

User's Guide



PVT CV, PVT RGB CV, PVT RGB and PVT SW RGB

PoleVault™ Twisted Pair Transmitters (Rack Mount Models)

68-1310-01
Rev. C
04 07

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 présentés 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.

Advertisement

Alimentations • 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 des 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 remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandée 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 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 andere 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 acometida 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 de los 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 pueden quedar expuesto a voltajes peligrosos u otros riesgos.

Ranuras y aberturas • Si el equipo posee ranuras o orificios 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. Deschar las baterías usadas siguiendo las instrucciones del fabricante.

Precautions

安全须知 · 中文



这个符号提示用户该设备用户手册中的操作和维护说明。



这个符号警告用户该设备机壳内暴露的危险电压，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。设备必用有地线供电系统供电。第三条线（地线）是安设施，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。必须使与厂家推荐的相同或相近型号的电池。按照生产厂的议处理废弃电池。

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PVT Series (Rack Mount Models)

1 Chapter One

Introduction

About the PVT Transmitters

Application Diagram

Introduction

About the PVT Transmitters

The Extron **PVT Series (PoleVault™ Twisted Pair Transmitters)** are a series of cost effective twisted pair transmitters that work **exclusively** with the PVS 204SA, a four-input twisted pair switcher with a built in power amplifier.

PVT transmitters can transmit composite video and stereo audio or high resolution video (RGB) and stereo audio to the PVS 204SA switcher over CAT 5 twisted pair cable, up to a distance of 100 feet. All transmitters are remotely powered via the twisted pair cable when connected to the PVS 204SA switcher.

NOTE

This manual covers the rack mount models only. For Decora® and AAP models, refer to the manual (part number 68-1259-01) for those devices.

NOTE

PVT series of transmitters are compatible ONLY with the PVS 204SA switcher.

NOTE

For PVS 204SA installation and operation information, refer to the manual supplied with the device.

The PVT transmitter rack mount models can be mounted on 1U 19" or standard rack shelves, or mounted under or on desks.

The PVT series rack mount models are as follows:

PVT CV — Transmits composite video and stereo audio.

PVT RGB, PVT SW RGB — Transmits computer (RGB) video and stereo audio.

PVT RGB CV — Transmits composite video, computer video and two stereo audio signals.

See the "About the PVT xx" sections in this chapter for details.

The PVT transmitters are part of a system for distribution of composite or computer 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.

Transmission distance

The maximum distance is determined by the frequency and resolution of the signal that is input to the transmitter. However, all PVT models can transmit signals to the PVS 204SA switcher if it is located not more than 100 feet away. **The optimum distance is between 50 and 75 feet.**

About the PVT CV

The PVT CV Twisted Pair Transmitter is a 1/8 rack mounting model that can transmit composite video and stereo audio to the PVS 204SA switcher. This model can also be mounted under a desk or shelf, or on certain projector poles.

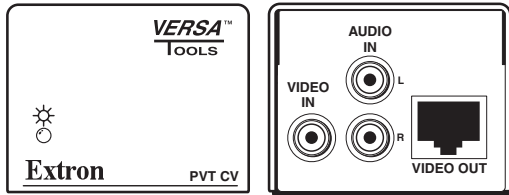


Figure 1-1 — PVT CV face and rear panel

About the PVT RGB

The PVT RGB Twisted Pair Transmitter is a 1/4 rack mounting model that can transmit high resolution (RGB) video and an associated stereo audio signal to the PVS 204SA switcher. It has a local monitor output for image monitoring. This model can also be mounted under a desk or shelf, or on certain projector poles.

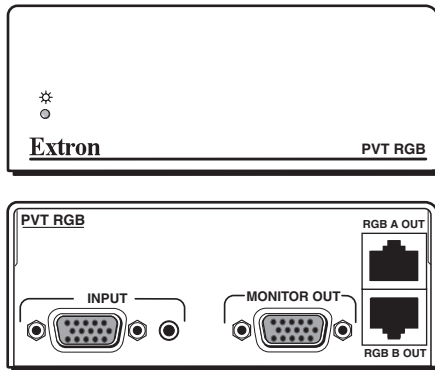


Figure 1-2 — PVT RGB face and rear panel

About the PVT RGB CV

The PVT RGB CV Twisted Pair Transmitter is a 1/4 rack mounting model that can transmit high resolution (RGB) video and composite video, and two associated stereo audio signals to the PVS 204SA switcher. This model can also be mounted under a desk or shelf, or on certain projector poles.

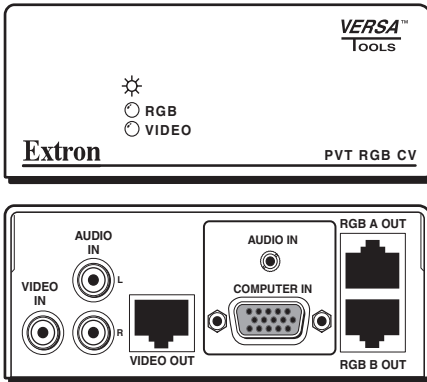


Figure 1-3 — PVT RGB CV face and rear panel

About the PVT SW RGB

The PVT SW RGB Twisted Pair Transmitter is a 1/4 rack mounting model with two input connectors, a local monitor output, and a remote contact closure connector. It transmits high resolution (RGB) video and stereo audio signals to the PVS 204SA, and switches between the two inputs by front panel, remote, or auto switching. In addition, the local monitor output can be set to accept only the input 1 signal, or to follow the current active input signal. This model can also be mounted under a desk or shelf, or on certain projector poles.

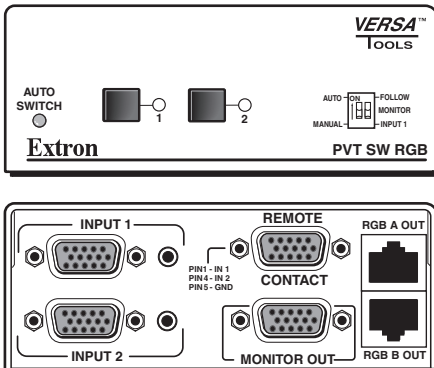


Figure 1-4 — PVT SW RGB face and rear panel

Application Diagram

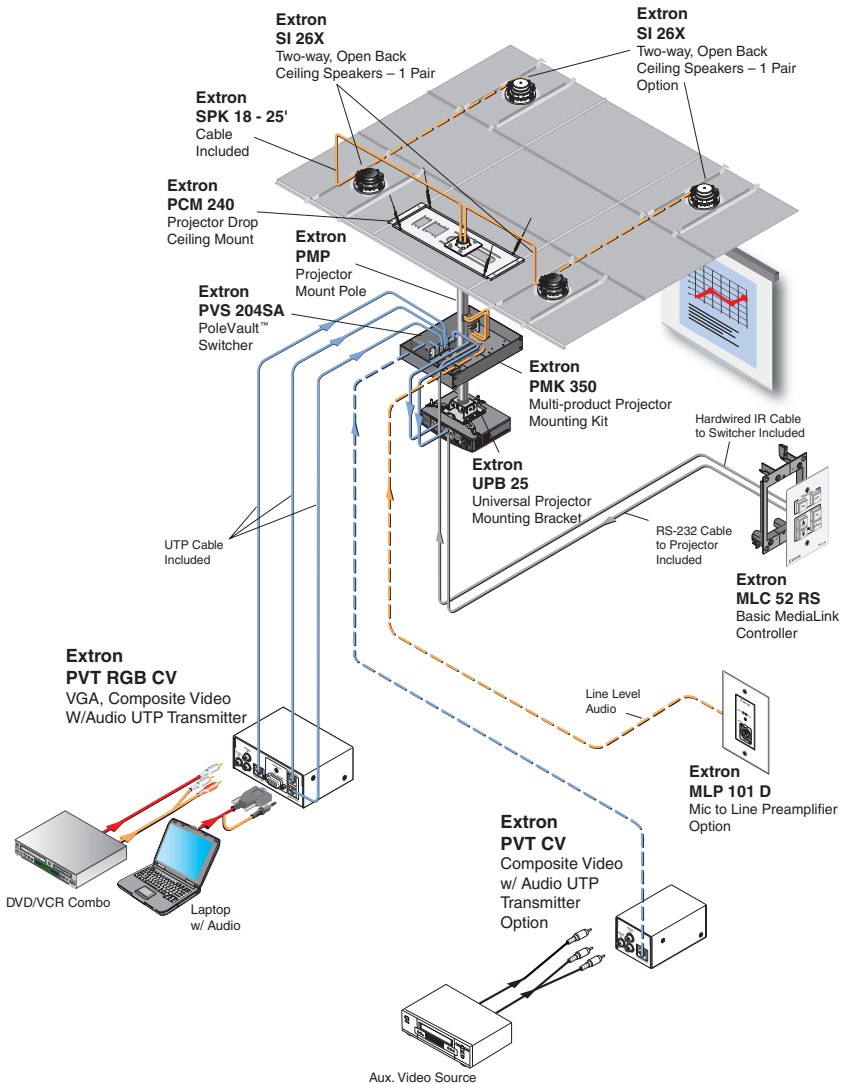


Figure 1-5 — Typical PVT series system application using PVT RGB CV and PVT CV transmitters with the PVS 204SA and other Extron devices

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PVT Series (Rack Mount Models)

2 Chapter Two

Installation

UL/Safety Requirements

Installing the PVT Twisted Pair Transmitters

Connections and Settings

Installation

UL/Safety Requirements

The Underwriters Laboratories (UL) requirements listed below pertain to the safe installation and operation of the transmitters.

Important safety instructions

1. Read these instructions.
2. Keep these instructions.
3. Heed all warnings.
4. Follow all instructions.
5. Do not use this apparatus near water.
6. Clean only with a dry cloth.
7. Do not block any ventilation openings. Install in accordance with the manufacturer's instructions.
8. Do not install near any heat sources such as radiators, heat registers, stoves, or other apparatus (including amplifiers) that produce heat.
9. Do not defeat the safety purpose of the polarized or grounding type plug. A polarized plug has two blades with one wider than the other. A grounding type plug has two blades and a third grounding prong. The wide blade or the third prong are provided for your safety. If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet.
10. Protect the power cord from being walked on or pinched particularly at plugs, convenience receptacles, and the point where they exit from the apparatus.
11. Only use attachments/accessories specified by the manufacturer.
12. Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer, or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.
13. Unplug this apparatus during lightning storms or when unused for long periods of time.
14. Refer all servicing to qualified service personnel. Servicing is required when the apparatus has been damaged in any way, such as power-supply cord or plug is damaged, liquid has been spilled or objects have fallen into the apparatus, the apparatus has been exposed to rain or moisture, does not operate normally, or has been dropped.

Installing the PVT Twisted Pair Transmitters

The PVT CV is a 1/8 rack shelf mountable transmitter, and the PVT RGB, PVT RGB CV, and PVT SW RGB are 1/4 rack shelf mountable transmitters. Each of the four models can be mounted under a desk or shelf, or on to certain projector mounts, and are also suitable for tabletop use.

Tabletop use

The PVT comes with self-adhesive rubber feet attached to the four corners of the bottom. Set the PVT on a horizontal surface.

UL requirements for rack mounted devices

The following Underwriters Laboratories (UL) requirements pertain to the safe installation of the PVT transmitter in a rack.

1. **Elevated operating ambient temperature** — If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, install the device in an environment compatible with the maximum ambient temperature ($T_{ma} = +122\text{ }^{\circ}\text{F}$, $+50\text{ }^{\circ}\text{C}$) specified by Extron.
2. **Reduced air flow** — Install the equipment in a rack so that the amount of air flow required for safe operation of the equipment is not compromised.
3. **Mechanical loading** — Mount the equipment in the rack so that a hazardous condition is not achieved due to uneven mechanical loading.
4. **Circuit overloading** — Connect the equipment to the supply circuit and consider the effect that circuit overloading might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
5. **Reliable earthing (grounding)** — Maintain reliable grounding of rack-mounted equipment. Pay particular attention to supply connections other than direct connections to the branch circuit (e.g., use of power strips).

Rack mounting

For rack mounting, mount the PVT on a VersaTools® 19" 1U rack shelf (RSF 123, part #60-190-20 or RSB 123, #60-604-20) (figure 2-1) or on a standard 1U rack shelf (RSU 129, part #60-190-01 or RSB 129, #60-604-01) (figure 2-2). On standard rack shelves, the PVT CV can be mounted in one of eight locations to the rear or the front of the rack, and the PVT RGB and RGB CV in one of four locations to the rear or front of the rack.

Installation, cont'd

To rack mount a PVT transmitter, do the following:

1. If installed, remove the feet from the bottom of the PVT.
2. Mount the PVT using two 4-40 x 3/16" screws in opposite (diagonal) corners to secure the PVT to the shelf.
3. Install blank panel(s) or other unit(s) to the rack shelf.

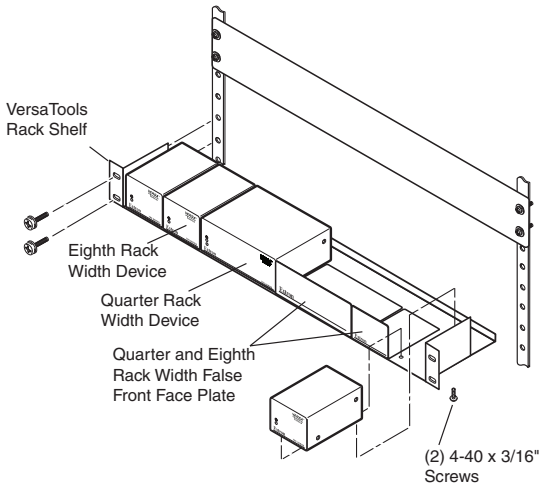


Figure 2-1 — Mounting the PVT on a VersaTools rack shelf

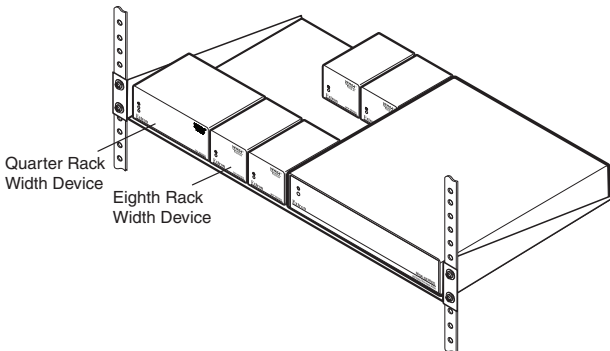


Figure 2-2 — Mounting the PVT on a standard rack shelf

Furniture mounting

Use the optional mounting kit (MBU 123, under desk mounting kit, part #70-212-01) to mount the PVT as follows:

1. If installed, remove the feet from the bottom of the PVT.
2. Attach the mounting brackets to the PVT with the machine screws provided (figure 2-3).

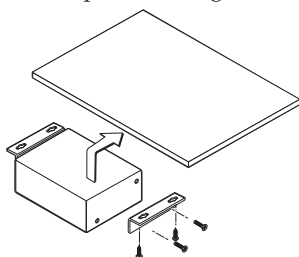


Figure 2-3 — Mounting the PVT under a desk

3. Hold the PVT with the attached brackets against the underside of the mounting surface. Mark the bracket screw hole locations on the mounting surface.
4. Drill four $3/32$ " (2 mm) diameter pilot holes, $1/4$ " (6.3 mm) deep in the mounting surface at the marked locations.
5. Insert #8 wood screws into the pilot holes. Tighten the screws until just less than $1/4$ " of the head protrudes.
6. Align the mounting screws with the slots in the brackets and place the PVT against the surface, with the screws through the bracket slots.
7. Slide the PVT slightly forward or back, then tighten all four screws to secure the PVT in place.

Installation, cont'd

Connections and Settings

NOTE

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

Front panel features

The front panel features are the same for the PVT CV, PVT RGB, and PVT RGB CV. The PVT SW RGB features are unique to that model.

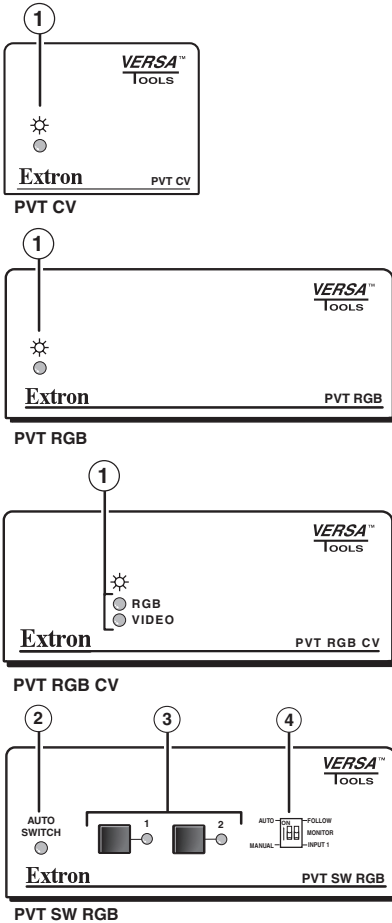



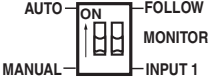


Figure 2-4 — PVT series front panel features

- ① **Dual color power LED** — This LED lights amber when power only (no signal) is applied to the PVT, and green when power and a signal are both present. 
- ② **Auto switch LED (PVT SW RGB only)** — This LED lights green when the unit is in auto switch mode. 
- ③ **Input selection button with LED (PVT SW RGB only)** — Press these buttons to select (switch) between inputs 1 and 2. The associated LEDs lights green when the input has an active video signal connected, and amber when there is no signal present. 
- ④ **Dual configuration dual DIP switch (PVT SW RGB only)** — The left DIP switch allows the user to select the switching mode, and the right DIP switch allows the user to configure the local monitor output from the rear panel. 

Switching mode (left DIP switch):

Set the switch up to Auto for automatic switching of the inputs with an active signal.

NOTE *When turning off auto switching, the PVT goes back to the input that was selected prior to turning the auto-switching on.*

Set the switch down to Manual for front panel input switching or input switching by contact closure control.

NOTE *In Auto mode, if both inputs have an active signal, Input 1 has priority.*

Local monitor output (right DIP switch):

Set the switch up to Follow for automatic switching of the local monitor output to the current selected input.

Set the switch down to Input 1 for local monitor output of the signal from input 1 only.

Installation, cont'd

Rear panel features

For all PVT rack mount models, the input connectors and the output connectors are on the rear panel (see figure 2-5).

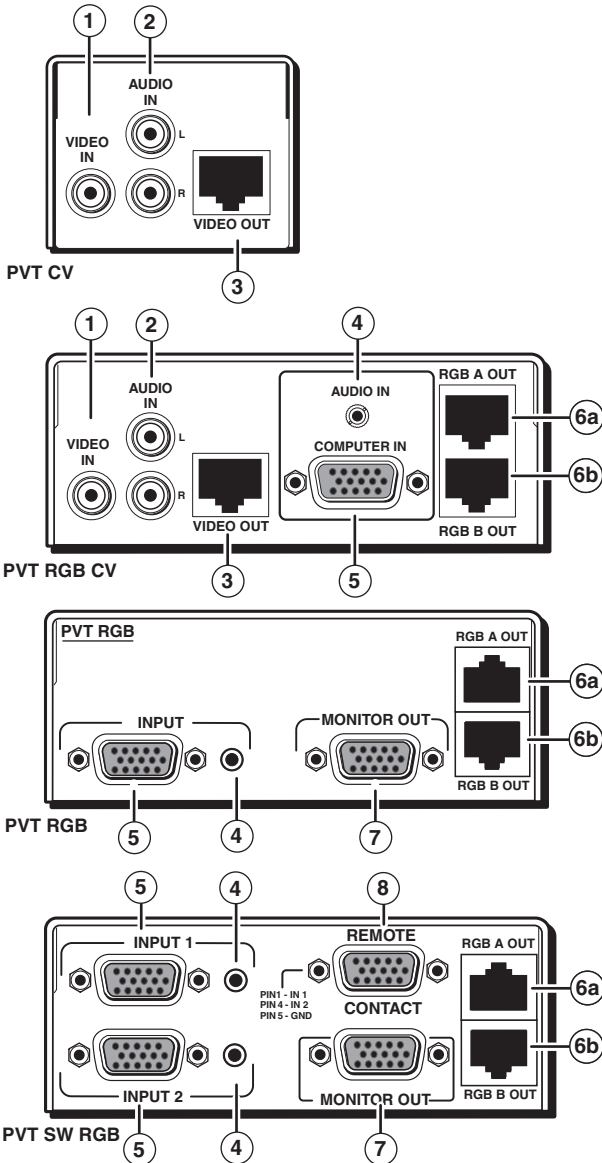



Figure 2-5 — PVT rear panel features

- ① **Composite video input (CV and RGB CV models)** —  To input a composite video signal from a suitable source, connect a male RCA plug to this yellow female RCA jack.
- ② **Audio (left and right) input (CV and RGB CV models)** — For unbalanced left and right audio input, insert male RCA plugs from the audio source, into these two female RCA jacks (white = left, red = right).

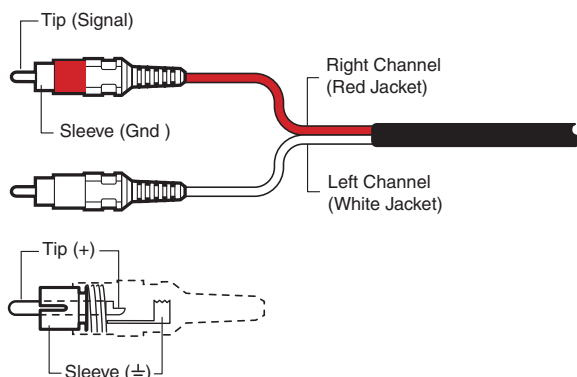


Figure 2-6 — RCA audio connectors

- ③ **Composite video/audio output (CV and RGB CV models)** — For composite video and audio output, using TP cable, connect this RJ-45 female output port to one of the two composite video RJ-45 input connectors (labeled 3 and 4), on the rear panel of the PVS 204SA switcher (see figure 2-8).

Cable termination for composite video and audio transmission

NOTE *The PVT cable termination method is specific for PVT transmitters working with the PVS 204SA switcher. DO NOT connect these devices to an MTP system.*

NOTE *RJ-45 termination with CAT 5, CAT 5e, CAT 6, and Skew-Free A/V UTP cable must comply with the TIA/EIA T 568A wiring standards for all connections.*

NOTE *For composite video signals, the RJ-45 connector must be wired exactly as shown in figure 2-7, so that the input video and audio signals are transmitted correctly.*

Installation, cont'd

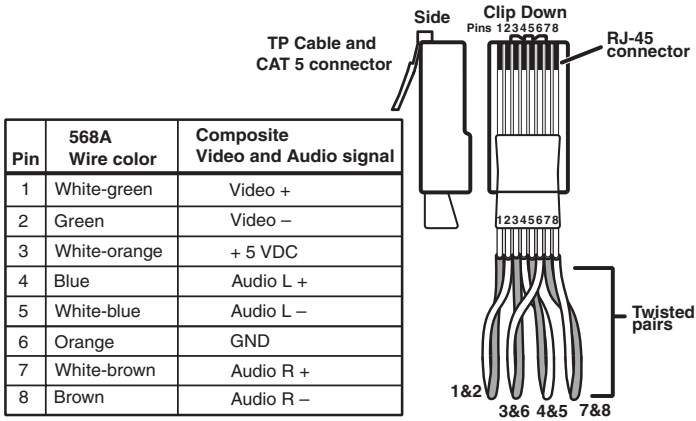


Figure 2-7 — Wiring the twisted pair composite video and audio cable

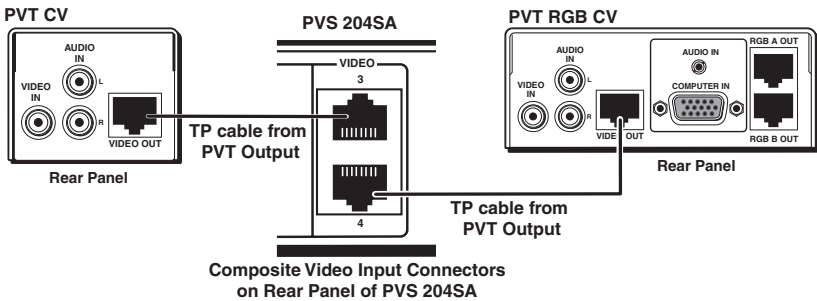


Figure 2-8 — Connecting the PVT composite video outputs to the PVS 204SA switcher

- ④ **Audio input (RGB CV, RGB and SW RGB models) —** Plug a 3.5 mm stereo audio plug into this jack for unbalanced audio input. Wire the plug as shown in figure 2-9.

NOTE Figure 2-9 shows a typical audio connector, which consists of tip, ring, and sleeve.

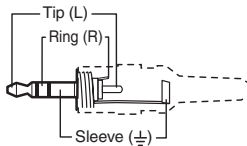



Figure 2-9 — 3.5 mm stereo audio plug

- ⑤ **RGB video input (RGB CV, RGB, and SW RGB models)** — Connect a computer video source to this 15-pin HD connector for high resolution RGB video input. 
- ⑥a **RGB cable A output (RGB CV, RGB, and SW RGB models)** — Using TP cable, connect this RJ-45 female output port, labeled "RGB A out", to one of the two input ports (labeled 1A and 2A) on the PVS 204SA switcher.
- ⑥b **RGB cable B output (RGB CV, RGB, and SW RGB models)** — Using TP cable, connect this RJ-45 female output port, labeled "RGB B out", to one of the two input ports (labeled 1B and 2B) on the PVS 204SA switcher.

Cable termination for RGB video and audio transmission

NOTE The PVT cable termination method is specific for PVT transmitters working with the PVS 204SA switcher. **DO NOT connect these devices to an MTP system.**

NOTE RJ-45 termination with CAT 5, CAT 5e, CAT 6, and Skew-Free A/V UTP cable must comply with the TIA/EIA T 568A wiring standards for all connections.

NOTE For **RGB signals**, the RJ-45 connectors must be wired exactly as shown in the figure 2-10, using the same wiring table for both ends, so that the correct input signal (video on cable A and audio on cable B) is carried.

NOTE Cable B carries the audio signal, the vertical sync information, and 5 VDC to power the PVT transmitters.

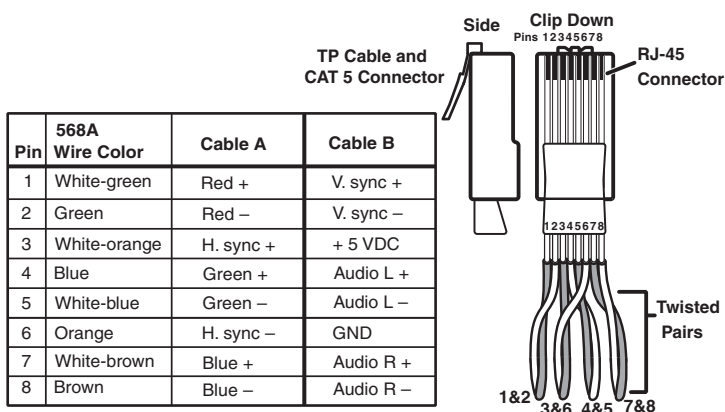


Figure 2-10 — Wiring twisted pair cables A and B

Installation, cont'd

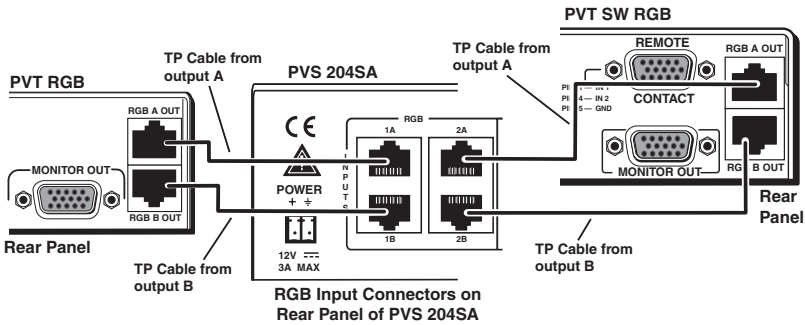


Figure 2-11 — Connecting RGB outputs A and B to the PVS 204SA switcher

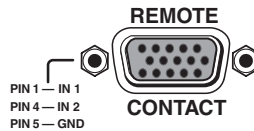
- ⑦ **Monitor output (RGB and SW RGB models) —** Connect a local monitor device to this 15-pin HD connector to view the video input.



NOTE *The PVT SW RGB allows the user to view the image from input 1 only or, by adjusting the front panel DIP switch, to view the image from either input 1 or input 2.*

- ⑧ **Remote contact closure connector (SW RGB model only) —** Connect a contact closure device to this 15-pin HD connector to switch between input 1 and input 2 video signals. The connector has the pin assignments as shown in the table below.

Pin	Function
1	Input #1
2	Not used
3	Not used
4	Input #2
5	Ground
6	Not used
7	Not used
8	Not used
9	Not used





PVT Series (Rack Mount Models)

Appendix A

Reference Material

Specifications

Part Numbers

Optional Accessories

Reference Material

Specifications

NOTE

These transmitters are compatible only with the Extron PVS 204SA. They are not compatible with other models of twisted pair receivers.

Video — RGB (RGB models)

Gain Unity

Video input and loop-through — RGB (RGB models)

Number/signal type..... 1 VGA-UXGA RGBHV, RGBS
(2 for PVT SW RGB, and 1 buffered loop through)
Connectors 1 female 15-pin HD (2 for PVT SW RGB)
Nominal level 0.7 V_{p-p} for RGB
Minimum/maximum levels..... Analog: 0.3 V to 1.5 V_{p-p} with no offset
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 — RGB (RGB models)

Number/signal type..... 2 analog proprietary signals
Connectors 2 female RJ-45

Sync — RGB (RGB models)

Input type RGBHV, RGBS
Input level 3.5 V to 5.5 V_{p-p}, unterminated
Input impedance 510 ohms
Max. input voltage..... 5.5 V_{p-p}

Video — composite video (CV models)

Gain Unity
Differential phase error <1.0° at 3.58 MHz and 4.43 MHz
Differential gain error <1.0% at 3.58 MHz and 4.43 MHz

Video input — composite video (CV models)

Number/signal type..... 1 composite video
Connectors 1 female RCA
Nominal level 1 V_{p-p} for composite video
Minimum/maximum levels..... Analog: 0.3 V to 1.5 V_{p-p} with no offset

Impedance	75 ohms
Return loss	<-30 dB @ 10 MHz
DC offset (max. allowable).....	100 mV

Video output — composite video (CV models)

Number/signal type.....	1 analog proprietary signal
Connectors	1 female RJ-45

Sync — composite video (CV models)

Standards.....	NTSC 3.58, NTSC 4.43, PAL, SECAM
----------------	----------------------------------

Audio input

Number/signal type.....	1 stereo, unbalanced (2 for PVT SW RGB)
Connectors	
RGB models	(1) 3.5 mm mini audio jack (tip, ring, sleeve), (2 for PVT SW RGB)
CV models.....	1 pair female RCA
Impedance	>10k ohms unbalanced, AC coupled
Nominal level	-10 dBV (316 mVrms)
Maximum level	+11 dBV, (unbalanced) at 1% THD+N

NOTE 0 dBu = 0.775 Vrms, 0 dBV = 1 Vrms, 0 dBV ≈ 2 dBu

Audio output to a PVS 204SA

Number/signal type	1 analog proprietary signal
Connectors	1 female RJ-45

General

External power supply	Remote power from PVS 204SA
Power input requirement.....	5 VDC, TBD A
Rack mount	
PVT CV	
PVT RGB	
PVT SW RGB	
PVT RGB CV	Yes, with optional 1U rack shelf, part # 60-190-01, or Versa Tools rack shelf, part # 60-190-02 or 60-604-20. Furniture mountable with optional part # 70-212-01
Enclosure type	Metal

Reference Material, cont'd

Enclosure dimensions

PVT CV

1/8 rack Versa Tools.... 1.7" H x 2.2" W x 3.0" D
4.3 cm H x 5.6 cm W x 7.6 cm D

PVT RGB, PVT SW RGB, PVT RGB CV

1/4 rack Versa Tools.... 1.7" H x 4.3" W x 3.0" D
4.3 cm H x 10.9 cm W x 7.6 cm D
(Depth excludes connectors.)

Product weight 1 lbs (0.5 kg).
Shipping weight 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 $\pm 10\%$.

NOTE Specifications are subject to change without notice.

Part Numbers

Item	Part number
PVT CV	60-827-01
PVT RGB	60-821-01
PVT RGB CV	60-828-01
PVT SW RGB	60-826-01

Included Parts

Included parts	Replacement part number
Tweezer (small screwdriver)	
Rubber feet	
User's manual	

Optional Accessories

Item	Part number
MBU 123, under desk mounting kit	70-212-01
MBB 100, back of rack mounting kit	70-367-01
RSF 123, 3.5" deep rack shelf mounting kit	60-190-20
RSB 123, 3.5" deep basic rack shelf mounting kit	60-604-20
RSU 129, 9.5" deep rack shelf mounting kit	60-190-01
RSB 129, 9.5" deep basic rack shelf mounting kit	60-604-01
KP 6 Keyboard remote control	60-111-01
Enhanced Skew-Free A/V UTP cables	26-569-xx
Enhanced Skew-free A/V UTP cables-plenum	26-570-xx
CAT 5 cable, 35', plenum	26-637-35
CAT 5 cable, 50', plenum	26-637-50
CAT 5 cable, 75', plenum	26-637-75
CAT 5 cable, 100', plenum	26-637-100

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FCC Class A Notice

Note: 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. These 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.

This device complies with 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.

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:

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and Central America:**

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1001 East Ball Road
Anaheim, CA 92805, USA

Asia:

Extron Electronics, Asia
135 Joo Seng Road, #04-01
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Singapore 368363

Europe, Africa, and the Middle East:

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Beeldschermweg 6C
3821 AH Amersfoort
The Netherlands

Japan:

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

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.

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Extron Electronics, USA
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Anaheim, CA 92805
800.633.9876 714.491.1500
FAX 714.491.1517

Extron Electronics, Europe
Beeldschermweg 6C
3821 AH Amersfoort, The Netherlands
+800.3987.6673 +31.33.453.4040
FAX +31.33.453.4050

Extron Electronics, Asia
135 Joo Seng Rd. #04-01
PM Industrial Bldg., Singapore 368363
+800.7339.8766 +65.6383.4400
FAX +65.6383.4664

Extron Electronics, Japan
Kyodo Building, 16 Ichibancho
Chiyoda-ku, Tokyo 102-0082
Japan
+81.3.3511.7655 FAX +81.3.3511.

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