

Extron® Electronics

INTERFACING, SWITCHING AND DISTRIBUTION



Installation Guide



SPA 12 AAP Architectural Speaker



Extron Electronics, USA
1230 South Lewis Street
Anaheim, CA 92805
USA
714.491.1500
Fax 714.491.1517

Extron Electronics, Europe
Beddschermweg 6C
3821 AH Amersfoort
The Netherlands
+31.33.453.4040
Fax +31.33.453.4050

Extron Electronics, Asia
135 Joo Seng Road, #04-01
PM Industrial Building
Singapore 368363
+65.6383.4400
Fax +65.6383.4664

Extron Electronics, Japan
Kyodo Building
16 Ichibancho
Chiyoda-ku, Tokyo 102-0082 Japan
+81.3.3511.7655
Fax +81.3.3511.7656

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www.camboard.de

Tel. 07131 911201
Fax 07131 911203

ce-info@camboard.de

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im Vertrieb von 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 présentés dans la documentation utilisateur.

Eviter 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 y a danger d'explosion s'il y a remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent 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 Objekte darauf- oder unmittelbar dagegengestellt werden können.

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

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

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

Advertencia

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

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

Protección 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. Deschar las baterías usadas siguiendo las instrucciones del fabricante.

FCC Class A Notice

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Note: This unit was tested with shielded cables on the peripheral devices. Shielded cables must be used with the unit to ensure compliance.

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 Electronics
1230 South Lewis Street
Anaheim, CA 92805, USA

Europe, Africa, and the Middle East:

Extron Electronics, Europe
Beeldschermweg 6C
3821 AH Amersfoort
The Netherlands

Asia:

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

Japan:

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

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

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

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

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

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的操作和维护说明。



这个符号警告用户该设备机壳内暴露的危险电压，有触电危险。

注意

阅读说明书 • 用户使用该设备前必须阅读并理解有安全和使用说明。

保存说明书 • 用户应保存安全说明书以备将来使用。

遵守警告 • 用户应遵守产品和用户指南上的所有安全和操作说明。

避免追加 • 不要使用该产品厂商没有推荐的工具或追加设备，以避免危险。

警告

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

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

电源线保护 • 妥善布线，避免被踩踏，或重物挤压。

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

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

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

Introduction

The Extron SPA 12 AAP is a full-range speaker designed for installation within the enclosures of select HSA (Hideaway™ Surface Access) and Cable Cubby® Series products. It provides localized, near-field sound coverage for one or more participants at a conference table.

Mounting the SPA 12 AAP

The SPA 12 installs directly into the four-space AAP opening of various architectural frames; the Cable Cubby 300, 600, and 800 series; and the HSA 400, and 822 series.

Each SPA 12 AAP includes a rear enclosure and a factory installed magnet cap to secure it. *These pieces enhance the quality of sound, but are not required for use.*

Installation into an HSA 400

To install the SPA 12 AAP speaker into an Extron HSA 400 front panel, do the following. Several of the steps are summarized in figure 1, below.

1. Insert the provided polyester fiber foam into the rear enclosure.

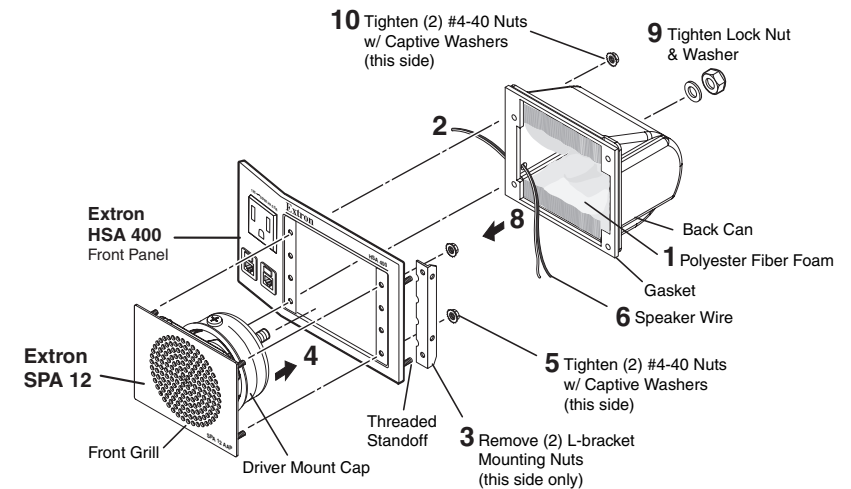


Figure 1 — Mounting the SPA 12 onto the HSA 400

2. Pass the speaker wire pair through the small hole on the side of the rear enclosure.

3. From the left side (viewed from the back) of the four-space AAP opening in the HSA 400 front panel, remove the L-bracket and mounting nuts.
4. Insert the SPA 12 speaker and front grill into the four-space opening of the HSA 400.
5. Attach and tighten #4-40 nuts to the furthestmost left (viewed from the back) pair of threaded standoffs of the SPA 12. This should seal the SPA 12 speaker onto the HSA 400 front plate.
6. Attach the speaker wire pair ends to the SPA 12 speaker by soldering the exposed tips to the speaker's positive and negative terminal pair (marked – and +).
7. Place the L-bracket back in its original location, but **do not reattach the mounting nuts**.
8. Attach the rear enclosure. When doing so, keep the following in mind:
 - Ensure that the arrows on the labels affixed to each piece are aligned and pointing upward before covering the magnet cap with the rear enclosure.
 - The bolt from the magnet cover should emerge through the hole of the rear enclosure.
 - On the left of the face plate, the rear enclosure *covers* the threaded standoffs of the SPA 12 (i.e., they are not visible). Conversely, the HSA 400 threaded standoffs fit onto the holes of the rear enclosure and are visible through them.
 - On the right of the face plate, the rear enclosure should line up with the pair of SPA 12 threaded standoffs that emerge through the HSA 400 front panel.
9. Tighten the lock nut and washer to the magnet cap bolt that emerges from the rear enclosure.
10. Tighten #4-40 nuts to the SPA 12 threaded standoffs on the right side (viewed from the back).
11. Attach the opposite end of the speaker wire to the output of your amplifier.

Installation into an HSA 402

To install the SPA 12 AAP speaker into an Extron HSA 402 front panel, do the following. Several of the steps are summarized in figure 2, below.

1. Insert the provided polyester fiber foam into the rear enclosure.

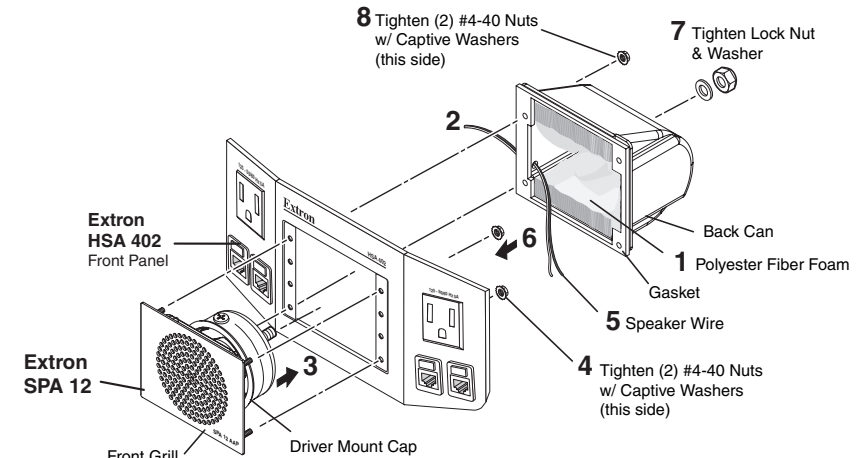


Figure 2 — Mounting the SPA 12 onto the HSA 402

2. Pass the speaker wire pair through the small hole on the side of the rear enclosure.
3. Insert the SPA 12 AAP and front grill into the four-space AAP opening in the HSA 402 front panel.
4. Attach and tighten #4-40 nuts to the furthestmost left (viewed from the back) pair of threaded standoffs of the SPA 12 AAP speaker. This should seal the SPA 12 onto the HSA 402 front plate.
5. Attach the speaker wire pair ends to the SPA 12 by soldering the exposed tips to the speaker's positive and negative terminal pair (marked – and +).
6. Attach the rear enclosure. When doing so, keep the following (viewed from the back) in mind:
 - Ensure that the arrows on the labels affixed to each piece are aligned and pointing upward before covering the magnet cap with the rear enclosure.
 - The bolt from the magnet cover should emerge through the hole of the rear enclosure.

- On the left of the face plate, the rear enclosure *covers* the threaded standoffs of the SPA 12 (i.e., they are not visible).
 - On the right of the face plate, the rear enclosure should line up with the pair of SPA 12 threaded standoffs that emerge through the HSA 402 front panel.
7. Tighten the lock nut and washer to the magnet cap bolt that emerges from the rear enclosure.
 8. Tighten #4-40 nuts to the SPA 12 threaded standoffs on the right side (viewed from the back).
 9. Attach the opposite end of the speaker wire to the output of your amplifier.

Installation into a Cable Cubby

Each SPA 12 AAP includes a rear enclosure and a factory installed magnet cap to secure it. *These pieces enhance the quality of sound, but are not required for use.*

Some Cable Cubby and HSA mounting options are too small to allow for these optional pieces, and some wall mount situations may present an obstruction. In such instances, remove the magnet cap and do not install the rear enclosure.

To remove the magnet cap

1. Unscrew the two ¼" lock washer nuts that hold the magnet cap in place.
2. Gently pull the magnet cap from the speaker driver.

NOTE

Although the SPA 12 AAP speaker works properly in free air (without the rear enclosure and magnet cap), it is a good practice to limit open space behind the SPA 12 AAP. Cover large openings as much as possible to optimize the speaker's performance.

To install the SPA 12 AAP into an Extron Cable Cubby, do the following. Several of the steps are summarized in figure 3 on the following page.

1. Placing the L-brackets inside the cubby in the desired position, use a Phillips head screwdriver to *lightly* secure the L-brackets in place with the supplied screws.

Insert the SPA 12 AAP and check for fit. Once the speaker's threaded standoffs are fully aligned with the L-brackets, tighten the screws through the holes in the cubby box.

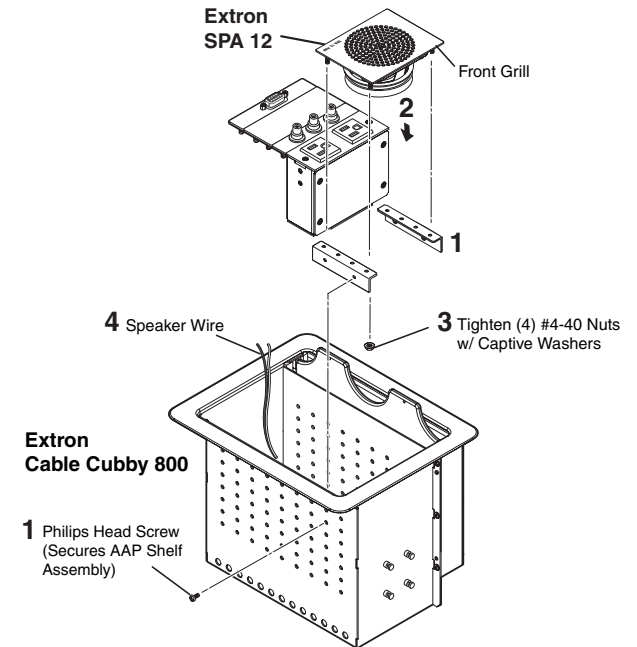


Figure 3 — Mounting the SPA 12 into a Cable Cubby

2. Insert the SPA 12 AAP speaker and front grill into the Cable Cubby opening, lining up the SPA 12 threaded standoffs with those of the brackets installed in step 1.
3. From the bottom of the Cable Cubby, attach and tighten #4-40 nuts to both pairs of threaded standoffs emerging from the SPA 12 AAP brackets.
4. Attach the speaker wire pair ends to the SPA 12 AAP speaker by soldering the exposed tips to the speaker's positive and negative terminal pair (marked – and +).
5. Attach the opposite end of the speaker wire to the output of your amplifier.

Installation into architectural frames

The SPA 12 AAP can be installed in most Extron four-space AAP architectural frames (e.g., the MLC 104 AAP) and in wall mount faceplates (e.g., the AAP 102).

The magnet cap and rear enclosure pieces work best with mounting options where ample room is provided for them. Some four-space AAP architectural frame products are too small to allow for these optional pieces, and some wall mount situations may present an obstruction. In such instances, remove the magnet cap.

To remove the magnet cap

1. Unscrew the two ¼" lock washer nuts that hold the magnet cap in place.
2. Gently pull the magnet cap from the speaker driver.

NOTE Although the SPA 12 AAP speaker works properly in free air (without the rear enclosure and magnet cap), it is a good practice to limit open space behind the SPA 12 AAP. Cover large openings as much as possible to optimize the speaker's performance.

To install the SPA 12 AAP speaker into an Extron architectural frame, do the following. Several of the steps are summarized in figure 4, below.

1. Insert the SPA 12 AAP speaker and front grill into the four-space AAP opening of the architectural frame. Ensure that the SPA 12 threaded standoffs are lined up with the openings of the architectural frame.

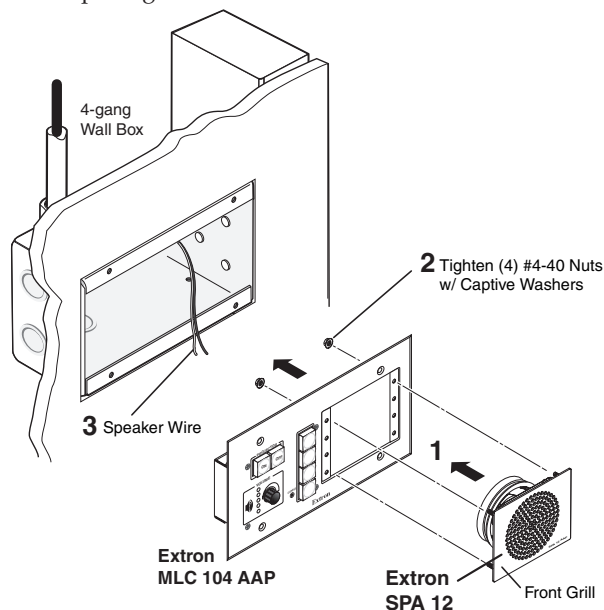


Figure 4 — Mounting the SPA 12 into an MLC 104

2. Attach #4-40 nuts to both pairs of threaded standoffs emerging from the SPA 12, and tighten them to the architectural frame.
3. Attach the speaker wire pair ends to the SPA 12 AAP speaker by soldering the exposed tips to the speaker's positive and negative terminal pair (marked - +).
4. Attach the opposite end of the speaker wire to the output of your amplifier.

Specifications

Audio/acoustic and electrical

Speaker type	1-way, full range architectural speaker
Frequency range	350 Hz to 15 kHz, -10 dB, half space
Power capacity	10 W continuous program 5 W continuous pink noise
Nominal sensitivity	86 dB SPL, 1 W (2.83 V) @ 1 m, half space
Nominal impedance	8 ohms
Nominal coverage	150° conical coverage
Driver	2.5" (64 mm) full-range
Input connector	(1) solder terminal, 2 pin

General

Package	1 speaker
Temperature/humidity	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
Mounting	Mountable into the four-space AAP opening of an Extron Cable Cubby (models 300C, 300S, 600, 800); an HSA 400 or HSA 402; or a mounting frame (AAP 102, AAP 102 FSR, AAP 106 AKM UK, AAP 104, AAP 202)
Enclosure type	Metal faceplate with plastic rear enclosure
Enclosure	
Faceplate	2.8" H x 3.5" W x 0.1" D (71 mm H x 89 mm W x 3 mm D) (four space AAP plate)
Device	2.8" H x 3.5" W x 2.5" D (71 mm H x 89 mm W x 64 mm D)

Product weight..... 0.7 lbs (0.3 kg)
 Shipping weight..... 3 lbs (2 kg)
 Warranty 5 years parts and labor

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

NOTE *Specifications are subject to change without notice.*

Included Parts

These items are included in each order of an SPA 12 AAP:

Included parts	Replacement part number
SPA 12 AAP Architectural Speaker (one of the following three):	
Black <i>or</i>	70-535-02
White <i>or</i>	70-535-03
RAL 9010 (Eurowhite)	70-535-05
<i>SPA 12 AAP Installation Guide</i>	
Magnet Cap	
Metal front grill	
Polyester Fiber Foam	
Rear Enclosure	