

## User's Manual



*HSA 200S & HSA 200SE*  
*HSA 200C & HSA 200CE*  
*HSA 222S & HSA 222C*  
**Hideaway® Surface Access Products**

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# 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.

### 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.

### Avertissement

**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 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** • Acheminer 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 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. 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 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, desconectar todos los cables de alimentación en el panel trasero del equipo, o desconectar el módulo de alimentación (si fuera independiente), o desconectar 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 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/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.

# 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.

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

Extron Europe  
Hanzeboulevard 10  
3825 PH Amersfoort  
The Netherlands

### Asia:

Extron Asia  
135 Joo Seng Road #04-01  
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.

## 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.*

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## HSA 200/222 Series Surface Access Products

# 1 Chapter One

## Introduction

About the Hideaway Surface Access Products

Features

## About the Hideaway Surface Access Products

The Extron Hideaway HSA 200 series and HSA 222 series are furniture-mounted, architectural solutions for inconspicuous computer video and/or network access and control.

The HSA 200C (figure 1-1) and HSA 200S (figure 1-2) provide:

- One standard grounded AC receptacle
  - The US versions have US power receptacles
  - The international versions have several different types of power receptacles available, including Universal, UK, French, Israeli, Australian, Indian, European, and Swiss receptacles.

**NOTE** *The Universal AC outlet is fully compatible with Europlug, British, Indian, Danish, and Italian plug types. See the universal AC outlet guide on the Extron Web site, [www.extron.com](http://www.extron.com), for compatibility details on all plug types.*

- Two RJ-45 Category (CAT) 6 connectors (terminated in accordance with the TIA/EIA 568 A standard)
- One 15-pin female HD computer video connector
- One 3.5 mm stereo female jack.



Figure 1-1 — HSA 200C hideaway enclosure

The HSA 200CE and HSA 200SE provide all of the HSA 200C or HSA 200S features plus:

- An Extender board, which sends the input signal a greater distance and converts the audio input to a balanced signal. See “About the Extender board line driver”, on page 1-4, for more details.



Figure 1-2 — HSA 200S hideaway enclosure

The HSA 222S (figure 1-3) and HSA 222C (US model only) provide:

- Two standard grounded AC receptacles
  - The US versions have US power receptacles
  - The international version has several different types of power receptacles available, including UK, French, Israeli, Australian, Indian, European, and Swiss receptacles.
- Two RJ-45 CAT 6 connectors



Figure 1-3 — HSA 222S hideaway enclosure

**NOTE** *The International HSA 222 is only available with a square top plate.*

For all models, cabling inside the enclosure runs the AC power line and RJ-45 signal lines from the HSA panel connectors to connectors on the bottom of the enclosure. For the HSA 200 model, the computer video signal is routed to 5 BNC connectors on pigtailed. On HSA 200S and HSA 200C units, the audio signal is sent to a 3-pole, 3.5 mm captive screw connector on a pigtail. On HSA 200SE and HSA 200CE units, the audio signal is sent to a 5-pole, 3.5 mm captive screw connector on the back of the unit.

The installed enclosures fit nearly flush within a table or podium top (figure 1-4), storing the connectors out of the way and out of sight. To access the connectors, the user presses down on the top of the enclosure, releasing a mechanical latch. A gas lift tips the connectors into view.

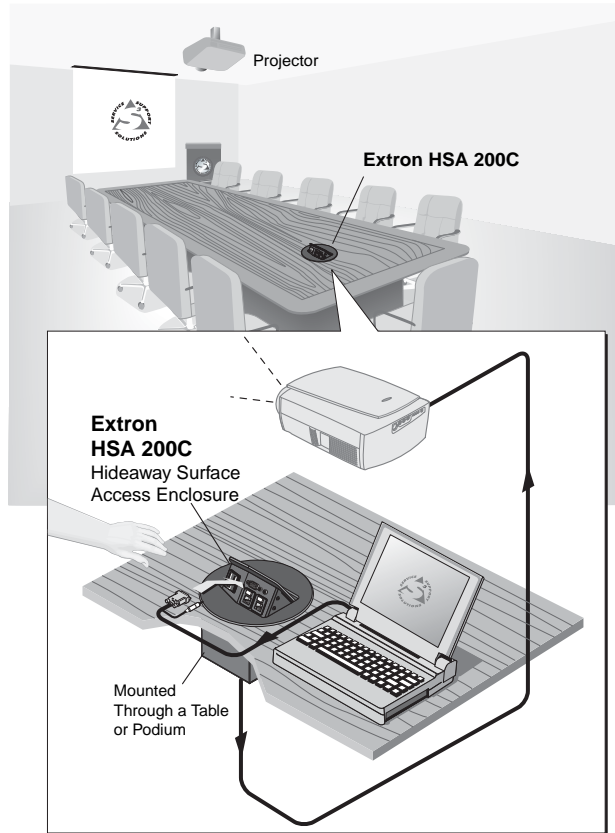


Figure 1-4 — HSA 200C application

## About the Extender board line driver

The Extron Extender board in the HSA 200CE and 200SE is a one-input VGA – UXGA/VESA line driver with audio. It boosts the video signal between a laptop or desktop computer and a monitor or projector. It has a 300 MHz (-3 dB) video bandwidth.

The Extender accepts one computer-video input and one stereo audio input, and features one buffered VGA-type RGB output and one stereo audio output. With an optional Mac/VGA adapter, the Extender board can also buffer Macintosh signals.

## Features

### All models

- UL/c-UL listing
- CSA certification
- Easy access to connectors
- Durable mechanical movement and latching mechanism
- Available in a variety of surface finishes
- Includes a variety of RJ-45 connector bezel colors: black, red, blue, orange, gray, white, ivory, yellow, and green
- Compact size
- Computer video and audio connections (HSA 200 models only)
- RJ-45 (CAT 6) network, data, or communications connections (terminated in accordance with the TIA/EIA T 568 A standard)
- Grounded AC receptacle(s)

### HSA 200CE and HSA 200SE models only

HSA 200CE and 200SE models include an Extender line driver board, which provides several features not available on the standard models.

- **Signal boosting ability** — The gain/peaking adjustment increases video signal voltages to compensate for signal degradation caused by long cables. The Extender board can send a high resolution signal up to 250 feet (76.2 m) through Extron's BNC-5 Mini HR cable.
- **Sync restoration** — Each Extender board restores low level sync voltages found on many laptops (as low as two volts) to normal TTL levels.
- **Stereo audio** — Unbalanced stereo audio inputs can be output as balanced or unbalanced stereo audio.



# Chapter Two

## Installation

Installation Overview

Preparing the Routing Template

Preparing the Table and Mounting the Enclosure

Underside Features and Cabling Connections

Front Panel Connectors

Pre-installation Testing and Troubleshooting  
(HSA 200CE and HSA 200SE Models Only)

## Installation Overview

Install and set up the HSA surface access enclosures as follows:

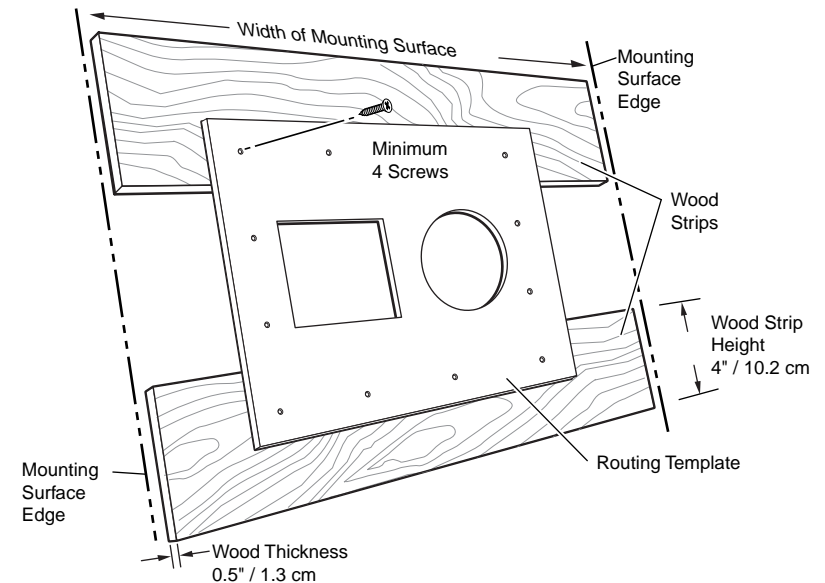
- 1 If you have an unprepared mounting template, prepare the template. See “Preparing the Routing Template” on the next page.
- 2 If desired, install the optional RJ-45 to RJ-11 conversion kit(s) to replace one or more RJ-45 connectors with RJ-11 connectors. Refer to the appropriate *RJ-45 to RJ-11 Conversion Kit* manual, for either the HSA 200 models or the HSA 222 models.
- 3 If desired, install the optional flexible conduit kit to replace the removable AC power cord. Refer to the *Flexible Conduit Kit* manual.
- 4 Cut a hole in the surface where the enclosure will be installed and install the enclosure. The screw clamps secure the enclosure to the tabletop. See “Preparing the Table and Mounting the Enclosure” in this chapter.
- 5 Run all cables necessary to support the AC power, RJ-45, and (for HSA 200 model only) video and audio connectors. Leave enough slack in the cables to connect them to the underside of the enclosure.
- 6 Turn off all of the equipment to be connected. Ensure that the equipment connected to the RJ-45, video, and audio connectors are all turned off and disconnected from the power source.
- 7 Connect the power, video, audio, and RJ-45 cables to the underside of the enclosure. See “Underside Features and Cabling Connections” in this chapter.
- 8 **On HSA 200SE and HSA 200CE models**, set the gain switch.
- 9 Connect and turn on the input and output devices.
- 10 **For HSA 200SE and HSA 200CE model installations**, the picture should now appear and sound should be audible. If not, ensure that all devices are plugged in and receiving power. Check the cabling and gain setting, and make adjustments as needed.
- 11 Peel the protective coating from the top surface.

## Preparing the Routing Template

Extron offers a metal template for each HSA model. Appendix A lists the HSA 200 and HSA 222 template part numbers. Extron recommends using this template as a guide to cut the hole in the table where the HSA will be installed.

**NOTE** *The metal routing template is reusable. Do not discard this template when the installation is complete. Save it for installing future HSA enclosures of the same size.*

1. Cut 1/2" x 4" strips of soft, finished lumber long enough to span the distance between the desired installation location on the mounting surface and the edges of the mounting surface (figure 2-1).



**Figure 2-1 — Prepared mounting template assembly**

These strips raise the routing template above the mounting surface to provide room for the router's collar, protect the mounting surface, and extend the reach of the routing template so that it can be clamped to the edge of the surface.

2. Using four or more short wood screws, secure the mounting template to the lumber strips.

**CAUTION** *Do not allow the wood screws to protrude through the bottom of the wooden strips. Protruding screws will mar the table when the template is used.*

### Preparing the Table and Mounting the Enclosure

The preferred and **recommended** method for preparing the table is to use the appropriate Extron routing template and a router. See the part numbers for the templates in appendix A, "Reference Information".

For an HSA 200C, HSA 200CE, or HSA 222C unit (**US version only**), another **preferred** method is to use a 6" hole saw.

Alternatively, for any model, you can use a paper cut-out template (see appendix A, "Reference Information") and a sabre saw or keyhole saw, but this method is **not recommended**.

**CAUTION** *The opening in the table for the HSA enclosure should be cut only by licensed and bonded craftspeople. Exercise care to prevent scarring or damaging the furniture.*

*The routing templates for the various HSA models are **not interchangeable**. If you use the wrong template, you **will** cut an improperly-sized hole. If you use a larger template than required, the cut will result in gaps in the table surface on either side of the enclosure.*

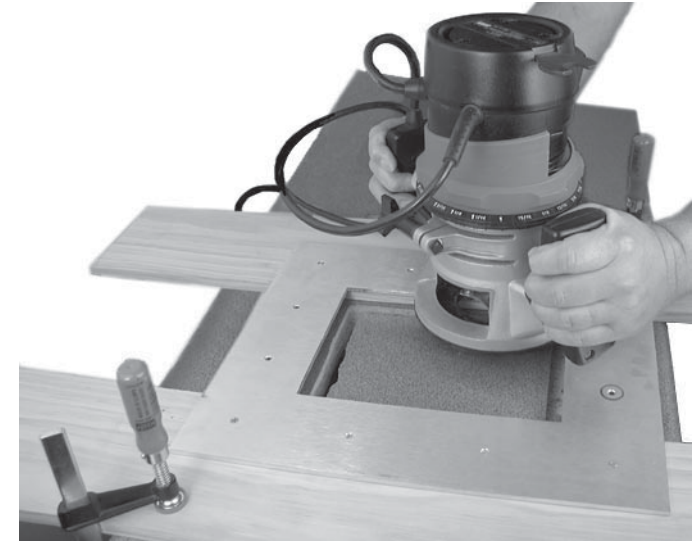
*The surfaces of the HSA enclosure have screws and other protruding hardware that could damage fine furniture. Do not rest the enclosure on unprotected furniture.*

### Preparing the table with a router

1. Locate the desired mounting location on the tabletop or other installation surface. Mark the location.
2. Place the mounting template assembly on the table, centered on the mounting location. Angle the template for the optimum positioning. If necessary, use a square to ensure that the template is properly positioned. Extron is not responsible for improperly-positioned HSA products.

**CAUTION** *Ensure that only the wooden strips contact the furniture. Failure to do so may mar the furniture.*

3. Once the template assembly is positioned properly, secure the assembly to the table with clamps (figure 2-2).



**Figure 2-2 — Cutting the opening with a router (example)**

4. Using a router with a 5/8" (or 16 mm) outside diameter guide bushing and a 1/2" (or 12 mm or 12.7 mm) diameter straight router bit, carefully cut the opening in the table surface (figure 2-2).

**WARNING** *Wear safety glasses when operating the router. Failure to comply can result in eye injury.*

5. Remove the clamps and the routing template.

**NOTE** *The routing template is reusable. Do not discard the template when the installation is complete. Save it to install other HSA products of the same size.*

### Preparing the table with a hole saw (HSA 200C, HSA 200CE, or HSA 222C—US version only)

1. Locate the desired mounting location on the tabletop or other installation surface. Mark the 6" circle, then find the center and mark it as well.

**WARNING** *Wear safety glasses when operating the hole saw. Failure to comply can result in eye injury.*

2. Using a 6" hole saw on a portable drill, cut the mounting hole at the desired location (figure 2-3). Extron is not responsible for improperly positioned HSA products.

**CAUTION** *Use a portable drill with sufficient power for the 6" hole saw. Exercise caution when handling the drill and hole saw. Care should be taken to protect the surface of the tabletop, podium, or other mounting surface from damage.*

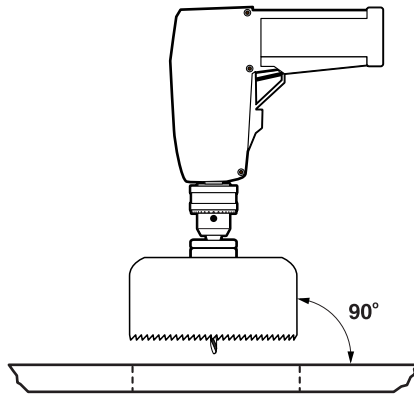


Figure 2-3 — Cutting the opening with a hole saw

### Installing the HSA enclosure (all)

1. Remove the screw clamps (2) on the sides of the enclosure.

**CAUTION** *The flanged edges of the top of the surface enclosure are bevelled to an ultra-fine thickness of less than 0.04 (4/100)" (approximately 1 mm), and are therefore very sharp. These edges are also soft and may be easily nicked or bent. Exercise caution when handling and mounting the enclosure. Mishandling may result in injury to the installer or damage the appearance of the enclosure.*

2. Remove the plastic strips that protect the corners of the enclosure. If a sticky residue remains, remove it with an appropriate metal cleaning product.

**CAUTION** *Do not use isopropyl alcohol or other solvents to clean the HSA. Strong solvents will ruin some finishes.*

3. Carefully lower the HSA enclosure into the hole to test the fit. If necessary, remove the enclosure and use a file or rasp to enlarge or smooth the edges of the opening.
4. From the underside of the table, reinstall the screw clamps on the enclosure at a height at which the clamp will reach the underside of the tabletop (figure 2-4).

**NOTE** *Figure 2-4 shows an HSA 200 installation. Except for the video and audio connectors, the HSA 222 installation is identical.*

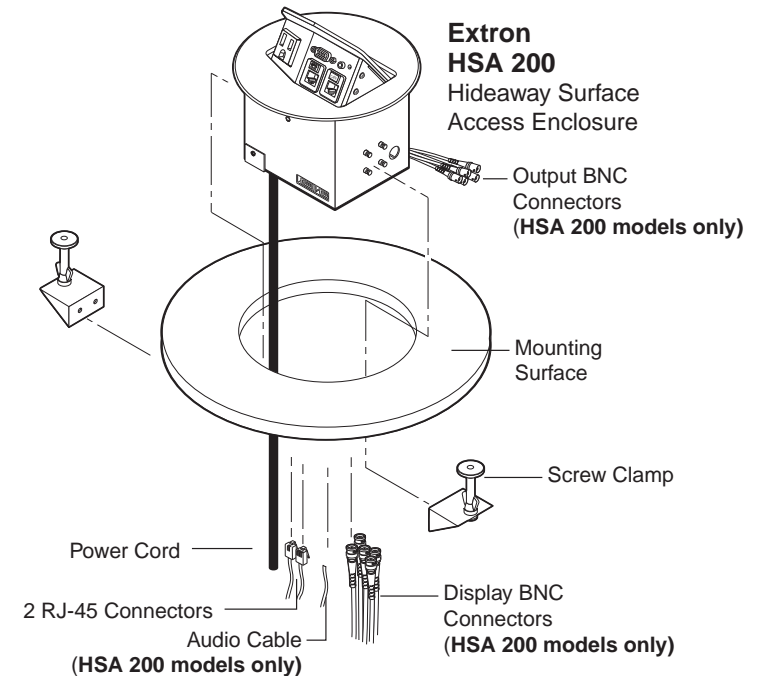


Figure 2-4 — Mounting the HSA 200 or HSA 222 enclosure

5. Snugly tighten the Phillips head screws on the screw clamps to secure the enclosure to the surface.
- CAUTION** *Overtightening the Phillips head screws on the screw clamps can bend the clamp's horizontal flange.*
6. Tighten the locking thumbscrews on the screw clamps to lock the clamp in position.
  7. Peel any remaining protective coating from the enclosure.

## Underside Features and Cabling Connections

Figure 2-5 shows the under-table connectors and other features that present on HSA 200CE models. Other HSA 200 and HSA 222 models have a subset of the same or similar features.

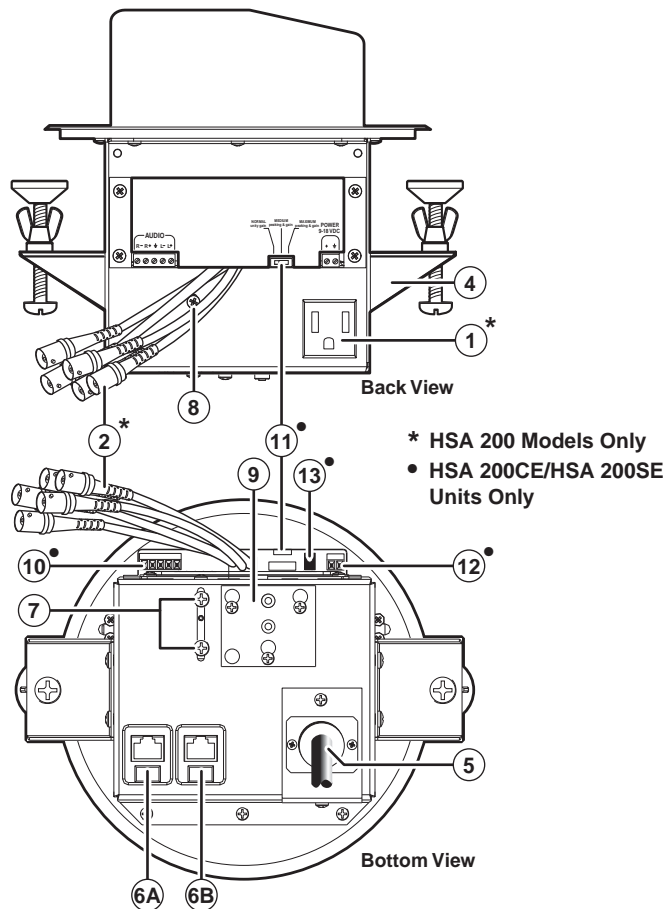


Figure 2-5 — HSA 200CE under-table features

## All HSA 200 models only

- ① **AC power outlet** — Use this AC connector to:
    - Plug in an external power supply to power the Extender board on the HSA 200CE or HSA 200SE.
    - Provide AC power (5 amps max.) for loop through to one additional HSA 200 unit.
    - Plug in a projector or other display device.
- NOTE** *This outlet is a US-style power outlet on both the US/ domestic and international HSA 200 models. The power output is the same voltage and frequency as the power input.*

- ② **RGBHV video output** — Connect the BNC cable from the projector, plasma screen, or other display device to these female BNC connectors.

**HSA 200C and HSA 200S (no Extender board)** — The output from these connectors is an unbuffered pass-through from the front panel VGA input.

**HSA 200CE and HSA 200SE (Extender board)** — The output on these connectors is buffered by the Extender board.

## HSA 200C and HSA 200S (no Extender board) only

On HSA 200 models with no Extender board, the audio connection is part of the pigtail (figure 2-6).



Figure 2-6 — HSA 200S and HSA 200C audio connector

- ③ **Audio output connection** — This 3-pole direct insertion terminal outputs unbalanced audio, passed through from the front panel. Figure 2-7 shows how to wire the connector.

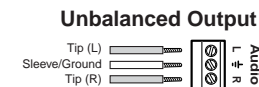


Figure 2-7 — Unbuffered, unbalanced audio connector wiring

## All HSA 200 and HSA 222 models

④ **Screw clamp bracket/screw clamp** — These two brackets/clamps hold the enclosure firmly in place in the mounting hole.

⑤ **AC power input connection** — Connect this cord to the power source.

**NOTE** For US domestic versions, this power cord is permanently connected to the HSA. Connect the power cord to a 125VAC, 60 Hz, 5A power source.  
For international versions, this power cord is a removable IEC power cord. Connect the cord to a 220-240V, 50-60 Hz, 5A power source.



You can replace this connector with an optional Extron HSA 200/HSA 222 Flexible Conduit Adapter kit (part #70-229-01).

⑥ **RJ-45 connectors** — Plug one end of a CAT 5 or CAT 6 twisted pair (TP) cable into each of these RJ-45 female connectors. Connect the other end to an appropriate telecommunications or data network or to an Extron TP product.

**NOTE** All RJ-45 connectors are terminated in accordance with the TIA/EIA T 568 A standard.

**NOTE** An RJ-11 (telephone) jack can be plugged directly into the RJ-45 jacking.

Ensure that the bottom RJ-45 connections match up with the front panel RJ-45 connector locations (figure 2-8). For example, match the front panel RJ-45 (CAT 6) network, data, or communications connection ⑤A with the underside RJ-45 connector ⑥A, match ⑤B with ⑥B and so forth.

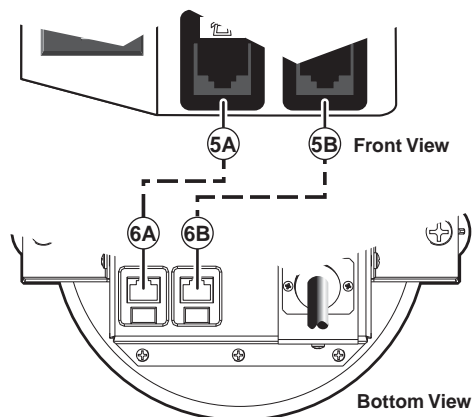


Figure 2-8 — Configuration of RJ-45 connectors

⑦ **Latch locking screws** — These screws secure the latching mechanism to the enclosure. They must be loosened in order to adjust the top surface (see “Adjusting the Top Panel” in chapter 3) with the top surface adjustment screw ⑧.

⑧ **Top surface adjustment screw** — After loosening the latch locking screws ⑦, adjust the top surface of the tilt up panel with this screw. Tighten the latch locking screws after adjustment.

⑨ **Gas lift mounting plate** — The lower end of the gas lift is attached to this plate. The plate must be detached from the enclosure in order to remove the gas lift.

## HSA 200CE and HSA 200SE (Extender board) only

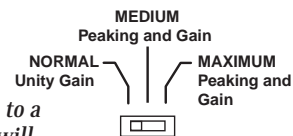
⑩ **Audio output connection** — This 5-pole direct insertion terminal outputs unbalanced or balanced audio. Figure 2-9 shows how to wire the connector.



Figure 2-9 — Extender board audio connector wiring

### CAUTION

Connect the sleeve to ground (Gnd). Connecting the sleeve to a negative (-) terminal will damage the audio output circuits.



⑪ **Gain switch** — To compensate for cable resistance and capacitance, use a Tweezer to slide this switch to select the level of video gain that yields the sharpest, smear-free picture.

**Normal** — unity gain (no signal boost)

**Medium** — mid-level peaking and gain

**Maximum** — maximum amount of peaking and gain. Select this setting for use with longer cables.

### NOTE

Adjust the gain before installing the HSA unit, as the gain switch may be inaccessible after installation.

⑫ **Power supply connection** — Plug the external power supply (included) output wires into this 2-pole direct insertion terminal. See “Power connector wiring” to wire the connector.

⑬ **Power LED** — Indicates when the Extender board is receiving power.

## Power connector wiring

1. See figure 2-10. Plug the input connector of the included 100-240 VAC, 50/60Hz, 12 VDC power supply into the AC power outlet on the underside of the enclosure (① on figure 2-5).

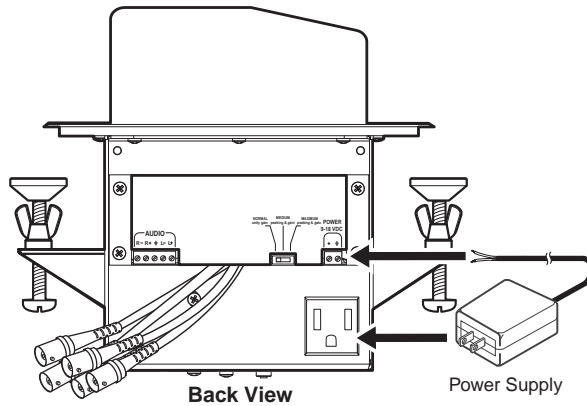


Figure 2-10 — Powering the Extender board

**NOTE** This outlet is a US-style power outlet on both the US/ domestic and international HSA 200 models. The power output is the same voltage and frequency as the power input and is an acceptable power input to the power supply included with the HSA.

2. Insert the external power supply (included) output wires into the 2-pole direct insertion captive screw terminal on the Extender board (figure 2-11) and secure the wires.

**CAUTION** When connecting the power supply wires, voltage polarity is extremely important. Applying power with incorrect voltage polarity could damage the power supply and the Extender board in the HSA.

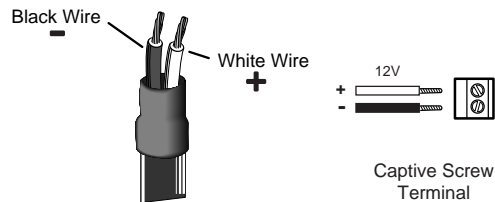


Figure 2-11 — Power connector wiring

**NOTE** Do not tin the stripped power supply leads. Tinned wires are not as secure in the captive screw terminals and could pull out.

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

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

## Front Panel Connectors

Figure 2-12 shows the front panel of the HSA 200 models. Figure 2-13 shows the front panel of the HSA 222.

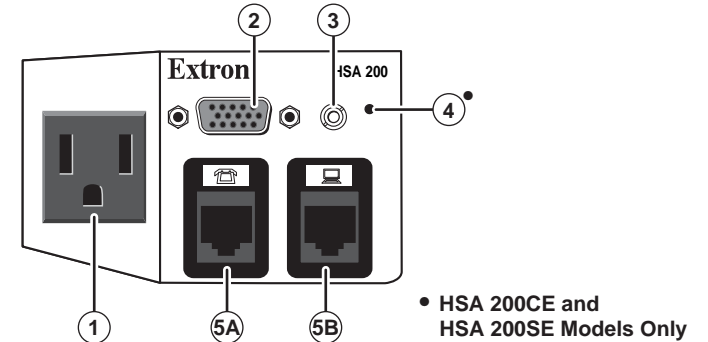


Figure 2-12 — HSA 200 front panel connectors

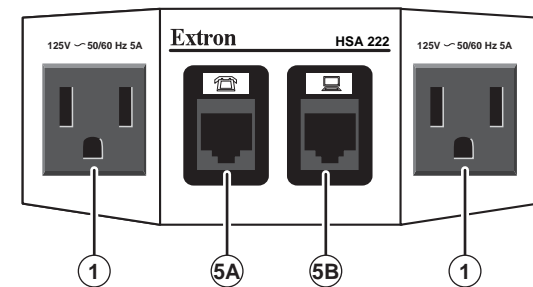


Figure 2-13 — HSA 222 front panel connectors

- ① **AC power outlet(s)** — Plug a standard power cord into this connector to provide AC power (5 amps max.) for a laptop or other device. The power output will be the same voltage and frequency as power input. The power outlet(s) will be appropriate to the model.

**NOTE** The Universal AC outlet is fully compatible with Europlug, British, Indian, Danish, and Italian plug types. See the universal AC outlet guide on the Extron Web site, [www.extron.com](http://www.extron.com), for compatibility details on all plug types.

- ② **Computer video input (HSA 200 models only)** — Plug the VGA-UXGA output from a computer into this 15-pin HD female connector.
- ③ **Audio input connector (HSA 200 models only)** — Plug a 3.5 mm stereo plug into this jack for unbalanced audio input. Figure 2-14 shows how to wire the male plug.

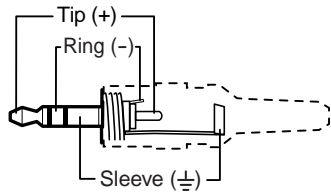


Figure 2-14 — Audio input connector plug

- ④ **Power/Signal LED (HSA 200SE and HSA 200CE only)** — This LED lights green when power and an input signal are present. The LED lights amber when power is present but no input signal is present.
- ⑤ **RJ-45 connectors** — Plug a CAT 5 or CAT 6 twisted pair (TP) cable into each of these RJ-45 female connectors for network, data, or communication connections.

When cabling the front panel and the underside of the enclosure (figure 2-15), ensure that the bottom RJ-45 connections match up with the front panel RJ-45 connector locations. For example, match the front panel RJ-45 (CAT 6) network, data, or communications connection 5A with the underside RJ-45 connector 6A and match 5B with 6B.

If necessary, on the front panel, have a qualified service person replace the connector icon by prying the old icon off of the connector plug-in with a Tweezer (figure 2-16) and snapping a new icon in place.

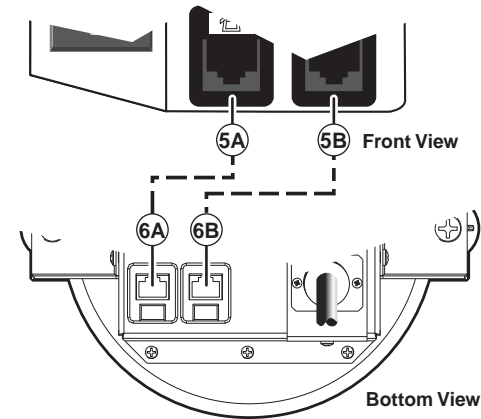


Figure 2-15 — Configuration of RJ-45 connectors

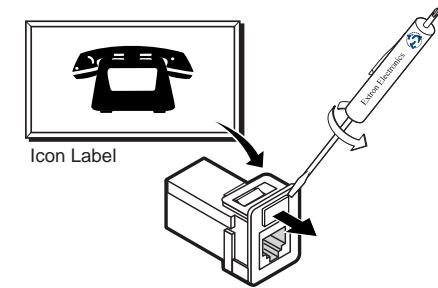


Figure 2-16 — Changing the connector icon

### Pre-installation Testing and Troubleshooting (HSA 200CE and HSA 200SE Models Only)

Before installing an HSA 200 with an Extender line driver into furniture, test the system to make sure that the connections and settings are correct.

1. Apply power to the line driver. The power/signal LED on the line driver will light to indicate that the line driver is receiving power.

If the LED does not light, check the wiring at both the line driver and the power supply, and ensure that the power supply is connected to a power source.

#### If the image does not appear or there is no sound

1. Make sure that all the devices are powered on.
2. Ensure that the connectors are wired correctly at both ends of the cables. Audio cables must be wired for an unbalanced stereo input signal and for the appropriate (unbalanced or balanced) output signal.
3. If the input is from a laptop computer and no picture appears, use a laptop breakout cable for the input connection. Check the computer's user's guide or contact Extron to determine if special commands are required to output video to the external video port. Also, many laptops' screens shut off after the external video port is activated.
4. Call the Extron S3 Sales and Technical Support Hotline if the image still does not appear or there is no sound.

#### If the image is not displayed correctly

1. If the picture is too bright or too dark, or if the edges of the image seem to exceed their boundaries, or if thin lines and sharp edges look thick and fuzzy, change the gain setting.
2. If the picture appears and is stable, but it has ghosting or blooming, verify that the video input is properly terminated. If the problem is not resolved by changing the termination, try using a different input cable. Poor quality or damaged cable can cause ghosting and blooming.
3. If the picture still is not displayed correctly, call the Extron S3 Sales and Technical Support Hotline.



# 3

## Chapter Three

### Maintenance and Modifications

Removing and Replacing the Enclosure

Replacing the Bezels

Replacing the Gas Lift

Adjusting the Top Panel

## Maintenance and Modifications

The most probable corrective maintenance procedures for your HSA 200 or HSA 222 are leveling the top surface and replacing the gas lifts. Most of the maintenance procedures require removing the surface mount enclosure from the table.

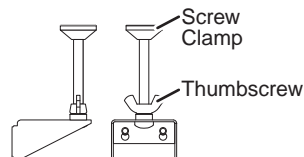
### Removing and Replacing the Enclosure

- The procedure for replacing the bezel in an **HSA 222 only** requires removing the HSA from the table.
- The procedure for replacing the gas lift requires removing the HSA 200 or HSA 222.
- The procedure for leveling the top surface **may** require removing the HSA.

Remove and replace the surface mount enclosure for maintenance as follows:

**WARNING** Ensure that AC power is disconnected before servicing the HSA unit.

1. Disconnect:
  - The IEC power cord
  - The RJ-45 connectors from the underside of the surface mount enclosure
  - **(HSA 200 models only)** Any device plugged into the AC power outlet
  - **(HSA 200 models only)** The BNC (video) connectors
  - **(HSA 200 models only)** The audio connector
  - **(HSA 200CE and HSA 200SE only)** The power supply connector
2. Loosen the locking thumbscrews on the screw clamps to unlock the clamp.
3. Loosen the screw clamps.
4. Remove the screw clamps on both sides of the enclosure. Lift the enclosure from the table.



**CAUTION** The flanged edges of the top of the surface enclosure are bevelled to an ultra-fine thickness of less than 0.04 (4/100) (approximately 1 mm), and are therefore very sharp. These edges are also soft and may be easily nicked or bent. Exercise caution when handling and mounting the enclosure. Mishandling may result in injury to the installer or damage the appearance of the enclosure.

**NOTE** The surfaces of the HSA enclosure have screws and other protrusions that could damage fine furniture. Do not rest the enclosure on unprotected furniture.

5. Perform the desired maintenance procedure.
6. If the surface is not level, adjust the top surface. See “Adjusting the Top Panel” in this chapter.
7. Carefully lower the HSA enclosure into the table opening.
8. From the underside of the table, reinstall the screw clamps on the enclosure at a height at which the clamp will reach the underside of the tabletop.
9. Snugly tighten the Phillips head screws on the screw clamps to secure the enclosure to the surface.

**CAUTION** Overtightening the Phillips head screws on the screw clamps can bend the clamp’s horizontal flange.

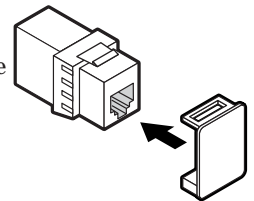
10. Tighten the locking thumbscrews on the screw clamps to lock the clamp in position.
11. Reconnect all of the connectors removed in step 1.

### Replacing the Bezels

The HSA ships with RJ-45/RJ-11 connector bezel plug-ins in a variety of colors and a black, blank bezel.

To change to a different color connector bezel or if a connector is not needed, replace the connector bezel plug-in on the front panel with a bezel of a different color or a blank plug-in.

If no connector is desired, snap the interior RJ-45 connector onto the rear of the blank bezel plug-in to hold it conveniently out of the way. Retain the removed connector bezel plug-in for later use.

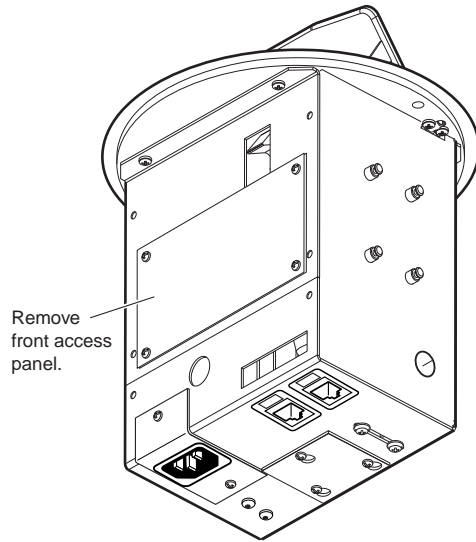


Replace a bezel as follows:

1. **(HSA 222 models only)** Remove the surface mount enclosure from the table. See “Removing and Replacing the Enclosure”, steps 1 through 4.

## Maintenance and Modifications, cont'd

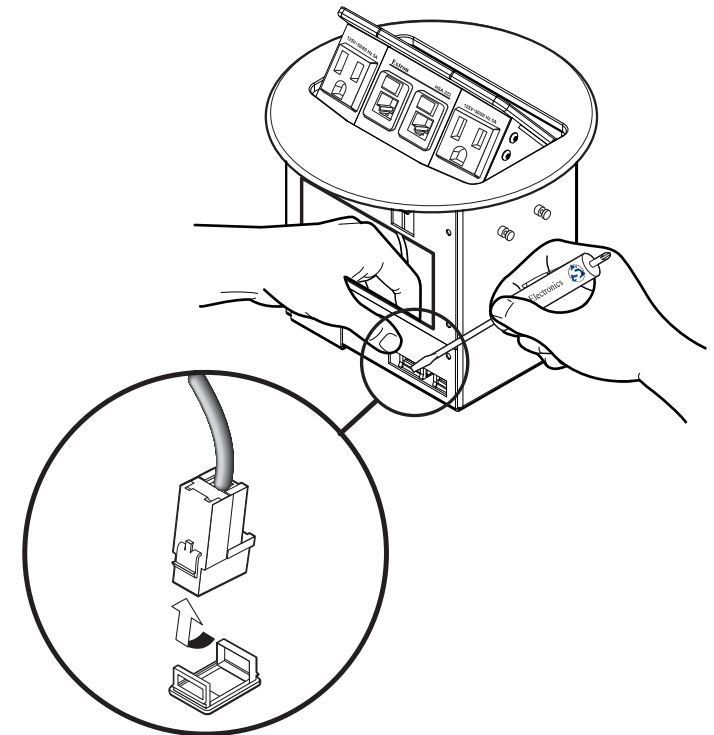
2. **(HSA 222 models only)** Remove the four Phillips head screws from the front access panel (figure 3-1). Retain the screws. Lift the panel away from the enclosure.



**Figure 3-1 — Removing the front access panel (HSA 222 models)**

3. **(HSA 222 models only)** Disconnect both RJ-45 connectors from the underside of the enclosure by **simultaneously** performing steps 3a and 3b:
  - a. With a Tweezer in one hand, reach through the small access hole in the front of the enclosure (figure 3-2) and gently pry outward on the front of the RJ-45 connector detent on the bezel plug-in,  
  
— while you —
  - b. Reach your other hand through the front panel access hole and tilt the connector back.

This disconnects the connector from the interior of the lower enclosure without damaging the bezel plug-in.

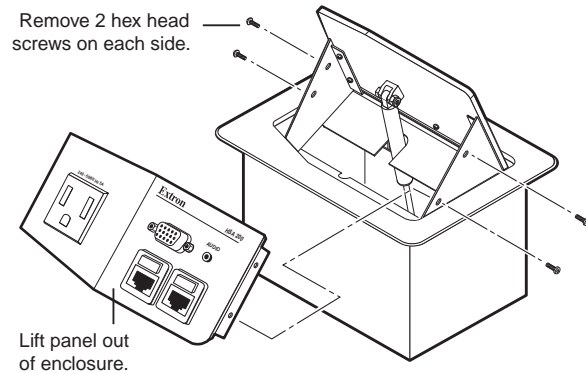


**Figure 3-2 — Releasing the bezel plug-in detent (HSA 222 models)**

## Maintenance and Modifications, cont'd

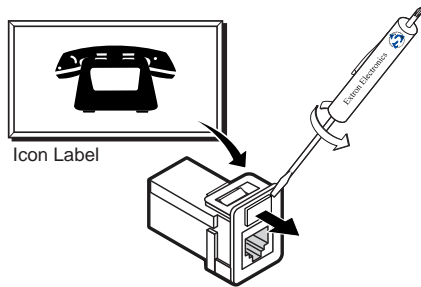
4. Remove the four 1/16" hex head screws on the right and left sides of the front panel (figure 3-3). Retain the screws. Lift the panel away from the enclosure.

**NOTE** *Figure 3-3 shows an HSA 200 model. Removing the front panel from an HSA 222 is an identical procedure.*



**Figure 3-3 — Removing the front panel**

5. With a Tweezer, push down on and gently twist on the front of each RJ-45 connector detent to disconnect the connector from the rear of the front panel plug-in.
6. Pinch the top and bottom bezel detents together and push the bezel through the front panel.
7. Snap a replacement bezel in place. If necessary, replace the connector icon by prying the old icon off of the connector plug-in with a Tweezer (figure 3-4) and snapping a new icon in place.



**Figure 3-4 — Changing the connector icon**

8. Snap the internal RJ-45 connector onto the back of the front panel enclosure bezel plug-in.
9. **(HSA 222 models only)** Reach your hand through the front panel access hole and snap the lower internal RJ-45 connectors onto the back of the lower enclosure bezel plug-ins.
10. Replace the front panel in the surface mount enclosure and secure it in place with the hex head screws removed in step 4.
11. **(HSA 222 models only)** Replace the front access panel in the surface mount enclosure and secure it in place with the Phillips head screws removed in step 2.
12. **(HSA 222 models only)** Reinstall the surface mount enclosure. See "Removing and Replacing the Enclosure", steps 6 through 11.

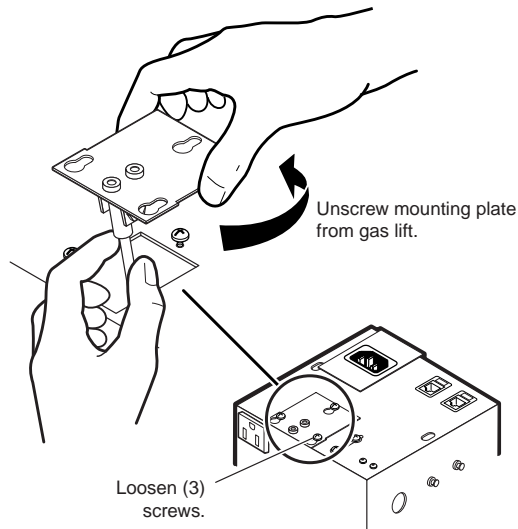
### Replacing the Gas Lift

The gas lift that raises the HSA surface is rated for 100,000 opening and closing cycles. Contact the Extron S<sup>3</sup> Sales & Technical Support Hotline at the nearest phone number listed on the rear cover of this manual to obtain a replacement gas lift. Replace the gas lift as follows:

**WARNING** Ensure that AC power is disconnected before servicing the HSA unit.

**CAUTION** When the HSA 200 is upside-down, the latch may be ineffective. If the latch releases in this position, the enclosure will tip and could damage the flanged edges. Keep a free hand on the enclosure to keep it from tipping.

1. Remove the surface mount enclosure from the table. See "Removing and Replacing the Enclosure", steps 1 through 4. Place the enclosure upside-down on a horizontal surface. To protect the finish, place the enclosure on a soft cloth.
2. Loosen the three Phillips head screws that secure the gas lift mounting plate in place (figure 3-5).



**Figure 3-5 — Removing the gas lift mounting plate**

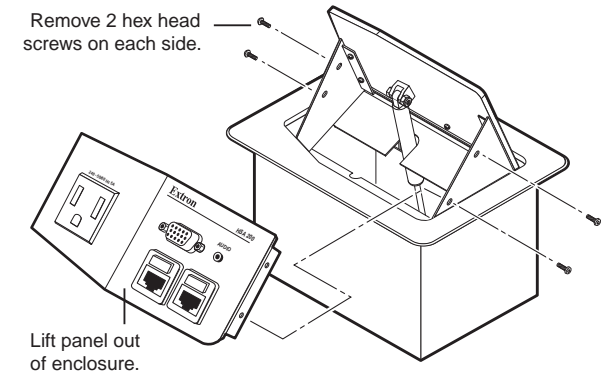
**NOTE** Figure 3-5 shows an HSA 200 model. Removing the gas lift mounting plate from an HSA 222 is an identical procedure.

3. Slide the gas lift mounting plate toward the center of the enclosure, releasing the mounting plate (figure 3-5).
4. Turn the gas lift mounting plate counterclockwise until the plate comes free from the shaft of the gas lift (figure 3-5).
5. Turn the surface mount enclosure onto its back side and open the top panel.

**NOTE** With the gas lift removed, the top panel must be manually lifted.

6. (HSA 200 models only) Remove the four 1/16" hex head screws on the right and left sides of the front panel (figure 3-6). Retain the screws. Lift the panel away from the enclosure.

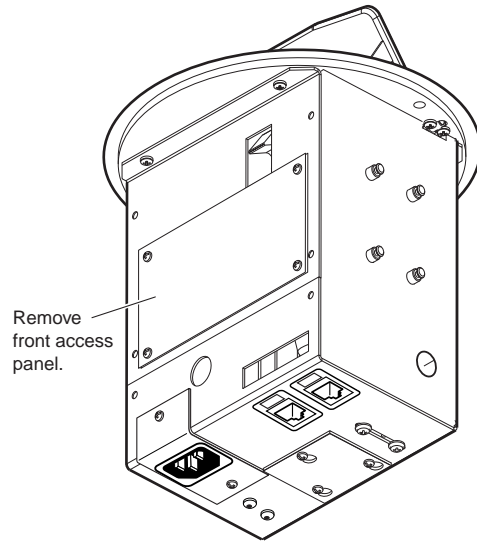
**NOTE** Figure 3-6 shows an HSA 200 model. Removing the front panel from an HSA 222 is an identical procedure.



**Figure 3-6 — Front panel removal (HSA 200 models)**

## Maintenance and Modifications, cont'd

7. **(HSA 222 models only)** Remove the four Phillips head screws from the front access panel (figure 3-7). Retain the screws. Lift the panel away from the enclosure.

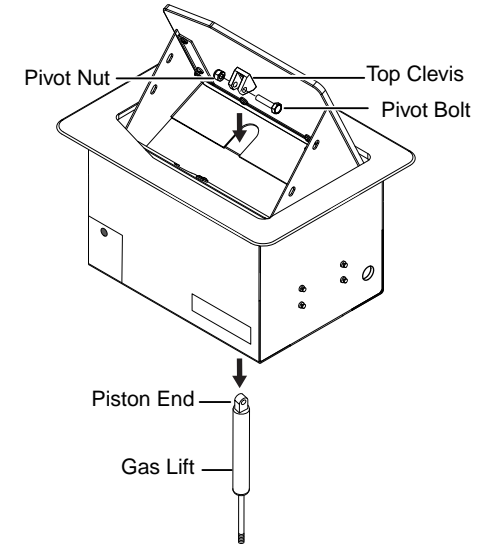


**Figure 3-7 — Front access panel removal (HSA 222 models)**

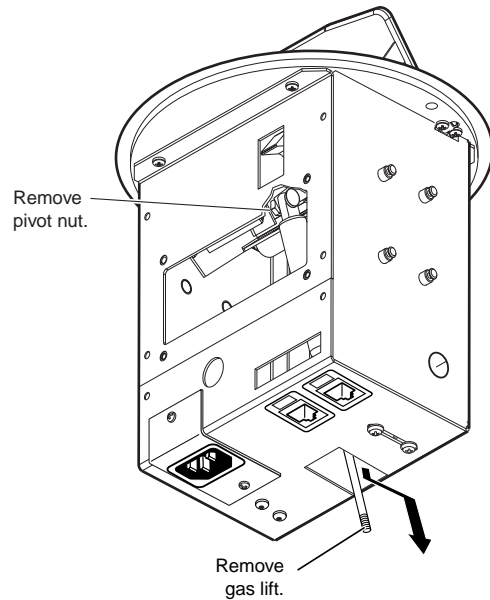
8. Remove the pivot nut from the upper pivot bolt, then remove the bolt, releasing the upper end of the gas lift from the top panel. Pull the gas lift from the bottom of the enclosure.

**HSA 200 models** — Reach through the front panel opening (figure 3-8).

**HSA 222 models** — Reach through the front access panel (figure 3-9 on page 3-12).



**Figure 3-8 — Replacing the gas lift, HSA 200 model**



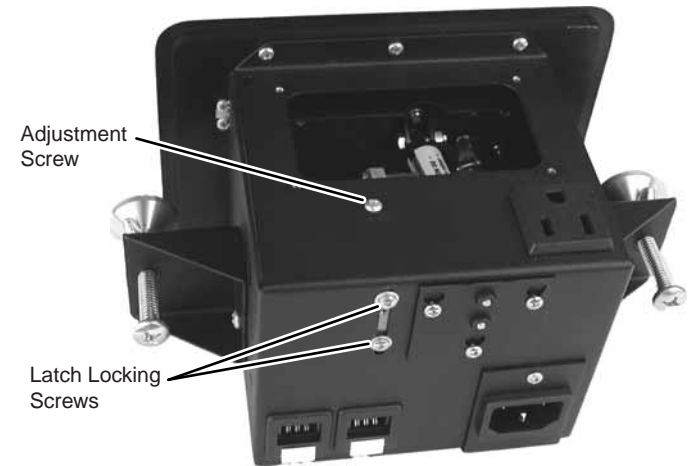
**Figure 3-9 — Replacing the gas lift, HSA 222 model**

9. Insert the piston end of the replacement gas lift through the hole in the bottom of the enclosure adjacent to the latch and secure the lift in the clevis on the top panel with the nut and bolt that were removed in step 8.
10. **(HSA 200 models only)** Replace the front panel in the surface mount enclosure and secure it in place with the hex head screws removed in step 6.
11. **(HSA 222 models only)** Replace the front access panel in the surface mount enclosure and secure it in place with the Phillips head screws removed in step 7.
12. Thread the pivot nut on the gas lift mounting plate onto the shaft of the gas lift and tighten it several turns.
13. Firmly push the gas lift mounting plate into position on the underside of the surface mount enclosure, engaging the three mounting screws that were loosened in step 2. Holding the plate in position with one hand, secure it to the enclosure with the three screws.
14. Reinstall the surface mount enclosure. See “Removing and Replacing the Enclosure”, steps 6 through 11.

## Adjusting the Top Panel

Level the top panel of the HSA 200 or HSA 222 as follows:

1. If necessary to view the top and the underside of the enclosure simultaneously, remove the surface mount enclosure from the table. See “Removing and Replacing the Enclosure”, steps 1 through 4.
2. Close and latch the top panel.
3. Slightly loosen the two latch locking screws (figure 3-10) on the underside of the surface mount enclosure. These screws lock the latch in place once it is adjusted.



**Figure 3-10 — Adjusting the top panel**

4. Gently turn the adjustment screw on the rear of the surface mount enclosure to raise or lower the top panel to level it with the flange. Turning the screw counterclockwise raises the panel and clockwise lowers the panel.
5. Once the top panel is level, tighten the two latch locking screws on the underside of the surface mount enclosure.
6. If the surface mount enclosure was removed, reinstall it. See “Removing and Replacing the Enclosure”, steps 7 through 11.



# Appendix A

## Reference Information

Specifications

HSA Part Numbers

Included Parts

Routing Templates

Replacement Parts

Accessories

Top Plate Dimensions

## Reference Information

### Specifications

#### Video — HSA 200SE, HSA 200CE

Gain .....	Selectable: unity (0.7 V), (0.75 V) 50%, (0.8 V) 100%
Bandwidth .....	300 MHz (-3 dB)

**NOTE** ID bits are terminated on pins 4 and 11.

#### Video input — HSA 200S, HSA 200C

Number/signal type ....	1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs
Connectors .....	(1) 15-pin HD female

#### Video input — HSA 200SE, HSA 200CE

Number/signal type ....	1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs
Connectors .....	(1) 15-pin HD female
Nominal level .....	0.7 Vp-p for RGB
Min./max. levels .....	Analog: 0.3 V to 1.5 Vp-p with no offset at unity gain
Impedance .....	75 ohms
Horizontal frequency ...	15 kHz to 135 kHz
Vertical frequency .....	30 Hz to 170 Hz

#### Video output — HSA 200S, HSA 200C

Number/signal type ....	1 pass-through VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs
Connectors .....	5 BNC female on pigtails

#### Video output — HSA 200SE, HSA 200CE

Number/signal type ....	1 VGA-UXGA RGBHV, RGBS, RGsB, RsGsBs
Connectors .....	5 BNC female on pigtails
Nominal level .....	0.7 Vp-p for RGB
Min./max. levels .....	Analog: 0.3 V to 1.5 Vp-p
Impedance .....	75 ohms
DC offset .....	±5 mV with input at 0 offset

#### Sync — HSA 200SE, HSA 200CE

Input type .....	RGBHV, RGBS, RGsB, RsGsBs
Output type .....	RGBHV, RGBS, RGsB, RsGsBs
Input level .....	2.0 V to 5.0 Vp-p
Output level .....	TTL: 5.0 Vp-p, unterminated
Input impedance .....	510 ohms
Output impedance .....	75 ohms
Max. propagation delay	18.8 ns
Max. rise/fall time .....	4 ns
Polarity .....	Positive or negative (follows input)

#### Audio — HSA 200SE, HSA 200CE

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 .....	>90 dB at rated maximum output (21 dB, balanced)

Stereo channel separation >75 dB @ 20 Hz to 20 kHz

#### Audio input — HSA 200S, HSA 200C

Number/signal type ....	1 stereo, unbalanced
Connectors .....	(1) 3.5 mm stereo female jack

#### Audio input — HSA 200SE, HSA 200CE

Number/signal type ....	1 stereo, unbalanced
Connectors .....	(1) 3.5 mm stereo female jack
Impedance .....	>10k ohms unbalanced, DC coupled
Nominal level .....	-10 dBV (316 mVrms)
Maximum level .....	+6 dBu, (balanced or unbalanced) at 1%THD+N

#### Audio output — HSA 200S, HSA 200C

Number/signal type ....	1 pass-through stereo, unbalanced
Connectors .....	(1) 3.5 mm, direct insertion captive screw connector, 3 pole

#### Audio output — HSA 200SE, HSA 200CE

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 .....	Unbalanced output: -10 dBV (316 mVrms) Balanced output: -2 dBu (632 mVrms)
Max. level (Hi-Z) .....	>+14 dBu, balanced at 1% THD+N
Max. level (600 ohm) ....	>+5.5 dBm, balanced at 1% THD+N

**NOTE** 0 dBu = 0.775 Vrms. 0 dBV = 1 Vrms. 0 dBV ≈ 2 dBu.

## Reference Information, cont'd

### General

**NOTE** *The Universal AC outlet is fully compatible with Europlug, British, Indian, Danish, and Italian plug types. See the Universal AC outlet guide on the Extron Web site, [www.extron.com](http://www.extron.com), for compatibility details on all plug types*

Power (HSA 200SE/CE)	Supplied by an external power supply
External power supply (HSA 200SE/CE)	100 VAC to 240 VAC, 50-60 Hz, external; to 12 VDC, 0.42 A, regulated
Power input requirements (HSA 200SE/CE)	12 VDC, 0.2 A
Temperature/humidity — HSA 200SE/CE	Storage: -40 to +158°F (-40 to +70°C) / 10% to 90%, noncondensing Operating: +32 to +122°F (0 to +50°C) / 10% to 90%, noncondensing
Rack mount .....	No, but furniture mountable
Enclosure type .....	Metal
Enclosure dimensions	

**CAUTION** *Use the appropriate metal Extron routing template or refer to the surface cutout dimensions here before cutting a hole in the furniture or other surface. Pay special attention to the direction the unit will face; the unit's connector access side is underlined. Extron is not responsible for miscut mounting holes.*

#### HSA 200S, HSA 200SE — USA models

Top plate (outer rim) .....	<u>6.470</u> " W x 5.125" D ( <u>16.43</u> cm W x 13.02 cm D)
Surface cutout (inside rim) .....	<u>5.970 ±0.0325</u> " W x 4.625 ±0.0325" D ( <u>15.16 ±0.083</u> cm W x 11.75 ±0.083 cm D)
Top plate (inside tilt plate) .....	<u>4.344</u> " W x 3.000" D ( <u>11.03</u> cm W x 7.62 cm D)

#### HSA 222S — USA model

Top plate (outer rim) .....	<u>6.470</u> " W x 5.125" D ( <u>16.43</u> cm W x 13.02 cm D)
Surface cutout (inside rim) .....	<u>5.970 ±0.0325</u> " W x 4.625 ±0.0325" D ( <u>15.16 ±0.083</u> cm W x 11.75 ±0.083 cm D)
Top plate (inside tilt plate) .....	<u>4.660</u> " W x 2.875" D ( <u>11.84</u> cm W x 7.30 cm D)

#### HSA 200C, HSA 200CE — USA models

Top plate (outer rim) .....	6.500" diameter circle (16.51 cm diameter) circle
Surface cutout (inside rim) .....	6.000 ±0.0325" diameter circle (15.24 ±0.083 cm diameter) circle
Top plate (inside tilt plate) .....	<u>4.344</u> " W x 3.000" D ( <u>11.03</u> cm W x 7.62 cm D)

#### HSA 222C — USA model

Top plate (outer rim) .....	6.500" diameter circle (16.51 cm diameter) circle
Surface cutout (inside rim) .....	6.000 ±0.0325" diameter circle (15.24 ±0.083 cm diameter) circle
Top plate (inside tilt plate) .....	<u>4.660</u> " W x 2.875" D ( <u>11.84</u> cm W x 7.30 cm D)

#### HSA 200S, HSA 200SE, HSA 200C, HSA 200CE — USA models

Box (under surface) .....	4.0" H x <u>4.6</u> " W (front of unit) x 4.4" D (10.2 cm H x <u>11.7</u> cm W x 11.2 cm D) <b>without clamps</b> 4.0" H x <u>8.0</u> " W (front of unit) x 4.4" D (10.2 cm H x <u>20.3</u> cm W x 11.2 cm D) <b>with clamps</b>
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#### HSA 222S, HSA 222C — USA models

Box (under surface) .....	5.6" H x <u>5.3</u> " W (front of unit) x 3.6" D (14.2 cm H x <u>13.5</u> cm W x 9.1 cm D) <b>without clamps</b> 5.6" H x <u>8.6</u> " W (front of unit) x 3.6" D (14.2 cm H x <u>21.8</u> cm W x 9.1 cm D) <b>with clamps</b>
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#### HSA 200S/HSA 200SE — international square models

Top plate (outer rim) .....	<u>8.183</u> " W x 6.375" D ( <u>20.79</u> cm W x 16.19 cm D)
Surface cutout (inside rim)	<u>7.683 ±0.0325</u> " W x 5.875 ±0.0325" D ( <u>19.51 ±0.083</u> cm W x 14.92 ±0.083 cm D)
Top plate (inside tilt plate)	<u>5.90</u> " W x 4.10" D ( <u>14.99</u> cm W x 10.41 cm D)

#### HSA 222S — international square models

Top plate (outer rim) .....	<u>8.183</u> " W x 6.375" D ( <u>20.78</u> cm W x 16.19 cm D)
Surface cutout (inside rim) .....	<u>7.683 ±0.0325</u> " W x 5.875 ±0.0325" D ( <u>19.51 ±0.083</u> cm W x 14.92 ±0.083 cm D)
Top plate (inside tilt plate) .....	<u>6.183</u> " W x 3.75" D ( <u>15.70</u> cm W x 9.53 cm D)

## Reference Information, cont'd

### HSA 200C/HSA 200CE — international circular models

Top plate (outer rim) .....	8.5" diameter circle (21.6 cm diameter) circle
Surface cutout (inside rim) .....	8.0" diameter (20.3 cm diameter) circle
Top plate (inside tilt plate) .....	5.9" W x 4.1" D (15.1 cm W x 10.4 cm D)

### HSA 200 — international, all models

Box (under surface) .....	4.0" H x 6.3" W (front of unit) x 5.0" D (10.2 cm H x 15.9 cm W x 12.7 cm D) <b>without clamps</b> 4.0" H x 10.0" W (front of unit) x 5.0" D (10.2 cm H x 25.3 cm W x 12.7 cm D) <b>with clamps</b>
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### HSA 222 — international, all models

Box (under surface) .....	4.5" H x 6.6" W (front of unit) x 4.9" D (11.4 cm H x 16.8 cm W x 12.4 cm D) <b>without clamps</b> 4.5" H x 10.3" W (front of unit) x 4.9" D (11.4 cm H x 26.2 cm W x 12.4 cm D) <b>with clamps</b>
---------------------------	--

### Product weight

HSA 200S, HSA 200C .....	4.0 lbs (1.8 kg)
HSA 222S, HSA 222C .....	3.5 lbs (1.6 kg)
HSA 200SE, HSA 200CE .....	5.0 lbs (2.3 kg)

### Shipping weight

HSA 200S, HSA 200C, HSA 222S, HSA 222C	7 lbs (4 kg)
HSA 200SE, HSA 200CE .....	8 lbs (4 kg)

Vibration ..... ISTA 1A in carton  
(International Safe Transit Association)

Listings, certifications ..... UL, c-UL

### Compliances

HSA 200SE, HSA 200CE ..... 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.

## HSA Part Numbers

HSA 200S	Part number
HSA 200S US/domestic (black anodized finish)	60-510-01
HSA 200S International	60-705- <i>nn</i>

HSA 200SE	Part number
HSA 200SE US (black anodized finish)	60-511-01
HSA 200SE International	60-706- <i>nn</i>

HSA 200C	Part number
HSA 200C US/domestic (black anodized finish)	60-512-01
HSA 200C International	60-703- <i>nn</i>

HSA 200CE	Part number
HSA 200CE US/domestic (black anodized finish)	60-513-01
HSA 200CE International	60-704- <i>nn</i>

HSA 222	Part number
HSA 222S US/domestic (black anodized finish)	60-630-01
HSA 222C US/domestic (black anodized finish)	60-631-01
HSA 222S International	60-701- <i>nn</i>

**NOTE** For the international versions, the *nn* in the part number identifies the AC power connector and finish (black anodized or brushed aluminum). Specify the desired power connector and finish when ordering.

**NOTE** The USA versions of the HSA 200 and HSA 222 are also available in a brushed aluminum finish. Visit the Extron Web site, [www.extron.com](http://www.extron.com) for more part numbers.

Included Parts

Part	Part number
HSA 200 and HSA 222 User's Manual	
RJ-45 connector bezel plug-in inserts (assorted colors)	70-201-01
Power supply, 100-240VAC, 50/60Hz, 12VDC (HSA 200SE and HSA 200 CE only)	28-104-01
Tweezer	

Routing Templates

Template	Part number
HSA 200/HSA 222 US routing template	70-237-01
HSA 200/HSA 222 International routing template	70-237-02

Accessories

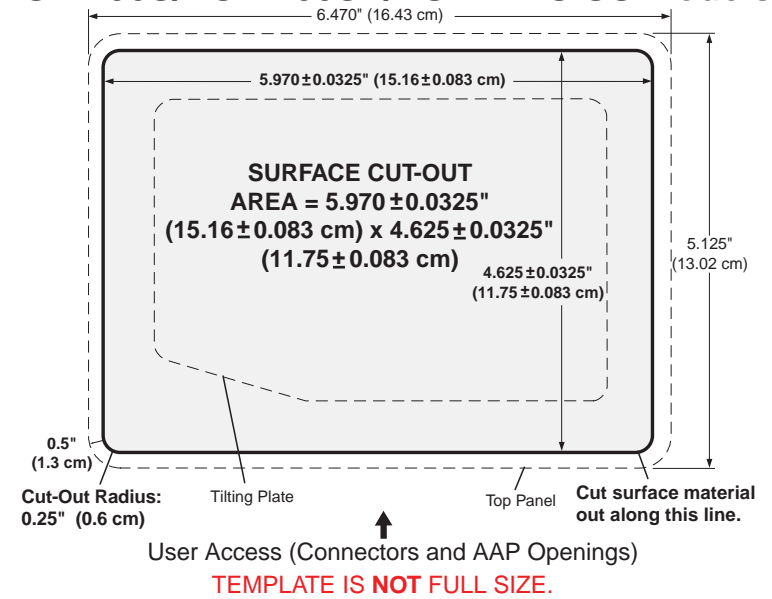
Part	Part number
HSA 200 RJ-45 to RJ-11 Conversion Kit	70-231-01
HSA 222 RJ-45 to RJ-11 Conversion Kit	70-231-02
HSA 200/HSA 222 Flexible Conduit Adapter Kit	70-229-01

Top Plate Dimensions

The cutout dimension illustrations (figures A-1 and A-2) are **not to scale** and are for reference only. If you choose not to use Extron's metal routing template (chapter 2, "Installation"), the dimensions on the illustrations will help you properly prepare the mounting surface. The surface cutout area is the shaded area on the diagrams. The cutout dimensions are provided.

For full size paper templates, visit the Extron Web site ([www.extron.com](http://www.extron.com)) or call the Extron S<sup>3</sup> Sales & Technical Support Hotline.

HSA 200S/HSA 200SE/HSA 222S US Models



HSA 200S/HSA 200SE International Models

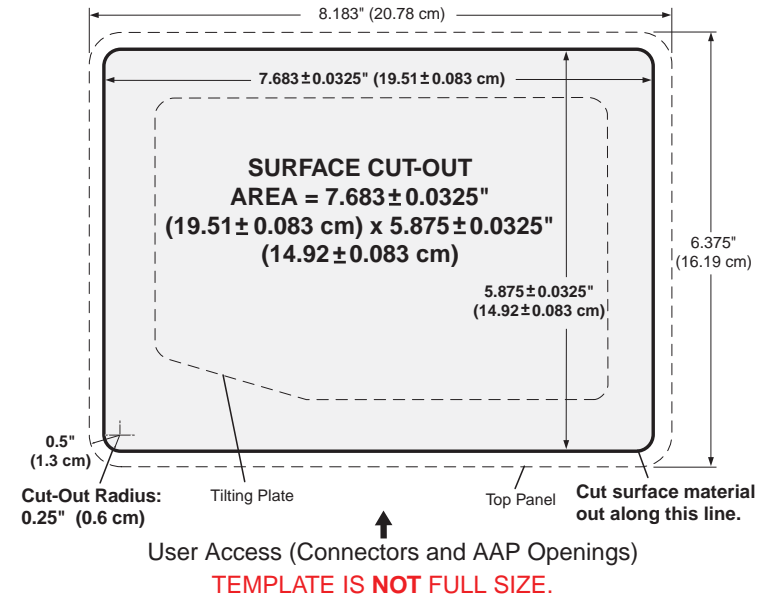
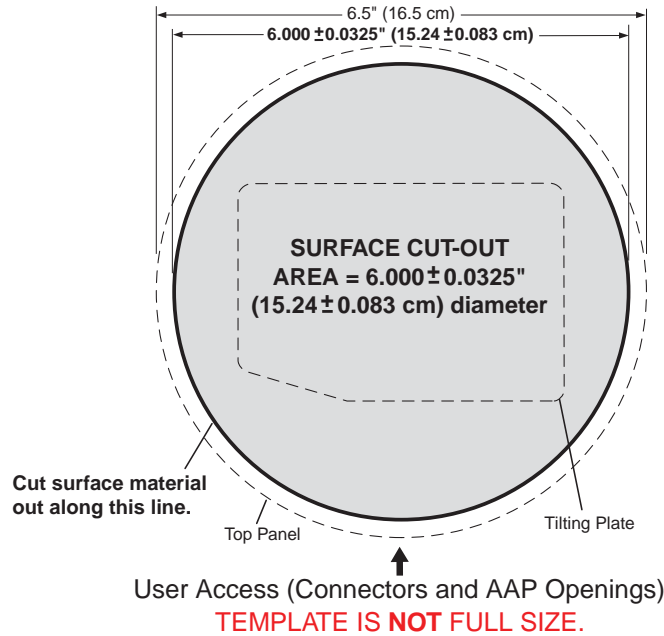


Figure A-1 — HSA 200S/HSA 200SE/ HSA 222S cutout dimensions

Reference Information, cont'd

**HSA 200C/HSA200CE/HSA222C US Models**



**HSA 200C/HSA 200CE International Models**

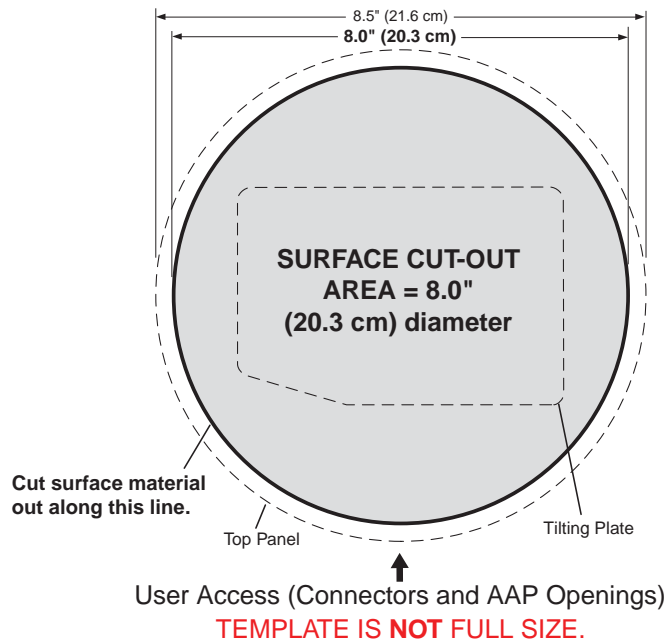


Figure A-2 — HSA 200C/HSA 200CE/HSA 222C cutout dimensions



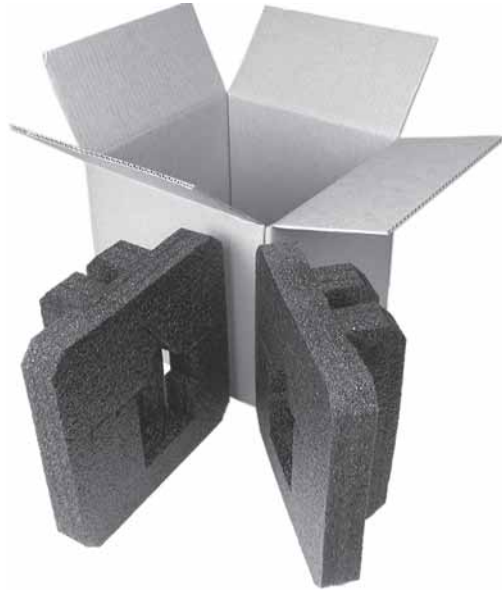
**HSA 200/222 Series Surface Access Products**

# Appendix B

## Packaging for Shipment

## Packaging for Shipment

The HSA 200's and HSA 222's ultra-fine machined surfaces and moving parts make them vulnerable to damage caused by mishandling during shipment, if they are improperly packaged. If, for any reason, you need to return an HSA to Extron, first contact Extron to obtain a return kit. The return kit, which reduces the chances of damage during shipment, includes a sturdy shipping carton and foam shells custom cut to fit the HSA (figure B-1).



**Figure B-1 — HSA 200/HSA 222 return kit**

Package an HSA for shipment as follows:

1. Contact the Extron S<sup>3</sup> Sales & Technical Support Hotline to obtain a return kit. Extron will send the return kit to the location you specify.

**WARNING** *The flanged edges of the top of the surface enclosure are sharp when the HSA is removed from the table. Exercise caution when handling to prevent personal injury.*

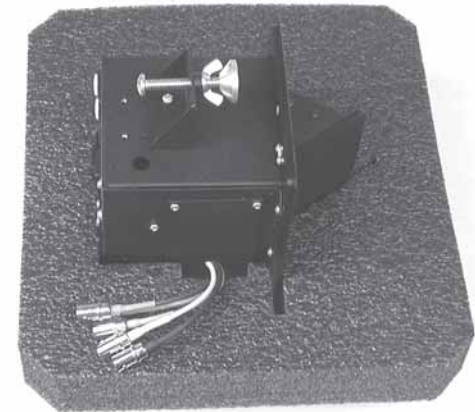
**CAUTION** *The flanged edges of the top of the surface enclosure are bevelled to an ultra-fine thickness of less than 0.04 (4/100)" (approximately 1 mm). These edges are soft and can be easily nicked or bent. Exercise caution when handling and mounting the enclosure. Mishandling can damage the appearance of the enclosure.*

2. Disconnect all cables and remove the HSA 200 or HSA 222 from the table or desk. See "Removing and Replacing the Enclosure", steps 1 through 4, in chapter 3, "Maintenance and Modifications".
3. Place the enclosure on a flat, horizontal surface. To protect the finish, place it on a soft cloth or rubber mat.
4. Install the plastic strip (part of the return kit) to protect the flanged edges of the top of the enclosure (figure B-2).



**Figure B-2 — Installing protective strips**

5. Open the top panel and insert the HSA 200 or HSA 222 into the custom cutout portion of one of the foam shells (figure B-3).



**Figure B-3 — Installing the HSA into the foam shell**

## Packaging for Shipment, cont'd

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6. Place the remaining foam shell on the other side of the HSA (figure B-4). Firmly push the foam shells together as far as they will go to completely suspend the HSA unit.



**Figure B-4 — HSA unit suspended in the foam**

7. Place the foam-protected HSA 200 or HSA 222 into the shipping carton (figure B-5).



**Figure B-5 — HSA in the shipping carton**

8. Close the shipping carton and seal it with high quality shipping tape.
9. Ship the HSA to Extron using a reputable shipping company.