Extron® Electronics
INTERFACING, SWITCHING AND DISTRIBUTION

User's Manual

SCP 100P

Control Panel

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 àavertir l'utilisateur de la présence dans le boîtier de l'appareil de tensions dangereuses non isolés 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.

Conserver 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 podrian 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 le contourner ni de la désactiver.

Déonnexion de l'alimentation• Pour mettre le matériel hors tension sans danger, déconnectez tous les cordons d'alimentation de l'arrière de l'appareil ou du module d'alimentation de bureau (s'il est amovible) ou encore de la prise secteur.

Protection du cordon d'alimentation • Acheminer les cordons d'alimentation de manière à ce que personne ne risque de marcher dessus et à ce qu'ils ne soient pas écrasés ou pincés par des objets.

Réparation-maintenance • Faire exécuter toutes les interventions de réparation-maintenance par un technicien qualifié. Aucun des éléments internes ne peut être réparé par l'utilisateur. Afin d'éviter tout danger d'électrocution, l'utilisateur ne doit pas essayer de procéder lui-même à ces opérations car l'ouverture ou le retrait des couvercles risquent de l'exposer à de hautes tensions et autres dangers.

Fentes et orifices • Si le boîtier de l'appareil comporte des fentes ou des orifices, ceux-ci servent à empêcher les composants internes sensibles de surchauffer. Ces ouvertures ne doivent jamais être bloquées par des objets.

Lithium Batterie • Il a danger d'explosion s'Il y a remplacment incorrect de la batterie. Remplacer uniquement avec une batterie du meme type ou d'un ype equivalent recommande par le constructeur. Mettre au reut les batteries usagees conformement 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 Erdanschluß, 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 Stomversorgung (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 andere Gefahren bestehen.

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

Litium-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 puentearia ni eliminaria.

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. Desachar las baterías usadas siguiendo las instrucciones del fabricante.

Extron's Warranty

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

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.

Table of Contents

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

SCP 100P

1

Chapter One

Introduction and Installation

About the SCP 100P

Installation Instructions

Introduction and Installation

About the SCP 100P

The Extron SCP 100P control panel replicates the front panel controls of the Extron System 5cr Plus system switcher, and it is also compatible with the System 5cr switcher. The Input 3 button on the control panel corresponds to the PC3 button on the front panel of the System 5cr. Up to two SCP 100Ps can be connected to the System 5cr/5cr Plus.

| NOTE | *The switcher cannot be configured from the SCP 100P control pad. All switcher setup must be done from the switcher's front panel or via RS-232 control.* |

The SCP is hard-wired to the system switcher, and it can also receive IR (infrared) signals from the System 5cr or System 5cr Plus' IR 401 remote control and pass them to the switcher.

Refer to the *System 5cr Plus User's Manual* (part #68-498-01) for details on installing and operating the switcher.

The SCP 100P includes a 2-gang wall box, and it can be mounted in a wall, desk, or podium. The SCP 100P is available in three faceplate colors: grey (part #60-331-01), black (part #60-331-02), and white (part #60-331-03).

Installation Instructions

### Preparing the site, installing the wall box

An electrical box is included with each SCP 100P, but a different box can be used. The box must be deep enough to contain the SCP's electrical components *and* the connected cables.

The electrical box can be attached to wall studs or to furniture, or the SCP 100P can be mounted in areas of walls or furniture without studs if using an optional Extron 2-gang mounting bracket, part #70-086-01.

Use the full-size rough-in template provided on page A-4 as a guide to mark and cut the hole in the wall or furniture through which the SCP 100P will be installed. The template includes the recommended 0.1" (0.25 cm) clearance on all sides of the electrical wall box to allow room for the raised areas surrounding the knockouts.

1. Cut out the center portion of the template. Cut up to the dashed line if using an electrical box, or cut up to the dotted line if an electrical box will not be used.

2. If wall-mounting the SCP 100P, locate a stud to which the wall box will be attached.

3. Using the provided template, mark and cut out the opening on the wall/furniture.

4. Insert the wall box (if used) into the wall, and attach the wall box to the wall stud (2" x 4") or furniture with nails or screws, leaving the front edge flush with the wall surface, as shown in the following illustration.

Wall Stud
Wall Box
Flush with Wall Surface
Screws or Nails
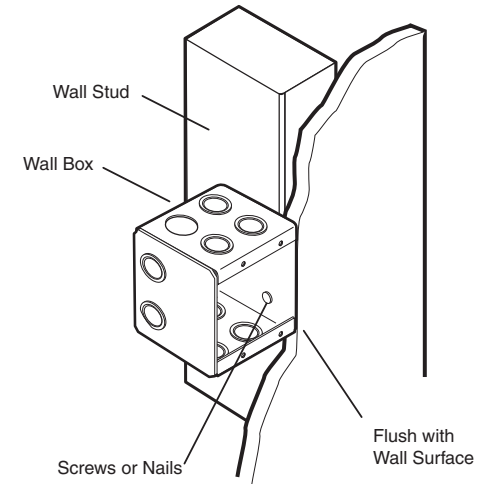
To attach the wall box to wood, use four #8 to #10 wood or sheet metal screws. A minimum of 1/2 inch (1.25 cm) of screw threads must penetrate the wood. If the wood is a 2 x 4, such as a wall stud, 10-penny or larger nails can be used.

To attach the electrical wall box to metal, use four #8 or #10 sheet metal screws (self-tapping) or #8 or #10 machine bolts with matching nuts.

| NOTE | *If mounting brackets will be used instead of studs, follow the mounting instructions that came with the brackets.* |

5. Feed the cables through the wall box. Cable clamps should be used to hold the cables in place for strain relief.

6. Exposed cable shields (braids or foil) are potential sources of short circuits. Trim back and/or insulate shields with heat shrink.

## Rear panel (circuit board) and cabling
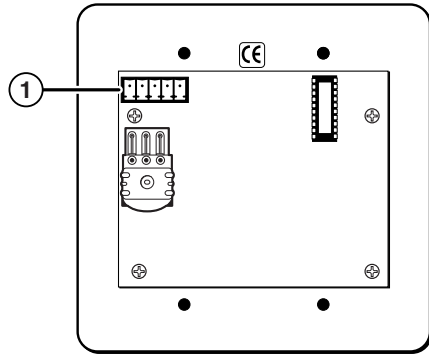
(1) **Rear panel port** — Connect this 3.5 mm, 5-pole captive screw port to either one of the System 5*cr* Plus's Aux port 5-pole captive screw connectors. Captive screw connectors are included with the SCP 100P. The cable is not supplied. See page A-2 for a list of recommended cables. The cable should be a maximum of 300 feet (91.4 meters) long.

The System 5*cr* Plus's Aux 1 and Aux 2 ports provide a total of 500 mA, split between the two ports, so each port provides 250 mA of current for powering the control pad.

1. Wire the connectors as shown below.
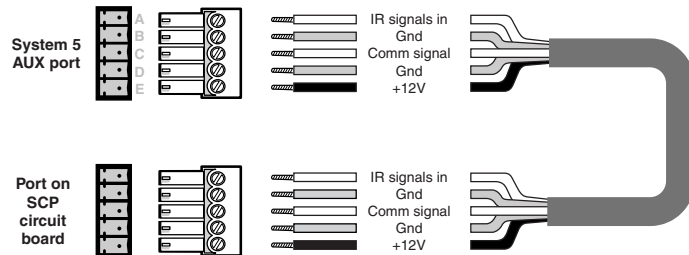
2. Plug one end of the cable into the SCP 100P rear panel port first, and then plug the other end into one of the System 5*cr* Plus Aux ports.

Pre-installation testing/troubleshooting

Before installing the control pad into the wall or furniture, test the system to make sure that the connections are correct and the SCP is working correctly. Test the system by powering on the switcher, then pressing the input selection buttons on the SCP 100P, and watching the LEDs on the switcher to see if the system switches to the desired inputs.

> **NOTE** *The connections between the SCP 100P and the System 5cr Plus can be tested even if input/output devices are not available.*

Mounting the SCP to the wall box

Once the system has been cabled and tested, the control pad can be installed in the wall or furniture.

1. With power removed, insert the SCP 100P into the wall or furniture.

2. Mount it to the wall box (or mounting brackets) with the provided machine screws (as shown in the illustration below), or attach it directly to the furniture with wood or metal screws.
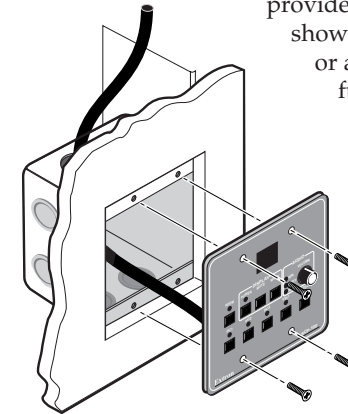
> **NOTE** *If you are not installing the SCP into a grounded metal wall box, make sure that the faceplate is grounded to an earth ground.*

Application diagram

Below is an example of a typical installation of an SCP 100P control pad and a System 5*cr* Plus switcher.

Front

IR 40 Remote

SCP 100P Control Panel

LIGHTING

SHADES/DRAPES

Room Control

Optional IR Broadcaster

or

IR Emitter

To Second Control Pad

Rear

LCD Projector

Power Sensor

RS-232 Control
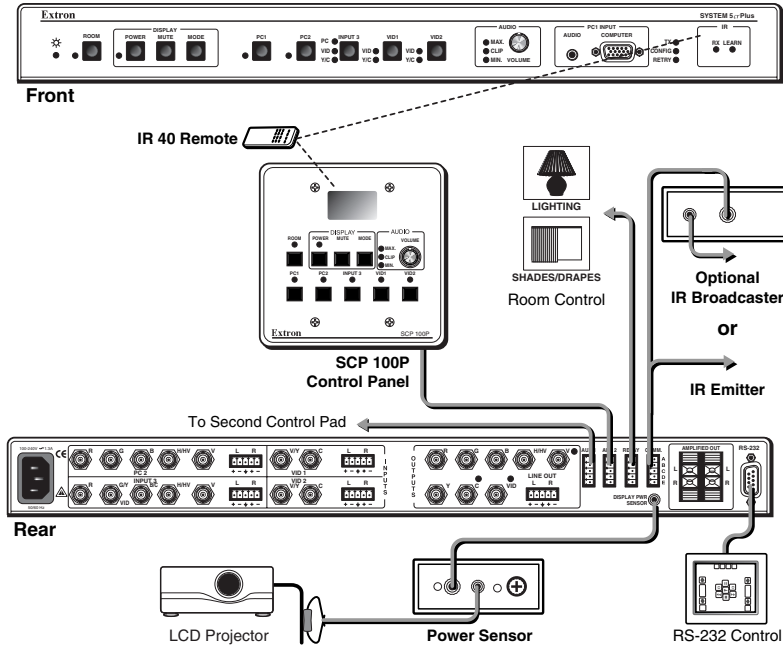
SCP 100P

Chapter Two

Operation

Front Panel Features

Operation

The SCP 100P replicates the front panel controls of the System 5*cr* Plus.

> **NOTE** *The System 5cr Plus cannot be configured from the SCP 100P control pad. All switcher setup must be done from the switcher's front panel or via RS-232 control.*

Front Panel Features

System control features

① **Room button and LED** — This allows control of "room" functions – items such as room lighting, window coverings, and display screens – via momentary or latching contact through the Relay port. T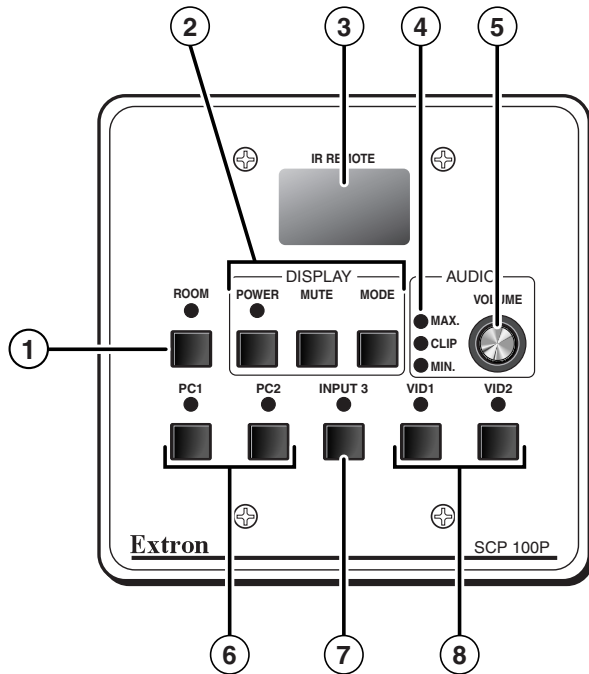hese contacts can be used to control any equipment as long as the contacts do not exceed a total of 24 volts at 1 ampere. The LED lights while the room function is active (on). Refer to the *System 5cr Plus User's Manual* for information on the room function/Relay port.

② **Display function controls and LED** — The settings of the display functions (power, mute, and mode) are customized for each projector. These buttons function only after they have been programmed, either by "learning" IR commands or by loading projector commands (drivers) from the Extron IR library.

Display Power button and LED — Once the System 5*cr* Plus has been programmed with the commands for the specific projector, pressing this button toggles the projector's power on or off.

The LED lights when projector power is on. The LED blinks quickly during projector power-up, and it blinks slowly during projector power-down. While the LED is blinking, do not send commands to the projector because the projector is not able to accept them. The blinking periods (power-up/down delay time) are generated within the System 5*cr* Plus, not the projector. The blinking periods can be set only via the Windows-based control program.

Display Mute button — Press this button to toggle the projector's video "mute" function (to turn off/on the displayed image) once the Mute button has been programmed for use with the projector.

Display Mode button — This button can be programmed to switch the mode of the projector between computer-video (RGB), S-video, and composite video. It replicates the 1-button (step) mode function provided on some projectors' remote controls.

③ **IR remote window** — This windows corresponds to the IR receiver port on the System 5*cr* Plus switcher. It is used for receiving commands from the IR 401 remote control (from a distance of up to 30 feet ((9.1 m)) away) and sending them to the switcher. Infrared signals from other devices are not passed on to the IR Emitter or the IR Broadcaster.

Audio adjustment control and LEDs

④ **Audio indicator LEDs (Max, Clip, and Min)** — These LEDs light in response to changes made via the front panel volume control knob or RS-232 or control software commands.

Max LED (red) – This LED lights when the volume control knob has reached its maximum limit. It does not indicate the audio level.

Clip LED (green) – This LED lights when the audio output level starts to peak (overdrive) and the signal is clipped, often when the input level is too high. It is used during audio input attenuation setup.

Min LED (red) – This LED lights when the volume control knob has reached its minimum limit. It does not indicate the audio level.

Operation, cont'd

⑤ **Volume control knob** — Rotate this knob to adjust the audio volume (audio gain) for the amplified output. The volume control knob can be used as a master volume control for both audio outputs if all the audio inputs have the same level. There is no physical limit to this knob's rotation. The Min or Max LED will light briefly when the knob has reached its functional minimum or maximum limit.

Audio gain/attenuation can be set per input via the switcher's front panel controls or via RS-232 commands or the Windows-based control program. For details, refer to the *System 5cr Plus User's Manual*.

Input selection buttons and LEDs

Use these buttons to select the appropriate input source. LEDs next to each button indicate the format of the incoming video signal. Only the selected input's LED lights. If the System 5*cr* Plus has learned commands, it may send IR commands (such as a display mode change command) to the projector when an input is selected.

⑥ **PC 1 and PC 2** — Press these buttons to select input 1 (PC 1 on the switcher's front panel) or input 2 (PC 2 on the switcher's rear panel), respectively. Both inputs accept only RGB computer-video and audio.

⑦ **Input 3** — This button corresponds to Input 3 (rear panel), which can be configured to accept audio and RGB, or S-video, or composite video. The LED corresponding to the selected format lights when Input 3 is selected.

⑧ **Vid 1 and Vid 2** — Press these buttons to select input 4 (Vid 1) or input 5 (Vid 2), respectively. Both of these rear panel inputs can be configured to accept audio and either S-video or composite video.

| NOTE | *Audio breakaway (the ability to separately switch audio and video signals from different inputs) is available only via the RS-232 control. While audio breakaway is active, on both the SCP 100P's panel and the switcher's front panel, the flashing LED indicates the input providing the audio signal, and the steadily lit LED indicates the active video input.* |

SCP 100P

A

Appendix

Specifications, Parts, Accessories, and Dimensions

Specifications

Included Parts

Accessories

Panel Dimensions

Template

Specifications, Parts, Accessories, Dimensions

Specifications

Control/remote — control pad

IR controller module .... IR 401 (optional)

General

Power	12VDC, at 60 mA, from the System 5*cr* Plus switcher
Temperature/humidity	Storage -40° to +158°F (-40° to +70°C) / 10% to 90%, non-condensing Operating +32° to +122°F (0° to +50°C) / 10% to 90%, non-condensing
Rack mount	No, but furniture/wall mountable with included faceplates and electrical boxes or optional mounting bracket kits or AAP wall plates.
Enclosure type	Metal

Enclosure dimensions

Plate	4.5" H x 4.6" W x 0.1" D (2 gang) 11.4 cm H x 11.7 cm W x 0.3 cm D
Box	3.75" H x 3.63" W x 3.5" D 9.5 cm H x 9.2 cm W x 8.9 cm D
Boards	2.9" H x 3.5" W x 0.8" D 7.4 cm H x 8.9 cm W x 2.0 cm D (Allow at least 1.5" (3.8 cm) depth in the wall or furniture. Depth excludes connectors and knobs.)

Product weight	0.3 lbs (0.1 kg)
Shipping weight	3 lbs (1.4 kg)
Vibration	ISTA/NSTA 1A in carton (International Safe Transit Association)
Listings	UL, CUL as a component of the System 5*cr* Plus
Compliances	CE as a component of the System 5*cr* Plus
MTBF	30,000 hours
Warranty	3 years parts and labor

NOTE *Specifications are subject to change without notice.*

Included Parts

These items are included in each order for an SCP 100P:

| Included parts	Part number
SCP 100P (grey)	60-331-01
or SCP 100P (black)	60-331-02
or SCP 100P (white)	60-331-03
SCP 100P User's Manual	68-390-01
3.5 mm, 5-pole captive screw connectors	10-319-10
2-gang electrical box	

Accessories

These recommended items are available from Extron:

Cable/accessory	Part number
Comm-Link cable (50')	29-461-01
Comm-Link cable (100')	29-461-02
Comm-Link cable (200')	29-461-03
Comm-Link cable (400')	29-461-04
2-gang mounting bracket	70-086-01

Panel Dimensions

The diagram below has been reduced to fit on the page. All dimensions are given in inches. The symbol "ø" indicates a diameter.
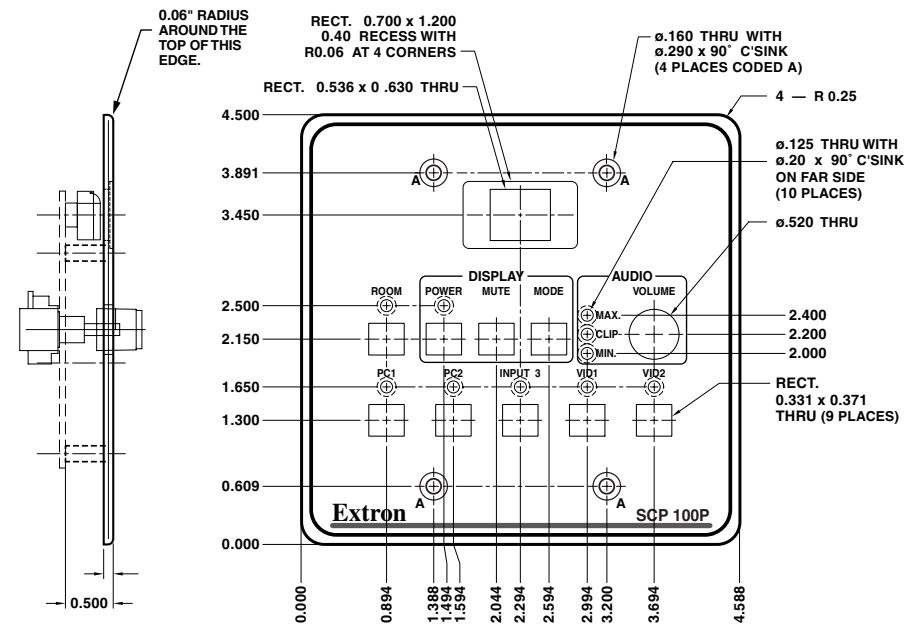
Template

Use the template as a guide to mark and cut the hole in the wall or furniture through which the SCP 100P will be installed. The template includes the recommended 0.1″ (0.25 cm) clearance on all sides of the electrical wall box to allow room for the raised areas surrounding the knockouts. See chapter two for details on installing the SCP 100P.

The light gray area represents the layout of the electrical box (3.75"H x 3.75"W) against the rear of the SCP 100P front panel.

To install the control panel *without* a wall box, use the cut-out area (3.00"H) indicated by the dotted line.

The dashed line indicates the cut-out area (3.95"H x 3.95"W) for installing the electrical wall box.