Setup Guide Checklist

☐ **Chapter 1**: Install Global Configurator.

- Install from the *Software Products* CD-ROM, *or*
- Download from Extron Web site.

☐ **Chapter 2**: Make the IPL T PC1 cable connections.

1. ☐ Power
2. ☐ Local Area Network (LAN)
3. ☐ Serial device
4. ☐ IR-controlled device
5. ☐ Switch or sensor (to contact closure Input port)

☐ **Chapter 3**: Create a Global Configurator project file, add a device, and configure it. Build and upload the GC project file. Launch the GlobalViewer® interface.

1. ☐ Download device drivers.
2. ☐ Create a new Global Configurator project file.
3. ☐ Add a device.
4. ☐ Define the location of the new device.
5. ☐ Save the new Global Configurator file.
6. ☐ Enter contacts.
7. ☐ Create e-mail messages.
8. ☐ Enter output receptacle and contact input port labels.
9. ☐ Assign device drivers.
10. ☐ Set scheduled actions and e-mail deliveries.
11. ☐ Set monitored conditions.
12. ☐ Build the Global Configurator file.
13. ☐ Upload the Global Configurator file.
14. ☐ Change device settings (if desired).
15. ☐ Launch the GlobalViewer® interface.

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Extron® Electronics

INTERFACING, SWITCHING AND DISTRIBUTION

Setup Guide

IP Link Power Control Interface

IPL T PC1 and IPL T PC1i

68-1386-01 **A**
06 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.

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 especificamente 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 la contourner ni de la désactiver.

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

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

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

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

Lithium Batterie • Il a danger d'explosion s'll 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 Öbjekten 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 sobrecalientamiento 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:

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。

FCC Class A Notice

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. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. The Class A 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 with FCC emissions limits.*

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Chapter One

Introduction

About this Manual

About the IPL T PC1

About Global Configurator

About this Manual

This setup guide describes the following:

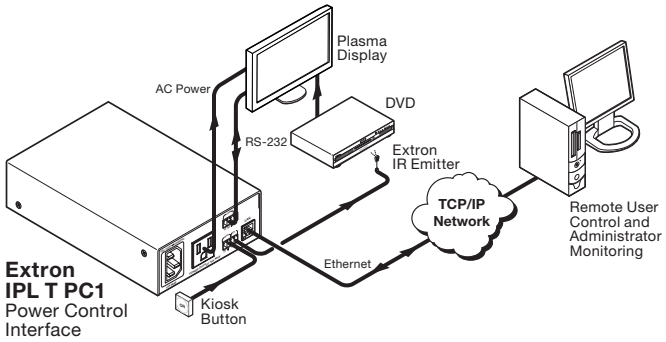
- The IPL T PC1/PC1i products
- The Global Configurator application
- The IPL T PC1 hardware installation
- The IPL T PC1 software configuration

About the IPL T PC1

The Extron IPL T PC1 and IPL T PC1i are Extron IP Link Power Control Interfaces. They are Ethernet-based power management devices that control and schedule AC power on and off. The PC1 and PC1i ports include a LAN port, a bidirectional RS-232 port, an IR output port, and a contact closure input port, providing integration of power control, serial device control, IR device control, and input sensing in a single device that can be easily mounted behind a display device or kiosk.

The PC1 can be used as a stand-alone control device or as one of many nodes in a distributed control system environment. The PC1 has its own Web pages, stored in flash memory.

The IPL T PC1i is an international version, configured for 220 VAC. Unless otherwise specified, "IPL T PC1" and "PC1" refer to both product versions throughout this guide.



A typical IPL T PC1 Interface application

About Global Configurator

Global Configurator (GC) is a software application that gives you the ability to create a single configuration file of all of the controlled devices on an audio/video (A/V) network.

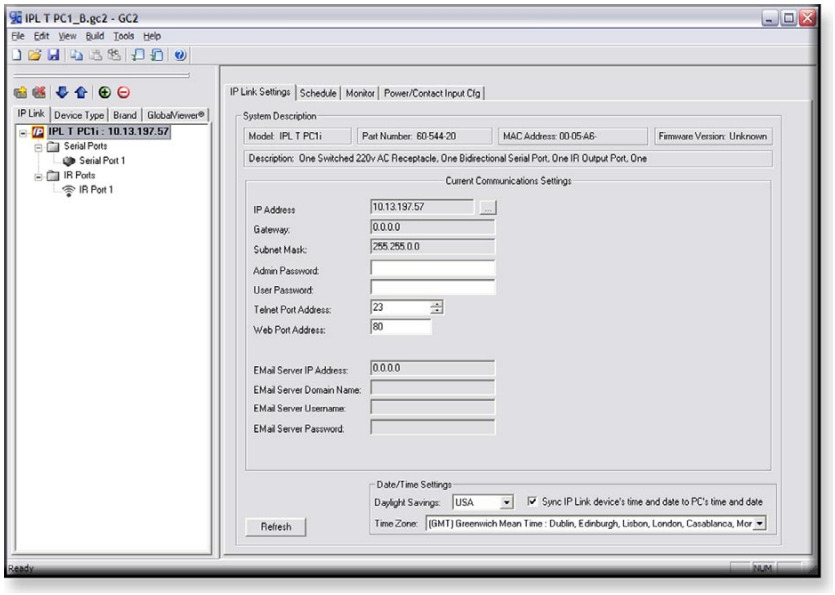
There are two types of devices in an A/V system:

Controllers — Control devices that have an IP Link enabled Ethernet port for network connectivity to serial, contact input, and infrared (IR) ports to communicate with A/V devices.

Controlled devices — Audio/video products, such as video projectors, displays, VCRs, DVD players, document cameras, projector screens, and room lighting systems — all of the equipment that is used to generate an audio/video presentation.

Once a "global" configuration file is built, GC2.3 then generates a graphical user interface called GlobalViewer that allows you to monitor and control all of the A/V devices contained within the GC2.3 configuration file. When the configuration file is created, one or more of the IP Link controllers on the network can be designated as a GlobalViewer host device.

The completed configuration file is uploaded to the host device(s). You can then launch the GlobalViewer interface by opening an Internet browser on a local PC and entering the host device's IP address in the browser address field.



Global Configurator application screen example

Using GC2.3, you can configure a single room controller or create a web-based remote monitoring system for hundreds of A/V devices in multiple locations.

You may configure an IPL T PC1 interface using GC2.3 without having the device physically connected to the A/V network.

CAUTION *Use Global Configurator version 2.3 or later. Update all PCs and devices running earlier versions of GC.*

System requirements

The minimum system requirements for the PC on which you install Global Configurator include:

- Intel® Pentium® III 1 GHz processor
- Microsoft Windows® NT SP4, Windows 2000 SP2, or Windows XP SP2
- Microsoft Internet Explorer 6.0 with ActiveX enabled

NOTE *Depending on your computer settings, if ActiveX is not enabled, one of the following occurs:*

- *The system loads ActiveX automatically.*
- *The browser displays a prompt asking you if you want ActiveX to be loaded.*
- *The GlobalViewer control page does not open until you load ActiveX manually.*

- Microsoft Windows Script 5.6
- 512 MB of RAM
- 50 MB of available hard disk space
- A network connection with a minimum data transfer rate of 10 Mbps; however, 100 Mbps is recommended.

Installing Global Configurator

Global Configurator software is available at no charge from Extron.

Downloading and installing from the Extron Web site

To download and install Global Configurator on your PC:

1. Visit the Extron Web site at **www.extron.com**.
2. Click the **Download** tab.
3. Click the **IP Link® Software** icon (shown at right).

4. Click the **Global Configurator** icon (shown below).

5. Click the **Download Now** button.
6. Complete the personal information form.
7. Click the **Download GCSWxxxxx.exe** button.
8. Follow the remaining system prompts.

Installing from CD-ROM — Autorun enabled

To install Global Configurator from an Extron Software Products CD if Autorun is enabled on your PC:

1. Insert the Extron Software Products CD into your drive.
2. Wait for the Extron Software Products page to load.
3. Click the **Software** icon (shown at right).

4. Scroll down to the Global Configurator description, and click the **Install** link in the far right column.
5. Follow the remaining system prompts.

Installing from CD-ROM — Autorun not enabled

To install Global Configurator from an Extron Software Products CD if Autorun is *not* enabled on your PC:

1. Insert the Extron Software Products CD into your drive.
2. From the Windows desktop, open **My Computer** and select the **CD-ROM** drive.
3. Double click **launch.exe**.
4. Wait for the Extron Software Products page to load.
5. Click the **Software** icon (shown at right).

6. Scroll down to the Global Configurator description, and click the **Install** link in the far right column.
7. Follow the remaining system prompts.

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Chapter Two

Hardware Setup

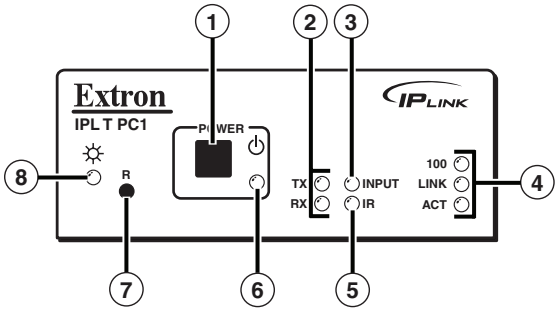
Front Panel

Rear Panel

Connecting the Hardware

Front Panel

The front panel has a recessed Reset button, a Power button (for the output receptacle), and the LED indicators described below:

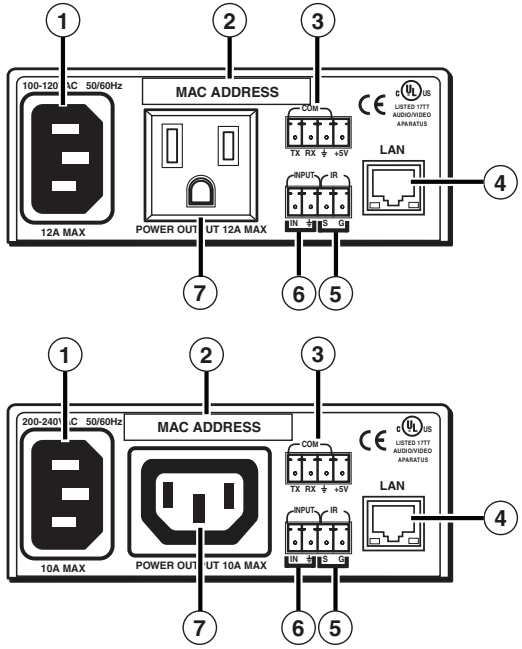


IPL T PC1 and IPL T PC1i front panel

1. **Power button** — Press this button to switch power on and off to the output receptacle on the rear panel.
2. **Tx and Rx LEDs** — The Tx (transmit) LED lights green when RS-232 data is being transmitted. The Rx LED lights green when RS-232 data is being received.
3. **Input LED** — Lights green when the Input contact closure port is activated (shorted).
4. **LAN status LEDs** — These three LEDs show the status of the Ethernet connection as follows:
   - **100 (green)** — When lit, indicates a 100 Mb connection speed. Otherwise, the connection speed is 10 Mb.
   - **Link (green)** — Indicates an active network connection.
   - **Act (Activity) (yellow)** — Blinks while data is being sent or received.
5. **IR LED** — Lights green when IR data is being transmitted.
6. **Receptacle power LED** — Indicates that power is being supplied to the rear panel receptacle and, therefore, to the attached output device.
7. **Reset button (recessed)** — Use the tip of a small Phillips screwdriver or an Extron Tweeker to press this recessed button to reset the unit in one of five reset modes. (Refer to the *IPL T PC1 User's Manual*, chapter 3, "Front Panel Features and Operation," "Resetting" section.)
8. **Power LED** — When his green LED is lit, the PC1/PC1i interface is receiving power and is running. When the unit is being reset from the front panel, this LED blinks the number of times to indicate the reset mode the PC1 has entered.

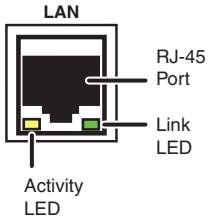
Rear Panel

The rear panel has connectors for power, control, signal input, and signal output, and indicators as described below.



1. **Power connector** — Connect a power cord from this male IEC receptacle to a wall outlet.
2. **UID # label** — Contains the unique User ID number (MAC address) of the unit (for example, 00-05-A6-00-00-01). On the PC1 rear panel, the MAC address is on a label directly above the output power receptacle.
3. **COM port (RS-232)** — Connect the output device serial port to this captive screw connector to enable bidirectional RS-232 device control. This serial port contains the following four pins, in order from left to right on the rear panel: transmission (TX), receiving (RX), ground (⏚), and +5 V (to tie hand-shaking lines on the controlled device if needed).

④ **LAN connector and LEDs** — An Ethernet connection can be used on an ongoing basis to monitor and control the PC1 (and the output device connected to it).



- **RJ-45 port** — Plug a patch cable into this RJ-45 female socket, and connect the other end to a network switch, hub, router, or PC. (See "Wiring the Local Area Network (LAN) port," on the next page, for information on cable types to use.)
- **Link LED** — This green LED lights to indicate a good network connection.
- **Activity LED** — This yellow LED blinks to indicate network activity.

⑤ **IR port** — Connect an IR emitter to pins 3 (S, for signal) and 4 (G, for ground) of this shared captive screw connector to enable infrared remote control of the output device. To enable IR control, you must load an Extron IR driver for your output device to the PC1 (via Global Configurator).

⑥ **Contact closure Input port** — Connect a contact closure device to pins 1 (IN, for input) and 2 (⏚, for ground) of this shared captive screw connector to enable the PC1 to detect a closed circuit between an input and ground.

⑦ **Output power receptacle** — Connect the power cord from an output device to this three-prong female Edison (IPL T PC1) or IEC (IPL T PC1i) power output receptacle.

Connecting the Hardware

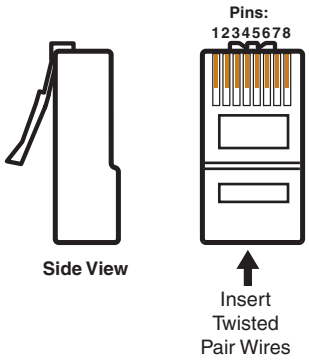
Connect the cables to the rear panel as follows:

1. Connect an IEC power cord from the PC1 rear panel male IEC receptacle to a wall outlet. The green Power LED lights and remains lit.
2. Plug the Ethernet cable from your network into the LAN port on the rear panel. The Link LED lights green.
3. Plug the power cord of the device to be controlled into the output receptacle on the back panel of the PC1.
4. If desired, connect the output device to the RS-232 COM port.
5. If desired, connect an IR emitter to the IR port to control an output device.
6. If desired, connect a contact switch to the contact closure input port.

Wiring the Local Area Network (LAN) port

- For 10Base-T (10 Mbps) networks, use a Category 3 or better cable.
- For 100Base-T (100 Mbps) networks, use a Category 5 cable.
- Use a straight-through cable to connect to a switch, hub, or router.
- Use a crossover cable to connect directly to a computer. Wire the connector as shown in the tables below.

Pinouts for the two types of Ethernet cables are shown in the illustration below.



RJ-45 Connector

Straight-through Cable
(for connection to a switch, hub, or router)

End 1		End 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
(for direct connection to a PC)

End 1		End 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

RS-232 port cabling

To connect an output device, such as a plasma display or projector, to the PC1's RS-232 connector, see the Extron *IP Link Device Interface Communication Sheet* for your display device. This sheet contains information about your display device, including connector pin assignments and connection diagrams, and is available from the Extron Web site.

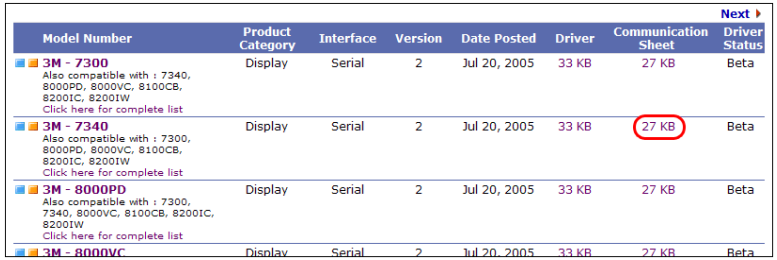
Accessing the Communication Sheet

To obtain the Communication Sheet for your output device,

1. On the Extron Web site (www.extron.com), click the **Download** tab.
2. On the Download Center page, click the Device Drivers button (shown at right).

3. At the bottom of the Device Drivers page, select IPL T PC1 from the pull-down menu.
4. On the next page, select **Serial** from the Protocol Type drop-down menu to display a list of the Extron serial drivers.
5. On the drivers list, locate the model name of your output device. In the row for your device, click on the ***nn*Kb** link in the Communication Sheet column.

   In the example below, the Communication sheet link for a 3M-7340 display has been selected.



Next

Model Number	Product Category	Interface	Version	Date Posted	Driver	Communication Sheet	Driver Status
3M - 7300 Also compatible with : 7340, 8000PD, 8000VC, 8100CB, 8200IC, 8200IW Click here for complete list	Display	Serial	2	Jul 20, 2005	33 KB	27 KB	Beta
3M - 7340 Also compatible with : 7300, 8000PD, 8000VC, 8100CB, 8200IC, 8200IW Click here for complete list	Display	Serial	2	Jul 20, 2005	33 KB	27 KB	Beta
3M - 8000PD Also compatible with : 7300, 7340, 8000VC, 8100CB, 8200IC, 8200IW Click here for complete list	Display	Serial	2	Jul 20, 2005	33 KB	27 KB	Beta
3M - 8000VC	Display	Serial	2	Jul 20, 2005	33 KB	27 KB	Beta

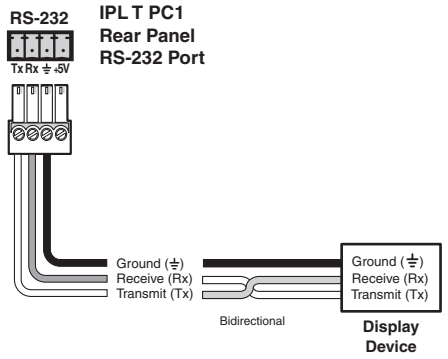
6. The Communication Sheet, a .pdf document, opens. You can view, print, and/or download it.
7. Wire your display device as described in its Communication Sheet.

You can also access the Communication Sheets from the GC2.3 software by clicking the Comm Sheet button on the Serial Configuration tab. See "Assigning a serial driver" in chapter 3, "Software Setup," for more information.

Connecting to the display device

To connect the display device to the PC1,

1. Wire an RS-232 cable to the provided four-pin captive screw connector, as described below. Use only the **first three pins** of the connector, starting at left.
   a. Connect the wire from the display's Receive port to the connector's first pin on the left, which plugs into the PC1's Tx (Transmit) port.
   b. Connect the wire from the display's Transmit port to the connector's second pin, which plugs into the PC1's Rx (Receive) port.
   c. Connect the ground wire from the display to the connector's third pin, which plugs into the PC1's ground (⏚) port.

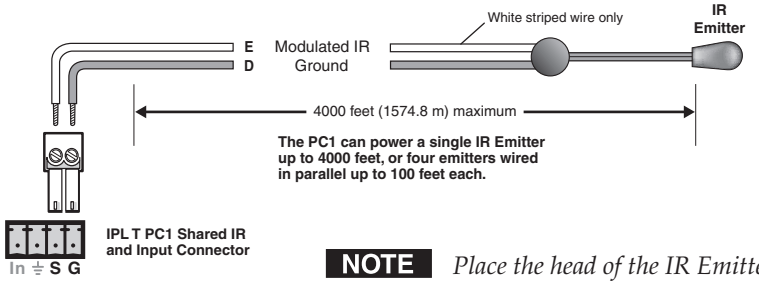


   d. Connect hand-shaking wires to the +5V port if needed.
2. Plug the cable into the RS-232 receptacle on the PC1 rear panel.

NOTE *The RS-232 port is by default a control port. If you want to use it to configure the PC1, you must perform a mode 2 reset. Refer to "Resetting," in chapter 3 of the* IPL T PC1 User's Manual *for this procedure.*

Wiring for IR control

If you intend to control the display device via infrared (IR) commands from the PC1, you can connect an Extron IR Emitter to the IR Signal and Ground pins (pins 3 and 4) of the shared captive screw connector. The PC1 provides enough current to power one IR Emitter up to 4000 feet, or up to four Emitters for 100 feet each. See the wiring illustration below.

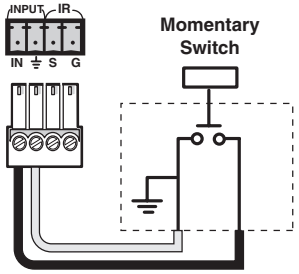


NOTE *Place the head of the IR Emitter over or directly adjacent to the controlled device's IR receiver.*

Wiring the contact Input port

The IPL T PC1 contact closure Input port can be connected to any device providing a closure to ground. The contact closure input is connected to 5 VDC via a 1k ohm pull-up resistor, and must be wired with a ground. This allows the input to be tied to a device such as a momentary switch, motion detector, alarm, photo eye, etc. You can define what this input will trigger via GC2.3.

1. Connect one end of the input cable to a 3.5 mm, 5-pole captive screw connector, wired appropriately, and plug it into pins 1 and 2 of the shared input/IR port connector on the rear panel.
2. Connect the other end of the input cable to the input device that will provide a triggering signal. (See the diagram below.)



Chapter Three

Software Setup

Creating a Global Configurator Project File

Building and Uploading a GC File

Launching the GlobalViewer Interface

Creating a Global Configurator Project File

After you have installed the Global Configurator (GC) application on your PC, follow the steps in this chapter to download device drivers, create a GC project file, configure your IPL T PC1 devices, and launch the GlobalViewer interface.

NOTE *Numbers shown in pictures correspond to procedure step numbers.*

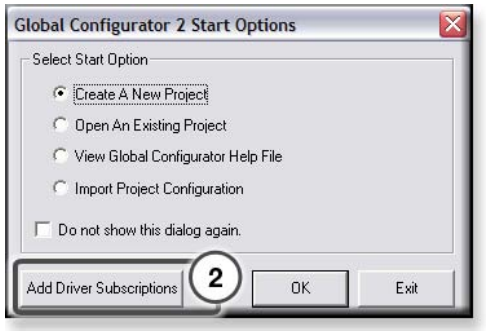
Step One: Download device drivers.

Software drivers for your audio/video devices are available at no charge from the Extron web site, at www.extron.com.

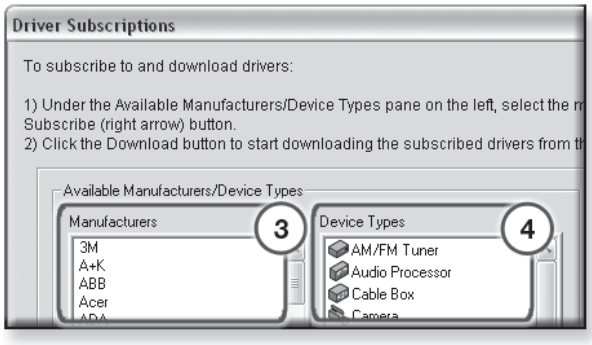
To download device drivers,

1. On your PC, click **Start > Programs > Extron Electronics > GC2.3.0**, or double-click the desktop **GC 2** icon (shown at right) to launch the GlobalViewer application.

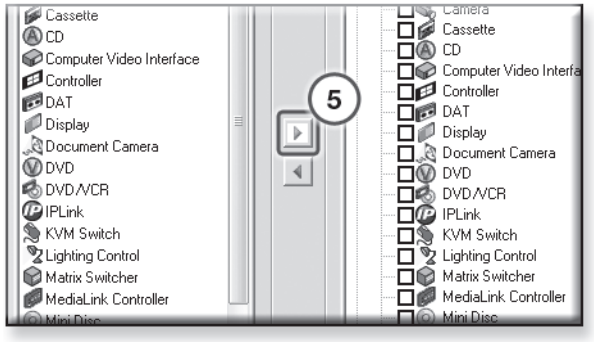
2. Click the **Add Driver Subscriptions** button.



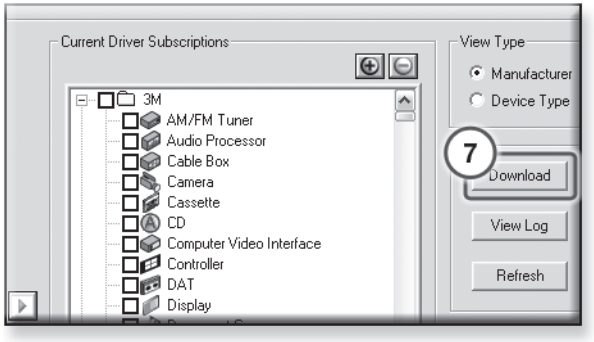
3. In the Available Manufacturers/Device Types section of the Driver Subscriptions window, select a manufacturer.
4. Select a device type.



5. Click the **Right Arrow (Subscribe)** button.

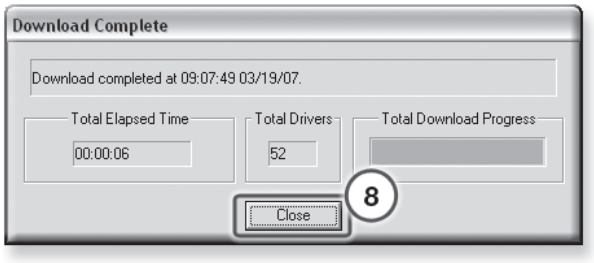


6. Repeat steps **3** through **5** for each type of device you plan to add to your audio/video network.
7. Click the **Download** button.



When the drivers have been downloaded, the Download Complete dialog box opens.

8. Click the **Close** button.



9. Click **OK**.

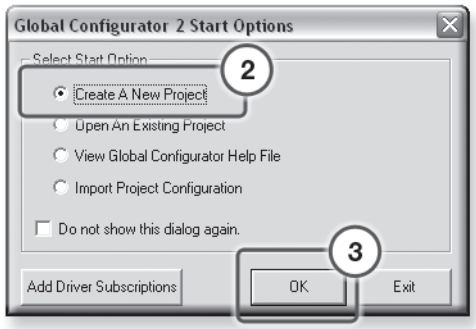
Step Two: Create a new project.

To create a new Global Configurator project file,

1. From the File menu, select **New**.

The Start Options dialog box opens.

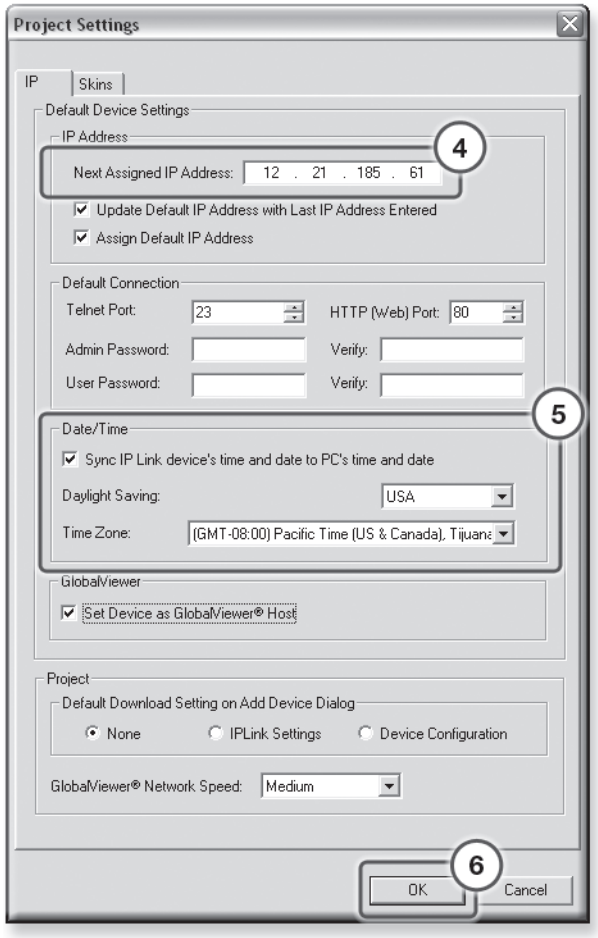
2. Select **Create a New Project**.
3. Click **OK**.



The Project Settings dialog box opens (see the illustration on the next page).

4. In the Next Assigned IP Address field, type in the IP address of the first device that you want to add to your GC project file.

5. Make the desired date/time selections.
6. Click **OK**. The Add Device dialog box opens.



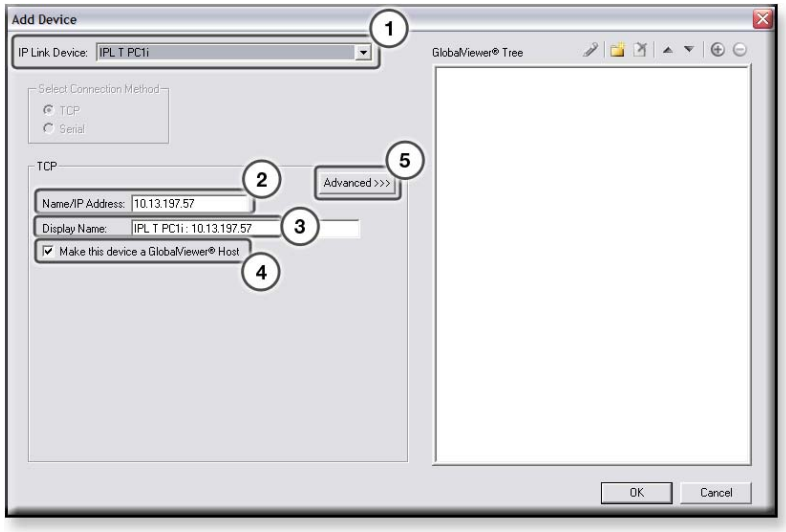
NOTE *You can edit these settings during a GC2.3 session by selecting* **Project Settings...** *from the Edit menu to display this dialog box.*

Step Three: Add a device.

There are four ways to launch the Add Device dialog box:

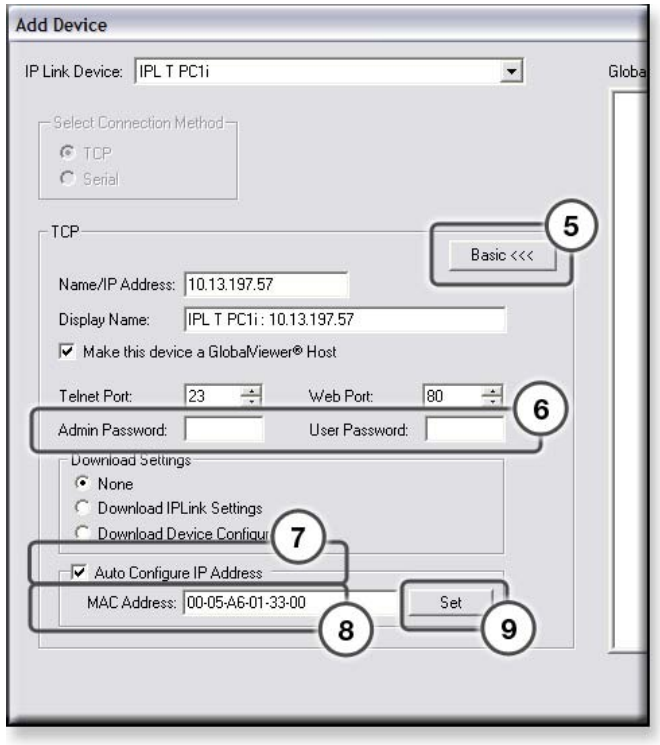
- Press **Ctrl+A** on the computer keyboard.
- Select **Add Device...** from the Edit menu.
- Click the **Add Device** icon (shown at right).

- Select the **Create a Project** radio button on the Start Options dialog box and follow the prompts. The Add Device window is the second dialog box to open.



With the Add Device dialog box open,

2. Enter an IP Address in the Name/IP Address field (or leave the default address).
3. Enter a unique display name of up to 24 characters. Characters can be A through Z (not case-sensitive), 0 through 9, and/or hyphens (-). No spaces or space characters are permitted. The first character must be a **letter**. The last character **cannot** be a hyphen.
4. Click **Make this device a GlobalViewer Host** (if desired). If you make your device a host, you can access it directly by entering its IP address on your browser's Address line. (At least one IP Link device must be a GV host in order for you to use GC2.3.)
5. Click the **Advanced** button. This opens additional Add Device screen options, and changes the **Advanced** button name to **Basic**. (If you want to return to the basic screen options shown above, click the **Basic** button.)



6. If the device you are adding is password protected, enter the appropriate admin and user passwords. (The default condition is no admin or user password).
7. Select the **Auto Configure IP Address** check box.
8. Enter the device's MAC address (found on the UID label on the rear of the device).
9. Click **Set**. The Auto Configure Successful prompt is displayed.

10. Click **OK**.

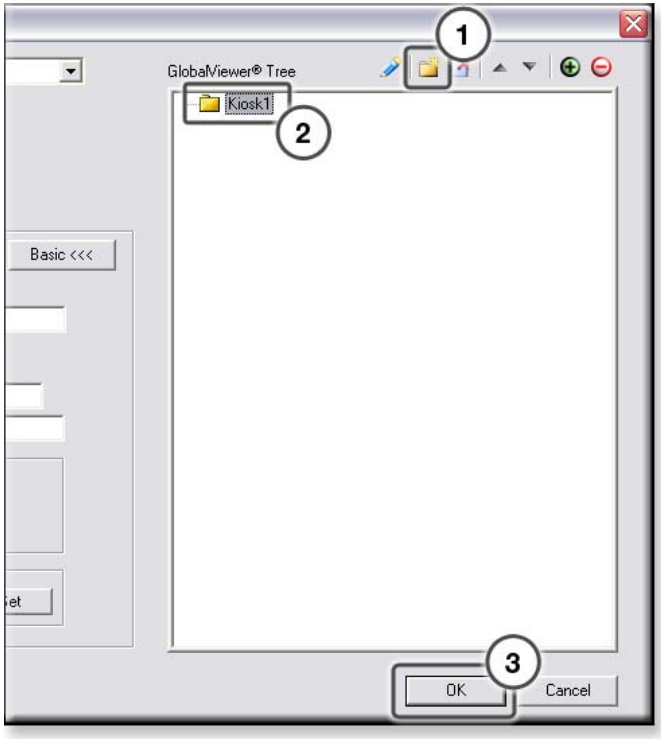
Step Four: Define the location of the new device.

Global Configurator allows you to keep track of the devices on your audio/video network by creating a custom tree of folders in which you can place and organize your audio/video devices.

This GlobalViewer Tree can be up to eight levels deep and have multiple folders in each level. You can name each folder for the place where the device(s) listed in the folder will be kept (conference room, kiosk, classroom, etc.)

To move your newly added device to a location folder, with the Add Device dialog box still open,

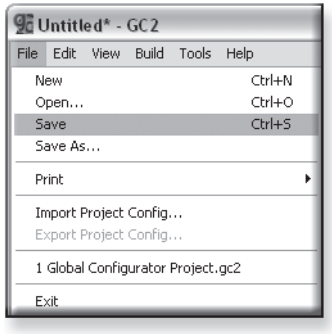
1. Click the **New Location** folder icon ( ) above the GlobalViewer Tree window.
2. Enter a unique location name for the new folder and keep the new location folder selected.
3. Click **OK**. The new device is added to the selected location folder and the Add Device dialog box closes.



Step Five: Save the new Global Configurator file.

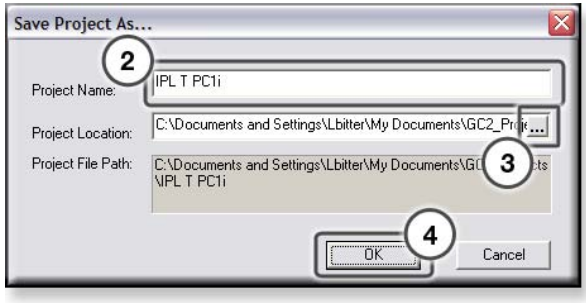
To save the new GC project file,

1. Select **Save** from the File menu, or click the **Save** icon (shown at right).



If the file has not previously been saved, the Save As dialog box opens.

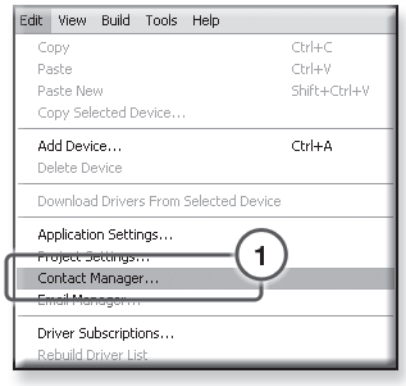
2. Enter a unique name in the Project Name field.
3. Click the **Browse** button ( ) to browse to the desired file location.
4. Click **OK**.



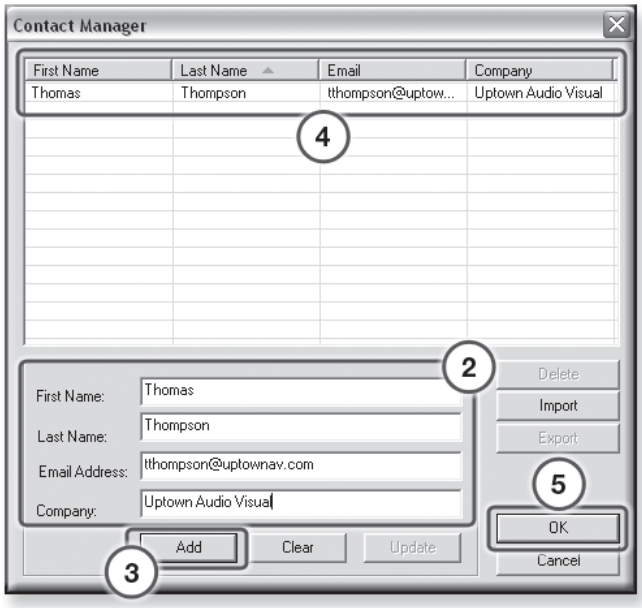
Step Six: Enter contacts.

The Contact Manager dialog box is used to enter the name, e-mail address, and company name of the network's contacts. To enter contact information,

1. From the Edit menu, select **Contact Manager... .**



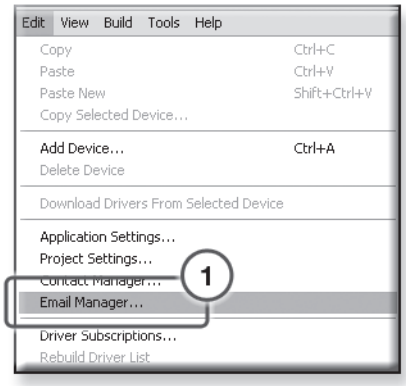
2. On the Contact Manager window, complete the Name, Email, and Company fields for your contact.
3. Click **Add**. The contact information is added (see ④).
4. Repeat steps **2** and **3** for any desired additional contacts.
5. When finished, click **OK** to close the window.



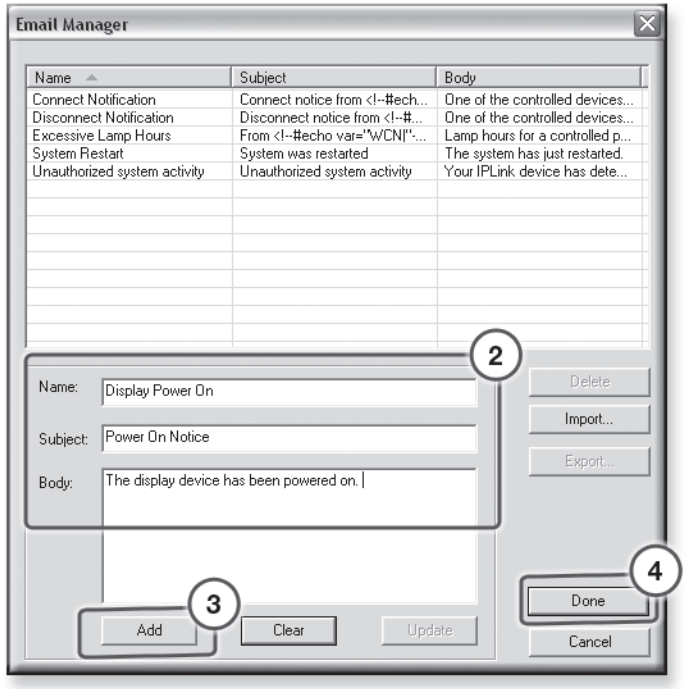
Step Seven: Create e-mail messages.

The Email Manager dialog box is used to create e-mails that are delivered according to instructions that you set up in the GC Schedule and Monitor windows.

1. From the Edit menu, select **Email Manager... .**



2. For each e-mail message, complete the Name, Subject, and Body (message content) fields.
3. Click **Add**.



4. Repeat steps **2** and **3** to create additional e-mail messages as needed.

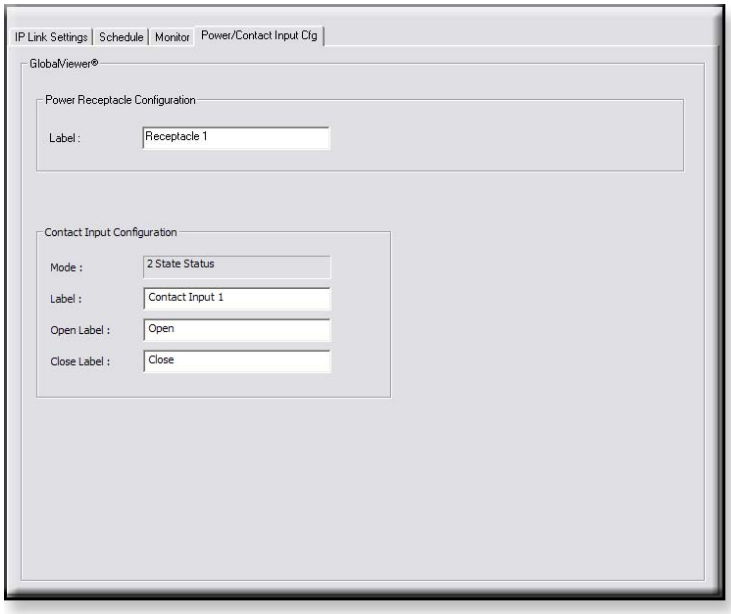
5. When finished adding e-mail messages, click **Done**.

Step Eight: Enter output receptacle and contact input port labels.

If you want to change the labels that will appear on the Power Receptacle Configuration and Contact Input Configuration screens in GlobalViewer, select the **Power/Contact Input Cfg** tab.

Type in your changes in the available fields:

- **Power Receptacle label** — In the Power Receptacle Configuration field, enter a name for the PC1's output receptacle. (The default label is "Receptacle 1.")
- **Contact Input label** — In the Contact Input Configuration field, enter names for the contact input port and for its open and closed (shorted to ground) conditions. (The default name label for this port is "Contact Input 1"; the labels for its two possible conditions are "Open" and "Closed.") The Mode label reflects the port setup and cannot be changed.

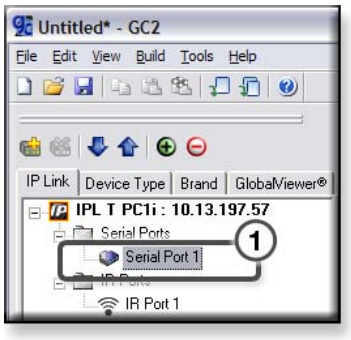


Step Nine: Assign device drivers.

The Serial Configuration tab and the IR Configuration tab allow you to assign a device driver to the PC1 serial and/or IR port.

Assigning a serial driver

1. In the IP Link tree area, click on a serial port name.



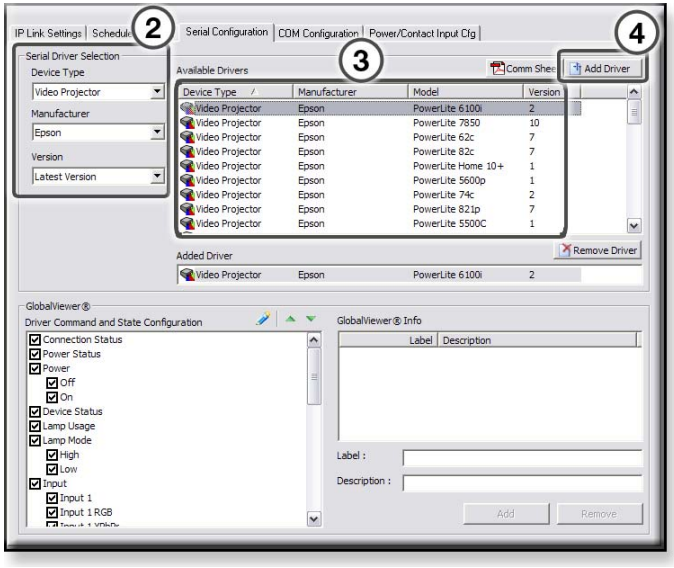
The Serial Configuration tab is displayed

2. In the Serial Driver Selection field, select a device type, manufacturer, and version from the drop-down boxes.

3. Select an available driver.

   If desired, you can click the **Comm Sheet** button to view a Communication Sheet with information about your device.

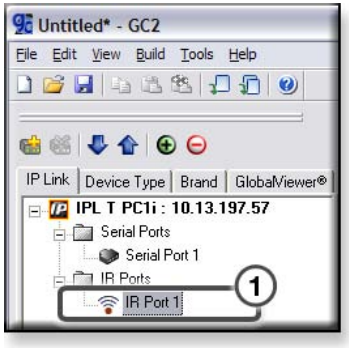
4. Click **Add Driver**.



Assigning an IR driver

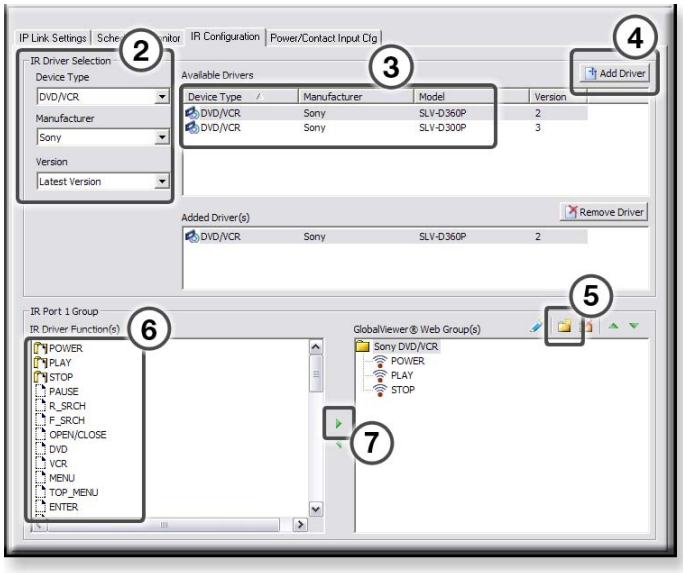
To assign a device driver to the IR port,

1. In the IP Link tree view area, click on an IR port name.



   The IR Configuration tab is displayed.

2. In the IR Driver Selection field, select a device type, manufacturer, and Version from the drop-down boxes.
3. Select an available driver.
4. Click **Add Driver**.



5. Create a group folder for your output device functions:

   a. Click the **Add** folder icon ( ) above the GlobalViewer®Web Group(s) section. A folder icon with the name Group Folder appears in the tree window.

   b. Give this folder a name, preferably the name of the device for which you added the driver in step **4**.

6. Select IR driver functions for your output device:

   a. Make sure that the folder you added in the Web Group(s) section is highlighted.

   b. In the IR Driver Function(s) (left) section, click on one or more functions that you will want to monitor and/or schedule on the output device. (To select multiple functions, hold down the Ctrl key while clicking on each function name.)

7. Click the green right-arrow button at the right of the IR Driver Functions section. The functions you selected are listed below the selected folder in the GlobalViewer ®Web Group(s) section.

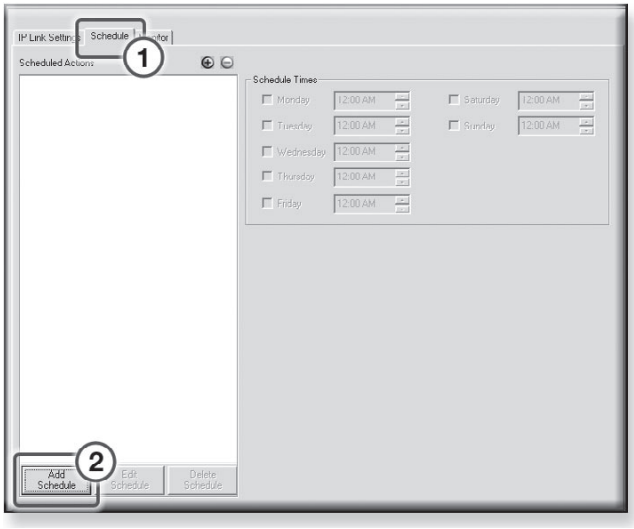
Step Ten: Set scheduled actions and e-mail deliveries.

The Schedule tab is used to set scheduled actions and to create and schedule delivery of e-mail messages. A single schedule can include both actions and e-mail.

Selecting an action

To schedule an action,

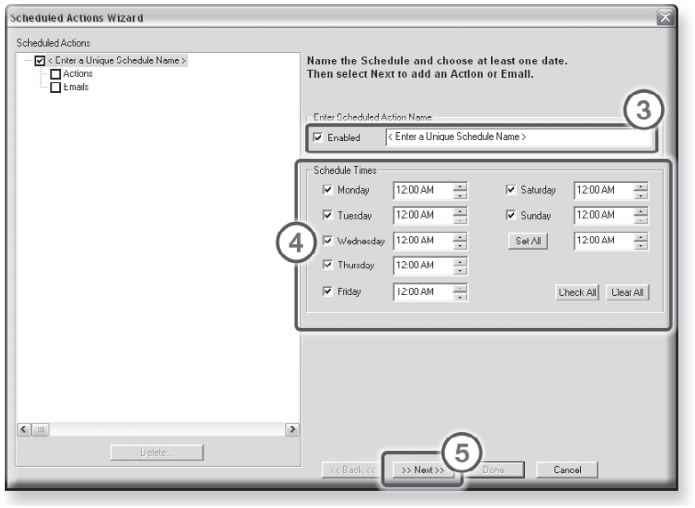
1. Select the **Schedule** tab.
2. Click the **Add Schedule** button.



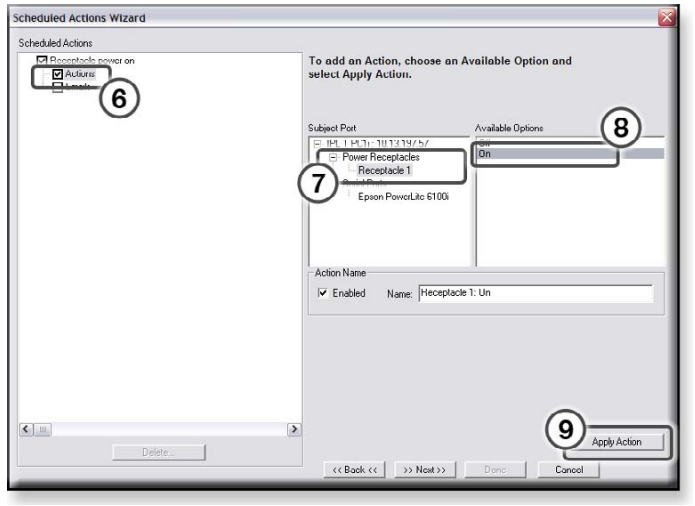
The Scheduled Actions Wizard dialog box opens.

NOTE *When this window opens, the* **Enable** *check box is selected. If you do not want the action you are scheduling to take effect immediately, you can clear this check box.*

3. Enter a unique scheduled action name.
4. Select the days and times the action will occur.
5. Click **Next**.



6. In the Scheduled Actions pane, select the **Actions** check box.
7. Select a subject port (device).
8. Select an available option (action).
9. Click the **Apply Action** button.

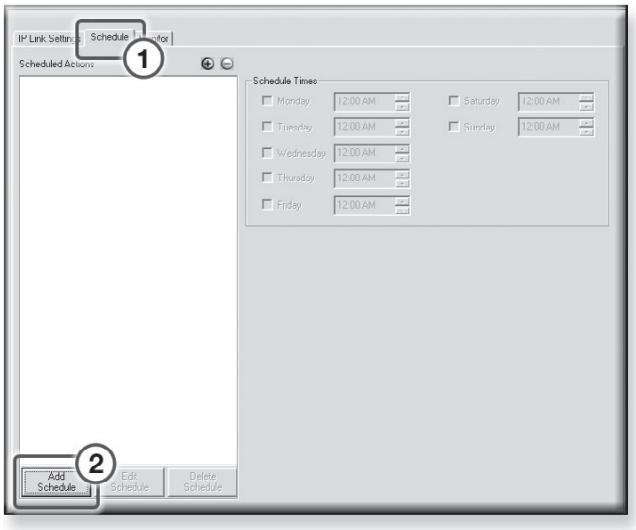


10. Click **Done**, if finished; or click **Next** to schedule e-mail.

Scheduling e-mail delivery

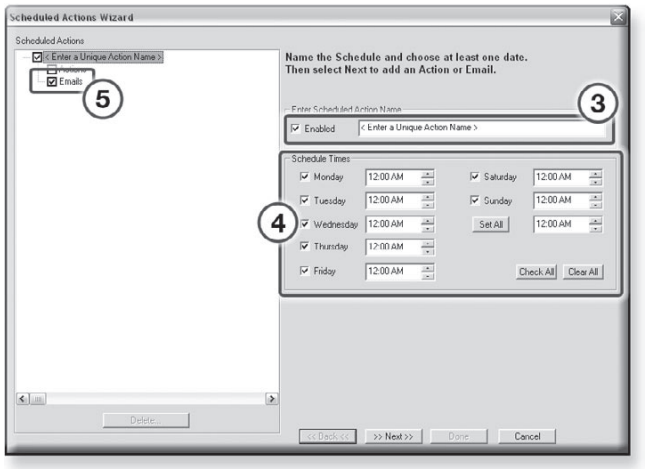
To schedule an e-mail message delivery,

1. Select the **Schedule** tab.
2. Click the **Add Schedule** button.



The Scheduled Actions Wizard dialog box opens.

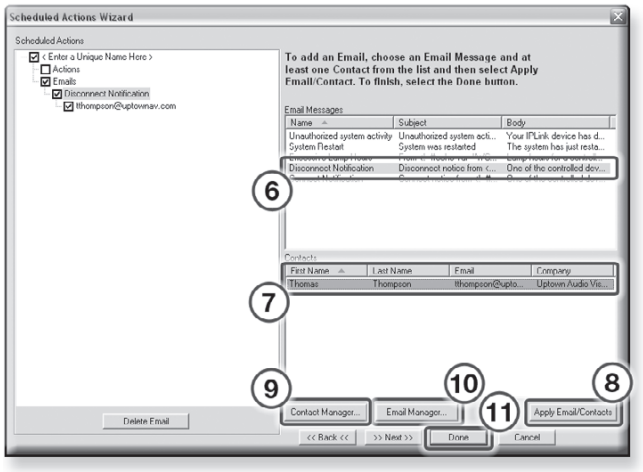
3. Enter a unique Scheduled Action Name (such as "Sending e-mail.").
4. Select the days and times that the e-mail message will be sent.
5. Select the **Emails** check box.



The Add an Email window opens in the right pane.

6. Select an e-mail message.
7. Select one or more contacts (e-mail recipients).
8. Click the **Apply Email/Contacts** button.

   The new e-mail and recipient(s) are displayed in the left pane.
9. Click the **Contact Manager** button to enter new contacts (if desired).
10. Click the **Email Manager** button to create new custom e-mails (if desired).
11. When finished setting up e-mails, click **Done**.



Step Eleven: Set monitored conditions.

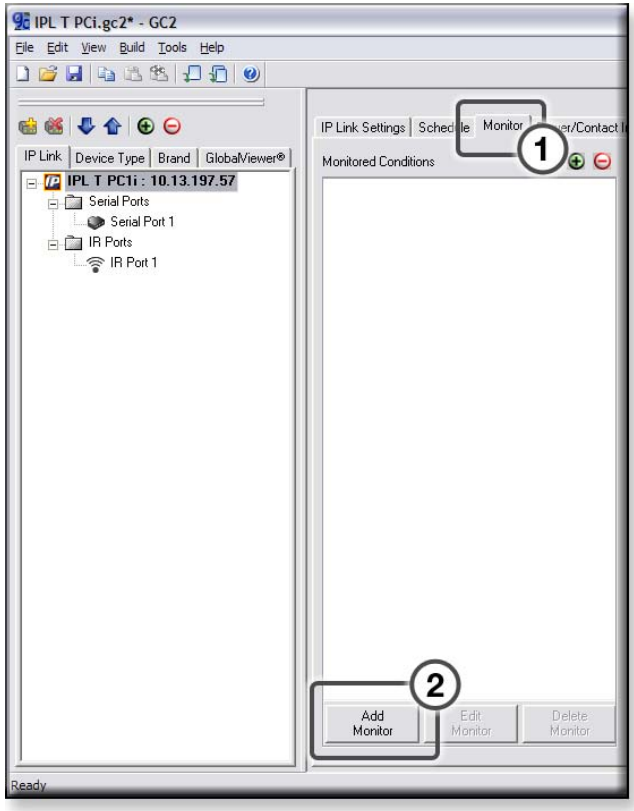
The Monitor tab is used to set up a response (action and/or e-mail) to a specified condition or event.

Actions vary by selected device and include options such as Enable/Disable PINs, Lockout Front Panel, and Time Delay.

Custom e-mails can be created and sent to specified e-mail addresses following specified conditions or events.

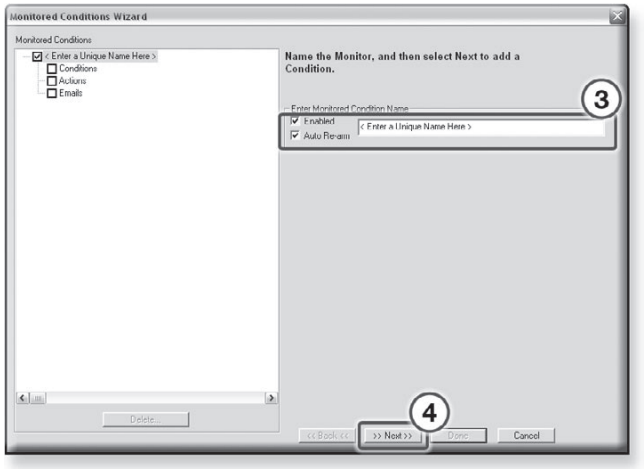
To add a monitored condition,

1. Select the **Monitor** tab.
2. Click the **Add Monitor** button.

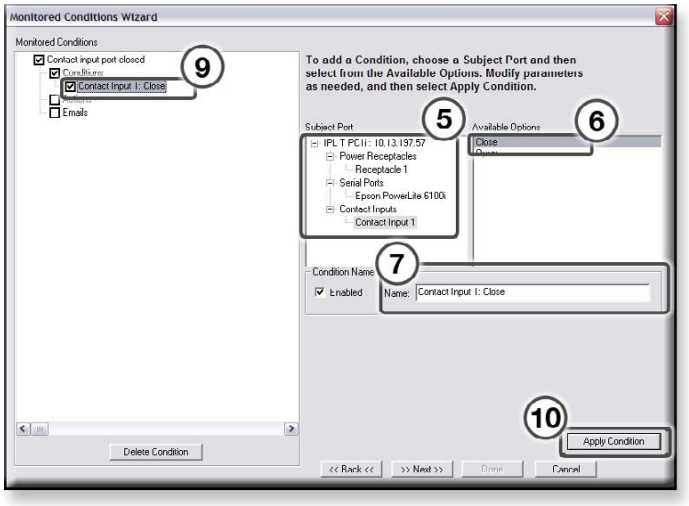


The Monitored Conditions Wizard opens (see next page).

3. Enter a unique monitored condition name. The two check boxes next to the Enter a Monitored Condition Name field are automatically selected:
   - **Enabled:** When selected, indicates that monitoring is enabled.
   - **Re-arm:** When checked, means that the specified action occurs every time the condition(s) are met.
4. Click **Next**.

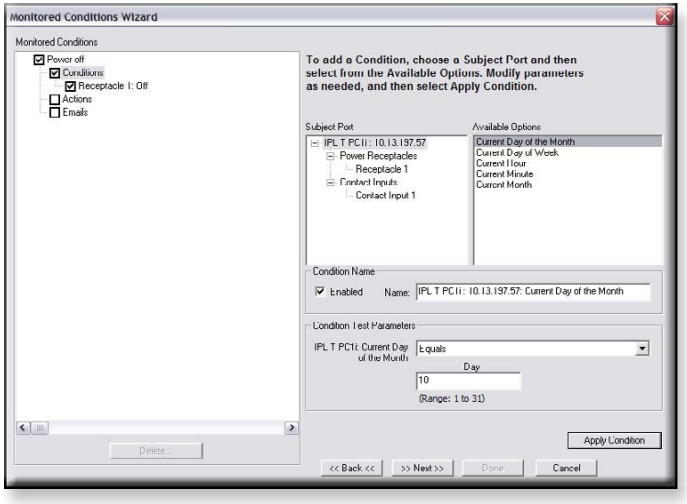


5. Select a Subject Port (device).
6. Select an Available Option (condition) to monitor.
7. Edit the condition **Name** field (if desired).
8. Set the desired Condition Test Parameters (if available). For an example of test parameters, see the screen on the next page.
9. If the **Apply Condition** button is grayed-out, click on the condition name in the Monitored Conditions pane.
10. Click the **Apply Condition** button.



11. If desired, follow steps **5** through **10** to add more conditions. You can select either a port name or the device name and IP address in the Subject Port field. In the example below, a "day of the month" condition has been added.

NOTE *When you add multiple conditions,* all *of the conditions must be met in order for the specified action/e-mail to occur.*



12. When finished adding conditions, click **Next**.

13. If desired, select an action and click **Apply Action**. If not, proceed to step **14**.

14. Click **Next** again if you want to add an e-mail message. If not, click **Done**.

15. If desired, select an e-mail message and contacts, and click **Apply Email/Contacts**.

16. When finished, click **Done**. The dialog box closes.

Building and Uploading a GC File

Before a Global Configuration (GC) file is active in the GlobalViewer interface, the GC file must be "built" and "uploaded" to a GlobalViewer host device.

The "build" process compiles all of the configuration data you have entered into the GC file for each A/V network device.

The "upload" process delivers the built (compiled) file to the GlobalViewer host device.

After the GC file has been uploaded to a host device, you can launch the GlobalViewer interface by entering the host device's IP address in the address field of an Internet browser.

Step Twelve: Build the Global Configurator file.

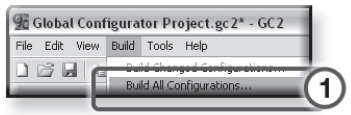
There are two Build commands:

Build All Configurations — Compiles configuration data for all devices in the GC file, including data for devices previously uploaded to a GlobalViewer host device.

Build Changed Configurations — Compiles configuration data only for devices that have been added or changed since the previous build cycle.

To initiate a "Build (all)" process,

1. From the Build menu, select **Build All Configurations...**,



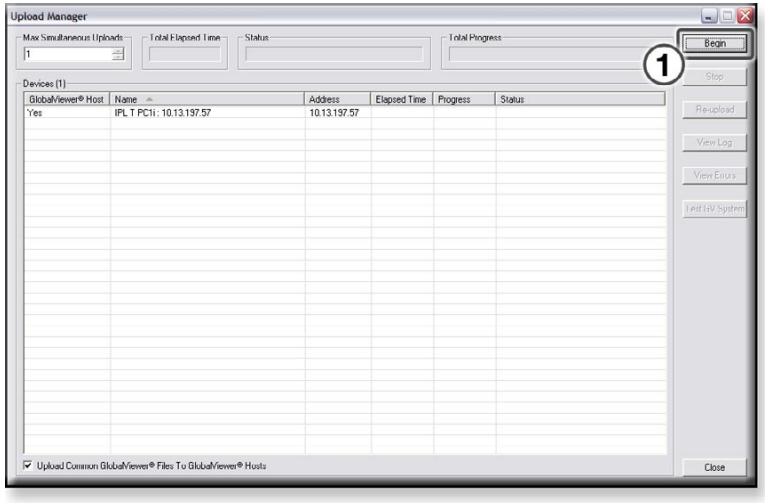
or click the **Build All Configurations** icon (shown at right).

The Please Wait. Building Configuration(s)... dialog box opens and displays a progress bar while the GC file is being built.

Step Thirteen: Upload the Global Configurator file.

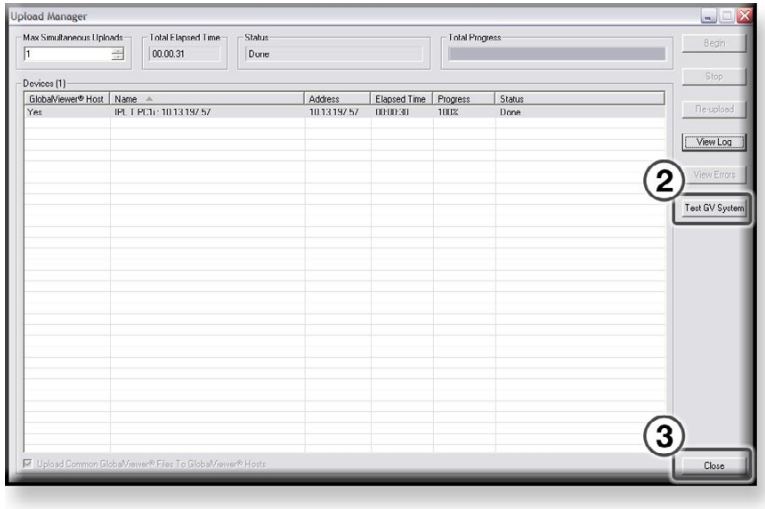
When the build process completes, the **Upload** dialog box opens.

1. Click the **Begin** button.



When the upload process completes, the Progress and Status fields are updated to indicate completion.

2. Click the **Test GV System** button to view the GlobalViewer host interface.

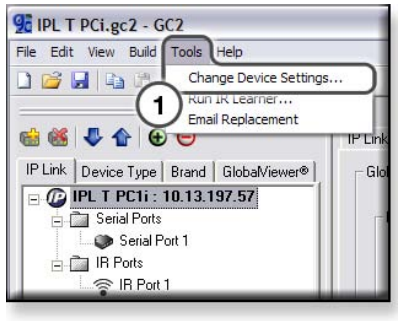


3. Click **Close** to close the Upload Manager window.

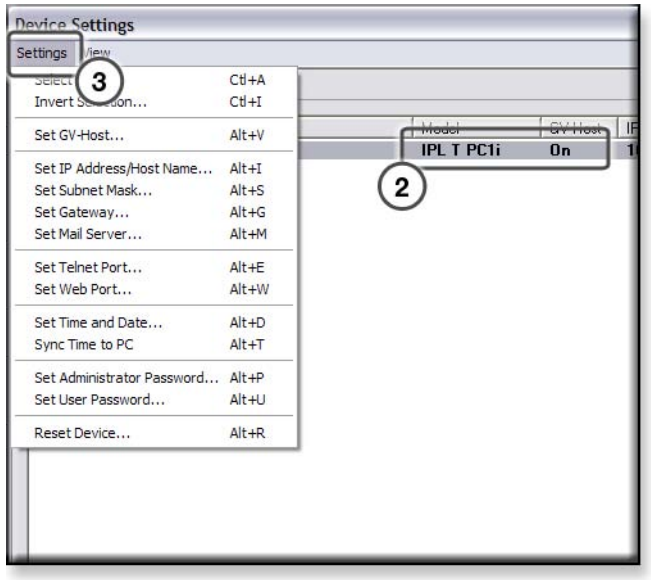
Step Fourteen: Change device settings (if desired).

If for any reason you need to change any of the previously configured settings,

1. From the Tools menu, select **Change Device Settings**.



2. On the Device Settings window, select a device.
3. Click **Settings** to open the Settings pull-down menu.
4. Select and change the desired setting(s), for example: **Set Mail Server...**, **Set Gateway...**, **Set Subnet Mask...**, etc.



NOTE *Use the* **Set Mail Server...** *option on the Settings menu to identify the local mail server's IP address, domain, and passwords.*

Launching the GlobalViewer Interface

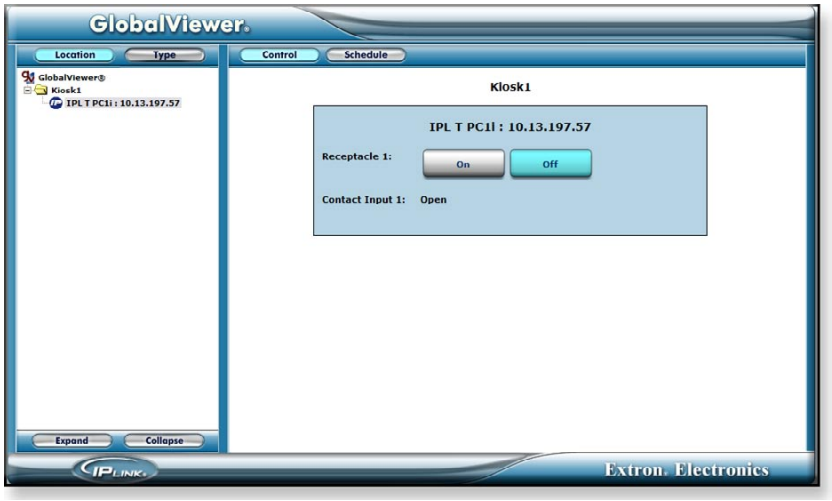
GlobalViewer is a graphical user interface that is generated by Global Configurator (GC). When a GC file is built and uploaded to a GlobalViewer host device, you can launch the GlobalViewer interface by opening an Internet browser and entering the host device's IP address in the browser's address field.

Once the GlobalViewer interface is launched, you can monitor and control all of the devices on your audio/visual network from the GlobalViewer host device.

Step Fifteen: Launch GlobalViewer.

To launch GlobalViewer,

1. Open an Internet browser.
2. Enter the IP address of your IPL T PC1 in the Address field, and press the keyboard's **Enter** key. The GlobalViewer Web page for the IPL T PC1 opens.
3. To display the Control screen (shown below), click on the device name in the left pane, or on the device folder icon in the main section.



4. To schedule power-on and power-off times or when the PC1 should send e-mails, click Schedule, and refer to the GC2.3 Help file.

NOTE *Once you have built and uploaded your GC file to GlobalViewer, the GlobalViewer page is always displayed when you enter your PC1's IP address in the Internet browser's Address field; you no longer see the IPL T PC1 default Web pages.*

If you want to display the default Web pages, enter the IP address, followed by ***/nortxe_index.html****, in the Address field. For example:*

http://12.113.184.57/nortxe_index.html

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