 cable 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 deba 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 orificios en su caja/alajamiento, 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.*

# Table of Contents

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<b>About the MTP Transmitters</b> .....	1
TP cable advantages.....	1
Transmission distance.....	1
About the MTP T 15HD A WM.....	4
About the MTP T 15HD A D .....	4
About the MTP T 15HD A AAP.....	4
<b>Installing the MTP T 15HD A WM and MTP T 15HD A D</b> .....	5
Preparing the site and installing the wall box .....	5
Final installation .....	6
<b>Installing the MTP T 15HD A AAP</b> .....	7
<b>Connections and Settings</b> .....	8
Front panel features.....	8
Rear panel features .....	9
<b>TP Cable Termination</b> .....	12
<b>Template</b> .....	13
<b>Application Diagrams</b> .....	14
<b>Part Numbers</b> .....	17
Included Parts .....	17
<b>Optional Accessories</b> .....	18
AAP accessories .....	18
<b>Dimensions</b> .....	19

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68-1241-01  
Rev. B  
11 09

# Introduction

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## About the MTP Transmitters

The Extron MTP T 15HD A Architectural Twisted Pair Transmitters (available in either black or white) are a series of wall, Architectural Adapter Plate (AAP) or furniture mounting products that are based on the MTP T 15HD A Twisted Pair Transmitter.

The Extron MTP T 15HD A architectural transmitters accept high resolution computer-video on a female 15-pin HD connector and a stereo audio signal on a female 3.5 mm mini stereo jack. The female RJ-45 output connector, mounted on a 3 inch pigtail, transmits a computer video and summed mono audio signal to an MTP R 15HD A, MTP RL 15HD A, or MTP RL 15HD A SEQ receiver. A pre-peaking control switch boosts the transmission distance of the proprietary signal.

The MTP T 15HD A architectural series is part of a system for long-distance distribution of VGA or other high resolution video and audio, over Extron Enhanced Skew-Free™ A/V UTP Cable, or any CAT 5, 5e, or 6 shielded twisted pair (STP), unshielded twisted pair (UTP), or foil shielded twisted pair (FTP) cable.

### TP cable advantages

Twisted pair cable is smaller, lighter, more flexible, and less expensive than coaxial cable. Termination of the cable with RJ-45 connectors is simple, quick, and economical. See "[TP Cable Termination](#)" on page 12 for wiring details.

### Transmission distance

The maximum distance is determined by the frequency and resolution of the signal that is input to the transmitter. Refer to the [table](#) on page 2 for the recommended maximum transmission distances and transmitter Pre-Peak switch positions using Extron Enhanced Skew-Free A/V UTP cable or UTP CAT 5 cable, terminated with CAT 5 rated connectors.

**Recommended Pre-Peak switch positions and transmission distances at 60 Hz**

Video Format	Pre-Peak off	Pre-Peak on	Max. distance (high quality)	Max. distance (variable quality)
Composite, S-video, Component			800' (245 m)	1000' (300 m)
640 x 480	<300' (90m)	>350' (105 m)	700' (215 m)	750' (240 m)
800 x 600	<300' (90m)	>350' (105 m)	550' (165 m)	650' (200 m)
1024 x 768*	<300' (90 m)	>350' (105 m)	500' (150 m)	600' (185 m)
1280 x 960*	<300' (90 m)	>350' (105 m)	400' (120 m)	500' (150 m)
1280 x 1024*	<250' (75 m)	>300' (90m)	350' (105 m)	450' (135 m)
1360 x 765	<250' (75 m)	>300' (90 m)	400' (120 m)	500' (150 m)
1365 x 768	<250' (75 m)	>300' (90 m)	400' (120 m)	450' (135 m)
1366 x 768	<250' (75 m)	>300' (90m)	400' (120 m)	450' (135 m)
1400 x 1050	<250' (75 m)	>300' (90m)	350' (105 m)	400' (120 m)
1440 x 900	<250' (75 m)	>300' (90m)	350' (105 m)	400' (120 m)
1600 x 1200*	<250' (75 m)	>300' (90m)	300' (90 m)	450' (135 m)
1920 x 1200	<250' (75 m)	>300' (90m)	300' (90 m)	400' (120 m)
2048 x 1080	<250' (75 m)	>300' (90m)	300' (90 m)	400' (120 m)
HDTV 720p	<250' (75 m)	>300' (90m)	400' (120 m)	500' (150 m)
HDTV 1080i	<250' (75 m)	>300' (90m)	300' (90 m)	400' (120 m)
HDTV 1080p	<250' (75 m)	>300' (90m)	300' (90 m)	400' (120 m)

**NOTE** Resolutions marked with an asterisk (\*) in the table have the same range specifications at 75 Hz.

**NOTE** It is possible to exceed the recommended distance; however, image quality may be reduced.

## Introduction, cont'd

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**NOTE**

*The transmitters are for use with, and perform best with Extron Enhanced Skew-Free A/V cable terminated in accordance with the TIA/EIA T 568 A wiring standard. CAT 5 cables are acceptable but less preferable. We also recommend the use of pre-terminated and tested cables. Cables terminated on site should be tested before use to ensure that they comply with Category 5 specifications.*

**NOTE**

*The recommendations shown in the table above apply for a single transmitter connected to a MTP receiver and for a daisy chain. For example, the maximum suggested range for 1024 x 768 video is 300 feet (90 m) with Pre-Peak off and 500 feet (150 m) with Pre-Peak on whether the system consists of one transmitter and one receiver or a transmitter and three daisy-chained receivers.*

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## About the MTP T 15HD A WM

The MTP T 15HD A WM Twisted Pair Transmitter is a wall or furniture mountable version of the MTP T 15HD A, and can be mounted into any standard one gang electrical wall box.

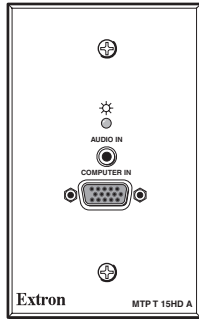


Figure 1 — MTP T 15HD A WM face

## About the MTP T 15HD A D

The MTP T 15HD A D Twisted Pair Transmitter is a wall or furniture mountable version of the MTP T 15HD A that fits any Decora® style wall plate.



Figure 2 — MTP T 15HD A D face

## About the MTP T 15HD A AAP

The MTP T 15HD A AAP Twisted Pair Transmitter can be mounted in any Extron product that accepts a double space AAP, such as the AAP 102.

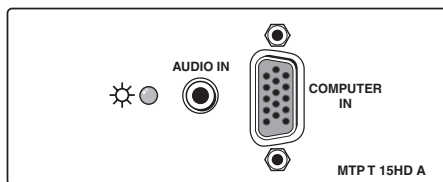


Figure 3 — MTP T 15HD A AAP face



# Installation

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## Installing the MTP T 15HD A WM and MTP T 15HD A D

The MTP T 15HD A WM and MTP T 15HD A D can be installed in a one-gang electrical wall box, with the MTP T 15HD A D fitting into a Decora wall plate cover (supplied). If a suitable wall box is already installed, follow steps 5 through 8 below. To install a new wall box, follow all the steps below. Underwriters Laboratories (UL) Listed wall boxes are recommended.

The installation must conform to national and local electrical codes and to the wall plate's size requirements.

The following Underwriters Laboratories (UL) requirements pertain to the installation of the MTP T 15HD A architectural series into a wall or furniture.

1. These units are not to be connected to a centralized DC power source or used beyond their rated voltage range.
2. These units must be installed in UL listed junction boxes.
3. These units must be installed with conduit in accordance with the National Electrical Code

### Preparing the site and installing the wall box

Choose a location that allows cable runs without interference. Allow enough depth for both the wall box and the cables. The box should be at least 2.5 inches (6.4 cm) deep to accommodate the connectors and cables. Install the cables into the wall, furniture, or conduits before installing the wall plate.

1. If a wall box is not available to use for a template, use the template on page 13. If installing directly into furniture, cut out the center portion of the template.
2. Place the template (or the wall box) against the installation surface, and mark the guidelines for the opening.
3. Cut out the material from the marked area.
4. Insert the wall box into the opening. The box or the wall plate's rear connectors should fit easily into the opening. Enlarge or smooth the edges of the opening as needed.
5. With the power supply disconnected, feed cables for the output devices through the opening and through the wall box punch-out holes, securing them with cable clamps to provide strain relief.
6. Trim back and/or insulate exposed cable shields with heat shrink to reduce the chance of short circuits.

To prevent short circuits, the outer foil shield can be cut back to the point where the cable exits the cable clamp.

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Both braided and foil shields should be connected to an equipment ground at the other end of the cable.

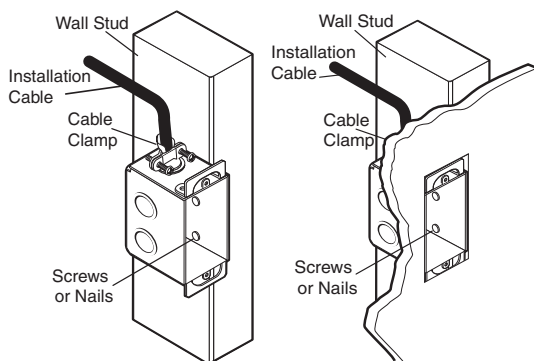
7. Connect the output device cables to the rear of the MTP architectural wall plate. See "[Rear panel features](#)" on page 9 for connector wiring details.
8. Connect input devices (see "[Front panel features](#)" on page 8 for connector details), restore the power supply, and test the wall plate. Make any cabling adjustments before final installation as the cables will be inaccessible afterwards

## Final installation

After testing and making any adjustments, turn off the power supply and carefully insert the wall box into the opening. Attach it with nails or screws, leaving the front edge flush with the outer wall or furniture surface. See figure 4.

**NOTE** *If attaching the wall box to wood, use four #8 or #10 screws or 10-penny nails. A minimum of 0.5 inches (1.3 cm) of screw thread must penetrate the wood.*

**NOTE** *If attaching the wall box to metal studs or furniture, use four #8 or #10 self-tapping sheet metal screws or machine bolts with matching nuts.*

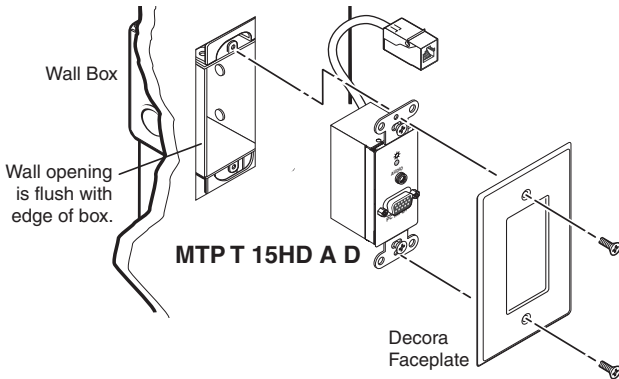


**Figure 4 — Installing the wall box**

If installing an MTP T 15HD A WM, mount the faceplate directly to the box.

If installing an MTP T 15HD A D, mount it directly to the wall box, then attach the Decora wall plate, as shown in [figure 5](#) on page 7.

Restore the power supply.

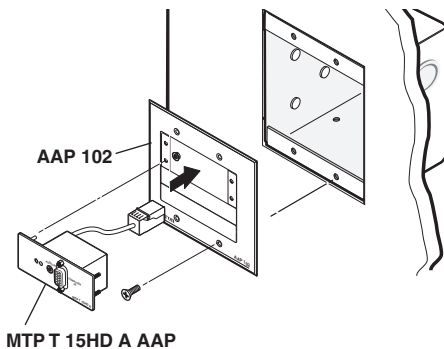


**Figure 5 — Mounting the MTP T 15HD A D**

### Installing the MTP T 15HD A AAP

The MTP T 15HD A AAP must be attached to a device faceplate or AAP wall plate and cabled before the device or wall plate is pretested or installed in a wall or furniture.

1. Before attaching any cables, insert the MTP T 15HD A AAP's standoffs through the holes in the device's faceplate or AAP wall plate.
2. Using the #4-40 nuts and captive washers provided, secure the line driver to the faceplate or wall plate.
3. Repeat steps 1 and 2 to mount any other AAPs. Cover any openings in the faceplate with blank plates (provided with the AAP faceplate).
4. Be sure to include the AAP connectors as part of the installation pretest before final installation of the faceplate.
5. For more detailed installation information, refer to the installation guide shipped with the device or AAP faceplate.



**Figure 6 — Mounting the MTP T 15HD A AAP**

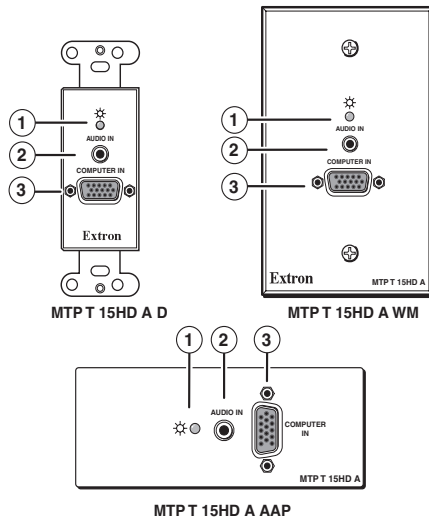
## Connections and Settings

### CAUTION

Do not connect these devices to a computer data or telecommunications network.



### Front panel features

The front panel features are the same on all the MTP T 15HD A architectural models, as shown in figure 7.



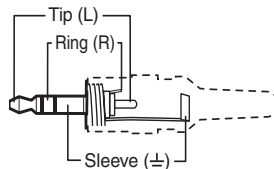
**Figure 7 — Architectural series front panel features**

### Power connection

- ① **Power LED** — Indicates power is applied to the MTP. 
- ② **Audio input connector** — Connect a 3.5 mm stereo audio plug into this jack for unbalanced audio input. Wire the plug as shown in figure 8. 

### NOTE

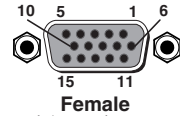
Figure 8 shows a typical audio connector, which consists of the tip, ring, and sleeve. The tip, ring, and sleeve wires are also shown on the captive screw audio connector diagram (figure 10 on page 10).



**Figure 8 — 3.5 mm stereo audio plug**

# Installation, cont'd

- ③ **Video input connector** — Connect a computer video source to this 15-pin HD connector for high resolution video input.



**NOTE** *Input only sync signals (no video signals) on the sync pins, 13 and 14.*

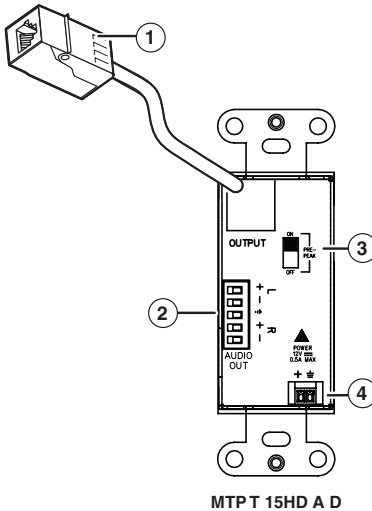
*For component video, use the R (R-Y) and R return pins (pins 1 and 6), G (Y) and G return pins (pins 2 and 7), and B (B-Y) and B return pins (pins 3 and 8).*

*For S-video, use the R, R return (C-chroma), G, and G return (Y-luma) pins.*

*For composite video, use the G pin and the associated return pin. For additional genlocked video signals, use the R, B, and associated return pins.*

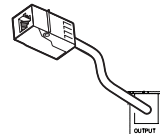
## Rear panel features

The rear panel features are the same on all the MTP T 15HD A architectural models. MTP T 15HD A D is shown in figure 9.

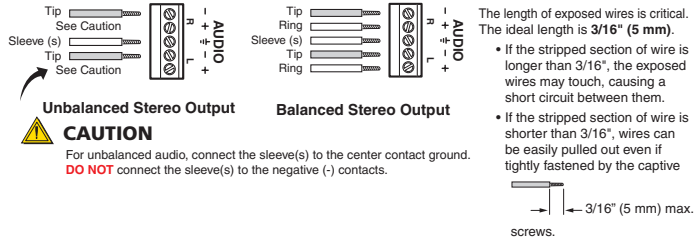


**Figure 9 — Architectural series rear panel features**

- ① **Output connector** — Connect one end of a TP cable to this RJ-45 female connector on the transmitter. Connect the free end of the same TP cable to the receiver's input RJ-45 remote connector. See "[TP Cable Termination](#)" on page 12 to wire the RJ-45 connectors.

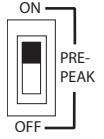


- ② **Stereo Audio output connector** — Insert bare wires into this direct insertion 3.5mm, 5-pole captive screw audio connector for stereo audio outputs. Wire the connector as shown in figure 10.

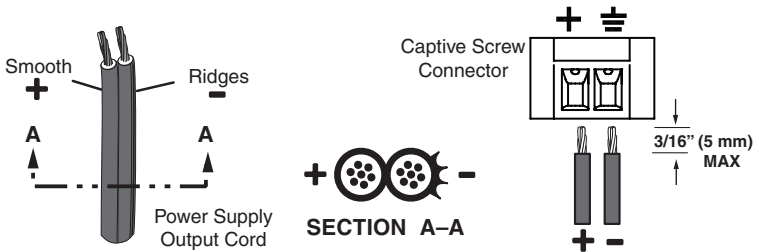


**Figure 10 — Captive screw audio connector wiring**

- ③ **Pre-Peak switch** — The Pre-Peak switch boosts the video signal output to correct for long cable runs. See the [table](#) on page 2 for suggested switch settings based on the transmitted video format and transmission distance.



- ④ **Power connector** — Plug the external 12 VDC power supply (included) into this direct insertion, 3.5 mm, 2-pole captive screw connector. Wire the connector as shown in figure 11.



**Figure 11 — Power connector wiring**

**CAUTION** Power supply voltage polarity is critical. Incorrect voltage polarity can damage the power supply and the MTP. Identify the power cord negative lead by the ridges on the side of the cord (figure 11).

To verify the polarity before connection, plug in the power supply with no load and check the output with a voltmeter.

**WARNING** The two power cord wires must be kept separate while the power supply is plugged in. Remove power before wiring.

## Installation, cont'd

---

**CAUTION**

*The length of the exposed (stripped) copper wires is important. **The ideal length is 3/16 inches (5 mm).** Longer bare wires can short together. Shorter wires are not as secure in the direct insertion connectors and could be pulled out.*

**NOTE**

*Do not tin the power supply leads before installing in the direct insertion connector. Tinned wires are not as secure in the connectors and could be pulled out.*

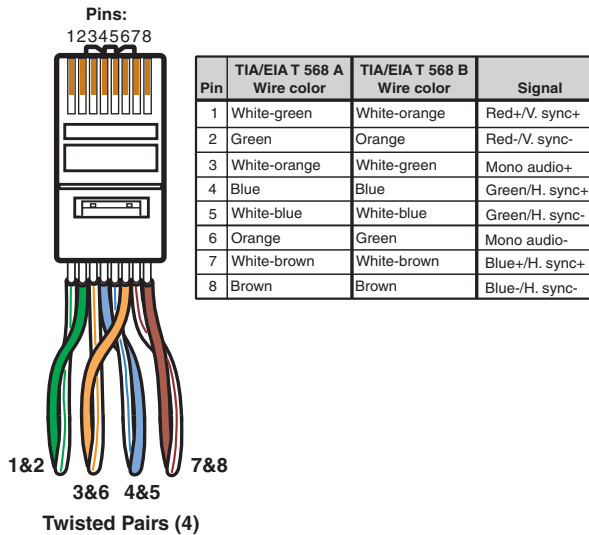
## TP Cable Termination

### NOTE

*RJ-45 termination with CAT 5, CAT 5e, or CAT 6 cable must comply with the TIA/EIA T 568A or TIA/EIA T 568B wiring standards for all connections.*

*RJ-45 termination with Skew-Free A/V UTP cable must comply with TIA/EIA T 568 A only.*

Figure 12 details the recommended termination of TP cables with RJ-45 connectors in accordance with the TIA/EIA T 568A or TIA/EIA T 568B wiring standards. You can use either standard with CAT 5 cable, but ensure that you use the same standard on both ends of the cable.



**Figure 12 — TP cable termination**

### NOTE

*Enhanced Skew-free A/V cable is **not recommended** for Ethernet/LAN applications.*

*This cable is specially designed for compatibility with Extron Twisted Pair products that are wired using the TIA/EIA 568 A standard.*

*The green, brown, and blue pairs of this cable have virtually identical lengths and should be used to transmit the RGB signals.*

*The orange pair of this cable has a different length and **should not** be used to transmit the RGB signals.*



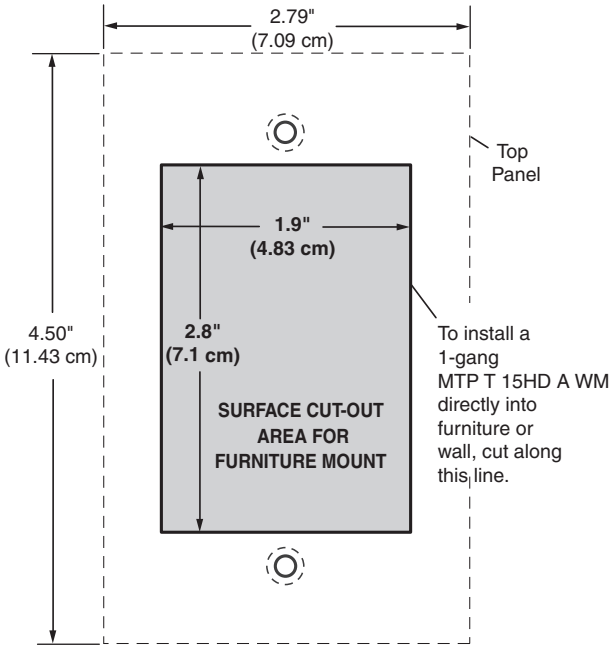
# Installation, cont'd

## Template

The cut-out template, shown in figure 13, is used to install a MTP T 15 HD A WM or MTP T 15HD A D. Use the dimensions in the cut-out template as a guide for cutting a hole in a wall or furniture.

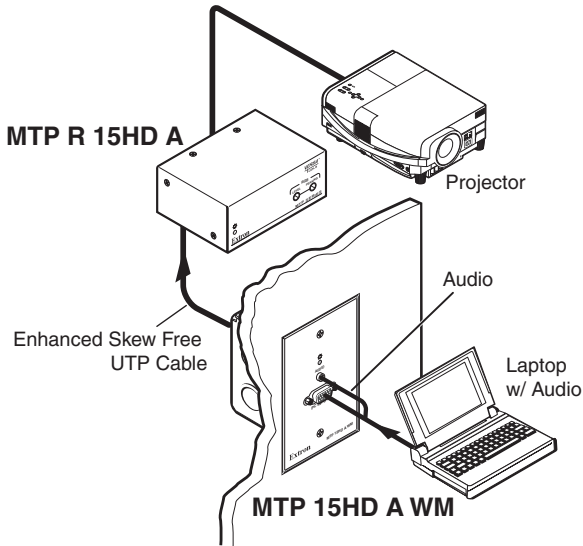
**NOTE** *The drawing is not full size or to scale. Do not scale up or print to use as a template.*

*Full size templates are available online at [www.extron.com](http://www.extron.com)*



**Figure 13 — 1-gang cut-out template**

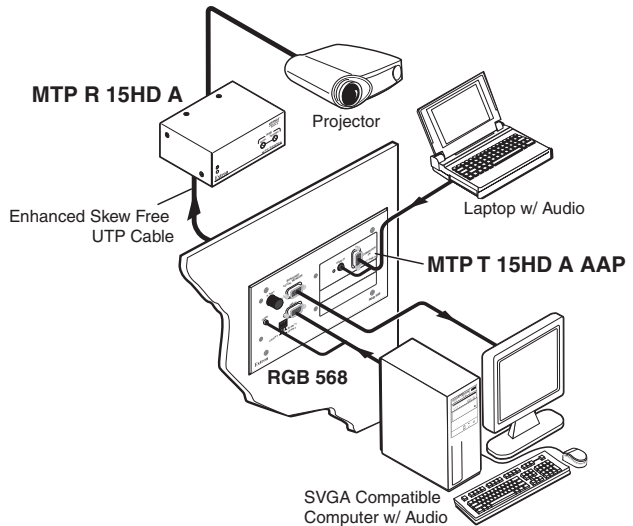
## Application Diagrams



**NOTE**

*This example application shows the MTP T 15HD WM, but also applies to the MTP T 15HD A D*

**Figure 14 — Typical MTP T 15 HD A WM application**



**Figure 15 — Typical MTP T 15 HD A AAP application**

# Specifications

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## Video

Gain .....	Unity
Number/signal type.....	1 set of proprietary analog signals
Connectors .....	1 female RJ-45

## Video input and loop through

Number/signal type.....	1 analog RGBHV, RGBS, RGsB, RsGsBs, component video, S-video, or composite video
Connectors .....	1 female 15-pin HD
Nominal level .....	1 V <sub>p-p</sub> for Y of component video and S-video, and for composite video 0.7 V <sub>p-p</sub> for RGB and for R-Y and B-Y of component 0.3 V <sub>p-p</sub> video for C of S-video
Minimum/maximum levels.....	0.3 V to 1.45 V <sub>p-p</sub>
Impedance.....	75 ohms
Horizontal frequency.....	15 kHz to 130 kHz
Vertical frequency.....	30 Hz to 150 Hz
Return loss.....	<-30 dB @ 5 MHz
DC offset (max. allowable).....	250 mV

## Video output — see receiver specifications

## Sync

Input type .....	RGBHV, RGBS, RGsB, RsGsBs
Standards .....	NTSC 3.58, NTSC 4.43, PAL, SECAM
Input level .....	3.5 V to 5.5 V <sub>p-p</sub> , unterminated
Input impedance .....	573 ohms ±5%
Max. input voltage .....	5.5 V <sub>p-p</sub>

## Audio

Number/signal type.....	1 set of proprietary analog signals
Connectors .....	1 female RJ-45
Gain .....	0 dB (unbalanced), +6 dB (balanced)
Frequency response .....	20 Hz to 20 kHz, ±1 dB
THD + Noise.....	0.15% @ 1 kHz, 0.3% @ 20 kHz at nominal level
S/N.....	>70 dB at maximum output (unweighted)

## Audio input — transmitter

Number/signal type.....	1 stereo, unbalanced
Connectors .....	1 mini stereo jack, 3.5 mm

---

## Audio input

Number/signal type.....	1 stereo, unbalanced
Connectors .....	1 mini stereo jack, 3.5 mm
Impedance.....	>10k ohms, unbalanced
Nominal level .....	+4 dBu (1.23 Vrms), -10 dBV (316 mVrms)
Maximum level.....	+18 dBu, 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 — local stereo output (see receiver's specifications for remote end specs)

Number/signal type.....	1 stereo, balanced/unbalanced
Connectors .....	1 direct insertion 3.5 mm captive screw connector, 5 pole
Impedance.....	50 ohms unbalanced, 100 ohms balanced
Gain error .....	$\pm 1$ dB channel to channel
Maximum level (Hi-Z) .....	$>+23$ dBu, balanced or unbalanced, at $<1\%$ THD+N
Maximum level (600 ohm).....	$>+17$ dBm, balanced or unbalanced, at $1\%$ THD+N
Stereo channel separation .....	$>60$ dB @ 1 kHz

## General

Recommended cable type.....	CAT 5/5e/6 (shielded or unshielded)
External power supply .....	100 VAC to 240 VAC, 50-60 Hz, external; to 12 VDC, 1 A, regulated
Power input requirements .....	12 VDC, 0.5 A
Temperature/humidity .....	Storage: $-40$ to $+158$ °F ( $-40$ to $+70$ °C)/ 10% to 90%, non condensing Operating: $+32$ to $+122$ °F ( $0$ to $+50$ °C)/ 10% to 90%, noncondensing
Rack mount .....	No, but wall or furniture mountable in a 1-gang opening, Decora®-style opening, or double space high AAP opening
Enclosure type .....	Metal
Dimensions	
WM plate .....	4.5" H x 2.8" W x 0.1" D (1-gang) (11.4 cm H x 7.1 cm W x 0.3 cm D)
D plate.....	2.6" H* x 1.3" W x 0.1" D (Decora® style) (6.6 cm H* x 3.3 cm W x 0.3 cm D) Fits the opening in a 1-gang Decora® faceplate. *Height is 3.8" (9.7 cm) including mounting tabs.
AAP plate .....	1.4" H x 3.5" W x 0.1" D (Double space high AAP) (3.6 cm H x 8.9 cm W x 0.3 cm D)

# Part Numbers

Enclosure .....	2.7" H x 1.4" W x 1.4" D (6.9 cm H x 3.6 cm W x 3.6 cm D)
Product weight .....	0.4 lbs (0.2 kg)
Shipping weight .....	WM model - 2.0 lbs (1 kg) AAP/D models - 2.0 lbs (1 kg)
Vibration .....	ISTA 1A in carton (International Safe Transit Association)
Regulatory compliance	
Safety .....	CE, C-tick, c-UL, UL
EMI/EMC .....	CE, C-tick, FCC Class A, VCCI, ICES
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.

## Part Numbers

Items	Part number
MTP T 15HD A WM, black, white	60-691-02, 03
MTP T 15HD A D, black, white	60-798-02, 03
MTP T 15HD A AAP, black, white	70-558-02, 03

## Included Parts

Unless otherwise noted, these items are included in each order for an MTP T 15HD A architectural model.

Included items	Part number
12 VDC, 1A external power supply	
IEC power cord	
Tweezer	
(1) Single gang Decora® wall plate (D model only)	
(1) MR 100 Mud Ring (WM models only)	70-519-1x
Setup Guide	

## Optional Accessories

Cables – various lengths	Part number
VGA with audio cables - male to male	26-490-xx
*UTP23SF-4, non-plenum	26-569-xx
*UTP23SF-4P, plenum	26-570-xx
Cables – Bulk	
*UTP23SF-4/1000, non-plenum	22-141-03
*UTP23SF-4P/1000, plenum	22-142-03

\* formerly known as Enhanced Skew-Free™ A/V UTP

**NOTE** *Enhanced Skew-Free™ A/V UTP cables are not recommended for Ethernet/LAN applications.*

RJ-45 connector	Part number
CAT 6 jack (black), qty. 10	100-476-01
CAT 6 jack (red), qty. 10	100-477-01
CAT 6 jack (blue), qty. 10	100-478-01
CAT 6 jack (orange), qty. 10	100-479-01
CAT 6 jack (gray), qty. 10	100-480-01
CAT 6 jack (white), qty. 10	100-481-01
CAT 6 jack (ivory), qty. 10	100-482-01

## AAP accessories

**NOTE** *All the accessories in the following table are for AAP models only.*

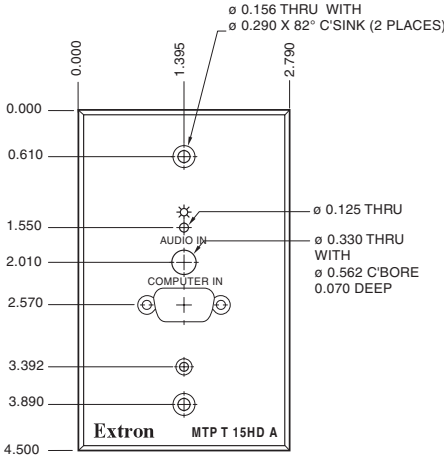
Item	Part number
AAP 100 panel, black, white, RAL9010	60-593-02, 03, 05
AAP 102 panel, black, white	60-300-02, 03
AAP 104 panel, black, white, RAL9010	60-301-02, 03, 05
AAP 106 panel, black, white, gray	60-531-02, 03, 01
AAP 201 panel, ½ rack width, 1U, black, white, gray	60-302-02, 03, 01
AAP 202 panel, ½ rack width, 2U, black, white	60-303-02, 03
AAP 301 panel, 1 rack width, 1U, black	60-632-02
AAP 302 panel, 1 rack width, 2U, black, white	60-633-02, 03

# Dimensions

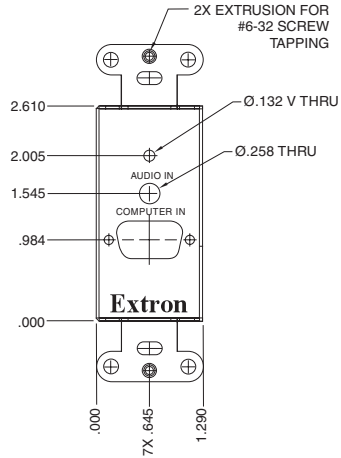
## Dimensions

**NOTE**

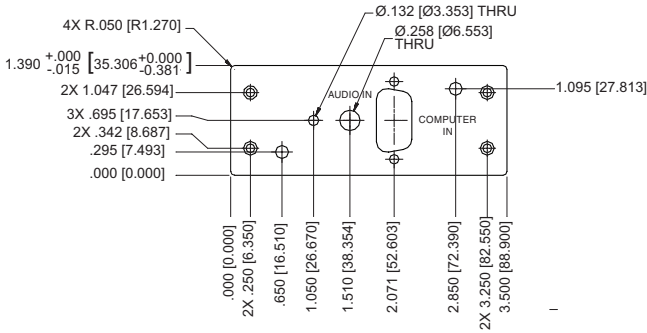
The drawings in this section are not full size.  
Do not scale.



**MTP T 15HD A WM**



**MTP T 15HD A D**



**MTP T 15HD A AAP**

# Extron 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.

**Europe, Africa, and the Middle East:**

Extron Europe  
Hanzeboulevard 10  
3825 PH Amersfoort  
The Netherlands

**Asia:**

Extron Asia  
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PM Industrial Bldg.  
Singapore 368363  
Singapore

**Japan:**

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

**China:**

Extron China  
686 Ronghua Road, Songjiang  
District  
Shanghai 201611  
China

**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.



**Extron USA - West**

Headquarters

**+800.633.9876**

Inside USA / Canada Only

**+1.714.491.1500****+1.714.491.1517 FAX****Extron USA - East****+800.633.9876**

Inside USA / Canada Only

**+1.919.863.1794****+1.919.863.1797 FAX****Extron Europe****+800.3987.6673**

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