

# HSA 400 and HSA 402 Series

Hideaway Surface Access Products



**Extron Electronics**  
INTERFACING, SWITCHING AND CONTROL

# Safety Instructions

## Safety Instructions • English

**WARNING:** This symbol, ⚠, when used on the product, 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.

**ATTENTION:** This symbol, ⚠, when used on the product, is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.

For information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the Extron Safety and Regulatory Compliance Guide, part number 68-290-01, on the Extron website, [www.extron.com](http://www.extron.com).

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**VOICHT:** Dieses Symbol ⚠ auf dem Produkt soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.

Weitere Informationen über die Sicherheitsrichtlinien, Produkthandhabung, EMI/EMF-Kompatibilität, Zugänglichkeit und verwandte Themen finden Sie in den Extron-Richtlinien für Sicherheit und Handhabung (Artikelnummer 68-290-01) auf der Extron-Website, [www.extron.com](http://www.extron.com).

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**ATTENTION:** Ce pictogramme, ⚠, lorsqu'il est utilisé sur le produit, signale à l'utilisateur des instructions d'utilisation ou de maintenance importantes qui se trouvent dans la documentation fournie avec le matériel.

Pour en savoir plus sur les règles de sécurité, la conformité à la réglementation, la compatibilité EMI/EMF, l'accessibilité, et autres sujets connexes, lisez les informations de sécurité et de conformité Extron, réf. 68-290-01, sur le site Extron, [www.extron.com](http://www.extron.com).

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**ATTENZIONE:** Il simbolo, ⚠, se usato sul prodotto, serve ad avvertire l'utente della presenza di importanti istruzioni di funzionamento e manutenzione nella documentazione fornita con l'apparecchio.

Per informazioni su parametri di sicurezza, conformità alle normative, compatibilità EMI/EMF, accessibilità e argomenti simili, fare riferimento alla Guida alla conformità normativa e di sicurezza di Extron, cod.

articolo 68-290-01, sul sito web di Extron, [www.extron.com](http://www.extron.com).

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**ПРЕДУПРЕЖДЕНИЕ:** Данный символ, ⚠, если указан на продукте, предупреждает пользователя о наличии неизолированного опасного напряжения внутри корпуса продукта, которое может привести к поражению электрическим током.

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Для получения информации о правилах техники безопасности, соблюдении нормативных требований, электромагнитной совместимости (ЭМП/ЭДС), возможности доступа и других вопросах см. руководство по безопасности и соблюдению нормативных требований Extron на сайте Extron: [www.extron.com](http://www.extron.com), номер по каталогу - 68-290-01.

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**注意:** ⚠ 产品上的这个标志意在提示用户设备随附的用户手册中有重要的操作和维护(维修)说明。

关于我们产品的安全指南、遵循的规范、EMI/EMF 的兼容性、无障碍使用的特性等相关内容, 敬请访问 Extron 网站 [www.extron.com](http://www.extron.com), 参见 Extron 安全规范指南, 产品编号 68-290-01。

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安全上のご注意、法規遵守、EMI/EMF適合性、その他の関連項目については、エクストロンのウェブサイト[www.extron.com](http://www.extron.com)より「Extron Safety and Regulatory Compliance Guide」(P/N 68-290-01)をご覧ください。

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**경고:** 이 기호 ▲, 가 제품에 사용될 경우, 제품의 인클로저 내에 있는 접지되지 않은 위험한 전류로 인해 사용자가 감전될 위험이 있음을 경고합니다.

**주의:** 이 기호 △, 가 제품에 사용될 경우, 장비와 함께 제공된 책자에 나와 있는 주요 운영 및 유지보수(경비) 지침을 경고합니다.

안전 가이드라인, 규제 준수, EMI/EMF 호환성, 접근성, 그리고 관련 항목에 대한 자세한 내용은 Extron 웹 사이트([www.extron.com](http://www.extron.com))의 Extron 안전 및 규제 준수 안내서, 68-290-01 조항을 참조하십시오.

**NOTE:** For more information on safety guidelines, regulatory compliances, EMI/EMF compatibility, accessibility, and related topics, see the “[Extron Safety and Regulatory Compliance Guide](#)” on the Extron website.

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# Conventions Used in this Guide

## Notifications

**WARNING:** Potential risk of severe injury or death.

**ATTENTION:** Risk of property damage.

**NOTE:** A note draws attention to important information.

## Specifications Availability

Product specifications are available on the Extron website,  
[www.extron.com](http://www.extron.com).

## Extron Glossary of Terms

A glossary of terms is available at <http://www.extron.com/technology/glossary.aspx>.

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# Introduction

This section describes:

- **About the Hideaway Surface Access Products**
- **Features**

## About the Hideaway Surface Access Products

The patented Extron Hideaway HSA 400 and HSA 402 are furniture-mounted, architectural solutions for inconspicuous computer video interface connector access and control.

The HSA 400 provides space for two double-space (double-height) or four single-space Extron Architectural Adapter Plates (AAPs), a standard grounded AC receptacle, and two RJ-45 (Category 5/6) (CAT 5/6) connectors (see figure 1). The HSA is available in a US version, with a US power receptacle, and an international version. Several different types of power receptacles are available for the international version, including Multi-regional, UK, French, Israeli, Australian, Indian, European, and Swiss receptacles.

**NOTE:** The multi-regional AC outlet is fully compatible with Europlug, British, Indian, Danish, and Italian plug types. See the Multi-region AC Outlet Guide on the Extron website, [www.extron.com](http://www.extron.com), for compatibility details on all plug types.



**Figure 1. HSA 400 Hideaway Enclosure**

The HSA 402 provides the same AAP space, but with two AC receptacles and four RJ-45 connectors. The AC receptacles and RJ-45 connectors are arranged symmetrically on opposite sides of the AAP opening (see figure 1).

In both models, cabling inside the enclosure runs the AC power lines and RJ-45 signal lines from the HSA panel connectors to connectors on the bottom of the enclosure.

With an optional conversion kit, one or more of the RJ-45 (data) lines can be converted to an RJ-11 (telephone) line.

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



**Figure 2. HSA 402 Hideaway Enclosure**

The functionality of the HSA enclosures can be optimized with one or two RGB 580xi AAPs connected and routing video and audio signals to one or two RGB 580xi Remote Interfaces (see [figure 3](#) on the next page).

## Features

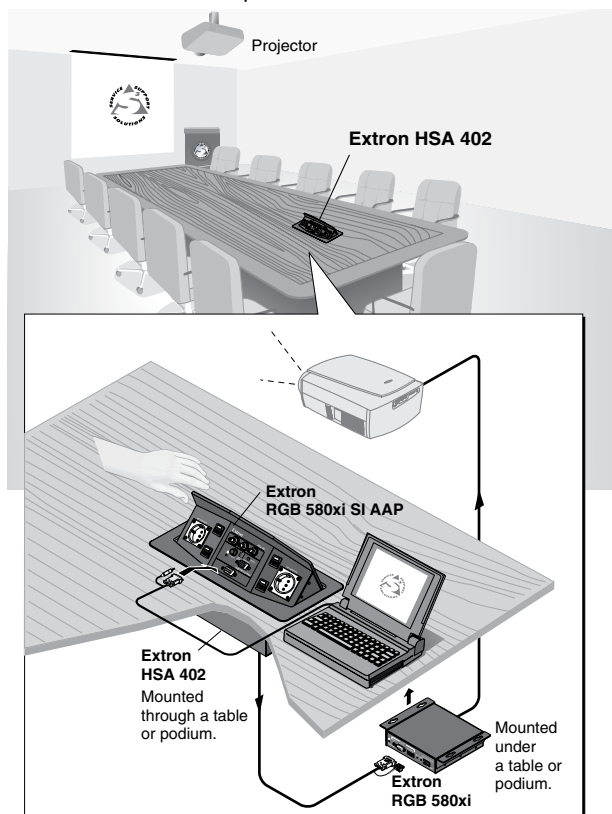
- UL/c-UL listing / CSA certification
- Easy access to connectors and controls
- Durable mechanical movement and latching mechanism
- A variety of surface finishes
- A variety of RJ-45 connector bezel colors included: black, red, blue, orange, gray, white, ivory, yellow, and green

**NOTE:** The space behind the AAP panel is limited. The on-line Connectivity Configurator, available at [www.extron.com](http://www.extron.com), offers guidance as to the fit of AAPs into this space.

- Compact size
- Easy installation of two double-space Extron AAPs
- RJ-45 (CAT 5/6) network, data, or communications connections (terminated in accordance with the TIA/EIA T568B standard)



- Grounded AC receptacles



**Figure 3. HSA 402 International and RGB 580xi Application**

# Installation

Topics covered in this section are:

- [Installation Overview](#)
- [Preparing the Routing Template](#)
- [Preparing the Table and Mounting the Enclosure](#)
- [Cabling and Installing the AAPs](#)
- [Cabling the Enclosure](#)
- [Routing the AAP Cables](#)
- [Bezels](#)

## Installation Overview

Install and set up the HSA surface access enclosure 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 kits to replace one or more RJ-45 connectors with RJ-11 connectors (see the *RJ-45 to RJ-11 Conversion Kit* manual).
3. If desired, install the optional flexible conduit kit to replace the removable AC power cord (see the *Flexible Conduit Kit* manual).
4. Cut a hole in the surface where the enclosure will be installed and install the enclosure. The clamshell clamps the enclosure to the table (see [Preparing the Table and Mounting the Enclosure](#) on page 6).
5. Run all cables necessary to support the AC and RJ-45 connectors and all planned AAP connectors. Leave enough slack in the cables to connect them to the underside of the enclosure or to the rear of the AAPs before the AAPs are installed in the enclosure.
6. Turn off all of the equipment to be connected. Ensure that the equipment connected to the RJ-45 connectors and the connections for any AAPs are all turned off and disconnected from the power source.
7. If applicable, connect cables to the rear connectors on the AAPs to be installed in the HSA. Install the desired AAPs on the front panel of the enclosure (see [Cabling and Installing the AAPs](#) on page 8).

8. Connect the power and RJ-45 cables to the underside of the enclosure (see [Cabling the Enclosure](#) on page 10).
9. Route and secure the AAP cables inside the clamshell (see [Routing the AAP Cables](#) on page 12).
10. Peel the protective coating from the top surface.
11. Connect the power cords and turn on the devices that connect to the surface access enclosure.

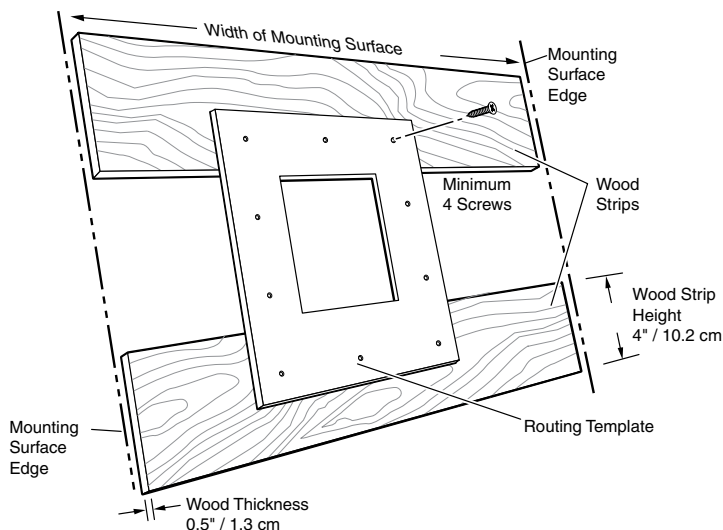
## Preparing the Routing Template

Extron offers a metal template for each HSA model (see [www.extron.com](http://www.extron.com)). 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 two 1/2 x 4 inches (approximately 13 mm x 102 mm) strips of soft, finished lumber at least long enough to span the distance between the desired installation location on the table or other mounting surface and the edges of the mounting surface (see figure 4).

**ATTENTION:** 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.



**Figure 4. Prepared Mounting Template**

These strips raise the routing template above the mounting surface to provide room for the router 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.

## Preparing the Table and Mounting the Enclosure

The preferred and recommended method for preparing the table is to use the appropriate Extron metal routing template and a router. For part numbers go to [www.extron.com](http://www.extron.com).

Alternatively, you can use a paper cut-out template (see [Reference Information](#) on page 22) and a sabre saw or keyhole saw, but this method is not recommended.

### Prepare the table as follows:

**ATTENTION:** The opening in the table for the HSA 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.

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

1. Locate the desired mounting location on the tabletop or other installation surface. Mark the location.

**ATTENTION:** Ensure that only the wooden strips on the routing template contact the furniture. Failure to do so may mar the furniture.

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.
3. Once the template assembly is positioned properly, secure the assembly to the table with C-clamps (see [figure 5](#) on the next page).



**Figure 5. Cutting the Opening with a Router**

**WARNING:** Wear safety glasses when operating power equipment. Failure to comply can result in eye injury.

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

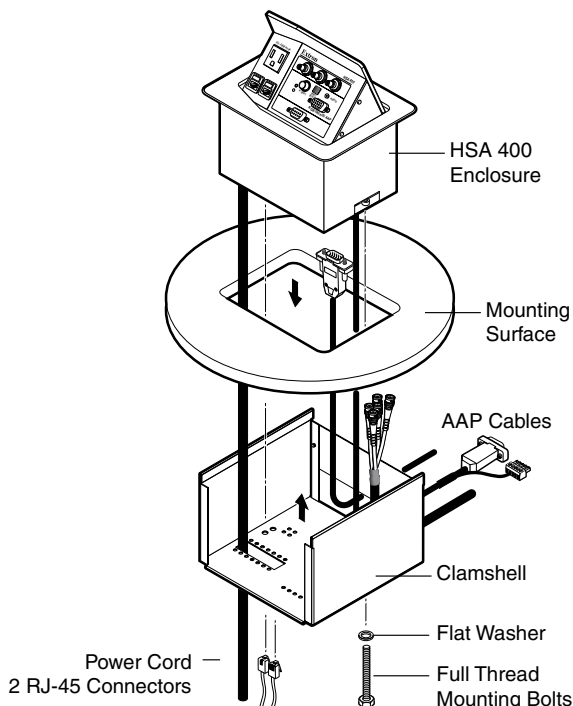
**WARNING:** The flanged edges of the top of the surface enclosure are sharp. To prevent personal injury, exercise caution when the HSA is not installed in a table.

**ATTENTION:** The flanged edges of the top of the surface enclosure are bevelled to an ultra-fine thickness of less than 0.04 (4/100) inch (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.

6. Remove the plastic strips that protect the flanged edges of the top of the surface enclosure. If a sticky residue remains, remove it with an appropriate metal cleaning product.

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

7. 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.
8. From the underside of the table, bolt the clamshell to the enclosure with two bolts of optimum length (included) (see figure 6).



**Figure 6. Mounting the HSA 400 Enclosure**

9. Peel any remaining protective coating from the enclosure.

## Cabling and Installing the AAPs

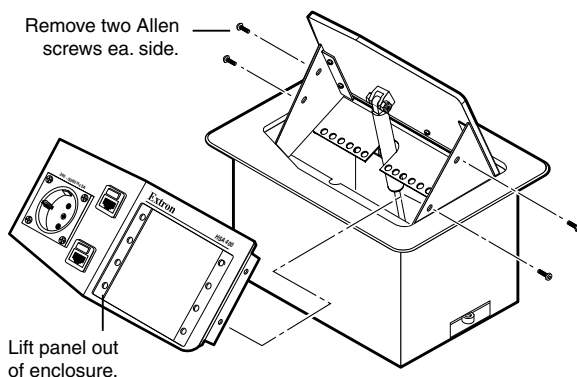
**NOTE:** The space behind the AAP panel is limited. The on-line Connectivity Configurator, available at [www.extron.com](http://www.extron.com), offers guidance as to the fit of AAPs into this space.

The various Extron single- and double-space AAP devices, including the various RGB 580xi AAPs, can be mounted to the HSA.

The screws needed for installing an AAP are built into its front panel, so no additional screws are needed.

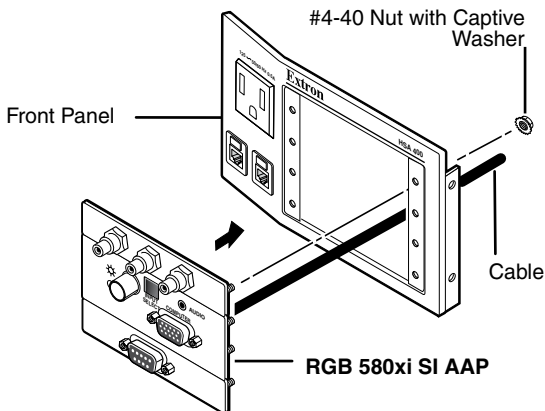
**WARNING:** Ensure that AC power is disconnected before servicing the HSA unit.

1. Remove the four hex head screws on the right and left sides of the front panel (see figure 7). Retain the screws. Lift the panel away from the enclosure.



**Figure 7. Removing the Front Panel from an HSA 400 International**

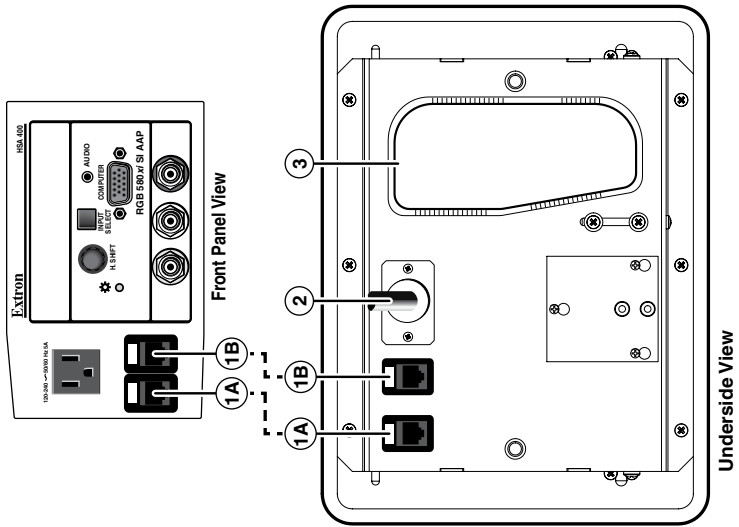
2. Cable the rear of the AAPs before attaching the AAPs to the enclosure. Route the cables through the hole in the underside of the surface mount enclosure and connect them to the rear of the AAPs. If applicable, refer to the cabling information in the documentation for the AAP.
3. Insert each of the AAP screws through the holes in the AAP opening of the front panel. Secure each AAP to the panel with the provided captive washers and #4-40 nuts (see figure 8).



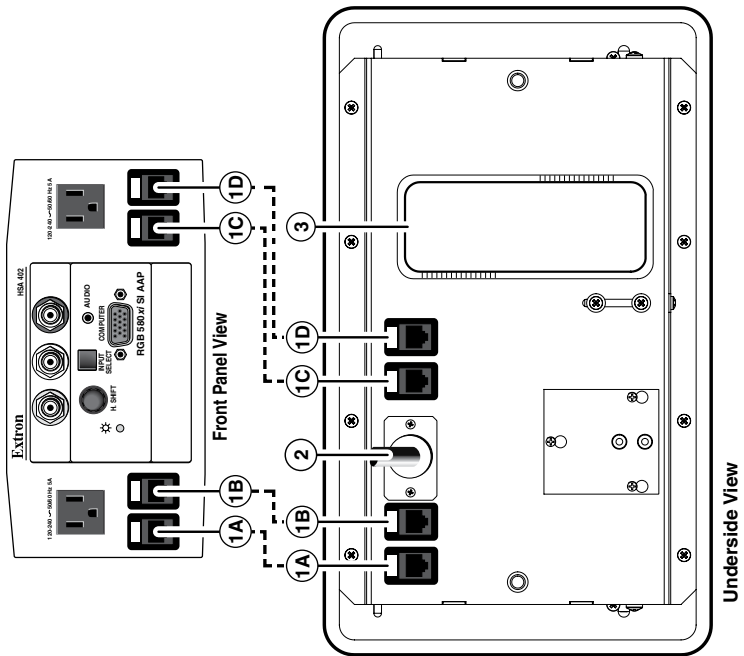
**Figure 8. Mounting an AAP Device to an HSA 400 US Front Panel**

4. Replace the front panel in the surface mount enclosure and secure it in place with the hex head screws removed in step 2. If you lose a front panel screw, two spare screws are stored in the underside of the clamshell.

## Cabling the Enclosure



### Figure 9. HSA 400 Enclosure Underside Features



**Figure 10. HSA 402 Enclosure Underside Features**



**① RJ-45 connectors** — See **Cabling the RJ-45 Connectors**.

**NOTE:** All RJ-45 connectors are terminated in accordance with the TIA/EIA T568B standard.

**② AC power connector** — Connect this power cord to the power source.

**NOTES:**

- For US domestic versions, this power cord is permanently connected to the HSA. Connect the power cord to a 125 VAC, 60 Hz, 10 A power source.
- For international versions, this power cord is a removable IEC power cord. Connect the power cord to a 220-250 V, 50-60 Hz, 10 A power source.
- The multi-regional AC outlet is fully compatible with Europlug, British, Indian, Danish, and Italian plug types. See the multi-regional AC outlet guide on the Extron Web site, [www.extron.com](http://www.extron.com), for compatibility details on all plug types.

**③ Cable access holes**

## Cabling the RJ-45 Connectors

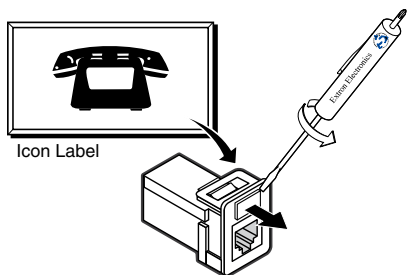
Plug one end of a twisted pair (TP) cable into each of these RJ-45 female connectors on the underside of the HSA (see **figure 9** and **figure 10** on page 10). Connect the other end to an appropriate telecommunications or data network or to an Extron TP product.

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

Cables inside the HSA route the network cables from the front panel to the underside of the enclosure. The bottom RJ-45 connections match up with the front panel RJ-45 connector locations identified on **figure 9** and **figure 10**. For example, match the front panel RJ-45 (CAT 5/6) network, data, or communications connection **1a** with the underside RJ-45 connector **1a**, match **1b** with **1b**, and so forth.

**NOTE:** Only connectors **1a** and **1b** are present on the HSA 400.

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 an Extron Tweaker or small screwdriver (see **figure 11** on the next page) and snapping a new icon in place.



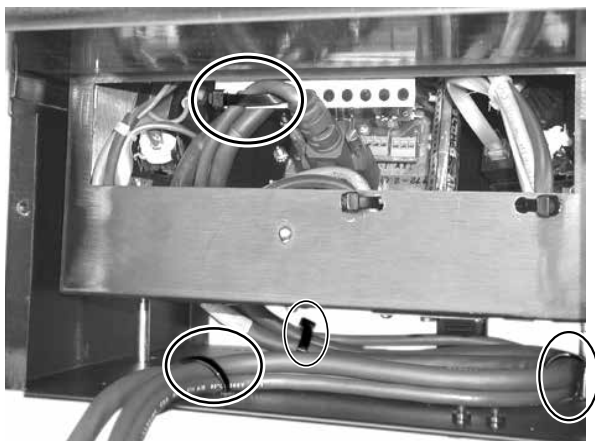
**Figure 11. Changing the Connector Icon**

## Routing the AAP Cables

The AAP cables must have freedom of movement to permit opening and closing the surface mount enclosure. At the same time, they need to be restrained to prevent them from rubbing against the edges of the enclosure cable access hole in the underside of the surface mount enclosure. Rubbing against the cable access hole edges can damage the cables. Route and secure the AAP cables as follows:

1. Open the top panel to extend the AAP cables to their maximum pull.
2. Experiment with AAP cable positioning to ensure that the cables do not rub against the edges of the AAP cable hole and to ensure that the cable pull does not restrict the movement of the top panel. Figure 12 shows the cables routed to the side, which proved effective in tests at Extron.
3. Secure the AAP cables to the tie-down holes with tie wraps in the clamshell and the enclosure in the locations shown in figure 12.

Rear View into HSA and Clamshell



Secure the AAP cables at the circled locations.

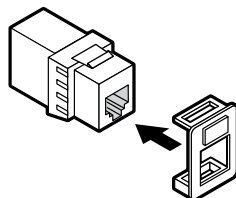
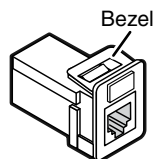
**Figure 12. HSA 402 AAP Cable Routing, Rear View**

## 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 or desired, replace the connector bezel plug-in on the front panel with a bezel of a different color or a blank plug-in (see [Replacing the Bezels](#) on page 15).

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 any possible later use.



# Maintenance and Modifications

Topics covered in this section are:

- **Replacing an AAP**
- **Replacing the Bezels**
- **Removing and Replacing the Enclosure**
- **Replacing the Gas Lift**
- **Adjusting the Top Surface Level**

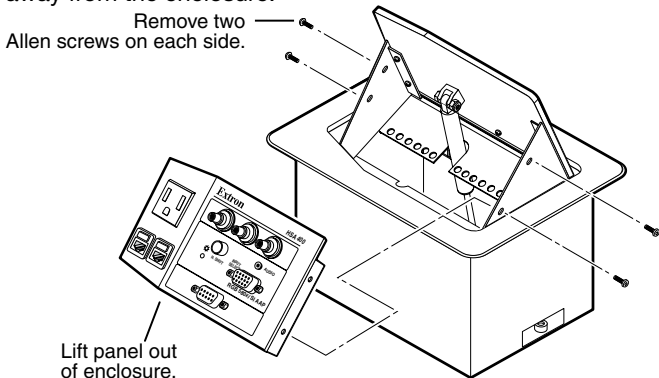
The HSA surface mount enclosures can be modified in the future to replace an AAP or to change the color or appearance of the bezel plug-ins. The most probable corrective maintenance procedures required are leveling the top surface and adjusting its height and replacing the gas lift. Most of the maintenance procedures require removing the surface mount enclosure from the table.

## Replacing an AAP

Replace one or more AAPs as follows:

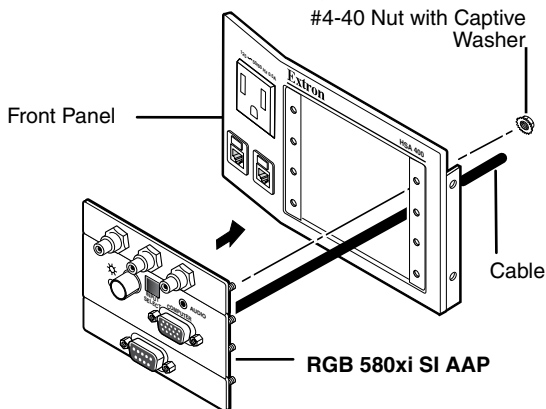
**WARNING:** Ensure that AC power is disconnected before servicing the HSA unit.

1. On the underside of the clamshell and in the enclosure, cut the tie wraps that route the AAP cables out of the way.
2. Remove the four hex head screws on the right and left sides of the front panel (see figure 13). Retain the screws. Lift the panel away from the enclosure.



**Figure 13. Removing the Front Panel**

3. Disconnect any cables from the rear of the AAPs that are to be replaced. If a cable is no longer required in your system, carefully pull the cable out through the bottom of the surface mount enclosure and the clamshell.
4. Remove the AAPs to be replaced from the front panel by unscrewing the nuts on the rear of the panel that fasten the plates to the faceplate (see figure 14).



**Figure 14. Mounting an AAP Device**

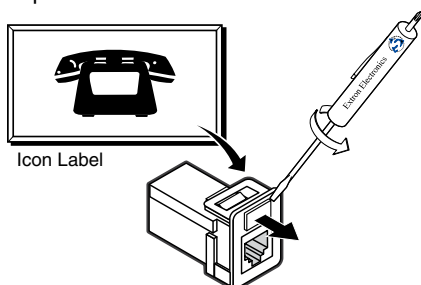
5. Cable the rear of the AAPs to be installed before attaching the AAPs to the enclosure. Route the cables through the hole in the underside of the surface mount enclosure and connect them to the rear of the AAPs. If applicable, refer to the cabling information in the AAP documentation.
6. Insert each AAP's screws through the holes in the AAP opening of the front panel. Secure each AAP to the enclosure with the provided captive washers and #4-40 nuts.
7. Replace the front panel in the surface mount enclosure and secure it in place with the hex head screws removed in [step 2](#) on the previous page. If you lose a front panel screw, two spare screws are stored in the underside of the clamshell.
8. To prevent wear and tear caused by cable movement, secure the AAP cables underneath the table (see [Routing the AAP Cables](#) on page 12).

## 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. Replace a bezel as follows:

1. Remove the four hex head screws on the right and left sides of the front panel (see [figure 13](#) on the previous page. Retain the screws.

2. Lift the panel away from the enclosure.
3. With an Extron Tweeker or a small screwdriver, push down on and gently twist on the front of each connector detent to disconnect the connector from the rear of the front panel plug-in.
4. Pinch the top and bottom bezel detents together and push the bezel through the front panel.
5. 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 Tweeker (see figure 15) and snapping a new icon in place.



**Figure 15. Changing the Connector Icon**

6. Snap the internal RJ-45 connector onto the back of the front panel enclosure bezel plug-in.
7. Replace the front panel in the surface mount enclosure and secure it in place with the hex head screws that were removed in [step 1](#).

## Removing and Replacing the Enclosure

The procedure for replacing the gas lift requires removing the HSA 400 or HSA 402 from the table. Adjusting the top surface level may also require removal of the HSA from the table. Remove and replace the surface mount enclosure as follows:

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

1. On the underside of the clamshell and in the enclosure, cut the tie wraps that route the AAP cables out of the way.
2. Disconnect the IEC power cord and the RJ-45 connectors from the underside of the surface mount enclosure.
3. Through the access hole in the rear of the enclosure, disconnect the 3-prong cable connector on the interior AC cable (see [figure 16](#) on the next page).



**Figure 16. Disconnecting the Interior AC Cable**

4. On front panel, remove the four hex head screws on the right and left sides of the front panel (see [figure 13](#) on page 14). Retain the screws. Lift the panel away from the enclosure as far as the connected cables allow.

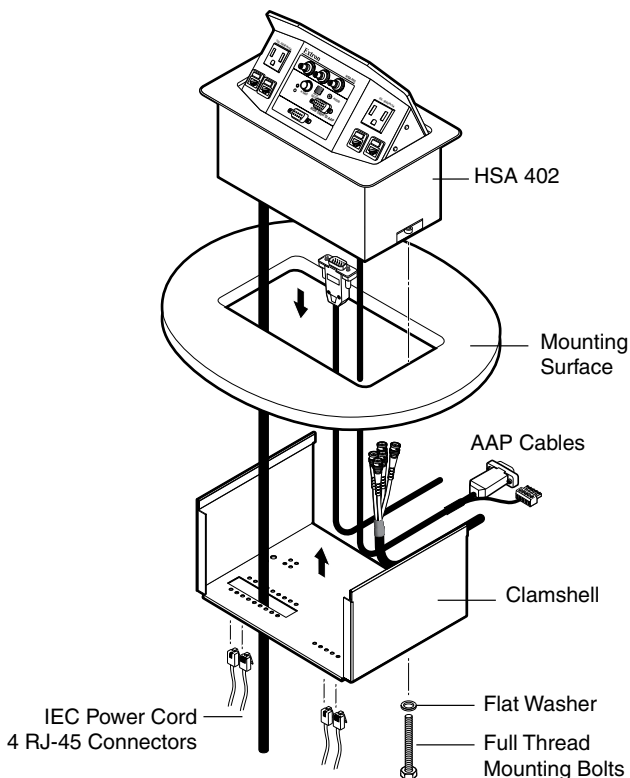
**NOTE:** Ensure that the edges of the connector panels do not scratch the finished surface of the top panel flange when removing the panels.

5. With an Extron Tweezer, push down on and gently twist on the front of each connector detent to disconnect the connector from the rear of the front panel bezel plug-in.

**ATTENTION:**

- The flanged edges of the top of the surface enclosure are bevelled to an ultra-fine thickness of less than 0.04 (4/100) inch (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.
- The surfaces of the HSA enclosure have screws and other protrusions that could damage fine furniture. Do not rest the enclosure on unprotected furniture.

6. Remove the front panel from the enclosure.
7. Disconnect any cables from the rear of the existing AAPs. Carefully pull the cables out through the bottom of the surface mount enclosure.
8. On the underside of the table, remove the two bolts that secure the clamshell to the surface mount enclosure (see [figure 17](#) on the next page).
9. Lift the enclosure out of the table.



**Figure 17. Removing the HSA 402 from the Table**

- 10.** Perform the desired maintenance procedure.
- 11.** If the surface is not level, adjust the top surface (see [Adjusting the Top Surface Level](#) on page 21).
- 12.** Carefully lower the HSA enclosure into the table opening. From the underside, bolt the clamshell to the enclosure with the two bolts removed in [step 8](#) on the previous page.
- 13.** Connect the IEC power cord and RJ-45 cables to the connectors on the underside of the surface mount enclosure.
- 14.** Cable the rear of the AAPs that are installed on the front panel. Route the cables through the hole in the underside of the surface mount enclosure and connect them to the rear of the AAPs. If applicable, refer to the cabling information in the AAP documentation.
- 15.** Snap the interior RJ-45 connectors onto the rear of the front panel bezel plug-ins.
- 16.** Replace the front panel in the surface mount enclosure and secure it in place with the hex head screws that were removed in [step 4](#) on the previous page. If you lose a front panel screw, two spare screws are stored in the underside of the clamshell.



17. Reconnect the interior AC power cable.
18. To prevent wear and tear caused by cable movement, secure the AAP cables underneath the table (see [Routing the AAP Cables](#) on page 12).

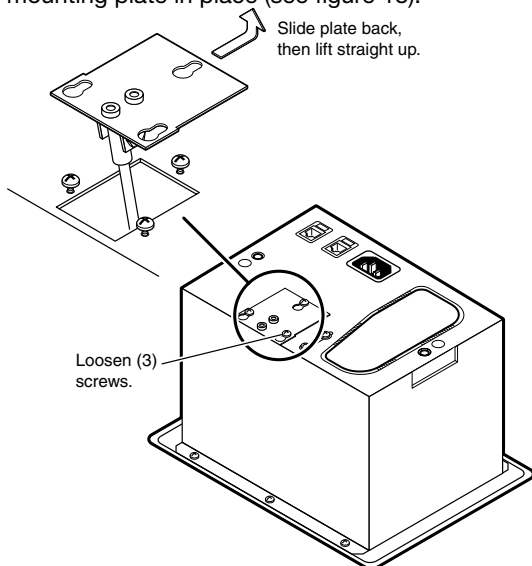
## Replacing the Gas Lift

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:

### ATTENTION:

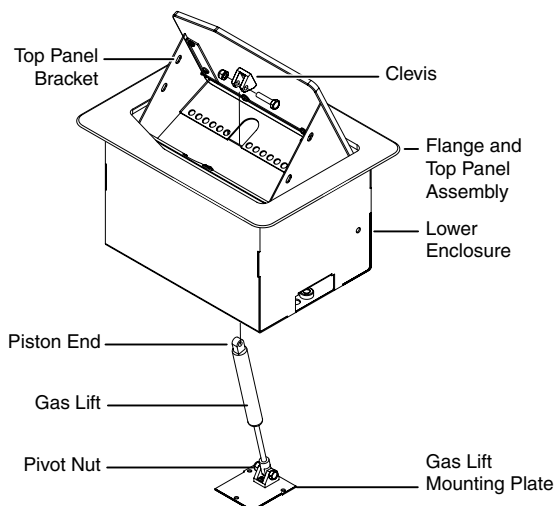
- Ensure that AC power is disconnected before servicing a HSA unit.
- When the HSA 400 or HSA 402 is upside-down, the latch may be ineffective. If the latch releases, the enclosure will tip and could damage the flanged edges. Keep a hand on the enclosure to keep it from tipping.

1. Remove the surface mount enclosure from the table (see Removing and Replacing the Enclosure, [steps 1](#) through 8 starting on [page 16](#)). 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 (see figure 18).



**Figure 18. Releasing the Gas Lift**

3. Slide the gas lift mounting plate toward the center of the enclosure, releasing the mounting plate from the enclosure (see figure 18).
4. Turn the gas lift mounting plate counterclockwise until the pivot nut on the plate comes free from the shaft of the gas lift (see figure 19).



**Figure 19. Replacing the Gas Lift**

5. Turn the surface mount enclosure onto its back side and open the top panel.

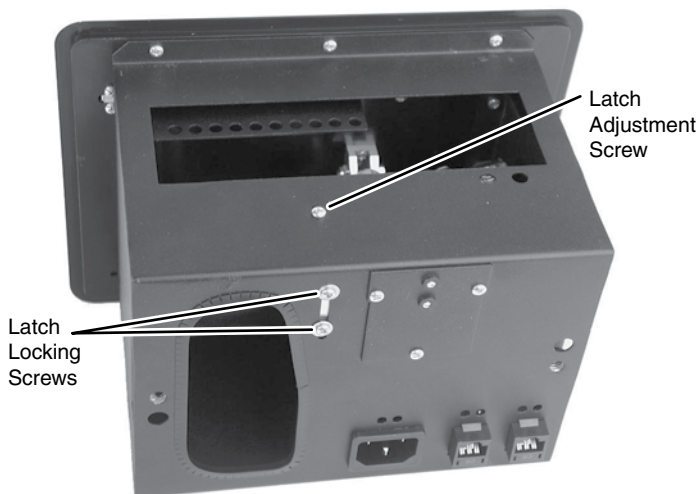
**NOTE:** With the gas lift disconnected, the top panel must be manually lifted.

6. Remove and retain the 9/32 inch nut and bolt that secure the gas lift to the top panel clevis. Pull the gas lift out of the enclosure.
7. 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 6.
8. Thread the pivot nut on the gas lift mounting plate onto the shaft of the gas lift and tighten it several turns.
9. Firmly push the gas lift mounting plate into position on the underside of the enclosure, engaging the three mounting screws with the holes in the plate. Holding the plate in position, secure it to the enclosure with the three screws that were loosened in step 2.
10. Reinstall the surface mount enclosure (see Removing and Replacing the Enclosure, [step 12](#) through step 17 starting on page 19).

## Adjusting the Top Surface Level

Level the top surface of the HSA as follows:

1. If necessary, in order to view the surface and the underside of the enclosure simultaneously, remove the surface mount enclosure from the table (see Removing and Replacing the Enclosure, [steps 1](#) through 8 on [page 16](#)).
2. If necessary, close and latch the top panel.
3. Slightly loosen the two latch locking screws (see figure 20) on the underside of the surface mount enclosure. These screws lock the latch in place once it is adjusted.



**Figure 20. Adjust the Top Surface Level**

4. Gently turn the adjustment screw on the rear of the surface mount enclosure to raise or lower the top panel until it is level with the flange. Turning the screw counterclockwise raises the panel and turning it clockwise lowers the panel.
5. 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, [step 12](#) through step 17 starting on page 19).

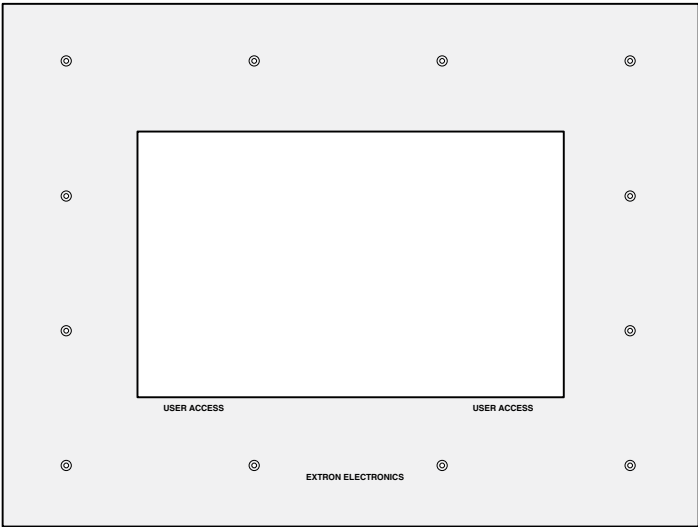
# Reference Information

Topics covered in this section are:

- [Top Plate Dimensions](#)
- [Routing Templates](#)
- [Packaging](#)

## Top Plate Dimensions

The preferred and recommended method for cutting the table is to use the correct size metal routing template (see figure 21 and [Installation](#) on page 4) and a router.



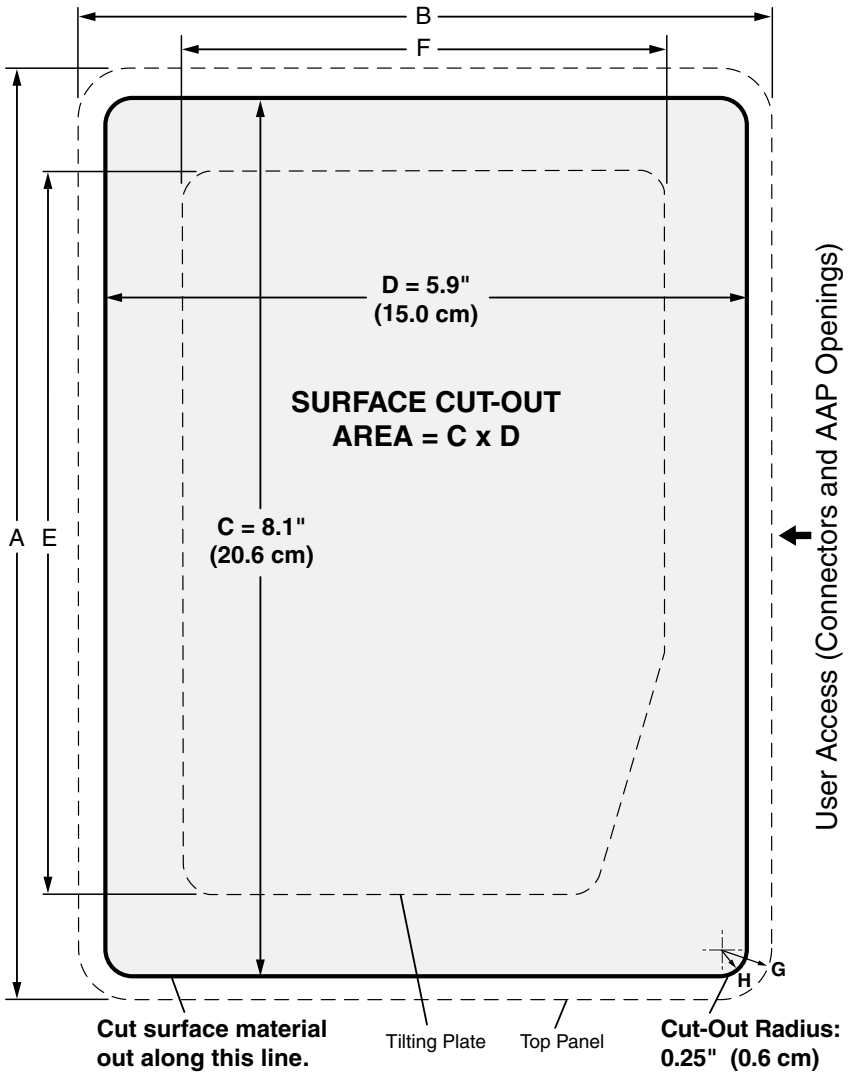
**Figure 21. HSA Metal Routing Template**

If you choose **not** to use the metal routing template available from Extron, the cut-out templates at [www.extron.com](http://www.extron.com) will help you properly prepare the mounting surface. The cutout templates are **not to scale** and are **for reference only**. The surface cut-out area dimensions on all templates are **C** and **D** and **marked in bold type**.

## Routing Templates

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

# US Model

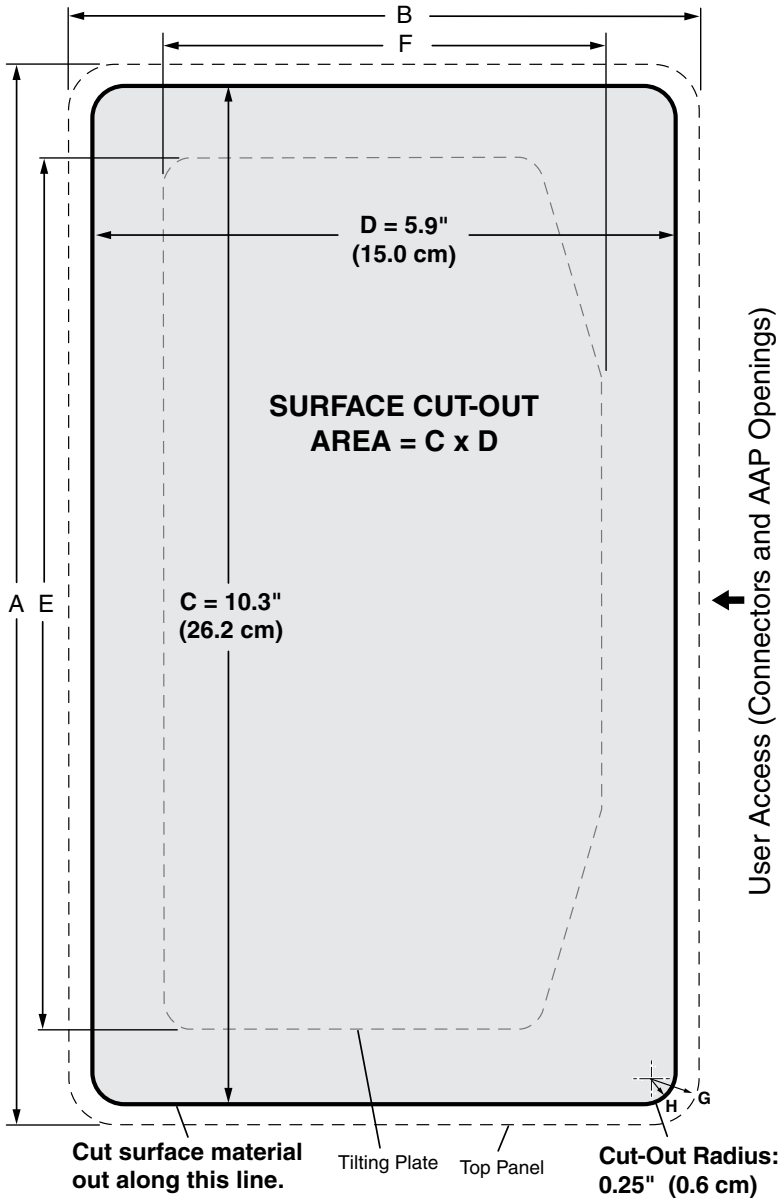


**TEMPLATE IS NOT FULL SIZE**

Cutout Template for Extron HSA 400

**Figure 22. HSA 400 US/Domestic Cut-out Template**

# US Model

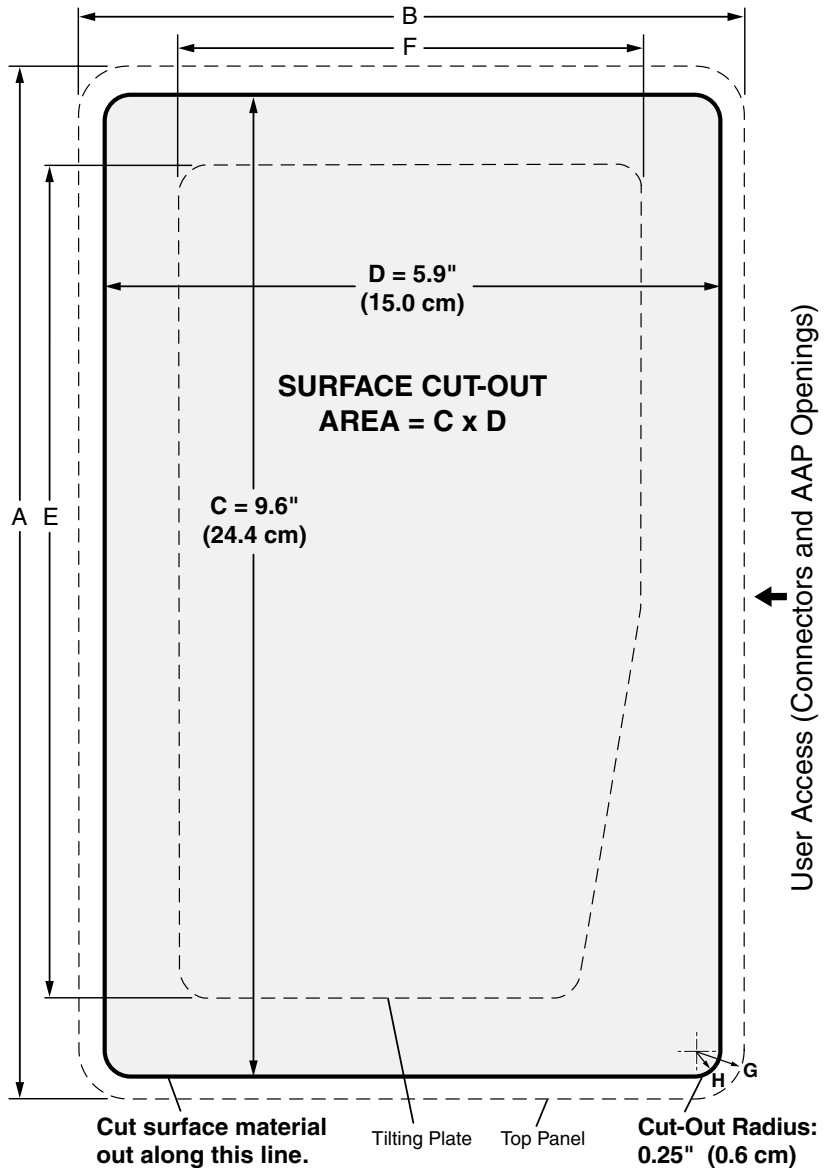


**TEMPLATE IS NOT FULL SIZE**

Cutout Template for Extron HSA 400

**Figure 23. HSA 402 US/Domestic Cut-out Template**

# International Model

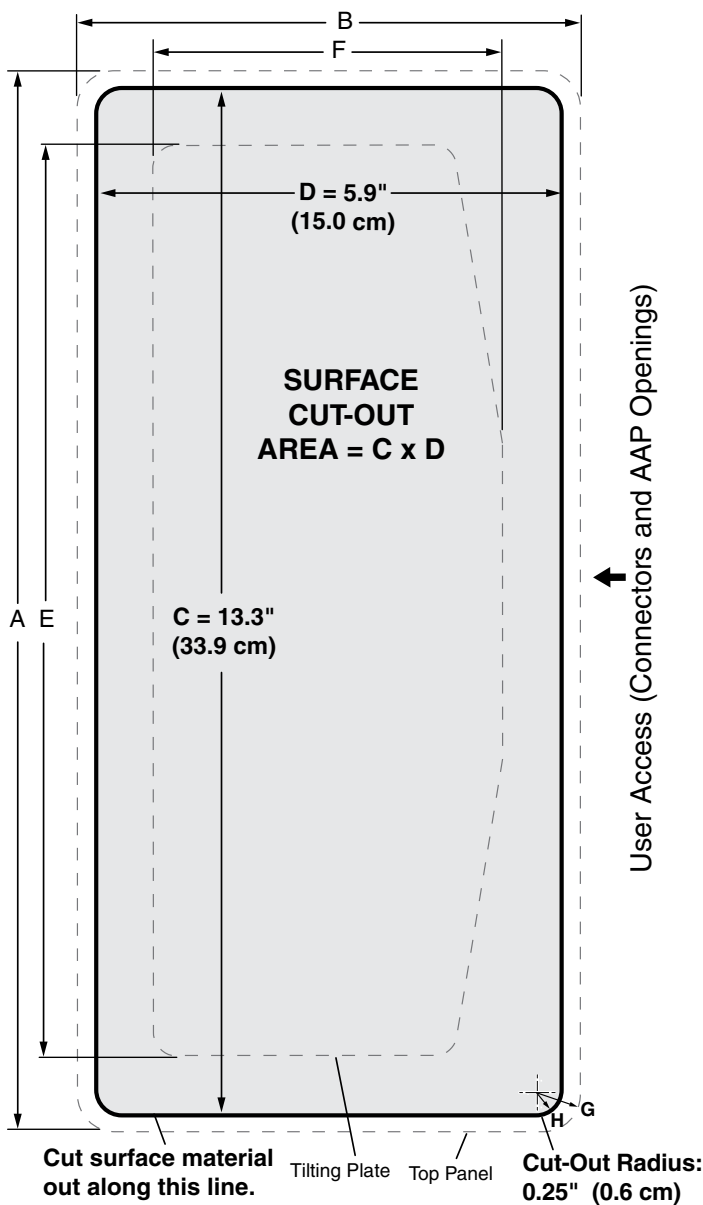


**TEMPLATE IS NOT FULL SIZE**

Cutout Template for Extron HSA 400

**Figure 24. HSA 400 International Cut-out Template**

# International Model



**TEMPLATE IS NOT FULL SIZE**

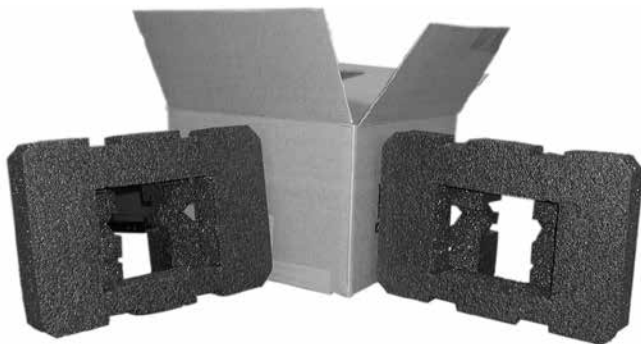
Cutout Template for Extron HSA 400

**Figure 25. HSA 402 International Cut-out Template**



## Packaging

The HSA'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 cut to fit the HSA (see figure 22).



**Figure 26. HSA 400/402 Return Kit**

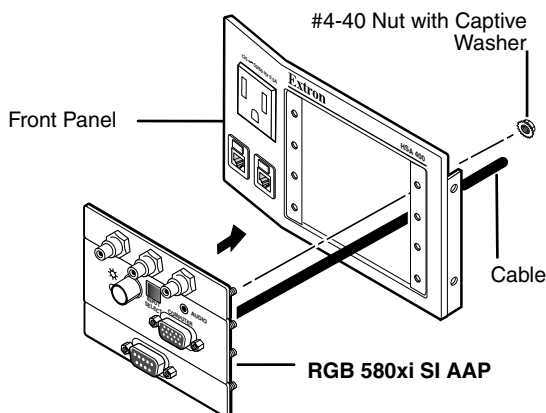
Package an HSA for shipment as follows:

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.

**ATTENTION:** The flanged edges of the top of the surface enclosure are bevelled to an ultra-fine thickness of less than 0.04 (4/100) inch (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 from the table or desk (see Removing and Replacing the Enclosure, [step 1](#) through step 8 starting on page 16).
3. Remove any AAPs by unscrewing the nuts on the rear of the panel that fasten the plates to the faceplate (see [figure 27](#) on the next page).



**Figure 27. Removing an AAP Device**

4. Place the enclosure upside-down on a horizontal surface. To protect the finish, place the enclosure on a soft cloth or rubber mat.
5. Bolt the clamshell to the enclosure with the two bolts and flat washers that are included in the return kit (see figure 28).



**Figure 28. Attaching the Clamshell**

6. Install the plastic strips that protect the flanged edges of the top of the surface enclosure (see figure 29).



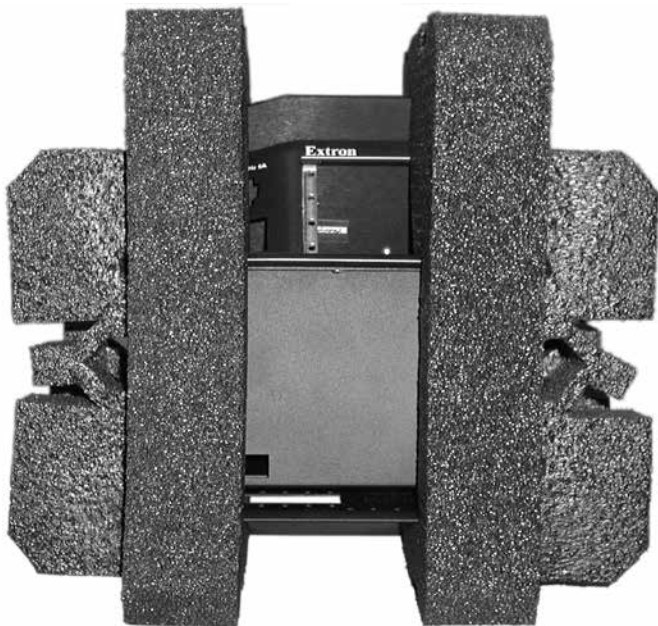
**Figure 29. Installing Protective Strips**

7. Release (tilt up) the top panel.
8. Insert the HSA and the clamshell into one of the foam shells (see figure 30). Either open end of the clamshell and the open top panel will fit into the recesses in the foam.



**Figure 30. Installing the Foam Shell**

9. Insert the opposite end of the clamshell into the remaining foam shell (see figure 31). Firmly push the foam shells together as far as they will go to completely suspend the HSA and clamshell. The sides of the clamshell protrude through slots in the foam.



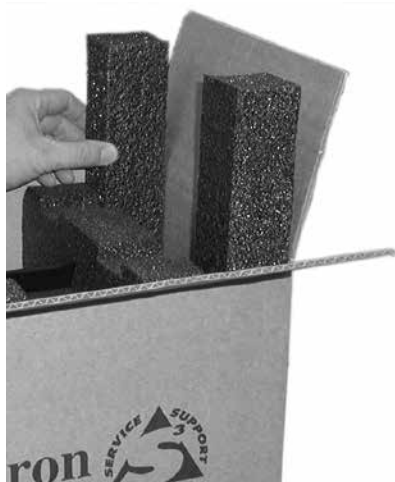
**Figure 31. HSA Suspended in the Foam**

10. Lower the foam-protected HSA into the shipping carton (see [figure 32](#) on the next page).



**Figure 32. Placing the HSA in the Shipping Carton**

- 11. HSA 400 US/domestic version only.** These smaller HSAs in the foam shells do not fit snugly in the shipping carton. Pad either side with the extra foam that was included in the return kit. Insert the foam vertically in the carton's corners on one side of the carton and horizontally on the other side of the carton (see [figure 33](#) on the next page).



**Vertical Foams**



**Horizontal Foams**

**Figure 33. Padding the Carton with Foam, HSA 400 US/ Domestic Version Only.**

- 12.** Close the shipping carton and seal it with high quality shipping tape.
- 13.** Ship the HSA to Extron using a reputable shipping company.

## Extron Warranty

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

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

Extron Electronics  
1230 South Lewis Street  
Anaheim, CA 92805  
U.S.A.

**Europe and Africa:**

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 Electronics, 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  
F13, 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 if modifications were made to the product that were not authorized by Extron.

**NOTE:** If a product is defective, please call Extron and ask for an application engineer to receive an RA (return authorization) number. This will begin the repair process.

**USA:** 714.491.1500 or 800.633-9876

**Asia:** 65.6383.4400

**Europe:** 31.33.453.4040

**Japan:** 81.3.3511.7655

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

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

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

Extron USA Headquarters +800.633.9876 (Inside USA/Canada Only)  Extron USA - West                      Extron USA - East +1.714.491.1500                      +1.919.850.1000 +1.714.491.1517 FAX                      +1.919.850.1001 FAX		Extron Europe +800.3987.6673 (Inside Europe Only) +31.33.453.4040 +31.33.453.4050 FAX	Extron India 1800.3070.3777 (Inside India Only) +91.80.3055.3777 +91.80.3055.3737 FAX
Extron Asia +65.6383.4400 +65.6383.4664 FAX		Extron Japan +81.3.3511.7655 +81.3.3511.7656 FAX	Extron China +86.21.3760.1568 +86.21.3760.1566 FAX
Extron Middle East +971.4.299.1800 +971.4.299.1880 FAX		Extron Australia +61.8.8351.2188 +61.8.8351.2511 FAX	