

User's Manual



CVEQ 100 and SVEQ 100 1-Input, 1-Output Equalizing Composite Video and S-Video Line Drivers

68-1252-01 **Rev. B**
01 07

Precautions

Safety Instructions • English



This symbol is intended to alert the user of important operating and maintenance (servicing) instructions in the literature provided with the equipment.



This symbol is intended to alert the user of the presence of uninsulated dangerous voltage within the product's enclosure that may present a risk of electric shock.

Caution

- Read Instructions** • Read and understand all safety and operating instructions before using the equipment.
- Retain Instructions** • The safety instructions should be kept for future reference.
- Follow Warnings** • Follow all warnings and instructions marked on the equipment or in the user information.
- Avoid Attachments** • Do not use tools or attachments that are not recommended by the equipment manufacturer because they may be hazardous.

Consignes de Sécurité • Français



Ce symbole sert à avertir l'utilisateur que la documentation fournie avec le matériel contient des instructions importantes concernant l'exploitation et la maintenance (réparation).



Ce symbole sert à avertir l'utilisateur de la présence dans le boîtier de l'appareil de tensions dangereuses non isolées posant des risques d'électrocution.

Attention

- Lire les instructions** • Prendre connaissance de toutes les consignes de sécurité et d'exploitation avant d'utiliser le matériel.
- 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.

Precaucion

- 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 éraclés ou pincés par des objets.
- Réparation-maintenance** • Faire exécuter toutes les interventions de réparation-maintenance par un technicien qualifié. Aucun des éléments internes ne peut être réparé par l'utilisateur. Afin d'éviter tout danger d'électrocution, l'utilisateur ne doit pas essayer de procéder lui-même à ces opérations car l'ouverture ou le retrait des couvercles risquent de l'exposer à de hautes tensions et autres dangers.
- Fentes et orifices** • Si le boîtier de l'appareil comporte des fentes ou des orifices, ceux-ci servent à empêcher les composants internes sensibles de surchauffer. Ces ouvertures ne doivent jamais être bloquées par des objets.
- Lithium Batterie** • Il y a danger d'explosion s'il y a un remplacement incorrect de la batterie. Remplacer uniquement avec une batterie du même type ou d'un type équivalent recommandé par le constructeur. Mettre au rebut les batteries usagées conformément aux instructions du fabricant.

Vorsicht

- Stromquellen** • Dieses Gerät sollte nur über die auf dem Produkt angegebene Stromquelle betrieben werden. Dieses Gerät wurde für eine Verwendung mit einer Hauptstromleitung mit einem geerdeten (neutralen) Leiter konzipiert. Der dritte Kontakt ist für einen Erdschluß, und stellt eine Sicherheitsfunktion dar. Diese sollte nicht umgangen oder außer Betrieb gesetzt werden.
- Stromunterbrechung** • Um das Gerät auf sichere Weise vom Netz zu trennen, sollten Sie alle Netzkabel aus der Rückseite des Gerätes, aus der externen Stromversorgung (falls dies möglich ist) oder aus der Wandsteckdose ziehen.
- Schutz des Netzkabels** • Netzkabel sollten stets so verlegt werden, daß sie nicht im Weg liegen und niemand darauf treten kann oder Objekte darauf- oder unmittelbar dagegen gestellt werden können.
- Wartung** • Alle Wartungsmaßnahmen sollten nur von qualifiziertem Servicepersonal durchgeführt werden. Die internen Komponenten des Gerätes sind wartungsfrei. Zur Vermeidung eines elektrischen Schocks versuchen Sie in keinem Fall, dieses Gerät selbst öffnen, da beim Entfernen der Abdeckungen die Gefahr eines elektrischen Schlags und/oder 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 debe 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.

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
1001 East Ball Road
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。

Quick Start Guide — CVEQ 100 & SVEQ 100

CAUTION *Installation and service must be performed by authorized personnel only.*

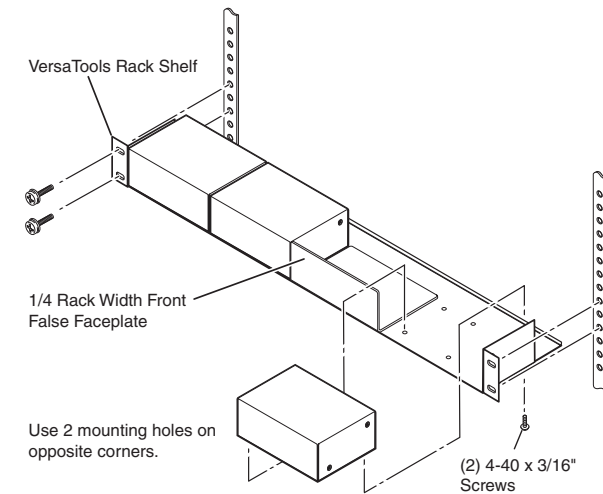
To install and set up a CVEQ 100 and SVEQ 100, follow these steps:

Step 1

Turn the input and output devices off and unplug their power cords.

Step 2

Mount the CVEQ 100 or SVEQ 100 on a rack shelf, under a desktop, through a desktop (CVEQ 100 only), or on the back of a rack (SVEQ 100 only). The example illustration below shows a VersaTools® rack shelf; you can also use the standard or 6-inch deep Universal 19-inch rack shelves. See chapter 2, "Installation and Operation", for detailed descriptions of the different mounting options.



Rack Shelf Mounting

Step 3

Attach output cables to the rear panel of the line driver and to the output devices. See "Rear Panel Features and Cabling" in chapter 2.

Step 4

Attach input cables from the input devices and to the line driver's rear panel input connectors. See "Rear Panel Features and Cabling" in chapter 2.

Quick Start Guide — CVEQ & SVEQ, cont'd

Step 5

Connect power cords and turn on the output devices (projector/monitor, speakers), and input devices.

Step 6

The picture should appear, and sound should be audible. If not, ensure that all devices are plugged in and receiving power. Check the cabling; make adjustments as needed.

Step 7

While watching the display, adjust the video gain and equalization by using the rotary Gain and Equalize (EQ) controls. An oscilloscope can be used to achieve a more precise adjustment. See “Front Panel Features and Operation” in chapter 2.

Step 8

Adjust the potentiometers for the outputs, using an Extron Tweaker.

If using very short output cables, set all pots to the default setting (the arrow on the pot pointing to the dot beside it; see the illustrations below).



If using long cables, follow these steps:

- Supply the Color Bars test signal to the input.
(Recommendation: Use an Extron VTG 300 Video Test Generator to generate the test signal.)
- Adjust the Gain pot(s) for the output until the signal level at the far end is the same as the input (or the display shows the correct brightness and contrast).
- Adjust the EQ pot for the output so that no overshoot or round front corner appears at the far end on the scope (or you see a sharp picture with no smearing).

Table of Contents

Chapter One • Introduction	1-1
About this Manual	1-2
About the CVEQ 100 and SVEQ 100	1-2
Models	1-2
Features	1-2
Connection diagram example	1-3
Chapter Two • Installation and Operation	2-1
Mounting the CVEQ 100 and SVEQ 100	2-2
Tabletop use	2-2
UL rack mounting requirements	2-2
Rack mounting	2-3
Furniture mounting — under-desk	2-5
Furniture mounting — through-desk (CVEQ 100 only)	2-6
Back of the rack mounting (SVEQ 100 only)	2-7
Rear Panel Features and Cabling	2-9
Power supply wiring	2-10
Front Panel Features and Operation	2-12
Gain adjustment control	2-13
Equalization (EQ) adjustment control	2-13
Appendix A • Specifications, Part Numbers, and Accessories	A-1
Specifications	A-2
Included Parts	A-5
CVEQ 100/SVEQ 100 Mounting Accessories	A-5
Cables and Adapters	A-5

All trademarks mentioned in this manual are the properties of their respective owners.



1

Chapter One

Introduction

About this Manual

About the CVEQ 100 and SVEQ 100

Introduction

About this Manual

This manual provides information on the Extron VersaTools® CVEQ 100 and SVEQ 100 video line drivers and discusses how to install and operate them.

About the CVEQ 100 and SVEQ 100

The Extron CVEQ 100 and SVEQ 100 are high performance one-input, one-output video line drivers with unbalanced audio input and balanced/unbalanced audio output. Both models are ideal for driving video signals over extended cable runs up to 1000' (300 m) using Extron MHR cable.

In this manual "CVEQ" or "CVEQ 100", or "SVEQ" or "SVEQ 100", or "line driver" are used to refer to the different models.

Models

CVEQ 100 — One input, one output composite video with equalization and gain controls for the output

SVEQ 100 — One input, one output S-video with equalization and separate Y/C gain controls for the output

Features

Stereo audio — Unbalanced stereo audio input can be output as balanced or unbalanced stereo audio.

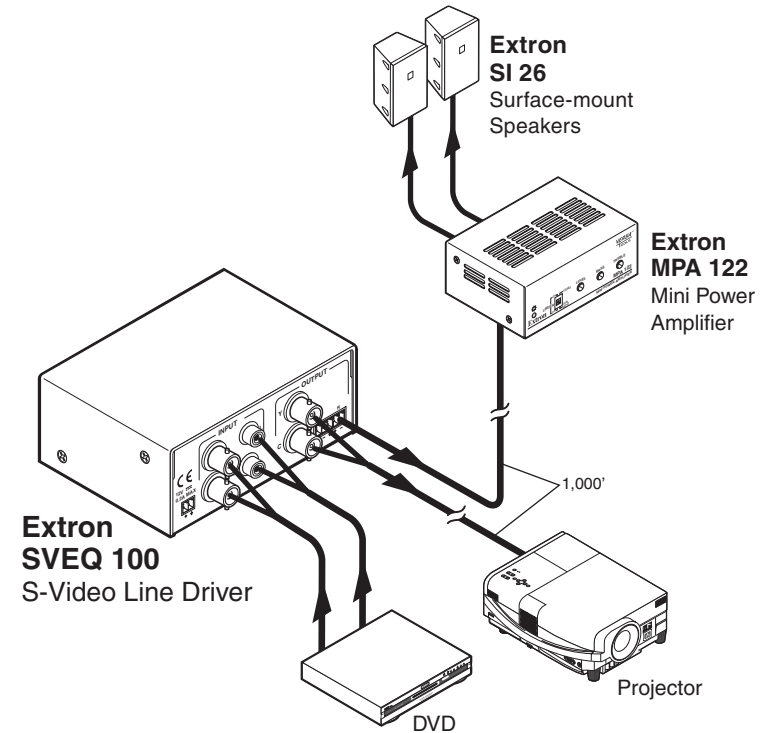
Gain adjustment — All models offer video gain adjustment. The CVEQ 100 has a gain adjustment range of -1 dB to +3 dB. The SVEQ 100 has a gain adjustment range for Y of S-video from -1 dB to +3 dB, and for C of S-video from 0 dB to +10 dB.

Equalization adjustment — Each model also features an equalization adjustment range from 0 dB to +7 dB @ 5 MHz that changes the level and peaking of the video output signal to compensate for use of long cables.

Rack and furniture mountability — Appropriate models can be mounted on a rack shelf, under a desk, or in a podium.

Connection diagram example

The following diagram is an example of how the various supported devices can be connected to the SVEQ 100.



Example of devices connected to an SVEQ 100



2

Chapter Two

Installation and Operation

Mounting the CVEQ 100 and SVEQ 100

Rear Panel Features and Cabling

Front Panel Features and Operation

Installation and Operation

Mounting the CVEQ 100 and SVEQ 100

The CVEQ 100 composite video line driver and the SVEQ 100 S-video line driver can be set on a table; mounted on a rack shelf; mounted under a desk or table; mounted through furniture (CVEQ 100 only); or mounted on the back of a rack (SVEQ 100 only).

Tabletop use

Four self-adhesive rubber feet are included with the line driver.

For tabletop use, attach one foot at each corner of the bottom side of the unit and place the unit in the desired location.

UL rack mounting requirements

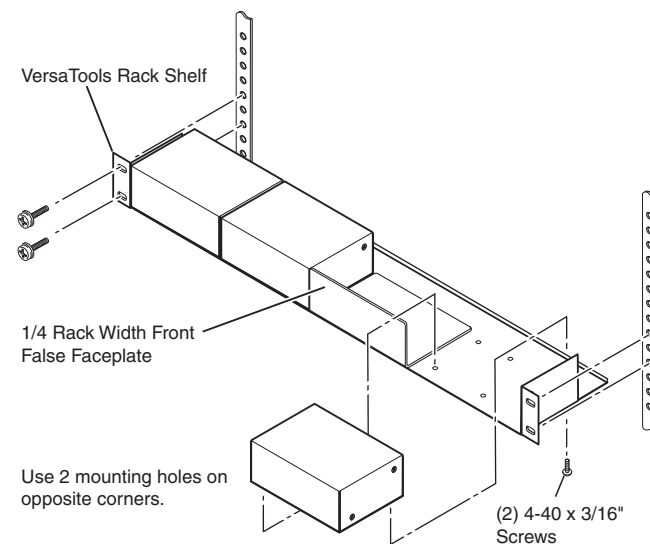
The following Underwriters Laboratories (UL) requirements pertain to the safe installation of the line drivers in a rack.

1. Elevated operating ambient temperature — If installed in a closed or multi-unit rack assembly, the operating ambient temperature of the rack environment may be greater than room ambient temperature. Therefore, install the line driver in an environment compatible with the maximum ambient temperature ($T_{ma} = +113^{\circ}\text{F}$, $+45^{\circ}\text{C}$) specified by Extron.
2. Reduced air flow — Install the equipment in a rack so that the amount of air flow required for safe operation of the equipment is not compromised.
3. Mechanical loading — Mount the equipment in the rack so that a hazardous condition is not achieved due to uneven mechanical loading.
4. Circuit overloading — Connect the equipment to the supply circuit and consider the effect that circuit overloading might have on overcurrent protection and supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.
5. Reliable earthing (grounding) — Maintain reliable grounding of rack-mounted equipment. Pay particular attention to supply connections other than direct connections to the branch circuit (e.g. use of power strips).

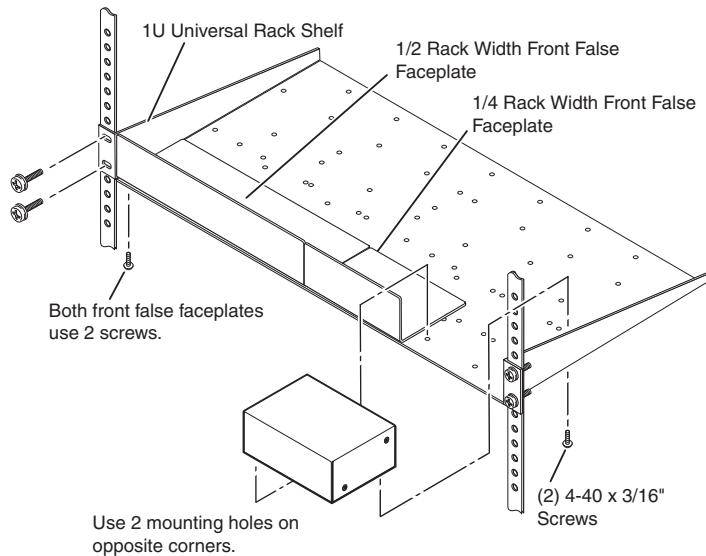
Rack mounting

For rack mounting, do not install the rubber feet. Mount the distribution amplifier on a 19" wide 1U VersaTools® rack shelf (Extron RSF 123, part #60-190-20; Extron RSB, part #60-604-20), a standard 1U Universal or Basic rack shelf (Extron RSU 129, part #60-190-01; Extron RSB 129, part #60-604-01), or a Universal or Basic 1U 6-inch Deep Rack Shelf (Extron RSU 126, part #60-190-10; Extron RSB 126, part #60-604-10).

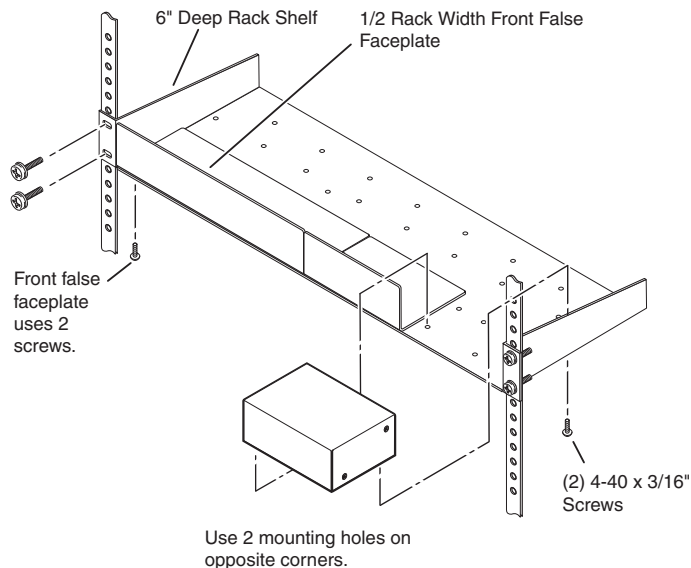
1. If feet were previously installed on the bottom of the line driver, remove them.
2. Mount the line driver on the rack shelf, using two 4-40 x 3/16" screws in opposite (diagonal) corners to secure the unit to the shelf.
3. Install blank panel(s) or other unit(s) on the rack shelf.



Mounting the line driver on a VersaTools rack shelf



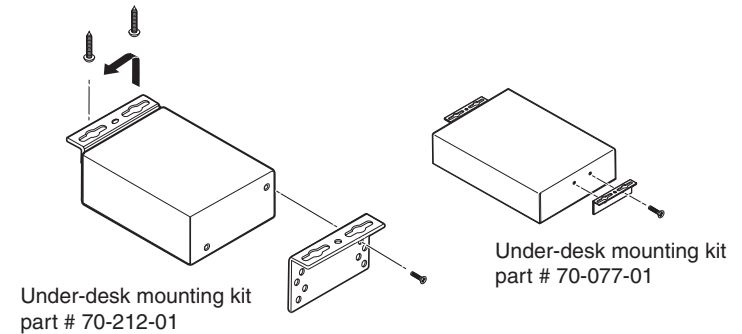
Mounting the line driver on a standard rack shelf



Mounting the line driver on a 6-inch rack shelf

Furniture mounting — under-desk

To mount the line driver under furniture, use the optional VersaTools® under-desk mounting kit for the SVEQ 100 (Extron MBU 123, part #70-212-01) or the optional under-desk kit for the CVEQ 100 (Extron MBU 125, part #70-077-01).

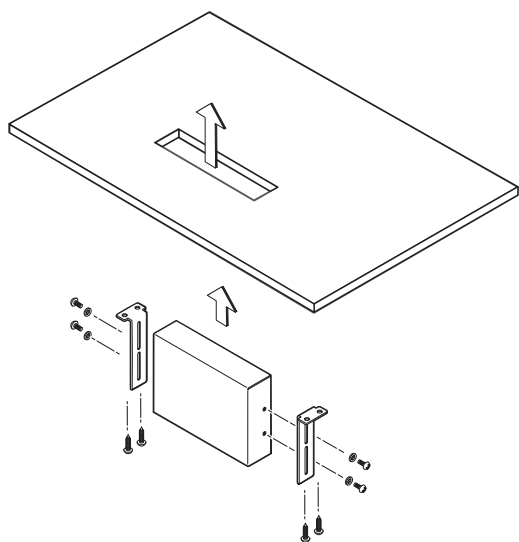


Preparing the line driver for under-desk mounting

1. If rubber feet were previously attached to the bottom of the unit, remove them.
2. Attach the mounting brackets to the line driver with the provided machine screws as shown in the previous figure.
3. Hold the unit with the attached brackets against the underside of the table or other furniture. On the mounting surface, mark the location of the bracket's screw holes.
4. Drill 3/32" (2 mm) diameter pilot holes, 1/4" (6.3 mm) deep in the mounting surface at the marked screw locations.
5. Insert #8 wood screws into the four pilot holes. Tighten each screw into the mounting surface until slightly less than 1/4" of the screw head protrudes.
6. Align the mounting screws with the slots in the brackets and place the unit against the surface, with the screws through the bracket slots.
7. Slide the unit slightly forward or back, then tighten all four screws to secure it in place.

Furniture mounting — through-desk (CVEQ 100 only)

To mount the CVEQ 100 through furniture, use the optional VersaTools® through-desk mounting kit (Extron MBD 129, part #70-077-02), as follows.

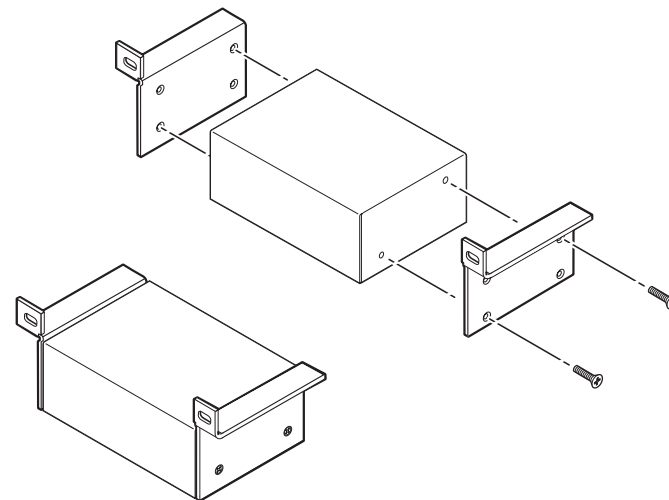


Preparing the CVEQ 100 for through-desk mounting

1. If rubber feet were previously attached to the bottom of the unit, remove them.
2. Attach the mounting brackets to the CVEQ 100 with the provided machine screws as shown in the previous figure.
3. Hold the unit with the attached brackets against the underside of the table or other furniture. On the mounting surface, mark the location of the bracket's screw holes.
4. Drill 3/32" (2 mm) diameter pilot holes, 1/4" (6.3 mm) deep in the mounting surface at the marked screw locations.
5. Insert #8 wood screws into the four pilot holes. Tighten each screw into the mounting surface until slightly less than 1/4" of the screw head protrudes.
6. Align the mounting screws with the slots in the brackets and place the unit against the surface, with the screws through the bracket slots.
7. Slide the unit slightly forward or back, then tighten all four screws to secure it in place.

Back of the rack mounting (SVEQ 100 only)

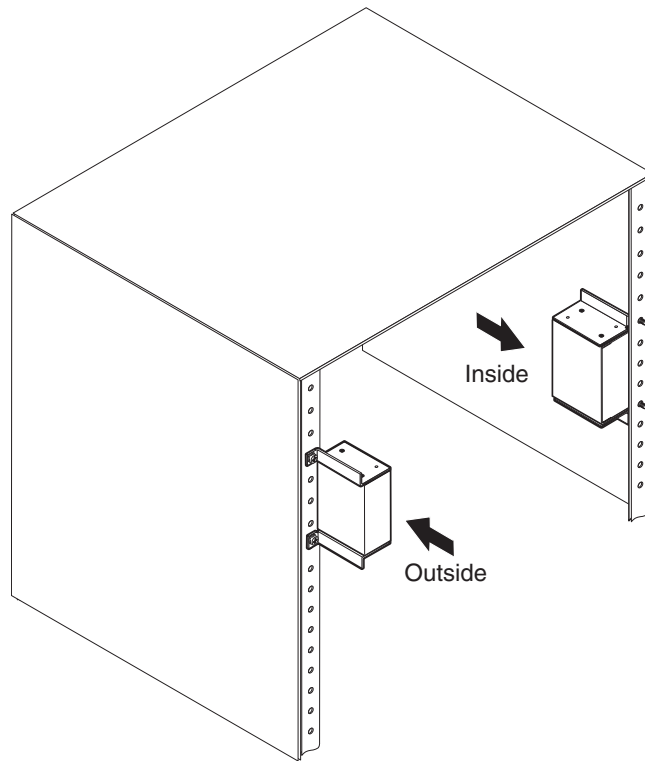
The SVEQ 100 can be mounted to the rear of a rack using the Extron VersaTools MBB 100 back of the rack mounting kit (part #70-367-01). The kit allows the product to be vertically mounted to the front or rear rack supports and facing either towards the front or the rear of the rack.



Using the MBB 100 back of the rack kit

1. If necessary, remove the feet from the bottom of the line driver.
2. Remove two screws from one side of the unit. Retain the screws for possible later reassembly without the bracket.
3. Attach one bracket to the side of the unit using the longer screws included in the kit.
4. Repeat steps 2 and 3 on the other side of the unit.
5. Mount the unit to the rack using the two included rack screws (see the following illustration). The SVEQ 100 can be vertically mounted facing in either direction.

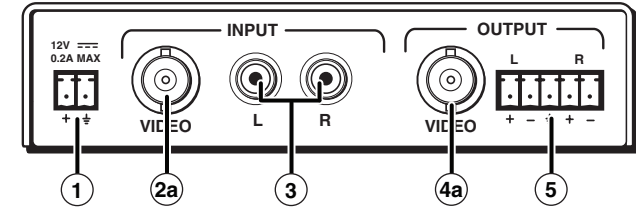
NOTE Only VersaTools products and most IP Link products can be mounted using the back of the rack mounting kit.



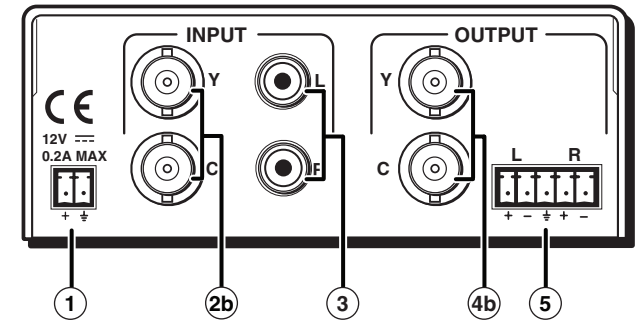
SVEQ 100 back of the rack installation example

Rear Panel Features and Cabling

The following figures show the back panel configurations of the CVEQ 100 and SVEQ 100 line drivers.



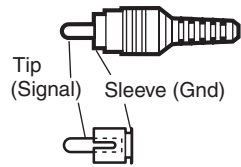
CVEQ 100 rear panel



SVEQ 100 rear panel

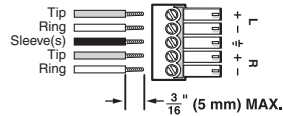
- ① **Power connector** — Plug the external 12 VDC power supply into this 2-pin, 3.5 mm captive screw connector. The power supply is included with the unit. The "Power supply wiring" section in this chapter explains how to wire the connector.
- ②a **Video input connector (CVEQ)** — Connect a composite video input source to this BNC connector.
- ②b **S-video input connectors (SVEQ)** — Connect an S-video input source to these BNC connectors.
- ③ **Audio input connectors** — Connect an unbalanced stereo audio source to these left (L) and right (R) RCA connectors. Wire the male connector as shown in the following illustration.

Installation and Operation, cont'd

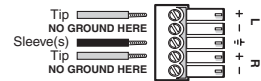


- ④a **Video output connector (CVEQ)** — Connect a composite video output device to this BNC connector.
- ④b **S-video output connector (SVEQ)** — Connect an S-video output device to these Y and C BNC connectors.
- ⑤ **Audio output connector** — Cable a balanced/unbalanced audio output device to this 3.5 mm 5-pole captive screw connector. Wire the male connector as shown below.

Balanced Audio Output



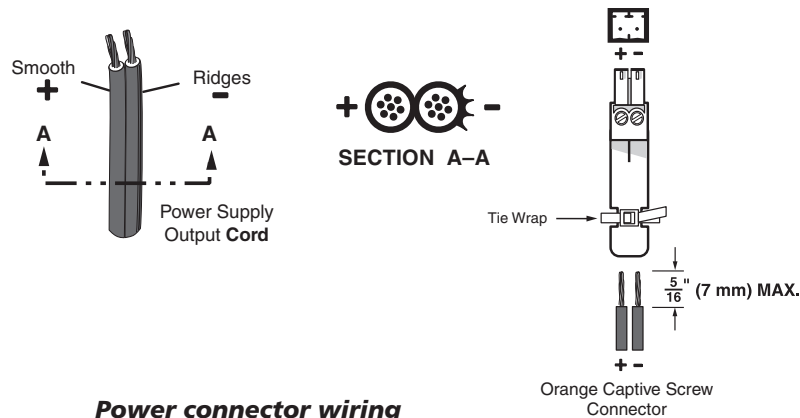
Unbalanced Audio Output



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

Power supply wiring

Wire the line driver's power connector, as shown below.



Power connector wiring

CAUTION

Power supply voltage polarity is critical. Incorrect voltage polarity can damage the power supply and the line driver. Identify the power cord negative lead by the ridges on the side of the cord.

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

WARNING

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

CAUTION

The length of the exposed (stripped) copper wires is important. **The ideal length is 5/16" (7 mm).** Longer bare wires can short together. Shorter wires are not as secure in the direct insertion connectors and could be pulled out.

Use the supplied tie-wrap to strap the power cord to the extended tail of the connector.

NOTE

Your line driver may have shipped with a blue captive screw connector. This blue connector can be plugged into either a blue or an orange power receptacle.

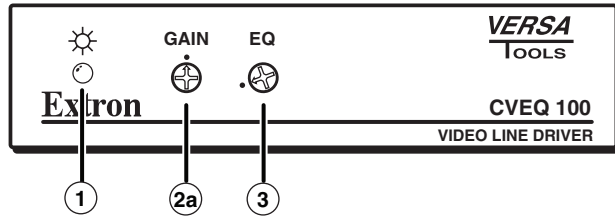
The blue connector does not have the extended tail or the included tie-wrap.

NOTE

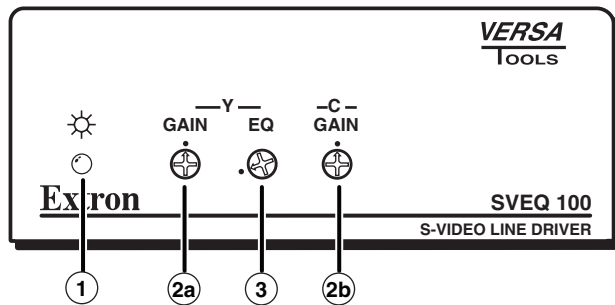
Do not tin the power supply leads before installing in the direct insertion connector. Tinned wires are not as secure in the connectors and could be pulled out.

Front Panel Features and Operation

The following figures show the front panel configurations of the CVEQ 100 and SVEQ 100.



CVEQ 100 front panel



SVEQ 100 front panel

- ① **Power LED** — When lit, this LED indicates power is applied to the line driver.
- ②a **Gain potentiometer (CVEQ and luma of SVEQ)** — Use an Extron Tweeker (a small screwdriver) to rotate this pot to adjust the CVEQ 100's gain and the SVEQ 100's luminance gain when the line driver is connected to long output cables. The adjustment range is -1 dB to +3 dB. The default is unity (the dot position). See "Gain adjustment control" in this chapter.
- ②b **Gain potentiometer (Chroma of SVEQ)** — Use an Extron Tweeker to rotate this pot to adjust the chroma gain when the SVEQ 100 is connected to long output cables. The adjustment range is 0 dB to +10 dB. The default is unity (The dot position). See "Gain adjustment control" in this chapter.

- ③ **Equalization (EQ) potentiometer** — Use an Extron Tweeker to rotate this pot to adjust equalization when the line driver is connected to long output cables. The adjustment range is 0 dB to +7 dB. The default is set to 0 dB (the dot position). See "Equalization (EQ) adjustment control" in this chapter.

Gain adjustment control

The gain control adjusts picture brightness by compensating for signal amplitude loss caused by cable resistance. To adjust the output gain, view the display while using a small, flat-blade screwdriver to rotate this two-turn potentiometer. This control produces a gain adjustment ranging from -6 dB to +6dB. Select the setting that gives the best picture brightness.

You can judge the adjustment visually by looking at the display. For a more precise setting you can use an oscilloscope or a waveform monitor connected to the far end of the output cable, and adjust the gain so that the level at the waveform monitor is 100 IRE.

Equalization (EQ) adjustment control

The equalization control adjusts the output level and peaking to get a sharp picture. This adjustment changes the level and peaking of the output signal to compensate for capacitance caused by up to 1000' (300 m) of Extron MHR cable.

Use a small, flat-blade screwdriver to rotate this control. View the display and select the setting that gives the sharpest picture. For a more precise setting you can use an oscilloscope or a waveform monitor connected to the far end of the output cable, and adjust the equalization so that the color burst ranges between -20 IRE and +20 IRE.

NOTE *The EQ control is a potentiometer with a soft mechanical stop at the high and the low end. If you have reached the high or low end of the adjustment, the potentiometer makes a clicking sound as you turn it, and no change is apparent on the display.*



A

Appendix A

Specifications, Part Numbers, and Accessories

Specifications

Included Parts

CVEQ100/SVEQ 100 Mounting Accessories

Cables and Adapters

Specifications, Part Numbers, and Accessories

Specifications

Video

Gain	Composite video and Y of S-video: -1 dB to +3 dB (x0.9 to x1.4), adjustable C of S-video: 0dB to +10 dB (x1 to x3), adjustable
Equalization	0 dB to +7 dB (x1 to x2) at 5 MHz, adjustable
Bandwidth (Y of S-video).....	185 MHz (-3 dB)
Output cable driving distance.....	Up to 1000' (300 m) with Extron MHR cable

Video input

Number/signal type	
CVEQ 100	1 composite video
SVEQ 100	1 S-video
Connectors	
CVEQ 100	1 female BNC
SVEQ 100	2 female BNC
Nominal level	1 Vp-p for Y of S-video, and for composite video (including sync) 0.3 Vp-p for C of S-video
Minimum/maximum levels	
CVEQ 100	0.4 to 2.0 Vp-p with no offset at unity gain
SVEQ 100	For Y: 0.4 to 2.0 Vp-p with no offset at unity gain
Impedance	75 ohms
Return loss	<-25 dB @ 0 to 5 MHz
DC offset (max. allowable).....	4.0 V
Input coupling	AC

Video output

Number/signal type	
CVEQ 100	1 composite video
SVEQ 100	1 S-video
Connectors	
CVEQ 100	1 female BNC
SVEQ 100	2 female BNC
Nominal level	1 Vp-p for Y of S-video, and for composite video (including sync) 0.3 Vp-p for C of S-video

Minimum/maximum levels	0.4 to 2.0 Vp-p (follows input)
Impedance	75 ohms
Return loss	-30 dB @ 5 MHz
DC offset	±5 mV with no input signal Floating: +0.1 to -0.6 V, depending on input signal content

Sync

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

Audio

Gain	Unbalanced output: 0 dB; balanced output: +6 dB
Frequency response	20 Hz to 20 kHz, +0.05 dB, -0.0 dB
THD + Noise	0.015% @ 1 kHz at nominal level
S/N	>100 dB at maximum output (unweighted)
Stereo channel separation	>80 dB @ 1 kHz
Output cable driving distance.....	Up to 1000' (300 m) with Extron STP cable

Audio input

Number/signal type	1 stereo unbalanced
Connectors	2 RCA female
Impedance	20k ohms unbalanced, DC coupled
Nominal level	-10 dBV (316 mVrms)
Maximum level	+16 dBu (4.9 V), balanced at 1% THD+N

NOTE $0 \text{ dBu} = 0.775 \text{ Vrms}$, $0 \text{ dBV} = 1 \text{ Vrms}$, $0 \text{ dBV} \approx 2 \text{ dBu}$

Audio output

Number/signal type	1 stereo, balanced/unbalanced
Connectors	(1) 3.5 mm captive screw connector, 5 pole
Impedance	50 ohms unbalanced, 100 ohms balanced
Nominal level	-10 dBV (316 mVrms), unbalanced; -2 dBu (632 mV), balanced output
Maximum level.....	+9 dBV (2.8 V) unbalanced, +17 dBu (5.6 V) balanced at 1% THD+N with a 10k ohm load

Specifications, Part Numbers, Accessories, cont'd

General

External power supply	100 VAC to 240 VAC, 50/60 Hz, external, autoswitchable; to 12 VDC, 1 A, regulated
Power input requirements	12 VDC, 0.2 A
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
Rack mount	Yes, with optional 1U rack shelf, part #60-190-01 or 60-604-01; or 1U, 6" deep rack shelf, part #60-190-10 or 60-604-10; or VersaTools® 3" deep rack shelf, part #60-190-20 or 60-604-20 Also furniture and projector mountable with optional mounting kits.
Enclosure type	Metal
Enclosure dimensions	
CVEQ 100	1.0" H x 4.3" W x 3.0" D (<1U high, quarter rack wide) 2.5 cm H x 11.0 cm W x 7.6 cm D (Depth excludes connectors.)
SVEQ 100	1.7" H x 4.3" W x 3.0" D (1U high, quarter rack wide) 4.3 cm H x 11.0 cm W x 7.6 cm D (Depth excludes connectors.)
Product weight	0.7 lbs (0.3 kg)
Shipping weight	3 lbs (2 kg)
Vibration	ISTA 1A in carton (International Safe Transit Association)
Listings.....	UL, CUL
Compliances.....	CE, FCC Class A, VCCI, AS/NZS, ICES
MTBF.....	30,000 hours
Warranty	3 years parts and labor

- NOTE** *All nominal levels are at ±10%.*
- NOTE** *Specifications are subject to change without notice.*

Included Parts

Included parts	Replacement part number
CVEQ 100 <i>or</i>	60-812-01
SVEQ 100	60-813-01
CVEQ 100 & SVEQ 100 User's manual	
Tweaker	
Rubber feet (not attached)	

CVEQ 100/SVEQ 100 Mounting Accessories

Description	Part number
RSF 123 VersaTools® rack shelf kit	60-190-20
RSB 123 VersaTools rack shelf	60-604-20
RSU 126 6" deep universal rack shelf kit	60-190-10
RSB 126 6" deep basic rack shelf	60-604-10
RSU 129 1U universal rack shelf kit	60-190-01
RSB 129 1U basic rack shelf	60-604-01
MBU 123 under-desk mount kit	70-212-01
MBU 125 under-desk mount kit	70-077-01
MBD 125 through-desk mount kit	70-077-02
MBB 100 back of the rack mount kit	70-367-01

Cables and Adapters

Description	Part number
MHR-2P Plenum S-video cable	22-129-0X
MHR-2 Non-Plenum S-video cable	22-123-0X
SVHSF-BNCM adapter (S-video female to 2 male BNCs)	26-541-0X
RCAF-BNCM/10 adapter (RCA female to BNC male, Qty. 10)	100-229-01
AV RCA/6 cable (RCA male to male 6')	IN8906

Specifications, Part Numbers, Accessories, cont'd