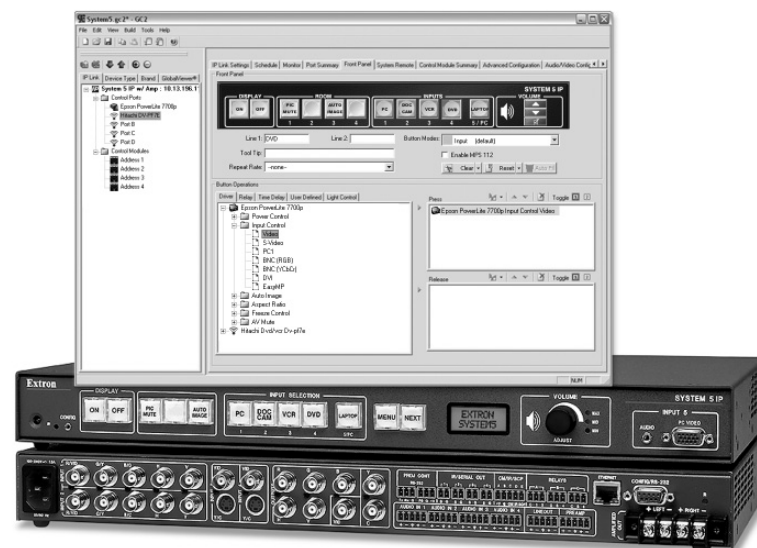


Setup Guide Checklist

- ☐ Download and install the latest version of Global Configurator (see chapter 1).
- ☐ Download the latest drivers to be used in the project using the Driver Subscription feature (see chapter 3).
- ☐ Reference the "IP Link Device Interface Communication Sheet" (click the **Comm Sheet** button) for any special setup requirements (see chapter 3, "Adding a serial driver").
- ☐ Obtain device and email IP settings from the network administrator.
- ☐ Power the System 5 IP using the included IEC power cord (see chapter 2).
- ☐ Connect the System 5 IP to the PC via Ethernet patch or crossover cable (see chapter 2).
- ☐ Configure the System 5 IP using Global Configurator (see chapter 3).
 1. ☐ Create a new Global Configurator project.
 2. ☐ Select the model of the System 5 IP and set its IP address.
 3. ☐ Define the GlobalViewer Tree location and add the System 5 IP to the project.
 4. ☐ Define email IP settings, notifications and contacts.
 5. ☐ Add serial and IR drivers.
 6. ☐ Configure the front panel buttons.
 7. ☐ Configure the control module buttons.
 8. ☐ Create a display shutdown schedule.
 9. ☐ Create a display lamp hours warning email.
 10. ☐ Create a display disconnect warning email.
 11. ☐ Build and upload the configuration.
 12. ☐ Access GlobalViewer®.
- ☐ Cable peripheral devices to ports on the System 5 IP. Test and troubleshoot the setup if necessary (see chapter 2).
- ☐ Mount the System 5 IP into a rack or place on furniture (Refer to the *System 5 IP Series User's Manual*, chapter 2).

Setup Guide



System 5 IP Series System Switchers

68-1228-01 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.

Conservé 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.

Éviter les pièces de fixation • Ne pas utiliser de pièces de fixation ni d'outils non recommandés par le fabricant du matériel car cela risquerait de poser certains dangers.

Sicherheitsanleitungen • Deutsch



Dieses Symbol soll dem Benutzer in der im Lieferumfang enthaltenen Dokumentation besonders wichtige Hinweise zur Bedienung und Wartung (Instandhaltung) geben.



Dieses Symbol soll den Benutzer darauf aufmerksam machen, daß im Inneren des Gehäuses dieses Produktes gefährliche Spannungen, die nicht isoliert sind und die einen elektrischen Schock verursachen können, herrschen.

Achtung

Lesen der Anleitungen • Bevor Sie das Gerät zum ersten Mal verwenden, sollten Sie alle Sicherheits- und Bedienungsanleitungen genau durchlesen und verstehen.

Aufbewahren der Anleitungen • Die Hinweise zur elektrischen Sicherheit des Produktes sollten Sie aufbewahren, damit Sie im Bedarfsfall darauf zurückgreifen können.

Befolgen der Warnhinweise • Befolgen Sie alle Warnhinweise und Anleitungen auf dem Gerät oder in der Benutzerdokumentation.

Keine Zusatzgeräte • Verwenden Sie keine Werkzeuge oder Zusatzgeräte, die nicht ausdrücklich vom Hersteller empfohlen wurden, da diese eine Gefahrenquelle darstellen können.

Instrucciones de seguridad • Español



Este símbolo se utiliza para advertir al usuario sobre instrucciones importantes de operación y mantenimiento (o cambio de partes) que se desean destacar en el contenido de la documentación suministrada con los equipos.



Este símbolo se utiliza para advertir al usuario sobre la presencia de elementos con voltaje peligroso sin protección aislante, que puedan encontrarse dentro de la caja o alojamiento del producto, y que puedan representar riesgo de electrocución.

Precaución

Leer las instrucciones • Leer y analizar todas las instrucciones de operación y seguridad, antes de usar el equipo.

Conservar las instrucciones • Conservar las instrucciones de seguridad para futura consulta.

Obedecer las advertencias • Todas las advertencias e instrucciones marcadas en el equipo o en la documentación del usuario, deben ser obedecidas.

Evitar el uso de accesorios • No usar herramientas o accesorios que no sean específicamente recomendados por el fabricante, ya que podrían implicar riesgos.

Warning

Power sources • This equipment should be operated only from the power source indicated on the product. This equipment is intended to be used with a main power system with a grounded (neutral) conductor. The third (grounding) pin is a safety feature, do not attempt to bypass or disable it.

Power disconnection • To remove power from the equipment safely, remove all power cords from the rear of the equipment, or the desktop power module (if detachable), or from the power source receptacle (wall plug).

Power cord protection • Power cords should be routed so that they are not likely to be stepped on or pinched by items placed upon or against them.

Servicing • Refer all servicing to qualified service personnel. There are no user-serviceable parts inside. To prevent the risk of shock, do not attempt to service this equipment yourself because opening or removing covers may expose you to dangerous voltage or other hazards.

Slots and openings • If the equipment has slots or holes in the enclosure, these are provided to prevent overheating of sensitive components inside. These openings must never be blocked by other objects.

Lithium battery • There is a danger of explosion if battery is incorrectly replaced. Replace it only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

Avertissement

Alimentations • Ne faire fonctionner ce matériel qu'avec la source d'alimentation indiquée sur l'appareil. Ce matériel doit être utilisé avec une alimentation principale comportant un fil de terre (neutre). Le troisième contact (de mise à la terre) constitue un dispositif de sécurité : n'essayez pas de le contourner ni de le 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 éraillés 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.

Schlitz und Öffnungen • Wenn das Gerät Schlitz 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 cable 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. 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
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。

Table of Contents

Chapter One • Introduction	1-1
About this Manual	1-2
About the System 5 IP Series Switchers	1-2
About Global Configurator	1-3
System Requirements	1-4
Installing the Software	1-4
Updating Firmware	1-5
Chapter Two • System 5 IP Hardware Setup	2-1
Rear Panels and Cabling	2-2
A/V input and video output connections	2-2
Audio output connections	2-3
Control connections	2-5
Front Panel Features and Basic Operation	2-10
Control ports	2-11
Buttons	2-11
Indicators	2-13
Chapter Three • System 5 IP Software Setup	3-1
Online Training	3-3
Step 1: Download Device Drivers	3-3
Step 2: Create a New Project	3-4
Step 3: Add a System 5 IP Switcher and Define its Location	3-6
Step 4: Define E-mail Settings	3-8
Defining e-mail server settings	3-8
Setting up e-mail notifications	3-9
Adding e-mail contacts	3-11
Step 5: Add a Serial and an IR Device	3-12
Downloading additional drivers	3-12
Adding a serial driver	3-12
Adding an IR driver	3-13
Step 6: Configure the Front Panel Buttons	3-14
Configuring an input button	3-15
Configuring the On and Off buttons	3-16
Step 7: Configure the Control Modules Using the Auto Fill Feature	3-17

Table of Contents, cont'd

Step 8: Create a Display Shutdown Schedule..... 3-19

Step 9: Create a Display Lamp Hour Warning E-mail 3-21

Step 10: Create a Display Disconnection E-mail 3-22

Step 11: Build and Upload a Configuration 3-23

 Building a configuration..... 3-23

 Uploading a configuration 3-24

Step 12: Access GlobalViewer® 3-25

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

68-1228-01 B
01 07



System 5 IP Switchers

Chapter One

Introduction

- About this Manual
- About the System 5 IP Series Switchers
- About Global Configurator
- System Requirements
- Installing the Software
- Updating Firmware

Introduction

About this Manual

This setup guide allows you to easily and quickly set up and configure your System 5 IP switcher. Step by step instructions show you how to set up the hardware first, then use the Global Configurator program to add serial and IR drivers, configure the front panel buttons, set a shutdown schedule, and set up e-mail alerts for display disconnection as well as lamp hours warnings.

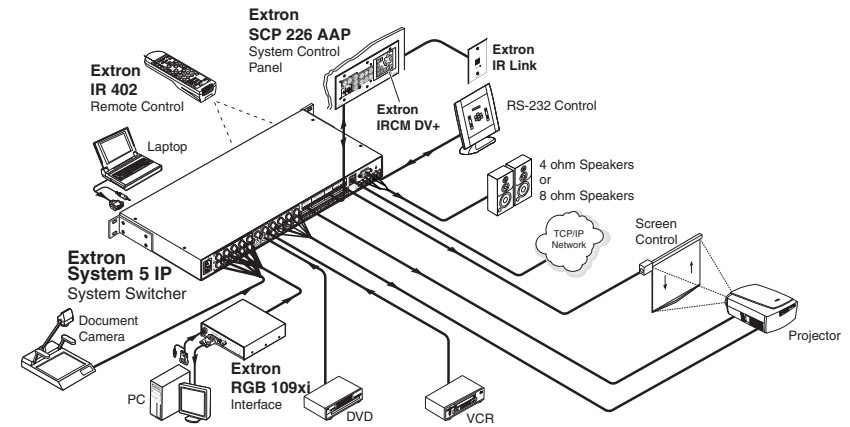
About the System 5 IP Series Switchers

The Extron System 5 IP switchers are five input, one output, active, audio/video (A/V) switchers capable of controlling a projector and various other items such as lights, a projector lift, or a screen motor. Throughout this manual they are referred to as the System 5 IP, the switcher, or System 5.

Four models are available:

- **The Front Panel Controller (FPC) models**, which include front panel controls for projector power, selectable functions/room control, input selection, volume adjustment, and simple configuration—
 - ▶ with an audio amplifier (**amplifier model**), and
 - ▶ without an audio amplifier (**nonamplifier model**)
- **The non-FPC models**, which have no front panel controls except an input 5 selection button—
 - ▶ with an audio amplifier (**amplifier model**)
 - ▶ without an audio amplifier (**nonamplifier model**)

The System 5 IP offers two methods of projector and source device control: RS-232 or infrared (IR). The switcher can learn IR signals from remote controls to communicate with sources such as VCRs and DVD players. Users can create their own IR device drivers or go to the Extron Web site to obtain device drivers.



A typical application for a System 5 IP switcher with integrated audio amplifier

About Global Configurator

Extron Global Configurator (GC) software is an application that allows non-programmers to configure a wide range of Extron IP Link®-enabled products, and create entire GlobalViewer™ systems. It provides an integrated environment for defining A/V control and system monitoring functionality from an easy-to-use graphical user interface. It allows you to configure a single room controller as well as facilitate building a Web-based asset management and remote monitoring system for hundreds of A/V devices in multiple locations.

Global Configurator provides the following features for the System 5 IP:

Offline configuration—Using Global Configurator, you can configure your System 5 IP switcher without having the actual device on hand, eliminating the need to connect to your switcher before starting the configuration.

GlobalViewer Web pages—GlobalViewer Web pages (HTML, XML, and JavaScript) allow you to control and manage devices such as VCRs, DVDs, and displays connected to an Extron System 5 IP. These pages are generated when you build and upload your project files in GC. GlobalViewer must be viewed using Microsoft Internet Explorer® (version 6 and above), with Active X enabled, from any computer with access to the network.

System Requirements

- Intel® Pentium® III processor or later with at least a 1 GHz clock speed
- One of the following Microsoft® Windows operating systems:
 - ▶ Windows NT, service pack 4
 - ▶ Windows 2000, service pack 2
 - ▶ Windows XP, service pack 2
- Microsoft Internet Explorer 6.0 or later, with Active X enabled

NOTE *If Active X is not enabled, a prompt may appear in your browser, or a “Please wait while the files are loading” message may appear on the GV control page.*

- 512 MB of RAM
- 50 MB of hard disk space
- A network connection with a minimum data transfer rate of 10 Mbps

Installing the Software

Before getting started with Global Configurator, you must install the software. The configuration software is available at no charge via the Extron Web site at www.extron.com.

CAUTION *You **must** use Global Configurator version 2.2 or later to configure the System 5 IP. Using an earlier version (2.0.0 through 2.1.x) risks damage to the products. Immediately update any existing controllers configured with older versions of the software.*

To install the software on your hard drive:

1. Go to www.extron.com and click the **Download** tab.
2. Click the **IP Link® Software** link or icon.
3. Click the **Global Configurator** link or icon.
4. From the **Global Configurator** page, click the **Download Now** button.
5. Provide the necessary information, then click the **Download GCSWxxxx.exe** button.

The program wizard walks you through the remaining process. By default, the installation creates the necessary directories, placing icons, files, drivers, and a help file for Global Configurator within them.

Updating Firmware

Extron periodically updates product firmware in conjunction with the release of new software revisions. When updating any Extron software to the latest revision level, please be sure to read the supplied release notes, or contact an Extron Application Engineer to determine if your Extron product also requires a firmware update.

NOTE *For more information regarding how to update the firmware, refer to Appendix B in the System 5 IP Series User's Manual.*



Chapter Two

System 5 IP Hardware Setup

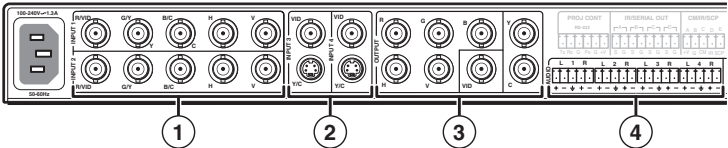
Rear Panels and Cabling

Front Panel Features and Basic Operation

System 5 IP Hardware Setup

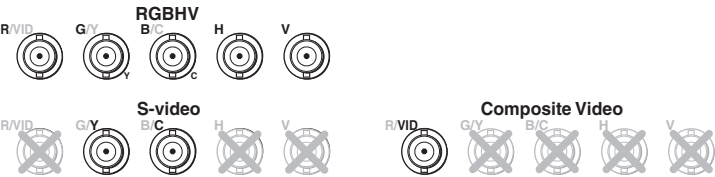
This chapter describes rear and front panel features and basic front panel operation of the System 5 IP switcher. It shows you how to connect the cables to audio, video, and control connectors.

Rear Panels and Cabling

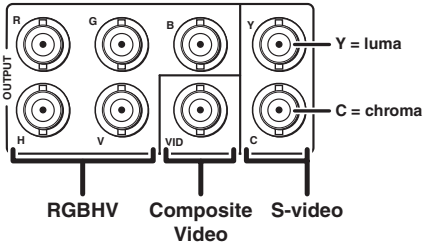


A/V input and video output connections

- ① **Inputs 1 and 2: RGBHV/S-video/composite video inputs** — Connect cables from an RGBHV, S-video (Y/C), or composite video source to each of these inputs. See the diagrams below. Inputs must be configured for either video or RGB. See chapters three, four, and five in the *System 5 IP Series User’s Manual* for details.



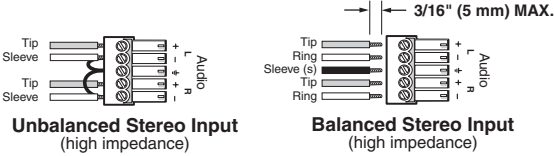
- ② **Inputs 3 and 4: S-video/composite video inputs** — Connect the cable from either an S-video (Y/C) source (using the 4-pin mini DIN connector) or a composite video source (using the BNC connector) to each of these inputs. Inputs 3 and 4 are not configurable.
- ③ **Display outputs** — Cable these output BNC connectors to an RGBHV, S-video (Y/C), or composite video port on the projector or display. See the diagram below.



- ④ **Audio inputs** — These inputs correspond to the like-numbered video inputs. For each input, connect the cable from a balanced or unbalanced stereo or mono audio input source. See the wiring diagrams below.

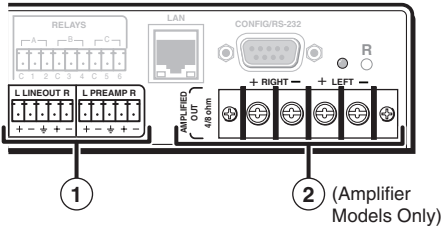
NOTE Do not tin the stripped leads before installing them in the captive screw connector. Tinned wires are not as secure in the captive screw connectors and could pull out.

CAUTION ⚠ For unbalanced audio, connect the sleeve(s) to the ground contact. **DO NOT** connect the sleeve(s) to the negative (-) contacts.



NOTE After the audio inputs and outputs are connected, refer to chapter 3, “Front Panel Features and Basic Operation” and chapter 4, “Software- and Web Page-based Setup and Control” from the *System 5 IP Series User’s Manual*.

Audio output connections



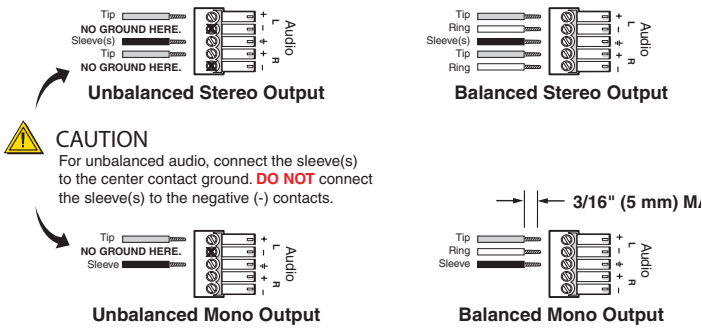
- ① **Lineout and preamp audio outputs** — Connect an audio output device to either connector for line level audio outputs. The lineout and preamp audio outputs are simultaneously active. Therefore, two devices can be connected at the same time (one to each output).
- The **lineout** connector outputs a fixed level audio signal that is not affected by audio adjustments.
 - The **preamp** connector outputs a variable, line level audio signal for use with a powered amplifier. The volume can be controlled (attenuated) via the front panel knob, RS-232, or Ethernet/IP communication. The volume range is 0 (mute) through 40 steps (0% through 100% of the maximum volume).

System 5 IP Hardware Setup, cont'd

Lineout and preamp outputs can both be wired as unbalanced or balanced (see diagrams below). Only the preamp output has the -10 dBV/+4 dBu options.

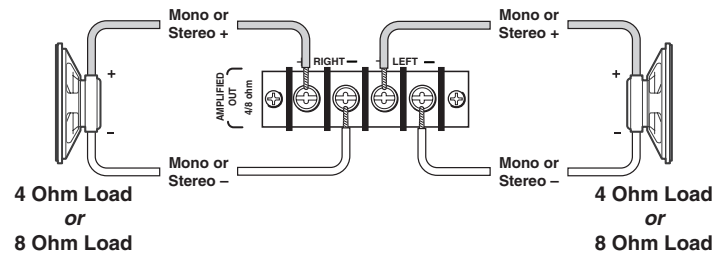
- **Unbalanced, -10 dBV (-8 dBu, 320 mVrms)** — the default, for consumer level devices such as VCRs, DVD players, and stereo receivers
- **Balanced, +4 dBu (+6 dBV, 1.23 Vrms)** — for professional devices such as mixers, signal processors, and power amps

NOTE Do not tin the stripped power supply leads before installing them in the captive screw connector. Tinned wires are not as secure in the captive screw connectors and could pull out.



② **Amplified output** (for models with an integrated audio amplifier only) — The switcher’s internal, 40-watt (20 watts per channel into a 4 or 8 ohm load) audio amplifier outputs stereo (default) or dual mono signals on a four-position screw terminal connected to non-powered speakers. Cable speakers to this screw terminal for a 20 watts (rms) per channel amplified audio output.

1. Use the appropriate wiring for the load as shown in the following illustration.

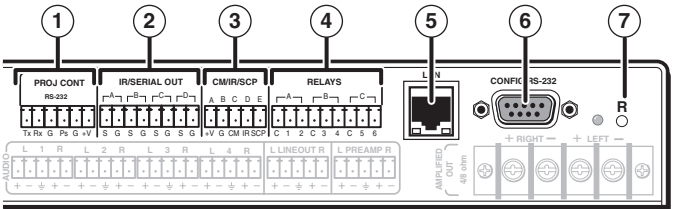


2. Using the front panel, RS-232, or IP control, set the switcher for either mono or stereo audio output. That setting affects the amplified output and the preamp output.

CAUTION Do not short the terminals to ground or the amplifier will be damaged.

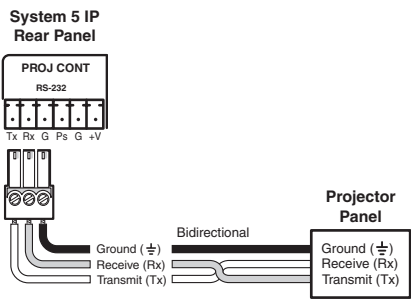
CAUTION Do not bridge the outputs. Bridging could damage the amplifier.

Control connections



① **Projector control RS-232 port** — Commands from a downloaded projector driver or user-defined command strings entered via the Global Configurator program can be sent to the display device from this port.

For bidirectional communication, the transmit (Tx), ground (G), and receive (Rx) pins must be wired at both the switcher and the projector.

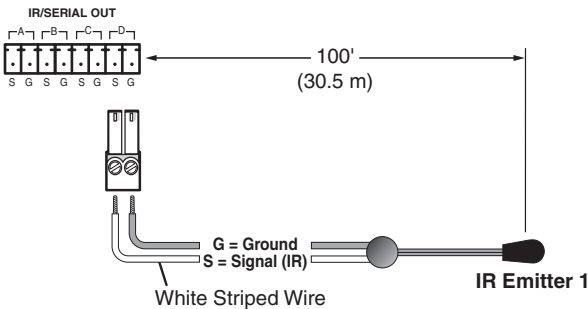


NOTE Each projector or display may require different wiring. For details, refer to the manual that came with the projector or click the **Comm Sheet** button under the Driver Configuration tab in Global Configurator to display the "IP Link® Device Interface Communication Sheet".

NOTE Extron recommends the use of shielded communication cables such as CTL (Comm-Link cable).

② **IR/Serial Output ports** — These ports output either infrared signals or unidirectional RS-232 signals for controlling various devices such as VCRs and DVD players. Each port must be set up via Global Configurator for either IR or RS-232 communication and associated with a device driver.

For infrared (IR) output, wire an IR Emitter (2 emitters, maximum, per port) as shown below for a modulated signal and ground.

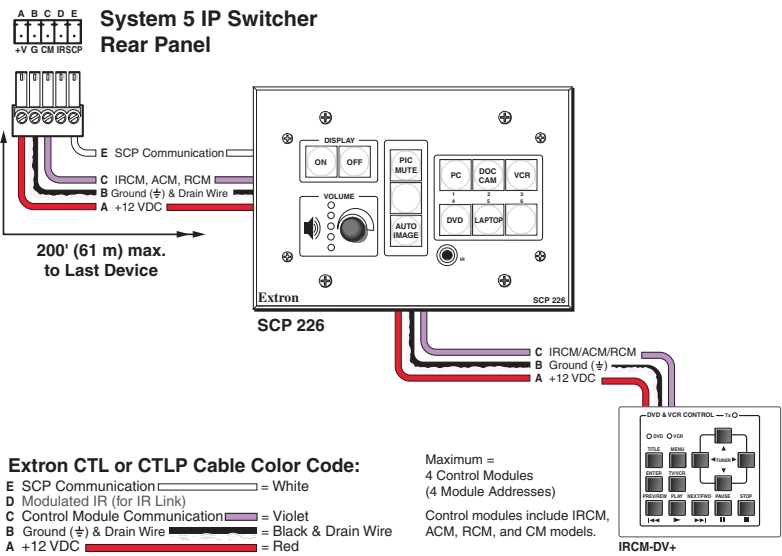


See the *System 5 IP Series User's Manual* for details on how to set up these ports for IR or RS-232 control.

- ③ **CM/IR/SCP port** — You can connect up to four Extron control modules (IRCMs, ACMs, RCMs), one Extron IR Link infrared signal repeater, and/or up to two Extron SCP 104 or SCP 226 control pads to this port to allow remote control of the System 5 IP switcher or other items. A maximum of seven devices can be connected to this port.

The SCP 104 or SCP 226 Secondary Control Panel replicates most of the switcher's front panel controls. The control pad can receive IR signals from an optional IR 402 remote control and send them to the switcher. Control modules can be used to control VCRs, DVD players, tape decks, a projector lift, or screen control. Refer to the appropriate device's user's manual.

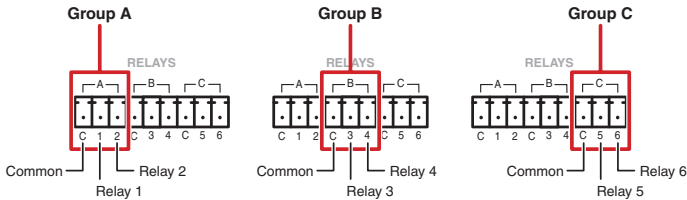
The control modules, IR Link, and SCPs can be daisy chained, as shown in the following diagram. Extron CTL (Comm-Link) cable is recommended for these connections. Use the following diagram as a wiring guide.



NOTE The maximum total distance between the System 5 IP and a connected device is 200' (61 m).

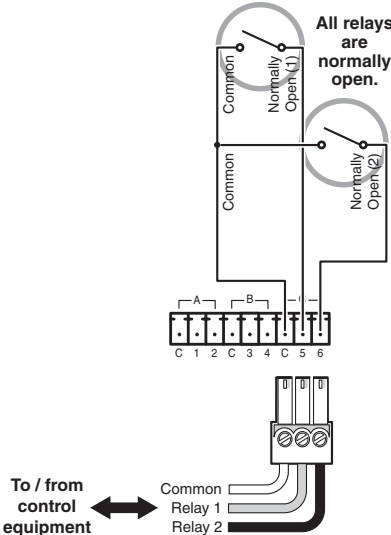
NOTE Extron recommends that you connect the cable's drain wire to the ground pin at both ends. This reduces EMI interference.

- ④ **Relay ports** — Via Global Configurator, each relay can be associated with a front panel button (projector on/off buttons, function buttons, or input selection buttons) or can be operated independently.

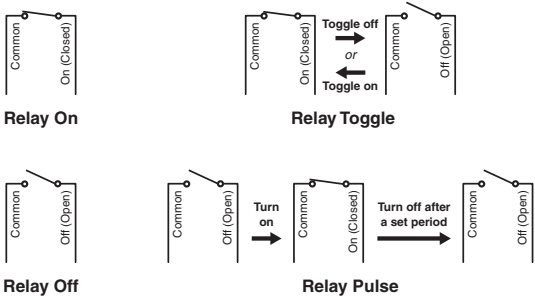


These relays are normally open by default. They can be configured via SIS commands or Global Configurator to operate as follows:

- **on** — relay closes and stays closed until otherwise instructed
- **off** — relay opens and stays open until otherwise instructed



- **toggle** — relay changes from open to closed or from closed to open until otherwise instructed
- **pulse** — momentary (timed) (press to turn on, timeout to turn off)



You can also use SIS commands or Global Configurator to specify pulse duration.

- 5 **LAN connector and LEDs** — An Ethernet connection can be used on an ongoing basis to control the System 5 IP in an Ethernet network.
- Use a **straight-through cable** for connection to a switch, hub, or router.
 - Use a **crossover cable** (ships with the product) for connection directly to a PC.

Configure the settings for this port via either SIS commands, an embedded Web page, or Global Configurator.

LAN port defaults are as follows:

- **IP address:** 192.168.254.254
- **gateway IP address:** 0.0.0.0
- **subnet mask:** 255.255.0.0
- **DHCP:** off

NOTE If DHCP remains disabled, obtain your System 5 IP gateway, subnet mask, and IP address from your network administrator.

Patch (straight) cable

Side 1		Side 2	
Pin	Wire color	Pin	Wire color
1	White-orange	1	White-orange
2	Orange	2	Orange
3	White-green	3	White-green
4	Blue	4	Blue
5	White-blue	5	White-blue
6	Green	6	Green
7	White-brown	7	White-brown
8	Brown	8	Brown

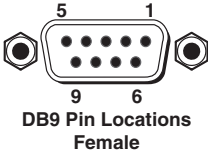
Crossover cable

Side 1		Side 2	
Pin	Wire color	Pin	Wire color
1	White-orange	1	White-green
2	Orange	2	Green
3	White-green	3	White-orange
4	Blue	4	Blue
5	White-blue	5	White-blue
6	Green	6	Orange
7	White-brown	7	White-brown
8	Brown	8	Brown

- 6 **Configuration/RS-232 port** — For switcher configuration and control via RS-232, connect to the 9-pin HD connector.

RS-232 protocol:

- 38400 baud
- 1 stop bit
- no parity
- 8 data bits
- no flow control



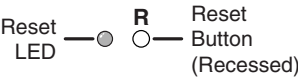
System 5 IP Hardware Setup, cont'd

The pin assignments of this connector are as follows:

Pin	RS-232 function	Description
1	—	No connection
2	Tx	Transmit data
3	Rx	Receive data
4	—	No connection
5	Gnd	Signal ground
6	—	No connection
7	—	No connection
8	—	No connection
9	—	No connection

The front panel 2.5 mm mini stereo connector **Config** port serves the same function as this rear panel port but is independent from it. You can use the Extron 9-pin D to 2.5 mm stereo mini TRS RS-232 cable (part #70-335-01).

- ⑦ **Reset button and LED** — Pressing this recessed button causes various IP functions and Ethernet connection settings to be reset to the factory defaults. See chapter 2 in the *System 5 IP Series User’s Manual* for details.



Front Panel Features and Basic Operation

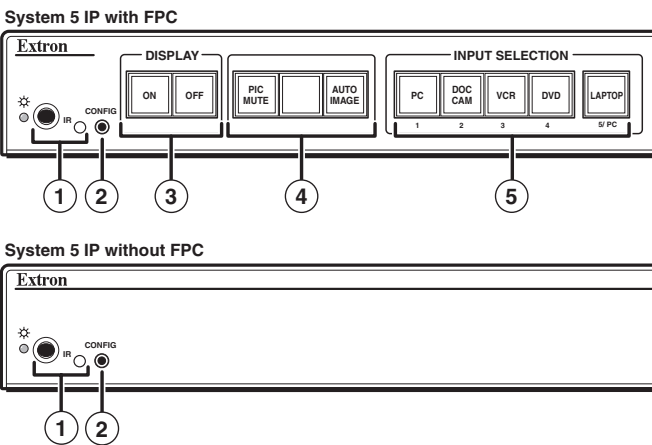
A System 5 IP can be set up and operated by using:

- The front panel controls.
- An Extron control pad, such as the SCP 104, or SCP 226.

Most settings can be adjusted only through a host computer using Extron’s Simple Instruction Set™ (SIS™) or Global Configurator. For details on setup and control via RS-232 or Ethernet, see chapters 4 and 5 in the *System 5 IP Series User’s Manual*.

NOTE Switcher settings can be adjusted via the front panel.

NOTE Any control settings must be adjusted via Global Configurator.



Control ports

- ① **IR receivers** — The larger infrared receiver (on the left) accepts IR signals from the Extron IR 402 infrared remote control for controlling the switcher.

Use the smaller receiver (on the right) for receiving and “learning” codes from other devices’ remote controls. The System 5 IP uses learned IR signals to control devices such as VCRs or DVD players. Refer to chapter 4, “Software- and Web Page-based Setup and Control” of the *System 5 IP Series User’s Manual* and the *IR Learner Help file* for details. This receiver accepts infrared signals from 30 kHz to 62 kHz.

- ② **Config port** — This port is a front panel version of the rear panel Configuration/RS-232 port, and it is independent of the rear panel port.

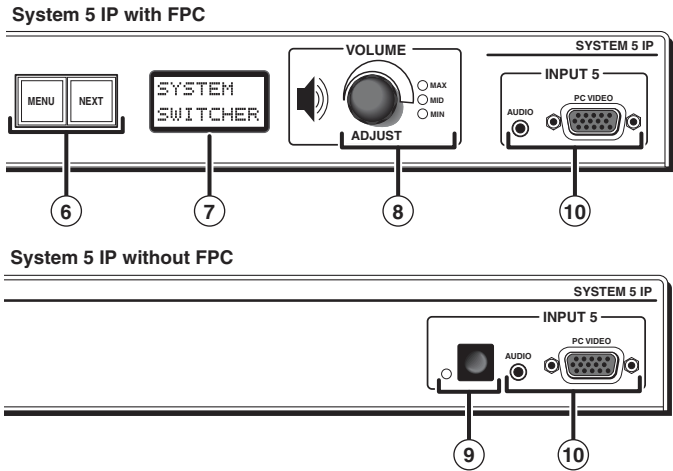
Buttons

The System 5 IP with FPC (front panel control) has backlit buttons, and the non-FPC model has an unlit input 5 selection button only. The button caps are removable so the button labels can be changed.

- ③ **Projector On/Off buttons** — After they have been configured, press the On button to turn the display device on, and press the Off button to power it off. Only one of these two buttons can be selected (active) at once. Via Global Configurator, other functions and relays can be associated with each of these buttons.

- ④ **Function/room control buttons** — These buttons can be set up to control the switcher's relays, and they can also be set up to execute IR or RS-232 commands of your choice.
- ⑤ **Input selection buttons** — Press one of these buttons to select the desired audio and video input. The button lights brighter and remains lit while an audio-video input is selected.
- ⑥ **Menu and Next buttons** — Press these buttons to access and navigate through the switcher's LCD menus and options. They are not user programmable/configurable. For details, refer to chapter 3, "Front Panel Features and Basic Operation" from the *System 5 IP Series User's Manual*.

NOTE If you adjust volume, gain, bass, treble, etc., it takes 1 minute and 40 seconds (100 seconds) for data in the switcher's RAM to be saved to flash memory.

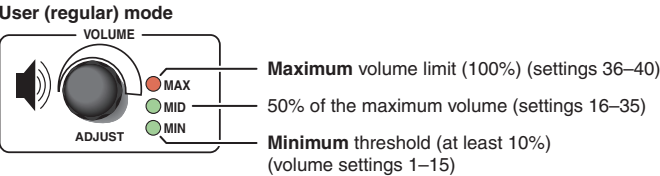


- ⑨ **Input 5 selection button (non-FPC model only)** — Press this button to switch to input 5. Press this button again to deselect input 5 and return to the previously selected input.
- ⑩ **Input 5 (PC Video)** — These connectors accept computer-video and stereo audio input signals.

Indicators

- ⑦ **LCD screen** — This screen displays basic system status, menu, and configuration information. It is used primarily during switcher configuration.
- ⑧ **Volume/Adjust knob and Min/Mid/Max LEDs** — Rotate this knob to adjust the volume when the switcher is in regular user mode, and use it to select options from menus in switcher setup mode. The LEDs indicate different things depending on the mode (user or setup) the switcher is in.

- In the user (regular) mode the LEDs function as volume level indicators. Rotate the Volume knob to adjust the output level of the preamp and amplified outputs. The volume range is 0 to 40 steps, which is displayed as 0% to 100% in the configuration software.



- In setup mode these LEDs function as input level indicators. Rotate the Volume knob and observe the LEDs to set up the proper audio input levels. See chapter 2 in the *System 5 IP Series User's Manual* for details.

- **MAX**
- **MID** — **Normal:** a blinking LED indicates that the level is set properly for maximum power output.
- **MIN** — **Signal:** when lit this LED indicates that a signal of at least -22dBV (-20dBu) is detected at the input.

NOTE If the Max/Clip LED lights, the audio may be clipped.

NOTE Per-input audio level settings can be adjusted via this front panel knob or via RS-232/Telnet/Web browser control.



Chapter Three

System 5 IP Software Setup

Online Training

Step 1: Download Device Drivers

Step 2: Create a New Project

Step 3: Add a System 5 IP Switcher and Define its Location

Step 4: Define E-mail Settings

Step 5: Add a Serial and an IR Device

Step 6: Configure the Front Panel Buttons

Step 7: Configure the Control Modules Using the Auto Fill Feature

Step 8: Create a Display Shutdown Schedule

Step 9: Create a Display Lamp Hour Warning E-mail

Step 10: Create a Display Disconnection E-mail

Step 11: Build and Upload a Configuration

Step 12: Access GlobalViewer®

System 5 IP Software Setup

This chapter provides the steps for setting up your System 5 IP switcher using the Global Configurator (GC) software.

By means of example, you will learn how to

- **Add drivers** that allow control of A/V devices.
- **Configure** the switcher's **power buttons** and **input selection buttons** to control a video projector.
- **Configure** an **IRCM-DV+ control module** to control the functions of a **DVD/VCR player**.
- **Schedule** a projector shutdown, create a lamp hour **warning alert**, and create a projector disconnection **e-mail alert**.

Each of the following steps of configuration are described in detail in the subsequent sections of this chapter.

- 1 Downloading device drivers
- 2 Creating a new project
- 3 Adding a System 5 IP switcher and defining its location
- 4 Defining e-mail settings
- 5 Adding a serial and an IR device
- 6 Configuring the front panel buttons
- 7 Configuring the control modules using the Auto Fill feature
- 8 Creating a display shutdown schedule
- 9 Creating a display lamp hour warning e-mail
- 10 Creating a display disconnection e-mail
- 11 Building and uploading a configuration
- 12 Accessing GlobalViewer®

NOTE *This setup guide provides instructions for the primary setup and configuration of the System 5 IP. For additional information and more detailed instructions, refer to the System 5 IP User's Manual or the GC Help File accessed through the GC software.*

CAUTION

*You **must** use Global Configurator version 2.2 or later to configure the System 5 IP. Using an earlier version (2.0.0 through 2.1.x) risks damage to the products. Immediately update any existing switchers configured with older versions of the software. See "Installing the Software" in chapter 1 for instructions on how to install GC 2.2.*

Online Training

Please note that you can also learn about Global Configurator through the "E-Training On Demand" feature of the Extron Web site. If you have login access to the Extron site, do the following:

1. Go to **www.extron.com**.
2. Use your e-mail and password to login to the Extron Web site.
3. Under the Dealers-Only tab, click the **Training and Education** link.
4. Click the **On-Demand Training** link.
5. Click the **Global Configurator 2.X** icon or link to begin the tutorial.

Step 1: Download Device Drivers

In order to configure a System 5 to control a device, you must download the drivers for each device.

For the purposes of this setup guide and tutorial, you will download two drivers to use in the following examples: one serial driver (for a video projector) and one IR driver (for a DVD/VCR player).

If you prefer to download the drivers required for your own configuration, replace our example drivers with your own in the following exercises.

To download the required drivers, do the following:

1. Double-click the **GC** icon to launch Global Configurator.



The GC 2 Start Options dialog box appears.

2. Click the **Add Drivers Subscription** button.

- 3a. From the **Available Manufacturers/Device Types** box, choose the required manufacturer(s) from the **left** window by clicking its name. For the following exercises, choose **Epson**.
- 3b. From the **Available Manufacturers/Device Types** box, choose the required device(s) from the **right** window by clicking its icon. For the following exercises, choose **video projector**.
4. Click the Subscribe button  between the two columns. The selected items appear in the **Current Driver Subscriptions** window.
5. Repeat steps 3-5 above, choosing **Hitachi** as the manufacturer and **DVD/VCR** as the device.
6. Click the **Download** button to download the drivers under the **Current Driver Subscriptions** window.

NOTE If configuring the System 5 IP on site and the model and device type are unknown, subscribe to and download drivers for all manufacturer and device types prior to going out to the field.

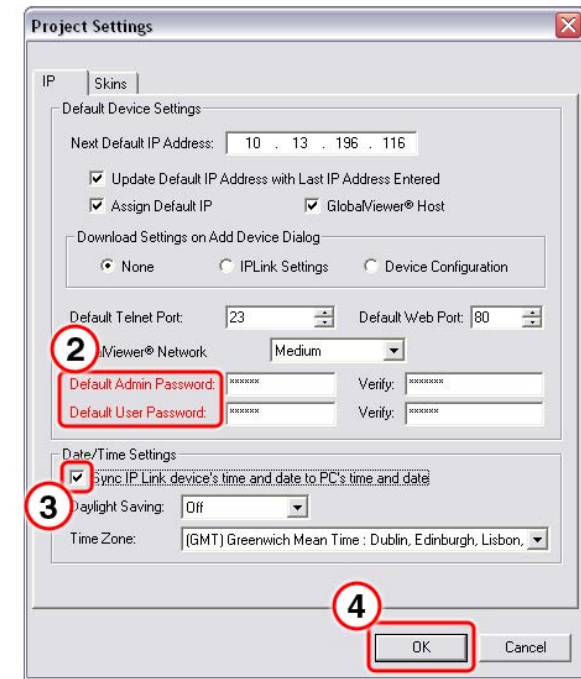
NOTE If you wish to unsubscribe to a particular driver, check its check box and then click the Unsubscribe button .

7. After all of your drivers are successfully subscribed, click the **OK** button. The **GC 2 Start Options** dialog reappears.

Step 2: Create a New Project

1. If the **GC 2 Start Options** dialog is displayed, select the "Create a New Project" option and click the **OK** button.
The **Project Settings** dialog box appears, as shown on the following page.

NOTE You can also access the **Project Settings** dialog box via the **Edit** menu.

The image shows the 'Project Settings' dialog box with several fields and checkboxes. Red circles and boxes highlight specific areas: a red circle with the number '2' around the 'Default Admin Password' and 'Default User Password' fields; a red circle with the number '3' around the 'Sync IP Link device's time and date to PC's time and date' checkbox; and a red circle with the number '4' around the 'OK' button at the bottom right. The dialog box has tabs for 'IP' and 'Skins'. Under 'Default Device Settings', there's a 'Next Default IP Address' field with '10 . 13 . 196 . 116', and checkboxes for 'Update Default IP Address with Last IP Address Entered', 'Assign Default IP', and 'GlobalViewer® Host'. There's also a 'Download Settings on Add Device Dialog' section with radio buttons for 'None', 'IPLink Settings', and 'Device Configuration'. Below that are 'Default Telnet Port' (23) and 'Default Web Port' (80). The 'Date/Time Settings' section includes the highlighted checkbox, a 'Daylight Saving' dropdown set to 'Off', and a 'Time Zone' dropdown set to '(GMT) Greenwich Mean Time : Dublin, Edinburgh, Lisbon, ...'. The 'OK' and 'Cancel' buttons are at the bottom right.

Project Settings dialog box

2. If passwords have been set on the System 5 IP, enter the administrator and user passwords. Ensure that both passwords are repeated in the **Verify** fields.

NOTE If a password has been set on the System 5 IP switcher but none is entered here, you will be unable to upload a new configuration. By default, there is no password set on the switcher.

3. Click the **Sync IP Link device's time and date to PC's time and date** check box and fill in the appropriate Daylight Saving time zone values in the menu drop boxes, if necessary.
4. Click the **OK** button. The **Add Device** dialog box appears.

Step 3: Add a System 5 IP Switcher and Define its Location

The most essential step in creating a configuration in a GC project is to add an IP Link device. The following steps instruct on how to add a System 5 IP into Global Configurator.

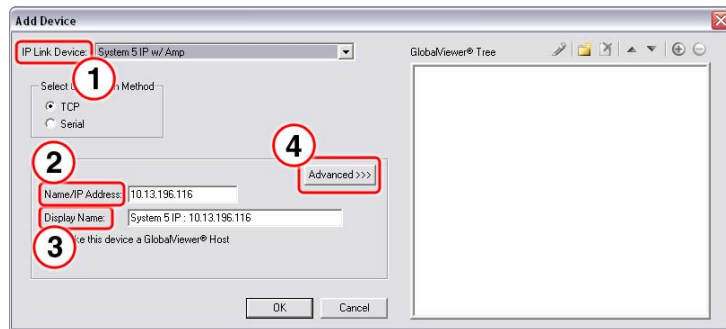
Before starting, obtain the following from your network administrator:

- IP address/host name
- Gateway IP address
- Subnet mask
- Telnet port
- Web port

NOTE These settings can be edited after adding the System 5 IP by using the **Change Device Settings...** dialog box found in the **Tools** menu.

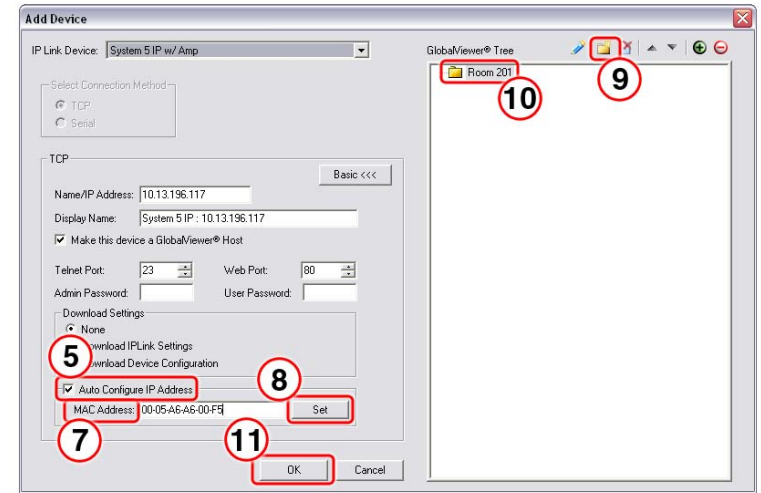
NOTE If the **Add Device** dialog box is not displayed, select **Add Device** from the **Edit** menu.

To add the **System 5 IP**, do the following:



Add Device dialog box (Basic)

1. From the **IP Link Device** drop-down menu, select **System 5 IP** or **System 5 IP w/ Amp**.
2. Enter or edit the host name or IP address in the **Name/IP Address** text box so that it matches the one assigned to the product by your network administrator.
3. In the **Display Name** box, enter an easy to remember, descriptive name (e.g., **System5IP**). You may choose to keep the default name.
4. Click the **Advanced** button.

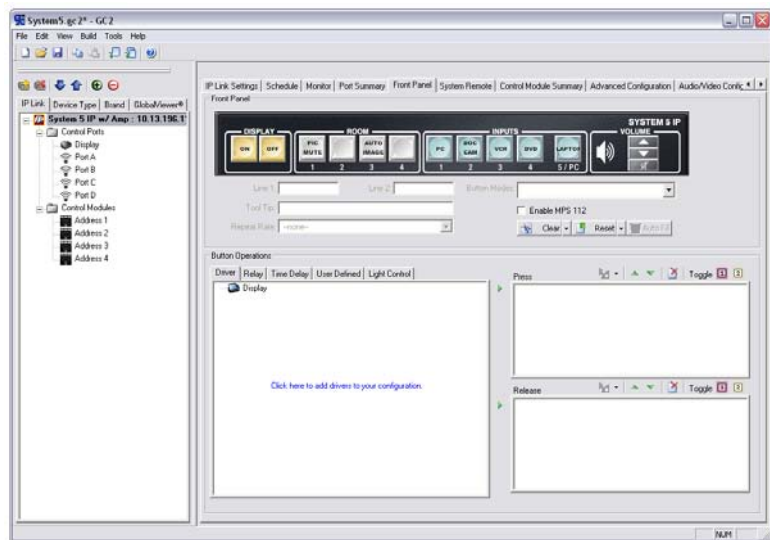


Add Device dialog box (Advanced)

5. Select the **Auto Configure IP Address** check box. The **MAC Address** text box becomes active and the first three octets of the MAC address appear.
6. Locate the MAC address on the rear of the Extron IP product or obtain it from your network administrator.
7. Enter the remainder of the MAC address in the **MAC Address** text box (the first three octets should be filled in).
8. Click the **Set** button. This assigns the new IP address to the IP device.

NOTE *Auto Configure IP Address (5) uses the ARP method to set the IP address. If this method fails, perform a mode 4 reset to set the System 5 IP back to its default IP settings. Refer to Chapter 2 of the System 5 IP Series User's Manual for instructions on performing a mode 4 reset.*

9. Click the **New Location** button in the upper right corner of the **Add Device** dialog box. A **Location** folder is created, in edit mode. You can use additional folders to create up to eight location levels.
10. Assign a location-oriented name to the highlighted folder (e.g., **Room 201**).
11. Once finished, click the **OK** button. The Global Configurator Front Panel window appears, as shown on the following page.



The Global Configurator Front Panel window

NOTE This Global Configurator project can be saved at any time by selecting **Save** from the **File** menu.

Step 4: Define E-mail Settings

Global Configurator supports scheduling, monitoring, and e-mail alerts for all connected devices (e.g., a video projector). For example, you can create a schedule to shut down a projector at a predetermined time, and/or create an e-mail alert that warns a school administrator if the projector's lamp hours are nearing expiration.

Defining e-mail server settings

Before you set up e-mail notifications, ensure that the following elements are set:

- Mail server IP
- Mail server domain
- Gateway IP
- SMTP user name
- SMTP password
- Subnet mask

If not, use the Change Device Setting feature to set up these elements.

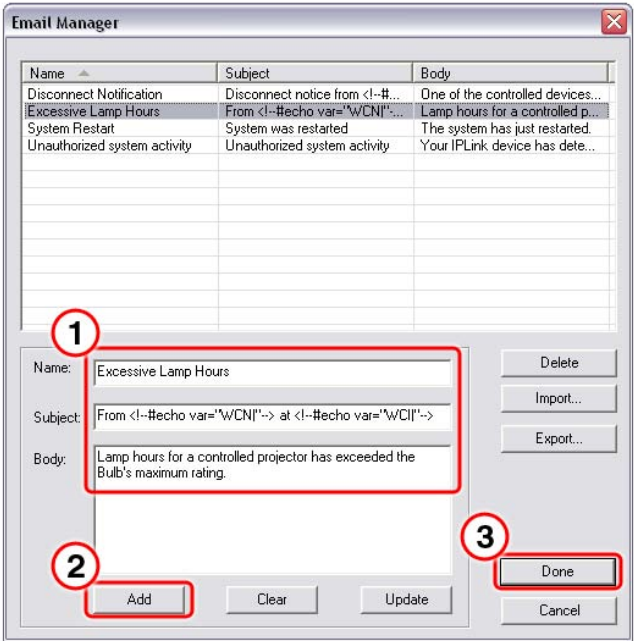
1. From the **Tools** menu, choose **Change Device Settings...**
The Device Settings page appears and displays every device in the current project.
2. Select the **System 5 IP** from the list.
3. From the **Settings** menu, choose **Set Mail Server...**
4. Complete each of the fields with your **mail server IP address**, **mail server domain**, and, if necessary, your **user name** and **password**.
5. Click the **OK** button.
6. Go back to the **Settings** menu to complete the entries for your **subnet mask** and **gateway** settings.
7. When finished, click the **Close** button.

Setting up e-mail notifications

The Email Manager provides preset messages for some of the most common actions performed in GC.

To set up an e-mail notification for a specified action, do the following:

1. From the Global Configurator **Edit** menu, choose **Email Manager**. The **Email Manager** dialog box appears, as shown on the following page.



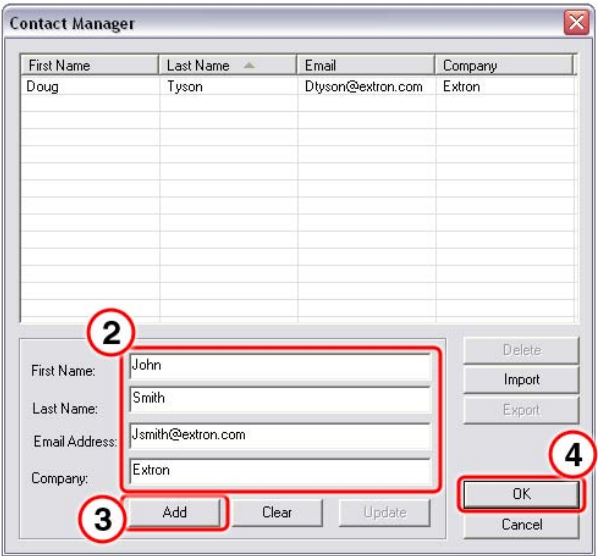
Email Manager dialog box

2. Select one of the choices under the **Name** field.
This action automatically populates the Name, Subject, and Body fields for the action, but these fields can be altered, if needed.
- To create a custom notification e-mail message, do the following:
1. Fill in name, subject, and body sections in the **Email Manager** dialog box.
 2. Click the **Add** button. The custom message joins the list of preset messages.
 3. Click the **Done** button to close the dialog box.

Adding e-mail contacts

To add e-mail contacts, do the following:

1. From the **Edit** menu, choose **Contact Manager**. A dialog box appears.
2. Fill in the name, e-mail address, and company areas of the **Contact Manager** dialog box.



Contact Manager dialog box

3. Click **Add** to add the newly-created contact to the list.
4. Click **OK** to close the dialog box.

Step 5: Add a Serial and an IR Device

Adding an A/V device (projector displays, VCRs, DVDs, etc.) for the System 5 IP to control requires that you first add the device's driver to the GC configuration.

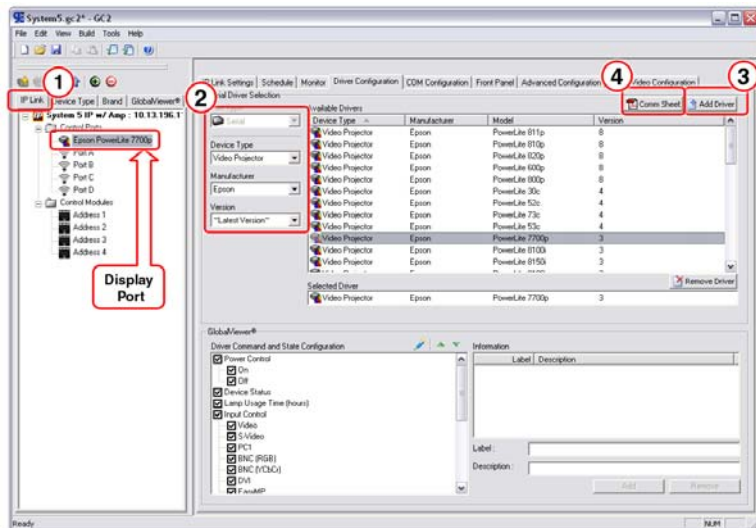
Downloading additional drivers

If you have not downloaded or need additional device drivers for your open project, select **Driver Subscriptions** from the **Edit** menu, then follow the steps under "Step 1: Download Device Drivers". GC automatically rebuilds the driver cache.

You are now ready to add A/V devices to the configuration using the new drivers.

Adding a serial driver

- From the IP Link tab (on the left pane), select the port named **Display**.



Add serial driver window

- Use the drop-down menus under **Serial Driver Selection** to select the device type (choose **video projector**), and manufacturer (choose **Epson**). For this example, select the **Epson PowerLite 7700p** video projector from the **Available Drivers** field.
- Click the **Add Driver** button. The Epson projector appears within the **Selected Driver** field.

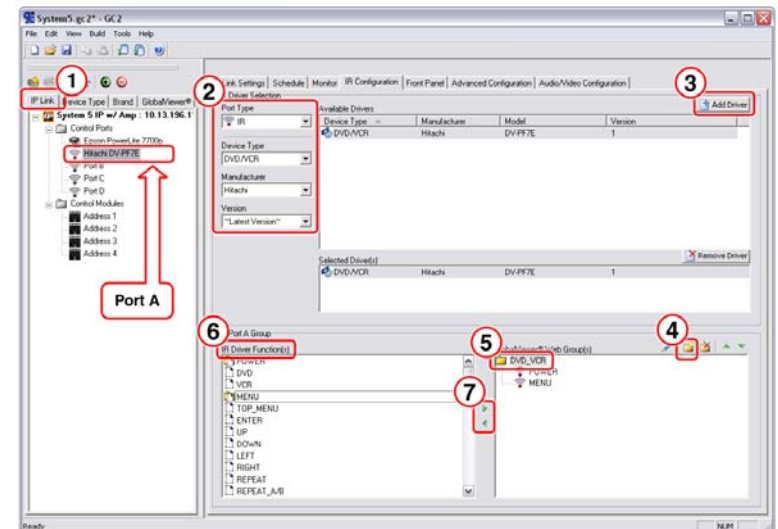
Notice that this action also populates the **Driver Command and State Configuration** field with predefined functions. These functions later appear as buttons on your GlobalViewer® Web page.

- Click the **Comm Sheet** button to display the "IP Link® Device Interface Communication Sheet". This document contains important notes, cable requirements and pinouts for the device.

Adding an IR driver

To add an IR driver to a port:

- From the IP Link tab (left pane), select the IR port labeled **Port A** beneath the System 5 IP tree.



Add IR driver window

- Use the drop-down menus under **IR Driver Selection** to select the device type (choose **DVD/VCR**), and manufacturer (choose **Hitachi**). In the **Available Drivers** field, choose **Hitachi DV-PF7E**.

NOTE If you are unable to find the correct IR driver in the drop-down menu or the Extron Web site, you can "learn" the command using the IR Learner software. You can download this software from the Extron Web site download center. Refer to the IR Learner Help File for instructions on how to use this software.

System 5 IP Software Setup, cont'd

- Click the **Add Driver** button. The Hitachi DVD/VCR appears within the **Selected Driver(s)** field.

Notice that this action also populates the **IR Driver Function(s)** field with predefined functions.

To view these IR driver functions as buttons on your GlobalViewer Web page, do the following:

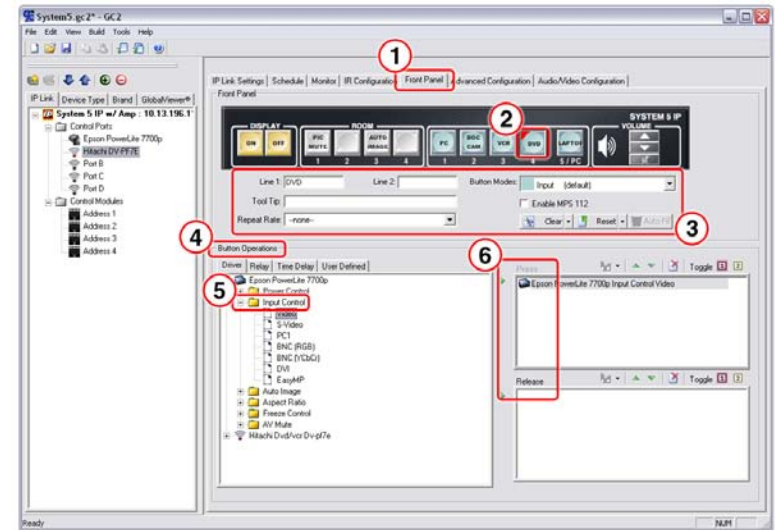
- Under the **IR Port A Group** field, click the **Add Group** button to add a folder (i.e., group) to the **GlobalViewer Web Group(s)** field.
- Rename the folder according to the function of the device and/or any name that allows you to easily recognize the device. In this case, use the name "DVD_VCR".
- Under the **IR Driver Function(s)** field, select the desired functions (e.g., **Power** or **Menu**).
- Use the small green arrows between the two fields to populate the DVD_VCR folder with the functions you require. You can also drag and drop them into the folder.

Notice that the **Port A IR** icon is renamed to match the name of the added device.

Step 6: Configure the Front Panel Buttons

Once the device drivers are added, you can configure the System 5 IP's front panel buttons. For this exercise, you will configure Input and On/Off buttons. Additionally, you can modify a button caption, add a tool tip, set repeat rates, and select button modes.

NOTE You can customize any front panel button (DVD, VCR, On/Off, etc.) on a System 5 IP, but most are shipped with the most common operations labeled for you.



Front Panel window with configured buttons

Configuring an input button

Input buttons on the System 5 IP include the following, grouped together on the System 5 front panel: **PC**, **Doc Cam**, **VCR**, **DVD**, and **Laptop**.

NOTE The steps in the following example require using a serial port driver.

To configure the **DVD** button to switch to a DVD player when pressed, do the following:

- Select the **Front Panel** tab.
- Choose the green **DVD** input button.
- Notice that the default in **Line 1** (a caption field) reads **DVD**. You can change this to a different name, if desired, and set the tool tip, repeat rate, and button mode, if applicable.
- In the **Button Operations** area, select the **Driver** tab and expand the tree under the **Epson PowerLite 7700p projector** icon. A list of possible projector operations appears.
- Expand the **Input Control** folder to view the input control options.

- Drag the **Video** icon (under Input Control) over to either of the right-side window fields labeled **Press** or **Release**. The field you choose determines whether the command will activate on the press of the button or on the release of it.

Notice that the Epson PowerLite 7700p projector now appears under your chosen **Press** or **Release** field, and the DVD button is marked with a red triangle. This indicates that the DVD button is now configured.

Configuring the On and Off buttons

Grouped within the **Display** section of the System 5 IP front panel, the On/Off buttons can be used to power a projector on or off.

To configure the on/off buttons, do the following:

- In the window under the **Front Panel** tab, click the yellow **On** button on the System 5 IP front panel.
- In the **Button Operations** area, expand the tree under the **Epson PowerLite 7700p projector** icon. A list of operations appears.
- Expand the **Power Control** folder to view the options.
- Drag the **On** icon to the right-side window field labeled **Release**. This sets the command to activate on the release of the button.

NOTE Failure to configure the On or Off buttons on Release may cause problems with the PIN Mode feature. Refer to the System 5 IP User's Manual for details.

Notice that the Epson PowerLite 7700p projector now appears under the **Release** field, and the front panel **On** button is marked with a red triangle. This indicates that the On button is now configured.

- To configure the **Off** button, repeat steps 1 through 4, selecting **Off**.

Step 7: Configure the Control Modules Using the Auto Fill Feature

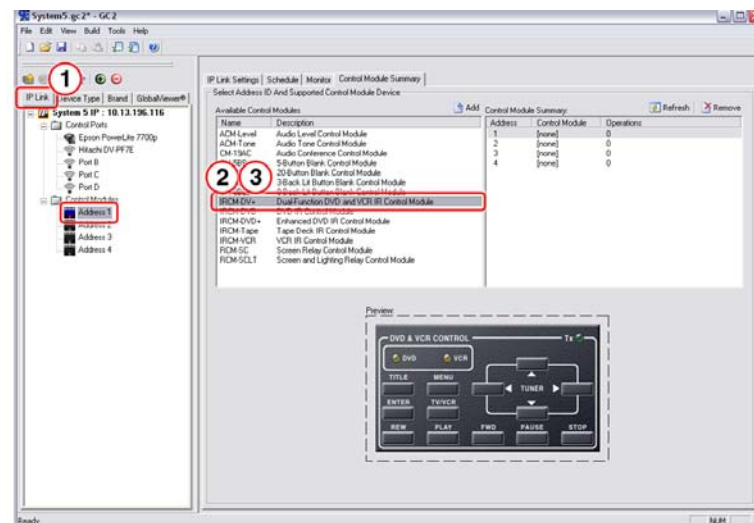
Control modules are optional hardware keypads that can be used to trigger IR and serial control commands. Once added to the system, each button can have a function associated with it.

The Auto Fill feature automatically associates the correct IR commands with control module buttons for the selected IR driver. For example, the Play command is automatically assigned to the **Play** button of the control module keypad.

- From the left pane **IP Link** tab, select **Address 1** beneath the folder called "Control Modules".

NOTE Global Configurator automatically recognizes any control module currently connected to the switcher. The **IRCM-DV+** appears at Address 1 and 2 or Address 3 and 4. If Address x **IRCM-DV+ [DVD]** is already shown in the System 5 IP tree view, skip steps 2 and 3 below, and proceed to step 4.

- Select **IRCM-DV+** in the **Available Control Module** section.
- Double-click the selection, then click the **OK** button on the message box that appears. This adds the **IRCM-DV+ [DVD]** module to the configuration.

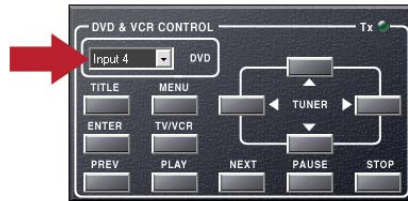


Control module main window

- Select the **Address #1** tab. The Address 1 **IRCM-DV+ [DVD]** window appears.

System 5 IP Software Setup, cont'd

5. In the upper left corner drop-down menu (under **DVD & VCR Control**), select **Input 4**, as illustrated below. This assigns the input button (Input 4) to activate the IRCM-DV+ [DVD] control panel.



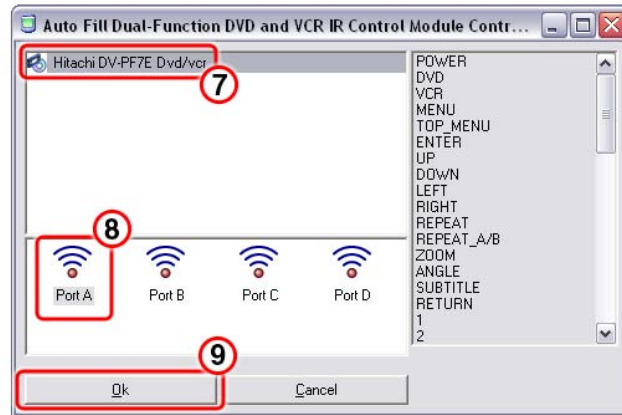
Input 4 button selection

6. Click the **Auto Fill** button.



NOTE To use the **Auto Fill** feature, an applicable IR driver must be present.

A dialog box appears.



Control module configuration

7. From the **Auto Fill Dual-Function DVD and VCR IR Control Module** dialog box, select the **Hitachi DV-PF7E DVD/VCR** IR driver. All functions for the selected driver appear in the right side pane of the dialog box.
8. Select **Port A** from the bottom portion of the dialog box.
9. Click the **OK** button. The dialog box closes.

All commands that match a button on the module are assigned to that button. Red triangles on the buttons of the control module indicate that all the matching buttons have been auto-filled.

10. To configure **Address 2 IRCM-DV+[VCR]**, repeat steps 1 through 9, substituting **Address 2** for **Address 1**.

NOTE In step 5, you will need to select a different input button in the VCR half of the control module.

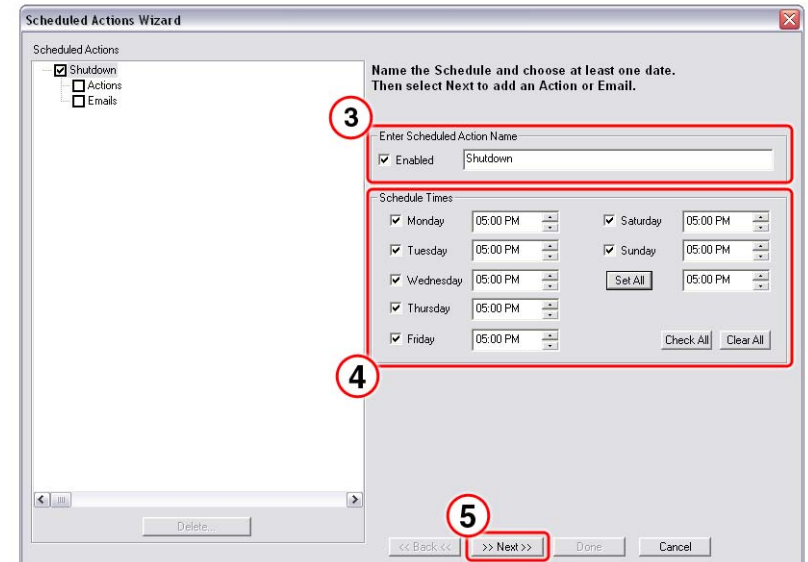
NOTE If using an IRCM-DV+, you must associate each half with an input.

Step 8: Create a Display Shutdown Schedule

Global Configurator's scheduling feature enables you to schedule actions and events for a selected device. Scheduling is often useful for setting a projector or other device to shut down or turn on at a predetermined time (e.g., in a school, all projectors can be set to power off at 5:00 P.M.).

To schedule a display shutdown:

1. Click on the **Schedule** tab in the Global Configurator window.
2. Click the **Add Schedule** button below the **Scheduled Actions** window. The **Scheduled Actions Wizard** dialog box appears, as shown below.

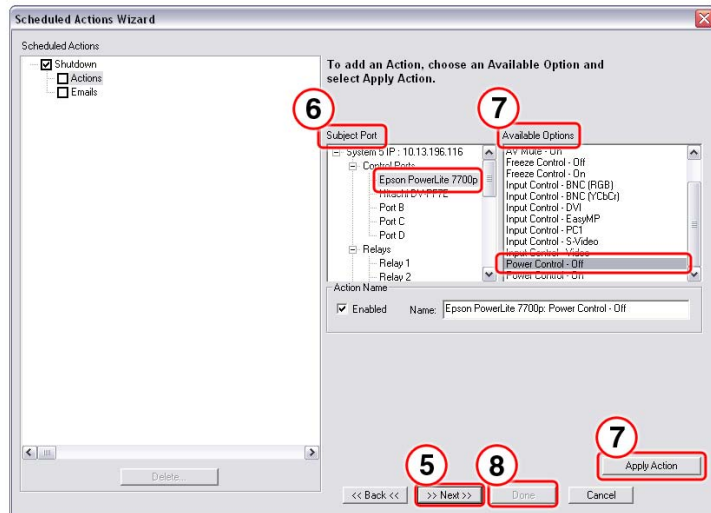


Scheduled Actions Wizard

3. Enter a name (**Shutdown**) in the **Enter Scheduled Action Name** field.
4. Indicate the time for the desired action and uncheck inactive times (weekend hours when staff are away, for example).

For events that occur at the same time daily, change the time alongside the **Set All** button. Click the **Set All** button to automatically change all the days of the week.

5. Click **Next**. This takes you to the actions page, where you can specify the action.



Display shutdown action selection dialog

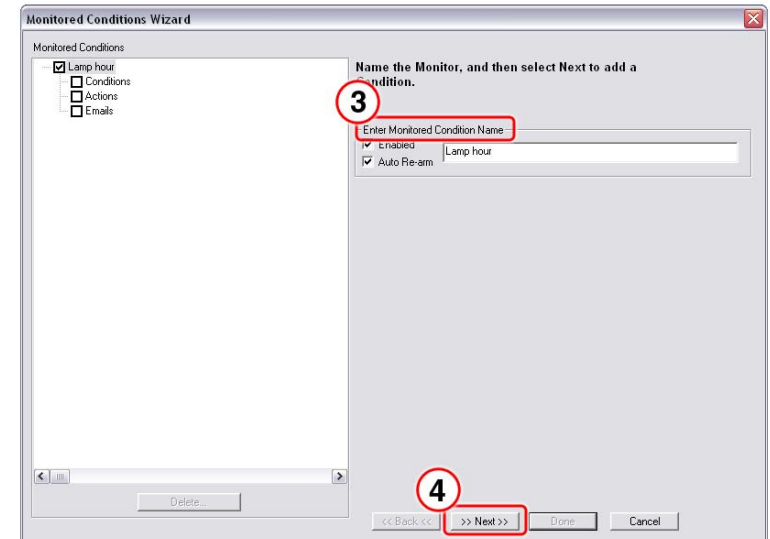
6. Select the device to be scheduled (for our purposes, choose the **Epson PowerLite 7700p**) from the **Subject Port** window.
7. Select the action **Power Control-Off** from the **Available Options** window, then click the **Apply Action** button.
8. Click **Done**. The dialog box closes.

Step 9: Create a Display Lamp Hour Warning E-mail

Global Configurator's monitoring feature enables you to configure a System 5 IP switcher to monitor many parameters of the connected display devices. For example, a monitor alert can warn the school administrator if a display lamp hour limit is close to expiration or if a display is inexplicably disconnected from the System 5 IP switcher.

To set a display lamp hour warning e-mail, do the following:

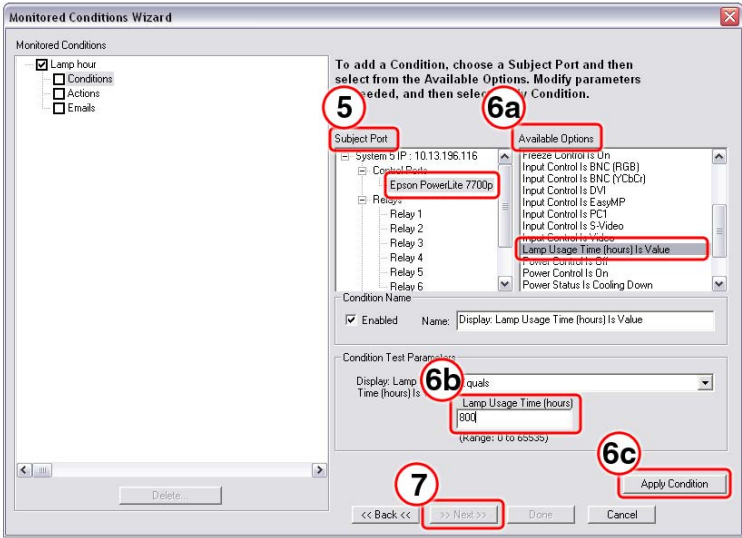
1. Click the **Monitor** tab in the Global Configurator window.
2. Click the **Add Monitor** button below the **Monitored Conditions** dialog. The **Monitored Conditions Wizard** dialog box appears.
3. Enter a name (**Lamp hour**) in the **Enter Monitored Condition Name** field area. The label now appears in the left pane.
4. Click the **Next** button. This takes you to the actions page, where you can specify the action.



Monitored Conditions Wizard dialog

5. In the **Subject Port** window, select the display (choose **Epson PowerLite 7700p**) for which the lamp hour warning is to be set. A list of monitoring options appears under the **Available Options** window.

- 6. Set the lamp hour limit by doing the following:
 - a. Choose **Lamp Usage Time (hours): Value** under the **Available Options** window.
 - b. Enter a value (800, for example) in the **Lamp Usage Time (hours)** box.
 - c. Click **Apply Condition**.
 - d. Click **Next**.
- 7. Click **Next** again to add an e-mail notification.



Display lamp hour e-mail notification

- 8. Click on the appropriate e-mail message and contacts, then click **Apply Email/Contacts**.
- 9. Click **Done**. The dialog box closes.

Step 10: Create a Display Disconnection E-mail

To set a display disconnected e-mail alert, do the following:

- 1. Click the **Monitor** tab in the Global Configurator window.
- 2. Click the **Add Monitor** button below the **Monitored Conditions** window. The **Monitored Conditions Wizard** window appears.
- 3. Enter a name (**Disconnected**) in the **Enter Monitored Condition Name** field area. The label now appears in the left pane.

- 4. Click **Next** to specify a condition.
- 5. Select the desired equipment (for our purposes, choose the **Epson PowerLite 7700p**) from the **Subject Port** window and **Connection Status is Disconnected** from **Available Options**.
- 6. Click **Apply Condition**, then click **Next**.
- 7. Click **Next** again to add an e-mail notification.
- 8. Highlight the appropriate e-mail message (**Disconnect Notification**) and contacts (**e-mail recipient(s)**), and click **Apply Email/Contacts**.
- 9. Click **Done**. The dialog box closes.

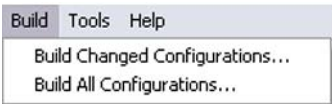
Step 11: Build and Upload a Configuration

The Global Configurator project file contains all the configuration data (port assignments, product/device locations, scheduling data, etc.) you have created in Global Configurator. This is the data used to build the project's GlobalViewer Web pages for the System 5 IP.

Building a configuration

To build a configuration, do the following:

- 1. Click the **GlobalViewer** tab at the left window to open GlobalViewer Designer.
- 2. Confirm that all configured products have been given a location. If not, drag each product to the desired location or create new ones.
- 3. Save your project file. If a project file has not been saved, GC prompts you to do so before building the configuration.
- 4. From the **Build** menu, choose **Build All Configurations** or **Build Changed Configurations**.



The Build menu

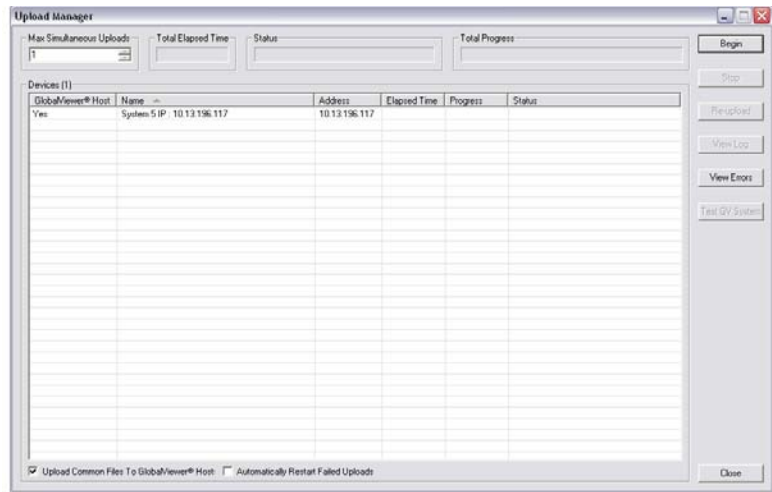
An activity bar appears, indicating that the build is progressing. The **Upload Manager** dialog box appears when the build is complete.

Uploading a configuration

The process of uploading your project is essential to successfully configuring the System 5 IP and creating a GlobalViewer Web page. You can upload the project to one switcher or controller at a time or several at once.

NOTE You can configure devices offline, but the device must be connected to the network for a successful upload.

The **Upload Manager** appears only after a build has been successfully performed on at least one device. If errors occur during the build of any devices, a dialog box appears listing the errors.



The Upload Manager window before file upload

To begin the upload, do the following:

- 1. Click **Begin**. The Upload Manager monitors the progress of the upload.
- 2. When the upload is finished, click **Close**.

The configuration should now be successfully uploaded to the appropriate product(s).

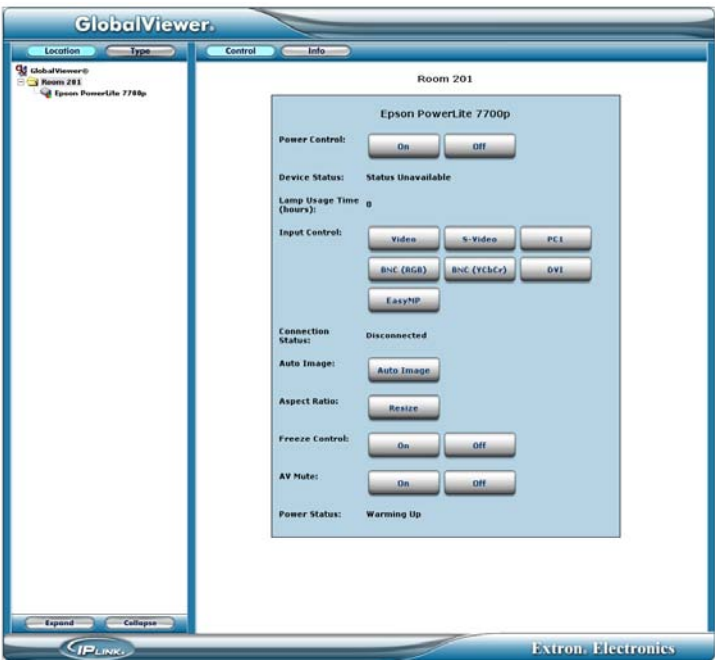
Step 12: Access GlobalViewer®

After uploading a configuration file to a System 5 IP switcher, there are three ways to access the GlobalViewer Web page:

- Right-click the System 5 IP switcher icon in the IP Link tree and select **Open GlobalViewer® Webpage**.
- Open an Internet browser window and type in the IP address of the System 5 IP.

NOTE You must use Internet Explorer 6.0 or later, with Active X enabled.

- From the **Upload Manager** window, click the **Test GV System** button.



GlobalViewer main page