

**LIAISON Software
lets you . . .**

PROGRAM the following:

GRAFIK Eye Control Units*

- Scenes—intensities and fade times
- Load types—includes non-dim options
- Temporary Mode switch setting
- Control Unit communication assignments
- Temporary, on-line scenes

Accessory Controls*

- Control Unit communication assignments

Power Panels*

- Control Unit and Zone assignment for each circuit
- Load types for each circuit

Timeclock Events†

- Real-time and astronomic event scheduling

Super Sequence†

- Automated, synchronized dynamic scene selection throughout the system

INTERROGATE the system for:

- The above information
- Number of Control Units and Accessory Controls present in system
- Control Unit type*
- Number of Control Units zones (2—24)
- Accessory Control type

BACK UP an entire programmed system, including Timeclock events, for archival purposes.

* Requires the use of 3500 and/or 4500 series Control Units and GRX-PRG.

† For use with 3100, 3500, 4100, and/or 4500 series Control Units. Requires GRX-PRG.



**Installing GRAFIK Eye LIAISON
System Requirements:**

In order to use *GRAFIK Eye LIAISON*, you will need the following:

HARDWARE

- IBM® compatible PC, Pentium® 266 MHz or higher recommended
- 32 MB RAM
- 15 MB of free space on your hard drive
- VGA Graphics

SOFTWARE

- Microsoft® Windows® 95 or later operating system, or Microsoft® Windows® NT version 4.0 or later

CD INSTALLATION

- Quit all other applications, including any anti-virus programs by:
 1. Right-clicking on its icon in the System Tray and quitting the program, or
 2. Pressing **Ctrl-Alt-Delete**, selecting the process, and clicking on the button labeled "End Process."
- Insert the *GRAFIK Eye LIAISON* CD into the CD-ROM.
- From Windows START menu, select RUN.
- In the RUN box, type the letter for your computer's CD-ROM drive (usually D: or E:), and SETUP. Click OK.
- After installation is complete, click on the *LIAISON* icon to run *LIAISON*.

To download the latest version of *LIAISON*, visit our website at www.lutron.com.

START-UP SCREEN

GRAFIK Eye LIAISON Lighting Control Software can be used to Create, Edit, Go Online with, or Back up a *GRAFIK Eye* system. Select the mode you wish to use:

Create or Edit a Project from File

This mode can be used without being connected to a GRX-PRG. Select this mode if: you are in the design stage of a project or wish to edit an existing project; you have created a project and need to download the data for the first time; or, you want create a project in your office for future downloading to a *GRAFIK Eye* system.

Go Online with System

Select this mode after you have transferred data using **Create or Edit a Project from File** to monitor and operate your *GRAFIK Eye* system. This mode requires interfacing with the GRX-PRG (refer to instruction sheet P/N 040-135). See Page 18.

CREATE OR EDIT A PROJECT FROM FILE

FILE MENU



Open

- If you have already created a job file, open that file using **Open**. *LIAISON* files have the extension ".lia" and, by default, are saved in the same directory as *LIAISON*.



New

- From the **File** menu, select **New**. Select the type of system that you will be designing. There are three options when creating a new file:

1. Timeclock Only

Schedule real-time and/or astronomic events for the entire system. Use the super sequence for dynamic, synchronized scene selections throughout the system. Requires a GRX-PRG and 3100 and/or 4100 series Control Units.

2. Programmable System

Includes all the Timeclock Only features, plus the ability to program all aspects of the system operation using *LIAISON*.
Program all Control Unit information:

- scenes (intensities and fade times), load types, communication assignments, and temporary mode options.
- Program Control Unit and zone assignments to the circuits in the system.
- Program the Control Unit communication assignments for Accessory Controls.
- Also, program all the Timeclock events and super sequence events; available with **Timeclock Only**.

Note: Programming Requires a GRX-PRG. To program directly from a Control Unit, a 3500 and/or 4500 series Control Unit is necessary.

3. Lutron Lighting Wizard

If you are still in the process of designing your system, let the Lutron Lighting Wizard assist you in creating a New file. After answering the questions presented by the Wizard and click-

ing **Finish**, those screens that apply to your project will be shown. If you want to add to or edit your system at a later time, simply use the menus to reopen the needed screen. The equipment required is based upon choices selected using the Wizard.



Save

- From the **File** menu, select **Save** to save the file.

Import - GRAFIK Eye Timeclock (.GTC)

- GRAFIK Eye LIAISON* can also be used to create Timeclock Only systems. Timeclock systems that have been created by *GRAFIK Eye Timeclock* (P/N GRXTC-WIN) can be imported to *LIAISON*. From the **File** menu, select **Import -> GRAFIK Eye Timeclock (.GTC)**. After selecting the file to import, click on **OK**. The file extension will be changed from .gtc to .lia and the imported file will be opened for editing. The original file created by *GRAFIK Eye Timeclock* will not be changed.



Print

- From the **File** menu, select **Print** to print information about the currently opened file. All system information or selected information can be printed. Select the information to be printed and then click **OK**.



Exit

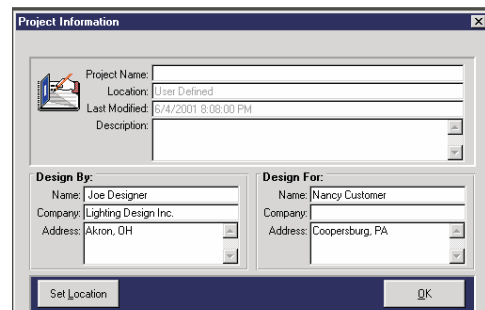
- To exit *LIAISON*, select **Exit** from the **File** menu. If changes have been made to the currently opened file, or a new file was created that has not been saved, a prompt to save will be issued before exiting.

VIEW MENU

Enter Project Information

By default, the Project Information screen is shown every time a new file is created. This information can be viewed or edited at any time. From the **View** menu, select **Project Information**.

- For future reference, enter the job name, location, and description in the corresponding boxes.
- Enter the name of individuals and companies for whom the system was designed. Include addresses for future reference.
- Click **Done** to exit the screen.



Set Preferences

Customize *LIAISON* by setting preferences for the user and hardware interface. Preferences for toolbar views, desktop color, and serial COM ports for communication are set by selecting **Preferences** from the **View** menu.

- Toolbar.** The toolbar below can be displayed by selecting "Buttons Without Text" from the Preferences screen. Also, "Large Buttons With Text" and "No Buttons" are options in the Preferences screen. The toolbar provides a shortcut means of selecting menu items.



- **Desktop Color.** Change the default color of the *LIAISON* desktop by selecting a color from the palette. The selection will be saved to an initialization file and used every time *LIAISON* is run.
- **Communications Port.** Transferring data to the *GRAFIK Eye* system requires the use of a PC serial COM port. From the **Preferences** screen, select the COM port through which data will be transferred. The COM port selection will be saved in an initialization file and will need to be set the first time that you use *LIAISON* to program your system or if you change the hardware configuration of your PC. The COM port can also be selected from the **Online Options** menu.
- **Advanced** - Set port redirection connecting time. By default port redirection connecting time is 0. If a longer connecting time is needed (i.e the user tries to use *LIAISON* to control a *GRAFIK Eye* system via a network by network-enabling the serial device), the user can click Advanced button and specify the connecting time via the Port Redirect Connecting Time screen.

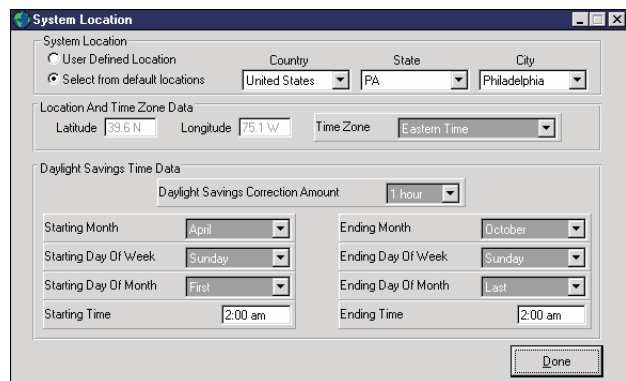
NOTE: LIAISON is designed to communicate with the GRX-PRG or GRX-RS232 via serial communication. If the user decides to network-enable the serial device, the communication quality and port redirection connecting time may vary depending on the system setup (i.e. the network adapter, device server, redirector software, operating system etc). Not all port redirector software and device servers will work with LIAISON. It is the user's responsibility to test the communication.



Enter Geographical Location

The geographical location of a job must be defined if any astronomic events are to be scheduled.

1. Select the **Location** item found in the **View** menu.
2. Select the city where the job is located using the pull-down lists for Country, State (if applicable), and City. The location value, time zone, and daylight savings information associated with the chosen city will appear on the screen.
3. If the desired city is not present in the list, select "User Defined Location" and enter the latitude and longitude in the appropriate locations on the screen. Latitude and longitude are in units of degrees. **For example**, 12.5 = 12 degrees, 30 minutes. Now enter the correct time zone and Daylight Savings information.
4. Click on **Done** to return to the start-up screen. Select **Save** from the **File** menu to save the changes.



SETUP MENU

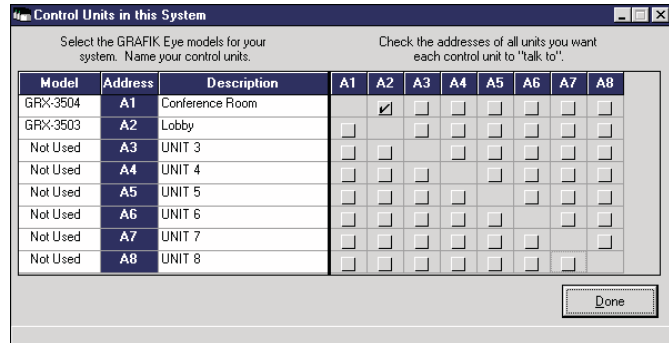


Specify Control Units

NOTE: Programming directly from a Control Unit requires 3500 and 4500 series Control Units.

Control Units are specified based upon the type of system that you are designing. If Timeclock Only was specified when the file was created OR the Wizard decisions did not require programmable Control Units, models will be limited to 3100 and 4100 series Control Units. If Programmable System was specified OR the Wizard decisions included creating scenes for *GRAFIK Eye* Control Units, the model list will include 3500 and 4500 series Control Units.

1. From the **Set Up** menu, select **Specify Control Units**. Click on the menu under the **Model** column to select or change the *GRAFIK Eye* model numbers for your system.
2. Use your pointer to highlight the Description section and name your Control Units by entering a description, such as "Conference Room" or "Lobby", on the line corresponding to each Control Unit.
3. If the Control Units are 3500 and 4500 series, check off the addresses of all the Control Units you want each Control Unit to "talk to" by clicking each corresponding box. **For example**, click A2 on the first line if you want Control Unit A1 to "talk to" Control Unit A2.
4. Once you have specified each Control Unit, click **Done** to exit the screen.



If Timeclock Only was specified when the file was created OR the Wizard decisions did not require programmable Control Units, skip the rest of this Section and proceed to Timeclock Menu on Page 13.



Specify Accessories (For Programmable Systems using GRX-PRG Only)

Many GRAFIK Eye systems include Accessory Controls that allow for remote control of Control Unit(s). These accessories must be told which Control Unit(s) to "talk to." Some accessories are programmed such that all buttons "talk to" the same Control Unit(s). Others, such as partition controls, are programmed on a button by button basis. These differences are based upon Accessory model and functionality. For this reason, Accessory Controls must be specified and then programmed.

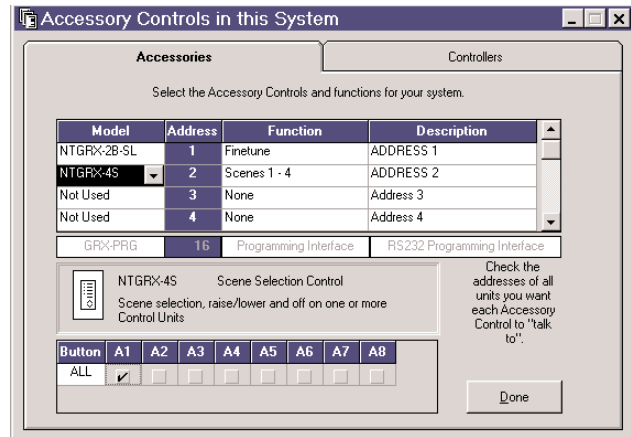
NOTE: Model information and functionality will not be programmed. This information is used to determine whether programming will be for all buttons or each individual button.

IMPORTANT! Accessory Control details are only available from accessory controls with a minimum code revision. To determine the code revision level, inspect the back of the accessory control. If you have questions, please contact the Lutron Hotline for assistance.

Minimum Code Revision of Accessory Controls For Getting Details

Type	Minimum Code Revision
Standard Accessory Control	2-0
Shade Accessory Control	1-1

1. From the **Set Up** menu, select **Specify Accessories**. Click the **Accessories** tab on the "Accessory Controls in this System" form. Click on the drop down menu under the **Model** column, and select the Accessory Control model numbers for your system.
2. The functions listed for each address are dependent on the model selected in the first column. Click on the drop down menu under the **Function** column, and select the function for the Accessory Control. The button table at the bottom of the screen may change from "ALL" to individual buttons based on the selected function.



NOTE: The bottom of this screen may have a different appearance for certain Accessory Controls.

3. Name your Accessory Control by highlighting the Description section and entering a description, such as "Conf Rm Entrance" or "Conf Rm Podium", on the line corresponding to each Accessory Control. Descriptions are for reference only and will not be downloaded to the Programmer Interface (GRX-PRG).
4. Indicate which Control Units you want each Accessory Control to "talk to" by checking each corresponding box. **For example**, click A1 on the first line of the Button table if you want the NTGRX-4S Accessory Control at Address 2 to "talk to" A1.
5. For Fine Tuning Accessory Controls and Shade Accessory Controls, individual zone control is available. To program which zones of a Control Unit you want the Accessory to control, click on the corresponding box. This action will bring up a list box of zones for the selected Control Unit. Select or de-select zones by clicking on the zones of the list box, or select / de-select all zones of the Control Unit by clicking the Select All / Clear All button, and then click Done to exit the screen. (SG-3WD is a dual 3-button shade control, the top 3 buttons and the bottom 3 buttons can be programmed separately on a zone by zone basis).
6. Once you have specified each Accessory Control and Controllers, click **Done** to exit the screen.

Specify Controllers (For Programmable Systems using GRX-PRG Only)

1. From the **Set Up** menu, select **Specify Accessories**. Click the **Controllers** tab on the "Accessory Controls in this System" form. Click on the drop down menu under the **Model** column, and select the Controller model numbers for your system.
2. The functions listed for each address are dependent on the model selected in the first column. Click on the drop down menu under the **Function** column, and select the function for the Accessory Control.
3. Name your Controller by highlighting the Description section and entering a description, such as "Conf Rm Entrance" or "Conf Rm Podium", on the line corresponding to each Controller. Descriptions are for reference only and will not be downloaded to the Programmer Interface (GRX-PRG).

NOTE: The bottom of this screen may have a different appearance for certain Accessory Controls.

4. Using the table at the bottom of the screen to program the selected controller.

GRX-SVC: Specify a zone to control.

GRX-GC: For each channel of the unit, specify a zone to control.

GRX-CCO (Zone mode): For each relay group of the unit, specify a zone to control.

- Click on the drop down menu under the **Control Unit** column of the bottom table, select the Control Unit that you want the selected unit/channel/relay group to "talk to" from the list.
- Click on the drop down menu under the "Zone" column of the bottom table, select the zone that you want the selected unit/channel/relay group to "talk to" from the list.

GRX-CCO (Scene mode):

- Indicate which Control Units you want the controller to "talk to" by checking each corresponding box. **For example**, click the box under A1 if you want the controller to "talk to" A1.

5. Once you have specified each Controller and Accessories, click **Done** to exit the screen.

NOTES:

- Each Controller in a system must be assigned a unique Controller address by setting the DIP switches on the unit. There are a maximum of 8 Controllers per system. (These Controllers do not occupy the 16 standard Accessory Control addresses).
- GRX-SVC, GRX-GC and GRX-CCO (Zone mode) can only control zones on GRAFIK Eye Control Units with software revision 7-0 or higher, these controllers will not function correctly with Control Units with lower software revisions.
- Each GRX-SVC unit, each channel of a GRX-GC, each relay group of a GRX-CCO (Zone mode) can "talk to" one zone **in a system**.



Program Control Units (For Programmable Systems using GRX-PRG Only)

In addition to specifying Control Unit model numbers and communications, scene names, zone names, scenes, and load types are all programmable using *LIAISON*.

1. Scenes are made up of zone intensities and fade times. There are 16 scenes plus an Off scene for each Control Unit.

2. Light intensities for all scenes except Off can be adjusted from 0 to 99 or unaffected (UA).

AC shade positions for all scenes can be set to Open, Close or unaffected (UA).

Sivoia shade positions for all scenes can be set to Open, Preset 1, Preset 2, Preset 3, Close or unaffected (UA).

The light level or shade position of an unaffected zone will not change when that scene is selected.

3. Fade times are adjustable for all scenes and can range from 0 to 59 seconds or 1 to 60 minutes. The fade time is the time it will take for the zone intensities to raise or lower to the scene's pre-set level from their current intensities.


4. Load types are the type of fixture(s) that will be controlled on a zone-by-zone basis. It is important to specify the correct load type for each zone to achieve the best dimming performance.



Program Control Units (continued)

- From the **Set Up** menu, select **Program Control Units**. Click on the list box in the upper left-hand corner of the window and choose from the units specified previously. **For example**, click on Conference Room to program the Conference Room Control Unit.

Zone Names

- Click on the **Zones** button  to label your zones. Enter the names of your zones, e.g., "Downlights" or "Sconces", in the Zones text boxes.

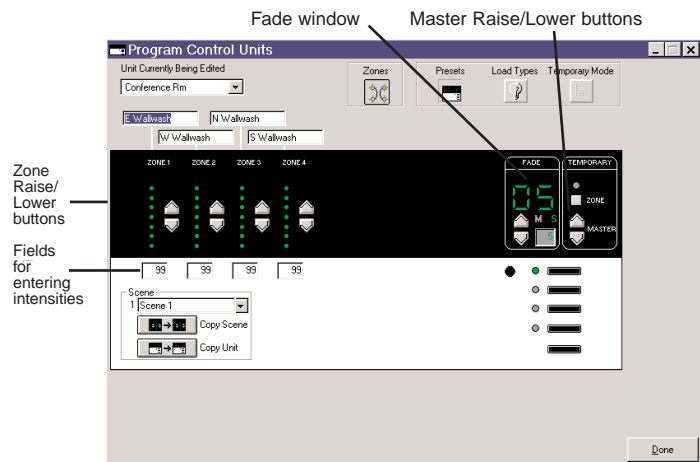
Presets



- Click on the **Presets** button to set up your scenes. Select the scene you want to create in the Scenes list box. To change the name of the scene, highlight the Scenes list box and enter the new scene name.

To create a scene, set the intensities of the zones in that scene by clicking on the Zone Raise and Lower buttons of each zone OR by typing in the value of intensity in the box below each zone.

For example, for Scene 1, click on the Zone 1 Raise button to increase the light intensity of that zone or type in 90 in the box if you want the intensity at exactly 90%. Repeat the procedure for each zone in the scene.



Lighting Zones:

Clicking on Raise/Lower button or typing in intensity value to set lights intensity.

AC Shade Zones:

Clicking on Raise/Lower button or typing in the following key to set shade position (Open and Close),

- Or: Typing in "O" or "o" for Open
- Typing in "C" or "c" for Close

Sivoia Shade Zones:


Clicking on Raise/Lower button or typing in the following key to set shade position (Open, Preset 1, Preset 2, Preset 3 and Close),

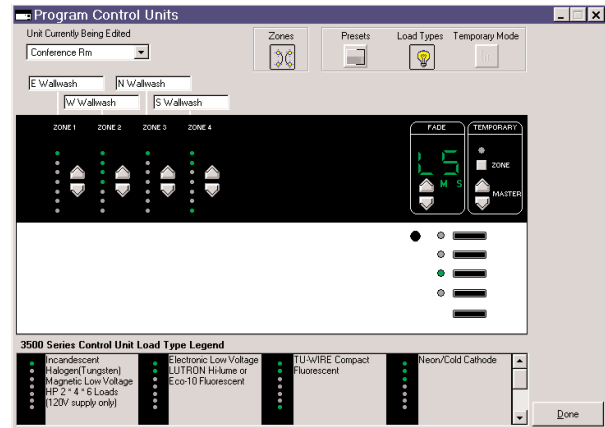
- Or: Typing in "O" or "o" for Open
- Typing in "C" or "c" for Close
- Typing in "1" for Preset 1
- Typing in "2" for Preset 2
- Typing in "3" for Preset 3

Fade Time




- Modify the Fade Time for the scene by clicking on the Raise/Lower buttons in the Fade box OR by typing in the exact value in the Fade window.
- Follow the same procedure for each scene.
- Fade time will not be applied to non-lighting zones.







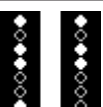
Select Load Types






- To select Load Types, click on the **Load Types** button  the Program Control Units window.
- Click on the Raise/Lower buttons of each zone until the correct number of LEDs corresponding to the appropriate load type (as defined in the chart at the bottom of the screen) are lit. For example, for electronic low-voltage loads, use the Raise/Lower buttons to light two LEDs. Repeat for each zone.



Load Type Legend

LED Display	Load Type Description	GRX -3xxx	GRX-4xxx	Integrale GXI-3xxx
	GRX units: Incandescent Magnetic low voltage HP 2, 4, 6 loads (120v supply only) Integrale: Magnatic Low Voltage (MLV)	Yes	Yes	Yes
	GRX units: Electronic low voltage Lutron Hi-lume or Eco-10 fluorescent Integrale: GRX-TVI	Yes	N/A *	Yes
	Tu-wire compact fluorescent	rev 5-5 or higher	N/A *	N/A

	Neon/Cold cathode	Yes	N/A *	Yes
	Non-dim (last on, first off)	Yes	Yes	Yes
	Non-dim (first on, first off)	Yes	Yes	Yes
	AC shade	rev 7-0 or higher	rev 7-0 or higher	N/A
	Sivoia shade	rev 7-0 or higher	rev 7-0 or higher	N/A
	Unassigned/Non Dim This setting is the default for GXI Control units.	N/A	N/A	Yes
	Auto Phase Last LED ON: Reverse/Trailing edge Last LED OFF: Forward/Leading edge Note: LIAISON will always display Reverse/Trailing edge	N/A	N/A	Yes

	Electronic Low Voltage (ELV) Incandescent GRX-ELVI	N/A	N/A	Yes
	0-10v ballasts	N/A	N/A	Yes
	DSI compatible ballasts	N/A	N/A	Yes
	DALI (intensity broadcast only) ballasts	N/A	N/A	Yes
	PWM ballasts	N/A	N/A	Yes


Key:

Yes: All versions support the LoadType

Rev #: All versions of that code rev or higher

* : GRX-4000 units should be set to Load Type 1 for those Load Types

Temporary Mode

- To set the Temporary Mode, click on the **Temporary Mode** button. 
- Use the Master Raise/Lower buttons to select a Temporary Mode: **Sd** to Save by default; **Sb** to Save by button; **Sn** to Save never; **4S** for Scene selection and Master Raise/Lower only; and **bd** for Buttons disabled. The Temporary Mode selected appears in the Fade window. Press F1 for descriptions.



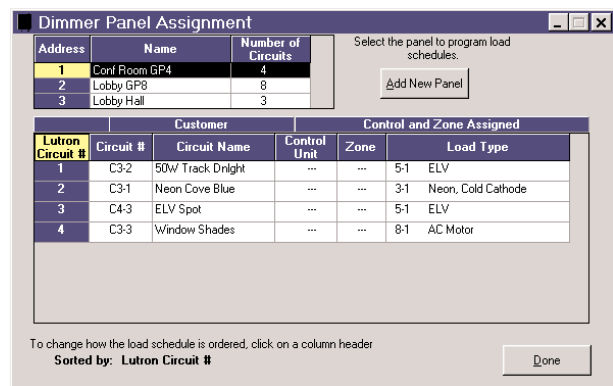
Program Power Panels (For Programmable Systems using GRX-PRG Only)

If your system requires the use of *GRAFIK Eye* dimming or switching panels, use *LIAISON* to program Control Unit and Zone assignments plus the load type for each circuit. It will be necessary to Program Power Panels if 4100 or 4500 series Control Units have been included in the system. Each circuit of a dimming panel receives its light level from a Control Unit and Zone in the system. Each circuit will have an individual Zone assigned; however, multiple circuits may have the same Zone assignment. Load types are the type of fixture(s) that will be controlled on a zone-by-zone basis. It is important to specify the correct load type for each zone to achieve the best dimming performance.

NOTE: Power Panels must be uniquely addressed to allow for programming. If you have any questions regarding panel addressing, circuit capacities, or load types, please contact the Lutron Hotline for assistance.

IMPORTANT! Power Panel details are only available from circuit selectors with a code revision level of 2-50 or newer. The code revision is available on the circuit selector of the panel. If you have questions, please contact the Lutron Hotline for assistance.

- From the **Set Up** menu, select **Program Power Panels**. Choose the Panel to program by specifying the address in the table at the top of the screen. **For example**, click on Address 1 to program the Conference Room GP4.



- To modify the name of the panel, select the **Name** cell of the panel address you are modifying. Enter in the new panel name. This name is for reference only and will not be downloaded to the system.
- To modify the number of circuits in a panel, select the **Number of Circuits** cell of the panel address you are modifying. Use the pull-down list box to select the number of circuits for the panel being programmed. If the new number of circuits is greater than the original number, the circuits will be added to the current load schedule. If the new number is less than the original number, the circuits will be deleted. If any circuits to be deleted have already been programmed, you will have to confirm the deletion when prompted.
- The load schedule table at the bottom of the screen lists the circuits in the panel and allows the user to program the Control Unit, zone assignments, and the load type for each circuit. In addition, customer circuit information can be provided for reference. Select **Customer Circuit #** or **Customer Circuit Name** to enter customer-specific information.
- Click on the **Control Unit** cell and select from the pull-down list the Control Unit of the Zone that will be dimmed by this circuit. Only those Control Units that have been included in the system (see **Specify Control Units**) will be listed. After selecting the Control Unit, click on the **Zone** cell and select a zone from the list. This is the zone that will control the light level of the loads attached to the circuit.
- Finally, click on the **Load Type** cell and select from the pull-down list the load type of the fixtures of the circuit. The load type must be specified at the power panel in addition to specifying load type on the Control Unit (see **Program Control Units**).
- Program the remaining circuits of the panel in the same manner. To add additional panels to the system, click **Add New Panel**. A new panel will be added to the bottom of the panel table.
- Once you have programmed all the Power Panels, click **Done** to exit the screen. Remember to save your changes while working by selecting **Save** from the **File** menu.

TIMECLOCK MENU



Create a Timeclock Schedule



NOTE! For each schedule, there is a maximum of 60 events allowed.

Select **Schedules** from the **Timeclock** menu to open the *Schedule Events* screen. Follow the steps below to define a schedule.

1. **Select a Schedule.** There are four schedule options: Weekday, Weekend, Special 1 and Special 2. The Weekday and Weekend options allow schedules to be defined that will run every weekday or every weekend day by default. The Special 1 and Special 2 schedules are used to define schedules of events for a unique day (e.g., Holiday, Party, etc.). Select a schedule to program by clicking on an item from the "Schedule" list.

2. **Select Event type: Time of Day or Astronomic -** Select the **Time of Day** or **Astronomic** tab of the schedule. If the **Time of Day** tab is selected, events can be scheduled to occur at a particular time of day or night. Astronomic events can be defined by selecting the **Astronomic** tab. Events can be set to occur up to 2 hours before or up to 2 hours after sunrise OR sunset. The time scale corresponding to the event type will be listed in the schedule.

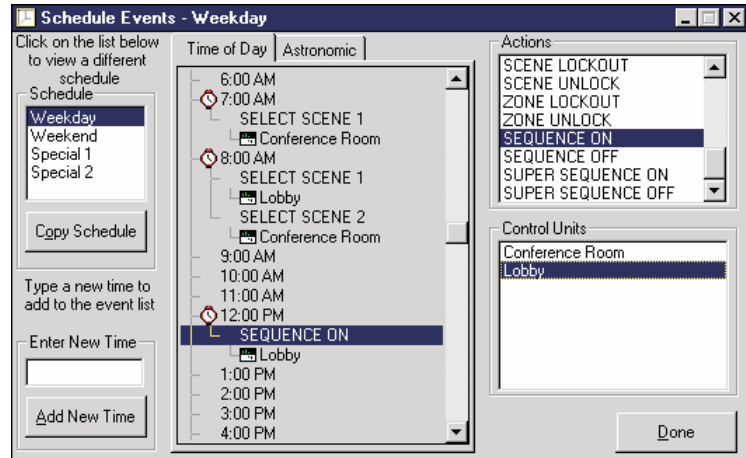


Figure 1. Time of Day Events

NOTE: For both event types, the time resolution is to the nearest minute.

Figure 1 displays **Time of Day**

events. All four schedules can include both real-time and astronomic events (though they cannot be viewed simultaneously on the *Schedule Events* screen).

3. **Add an event.** The *Schedule Events* screen utilizes the "drag and drop" method of adding items to a list. To add an event, begin by adding an action to the list of events. Select an action in the "Actions" list. Click on this item by pressing and holding the left button of your mouse. Continue to hold the left button down and drag the action to a time in the **Time of Day** or **Astronomic** event list. To drop the action, release the mouse button when the time for the event is highlighted. Actions can be dropped on times or other actions. For example, to change the action of a previously defined event, you would drag and drop the new action onto the original action.

After adding an action, you must specify at which *GRAFIK Eye* Control Units the action will occur. The only actions that do not require a Control Unit are "SUPER SEQUENCE ON" or "OFF." To add a Control Unit or Units to an action, click on the Control Unit in the "Control Units" list. Press and hold the left button of your mouse and drop the Control Unit to an action in the list. Control Units can be dropped on actions or other Control Units. If the Control Unit is already included in the action, it will not be added a second time. Multiple Control Units can be listed under an action by dragging additional items from the "Control Units" list to an action in the event list.

NOTE: Only those Control Units that have been included in **Specify Control Units** will be available for selection.

NOTE: To schedule a "START AFTER HOURS MODE" or "CANCEL AFTER HOURS MODE" event, After Hours Mode must be enabled.

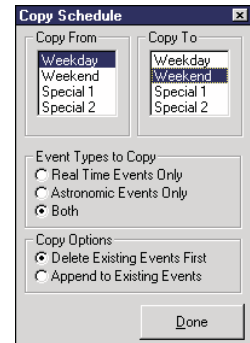
4. **Change an event time.** To change the time that an event will occur, again use the "drag and drop" method. Click on the action in the event list. Press and hold the left button of your mouse.



Create a Timeclock Schedule (continuation)

Drag this action to the new time in the event list. If the time is not listed, follow the procedures below to add the new time and then relocate the action.

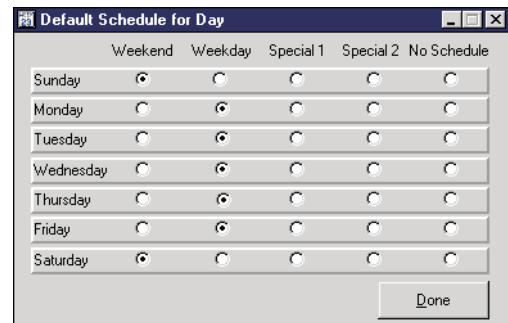
5. **Add New Time.** If you wish to schedule an event for a time not included on the list, you will need to add the time. In the "Enter New Time" text box, type the time of the event. For Time of Day events, type in the time, formatted based on the computer's international settings. For Astronomic events, type in the desired amount of time Before or After sunRise or sunSet (up to 2 hours) followed by the appropriate code: BS, AS, BR, AR. After entering the time, click on **Add New Time**. The new time will be added to the list. For Time of Day, if AM or PM was omitted (but included in the computer's international setting), the AM or PM extension will automatically be added based on the current event selected in the list.
6. To remove any events, highlight the event and then select **Delete** from the **Edit** menu.
7. To copy one schedule to another, click on the **Copy Schedule** button. The *Copy Schedule* screen gives the user the option to copy real-time events, astronomic events, or both, to another schedule. There is also the option to overwrite the events or to append the events to the end of the "Copy To" schedule.
8. The "Copy From" list is the schedule of events that will be copied. The "Copy To" list is the schedule to which the events will be copied. Use the options to set which events will be copied. Click and drag a schedule from the "Copy From" list to a schedule in the "Copy To" list. When the copy is complete, click on **Done**.
9. To change schedules, select a new item from the "Schedule" list. When the Weekday, Weekend and any Special schedules have been defined, click on the **Done** button to exit the *Schedule Events* screen.
10. Select **Save** from the **File** menu to save your system changes.



Default Schedule for Day

By default, weekday schedules will run Monday through Friday and weekend schedules will run Saturday and Sunday. If your system requires modifications to this default week definition, proceed as follows.

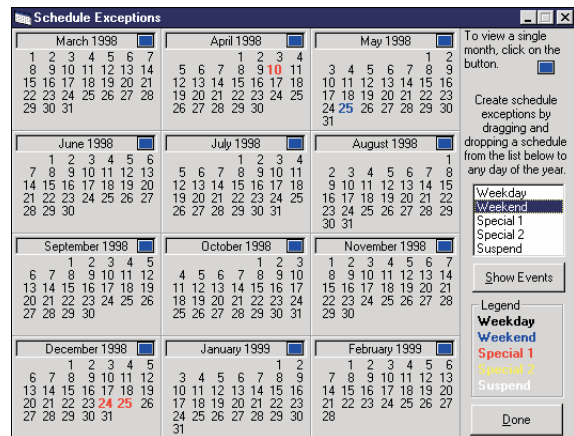
- To change the week definition, select **Default Schedules** from the **Timeclock** menu. The days that constitute weekdays and weekend days can be modified in the *Default Schedule for Day* screen. **For example**, to run the weekend schedule every Monday select the "Weekend" button.
- When modifications have been completed, click on **Done** to return to the main screen.
- Select **Save** from the **File** menu to save the changes.





View and Modify Calendar Exceptions

After creating and transferring a schedule of events, the weekday and weekend schedules will run, by default, every weekday and weekend, as defined in the *Default Schedule for Day* screen (see **Default Schedule for Day**). Special 1 and Special 2 schedules can be used for special events or exceptions to the default. In addition, schedules can be suspended or overridden using **Calendar**. Suspending scheduled events on a specific day will only suspend the schedule for that day. Any scheduled events will resume the following day. Exceptions are saved by date in memory indefinitely, therefore, annual maintenance may be needed for holidays that do not fall on the same day every year (e.g., Thanksgiving, Labor Day, etc...). Fixed-date holidays, such as New Year's Day, do not require maintenance.



1. Select **Calendar** from the **Timeclock** menu.
2. The *Schedule Exceptions* screen displays a one year calendar. To add an exception, drag a schedule from the list and drop it on any day of the year.
3. To view the events in a schedule, select the schedule in the list and click **Show Events**.
4. To view an individual month, the button in the top right corner of each month can be selected. Using the month view, you can add exceptions to every day or every weekday in a single "drag and drop" action. **For example**, to create exceptions for every Sunday, select the schedule, drag and then drop on "Sunday." To create exceptions for the entire month, select the schedule, drag and then drop on "April."



5. To delete an exception, highlight the day and select **Delete** from the **Edit** menu.
6. When the calendar modifications are complete, click on **Done** to return to the main screen.



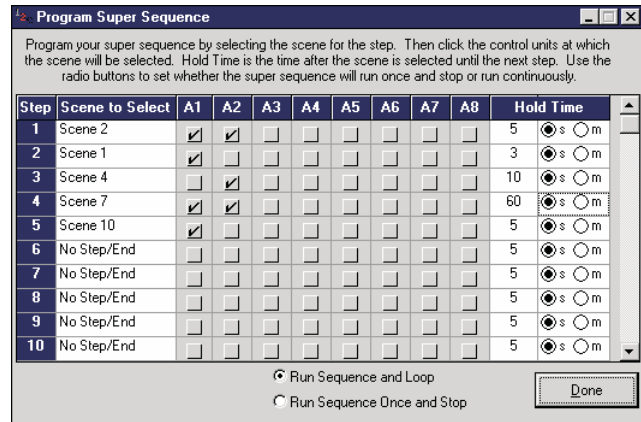
Create a Super Sequence

A Super Sequence is a collection of up to 60 system scene selects, called steps, and their corresponding hold times. The elements involved with a Super Sequence event are the scene, the selected *GRAFIK Eye* units, and the Hold Time.

- To define a Super Sequence, select **Super Sequence** from the **Timeclock** menu.
- **Set a Step.** Steps that have not yet been defined will have "No Step/End" in the **Scene to Select** column. From the first unused step, select the desired scene number from the pull-down list. Select the Units at which the scene will be selected by checking the appropriate Control Units.

NOTE: The selected scene will be activated on each of the Control Units selected for that step. For example, if Scene 2 and Control Units 1 and 2 (A1 and A2) are chosen for a step, Control Units 1 and 2 will go to their respective Scene 2 levels, using their respective Scene 2 fade times, when the step occurs.

- **Set a Hold Time.** The Hold Time defines the amount of time the system will wait before executing the next Super Sequence step. The range of hold times are 0 to 60 seconds and 0 to 99 minutes. If a Hold Time of 0 seconds is used, that step and the next step will occur simultaneously.



NOTE: The hold time begins as soon as the scene is selected, not after the scene has completed its fade. If your application requires that a scene remains for a given time after it has completed its fade, you must add the scene's fade time to the hold time. **For example,** you require that Scene 1 remains for 20 seconds after it has completed its fade. Scene 1 has a fade of 5 seconds, therefore, a Hold Time of 25 seconds should be set.

- **Editing Steps.** From the **Edit** menu, use the **Cut**, **Copy**, **Delete**, and **Paste** options to edit steps of the Super Sequence. To edit a step, select from the **Step** column and choose the appropriate edit function. In addition, an edit menu will appear by clicking the right mouse button when an event is highlighted. This pop-up menu also includes **Insert**. Inserting a step will shift the highlighted step and all steps following down one step and paste the copied step to the current step. If a step 60 has been defined, it will be shifted off the list.
- Click on **Done** to leave the *Program Super Sequence* screen.
- Select **Save** in the **File** menu to save the defined Super Sequence.

After Hours Mode

After Hours Mode of the GRX-PRG and LIAISON software allows the user to create timeclock schedules that minimize energy usage during off-peak periods or periods of non-occupancy. After a user-defined delay, following the start of After Hours mode, a user-defined scene will be selected. Any scene selection during this delay period will reset the delay period and “lease” the lighting for the space.

The user-defined delay can range from two minutes to two hours. After Hours mode can be cancelled via a scheduled event. After Hours mode can be initiated and cancelled on any combination of Control Units. The delay time is the same for all Control Units. The scene to be selected is the same for all Control Units.

After Hours Scene

A user designated scene that is automatically selected after a user-defined delay following a scene selection during After Hours Mode. While in After Hours mode, the system can automatically return to the desired energy efficiency level during periods of non-occupancy or off-peak usage.

After Hours Timeout

A user-defined time period, between two minutes and two hours, that the system will stay in a selected scene during After Hours Mode. When the time expires, the system will automatically select the After Hours Scene.

- Configure After Hours Mode:
 1. In Edit Mode, from the **Timeclock** menu, select **After Hours Mode**.
 2. On the After Hours Mode screen, check **Enable After Hours Mode** to enable the After Hours Mode; or uncheck the box to disabled it.
 3. Specify the After Hours Timeout. The valid timeout range is 2 minutes to 2 hours. Default timeout is 2 hours.
 4. Select an After Hours Scene. After Hours Mode Scene can be any Scene from Scene 1 to16 or Scene Off, the default is Scene 15.
 5. Click **Done** to exit the After Hours Mode screen
- After Hours Mode events:
 - Start After Hours Mode
 - Cancel After Hours Mode

These events can be scheduled as timeclock events.
- View System After Hours Mode Configuration:

In online mode, from Online Options menu, select After Hours Mode.

NOTE: After Hours Mode requires a GRX-PRG with minimum code revision of 4.2.

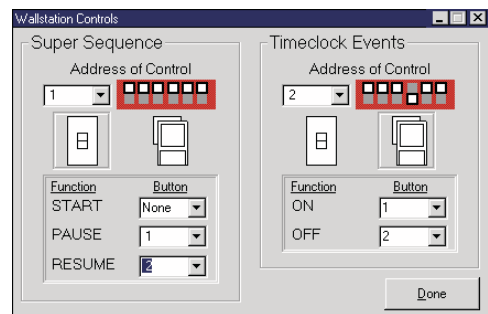


Assign Controls for Super Sequence and Timeclock Events

GRAFIK Eye Accessory Controls, NTGRX-2B-SL and GRX-AV, can be assigned to manually control the Timeclock interface by providing the following functions: start, pause and resume a Super Sequence, and turn on or off Timeclock events.

- To assign an Accessory Control, select **Wallstation Control** from the **Timeclock menu**. Choose the appropriate system address for the Accessory Control and the Wallstation type, NTGRX-2B-SL or GRX-AV.

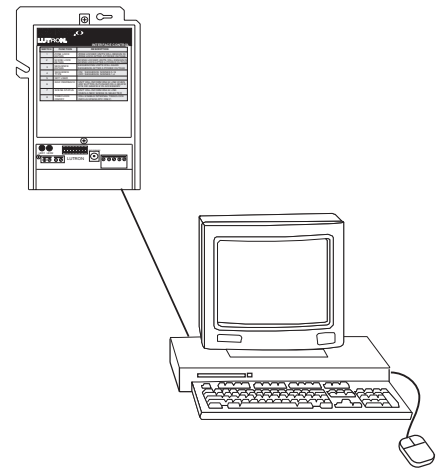
NOTE: The Accessory Controls **must** have the function DIP Switches set for Scene 1 selection.
- Assign a button for the function required.
- Select **Save** from the **File** menu to save the changes.



ONLINE OPTIONS MENU

Communicating with the GRX-PRG Interface Control

- **Establish communication with the Interface Control.**
Review the GRX-PRG instruction sheet before attempting to communicate with the Interface Control. Verify that the provided cable is connected from the 5-position terminal block on the Interface Control to a COM port on your computer.
- NOTE:** At this time, it is assumed that all system wiring has been completed correctly.
- Select **Set COM Port** from the **Online Options** menu. Select the COM port that corresponds to the port on your computer to which the GRX-PRG is connected.
 - Select **Establish Communication** from the **Online Options** menu. LIAISON will attempt to locate a GRX-PRG Interface Control. If one exists, and is connected properly, you will be notified that the unit was found. If an error message is displayed, check the wiring to the Interface Control and the PC.



Transfer Data to the GRX-PRG Interface Control

- Once communication has been established between the PC and the Interface Control, select **Transfer Data** from the **Online Options** menu. The *Transfer Options* screen allows the user to selectively transfer portions of data to the system. This feature is useful when only a portion (e.g., Timeclock events) of the system information has been modified. An initial transfer of any system requires that all system information be programmed and will take longer than selectively transferring data. After selecting **OK**, the *GRAFIK Eye LIAISON Compiler* screen will contain messages pertaining to the current status of the transfer. The messages shown during compilation will be dependent on the options chosen in the *Transfer Options* screen. After the data has been compiled and transferred, the message will read "System Compiled Successfully." After transferring data, you will be prompted to switch to Online Mode. If you would like to monitor the currently installed system, switch to **Online Mode**; otherwise, if additional editing to the system file is required, remain in the Edit Mode.

Congratulations! You have completed programming using *LIAISON* Lighting Control Software for *GRAFIK Eye*. To monitor the status of your system, continue to the next section, **Go Online with System**.

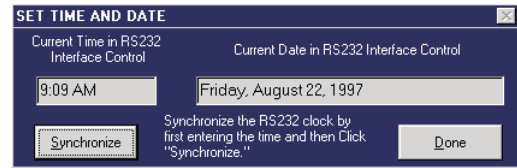
GO ONLINE WITH SYSTEM

After you have transferred data using the first mode (**Create or Edit a Project from File**), select this mode to monitor and operate your *GRAFIK Eye* system. System status is available for each Control Unit in the system. System status includes current scene selected, Timeclock status, Super Sequence status, and scheduled events. Monitoring an installed project does not require a database file (files with extension .lia). The only system information that will not be available will be system location and panel names. All other information can be monitored and/or retrieved from any installed system.



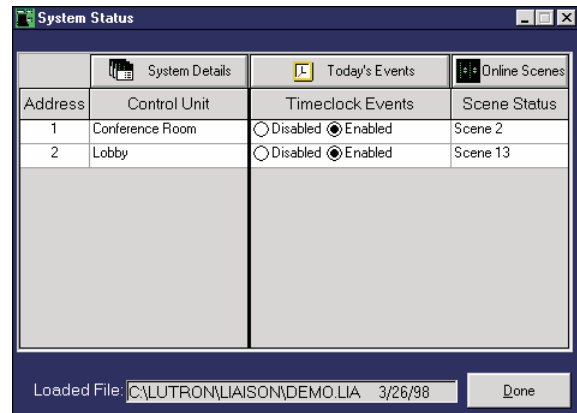
Set the Time and Date in the GRX-PRG

1. Select **Set Time and Date** from the **Online Options** menu.
2. The current time and date in the Interface Control will be displayed. If the time or date needs to be modified, type in the correct information and click the **Synchronize** button. Do not include the day of the week when entering the date.
3. Click on **Done** after the time and date have been set.



Check the Status of your System

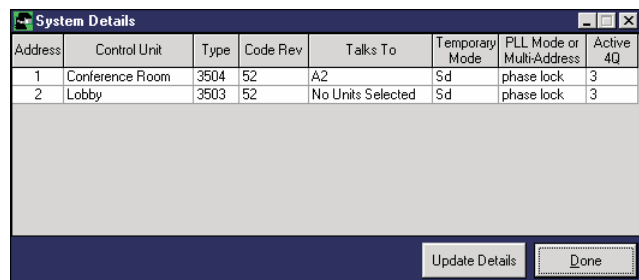
1. The current status of your system can be viewed by selecting **System Status** from the **Online Options** menu. The *System Status* screen will display current information, such as the currently selected scene at each Control Unit. With *LIAISON*, Timeclock events can be enabled and disabled on a Control Unit-by-Control Unit basis. By disabling the timeclock for a specific Control Unit, timeclock events will still occur, but will not affect the specified Control Unit.
2. If a wallstation control has been configured to turn Timeclock Events on and off (**Create or Edit a Project from File**), the Timeclock Status shown in the *System Status* screen will be affected. The Timeclock ON and OFF functions will enable and disable, respectively, the timeclock events of all Control Units in the system. **In addition, DIP Switch 8 (Timeclock ON/OFF) on the GRX-PRG will also affect timeclock status. However, timeclock status cannot be enabled on any Control Unit if the timeclock has been turned off using DIP Switch 8.**
3. Click on **Done** to close the *System Status* screen.



View the Details of your System

The details of your system can be viewed in the *System Details* screen. System details include Control Unit model number, software revision (ideal for troubleshooting), communications information, and temporary mode settings.

1. Select **System Details** from the **Online Options** menu.
2. If any changes are made to the system, click **Update Details** to refresh the list of Control Units. This feature can be useful during installation or troubleshooting.
3. Click on **Done** to close the *System Details* screen.





View the Accessory Control Details of your System

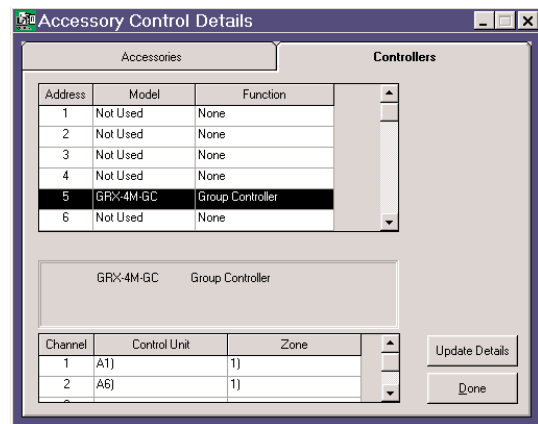
The details of the Accessory Controls in your system can be viewed in the *Accessory Control Details* screen (include Accessory Control model number, function, and communications information).

IMPORTANT! Accessory Control details are only available from accessory controls with a minimum code revision. To determine the code revision level, inspect the back of the accessory control. If you have questions, please contact the Lutron Hotline for assistance.

Minimum Code Revision of Accessory Controls for Getting Details

Type	Minimum Code Revision
Standard Accessory Control	2-0
Shade Accessory Control	1-1

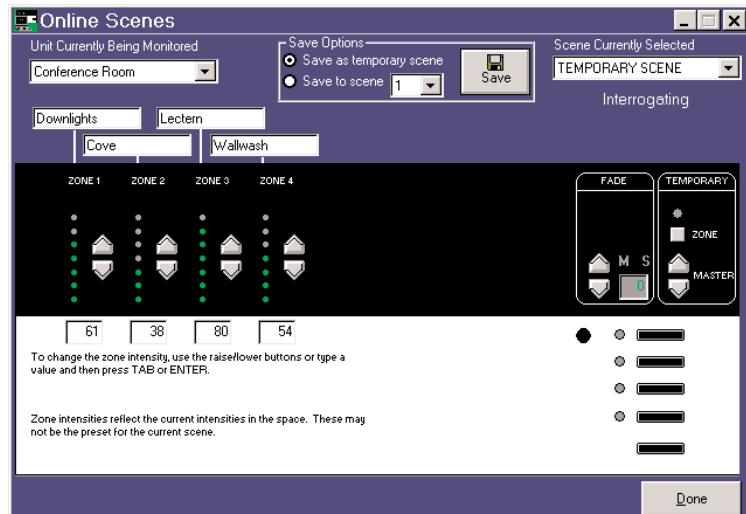
1. Select **Accessory Controls Details** from the **Online Options** menu.
 - Click the **Accessories** tab on the Accessory Control Details screen to view Accessory details.
 - Click the **Controllers** tab on the Accessory Control Details screen to view Controller details.
2. The function is derived from the DIP switch settings of the Accessory Control. Refer to the installation and instruction sheets of the Accessory Controls for more information.
3. If any changes are made to the system, click **Update Details** to refresh the list of Accessory Controls. This feature can be useful during installation or troubleshooting.
4. Click on **Done** to close the *Accessory Control Details* screen.



Modify Scenes Online

Online Scenes, located in the **Online Options** menu, enables you to modify preset data from your PC. Using your PC, temporarily adjust your lights through the familiar *GRAFIK Eye* Interface to create new scenes by adjusting fade times and zone intensities. Use this screen to "tweak" the light levels in the space, just as you would use the physical Control Unit.

- To adjust the current light levels or make modifications to presets, select **Online Scenes** from the **Online Options** menu.



- Any modifications to the light levels using **Online Scenes** will make "TEMPORARY SCENE" the currently selected scene on the Control Unit. This protects you from inadvertently changing presets unless you are sure of the modifications. To save a temporary preset, use the Save Options to select the scene and then press **Save**.

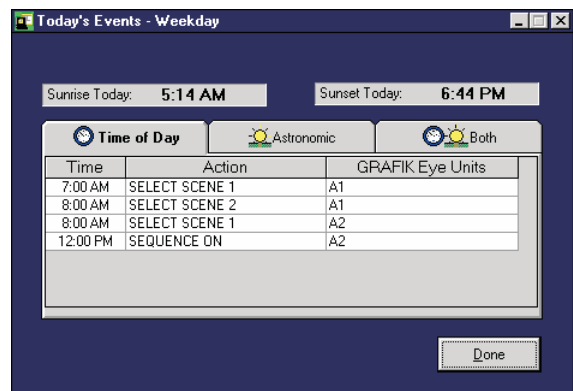
NOTE: All preset and system information in online mode is real time and does not require a file to be opened. Saving a preset in this screen saves the data to the Control Unit in the system. To retrieve and save this information to a file, refer to **Decompile**.

- To change the Control Unit being viewed, select from the "Unit Currently Being Monitored" list. The list of Control Units are the names last programmed using *LIAISON*.
- To change the current scene of the Control Unit being viewed, select from the "Scene Currently Selected" list. Remember, the zone intensities shown reflect the current intensities in the space. They may not be the preset for the current scene if someone has adjusted light levels from an Accessory Control or directly at the Control Unit.
- Click on **Done** to close the *Online Scenes* screen.



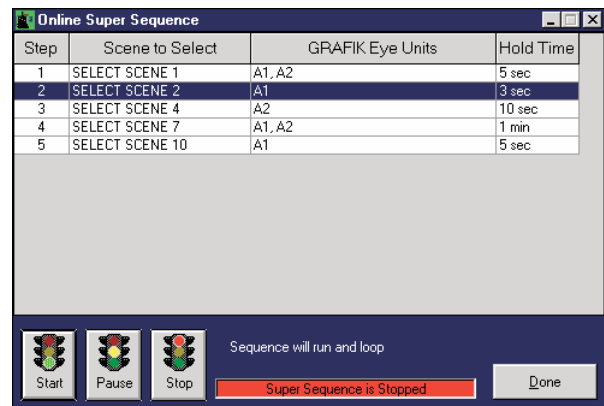
View the Events for Today

- To view the events scheduled for the current day, select **Today's Events** from the **Online Options** menu. The screen will display the current day, what schedule is to run, and the events in the specified schedule. If any events are astronomic, the time the event will occur will be shown followed by an * indicating that the time has been calculated based on sunrise or sunset.
- Click on **Done** to close *Today's Events*.



Monitor the Super Sequence

- If a super sequence (**Creating or Editing a Project from File**) has been created and transferred, the current status of your system can be viewed by selecting **Online Super Sequence** from the **Online Options** menu. The *Online Super Sequence* screen will display the status of the super sequence. Additionally, all steps of the sequence will be shown, but cannot be edited. From this screen, the user can start, resume, and stop the loaded super sequence.
- Selecting **Start** will begin the super sequence at the first step. If **Start** is selected while a super sequence is running, the super sequence will immediately go to Step 1 and continue. Selecting **Start**, for a super sequence that is **Paused** (see next page), will continue the super sequence at the next step following the event when the super sequence was **Paused**.



- Selecting **Pause** will halt the super sequence at the current step. This function may be ideal in a showroom application where specific areas are illuminated in a sequential manner and then stepped through to highlight specific areas.
- Selecting **Stop** will halt the super sequence. Any **Start** command or **Resume** from a Wallstation Control (**Creating or Editing a Project from File**) will begin the super sequence at the first step.

Any status change to the super sequence made by a Wallstation Control, will affect the status viewed in *Online Super Sequence*.

- Click on **Done** to close *Online Super Sequence*.

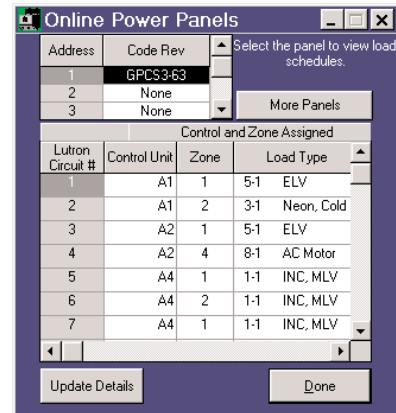


View the Power Panels of your System

The details of the power panels in your system can be viewed in the *Online Power Panels* screen. Panel details include Control Unit and zone assignment, and load type for each circuit of a panel.

IMPORTANT! Power Panel details are only available from circuit selectors with a code revision level of 2-50 or newer. The code revision is available on the circuit selector of the panel. If you have questions, please contact the Lutron Hotline for assistance.

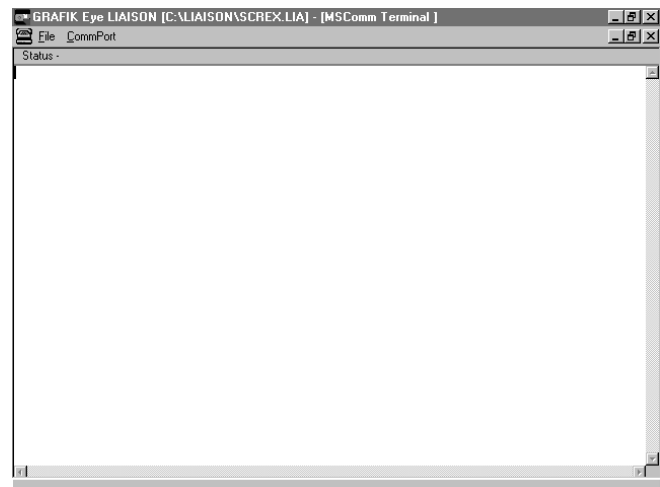
- Select **Online Power Panels** from the **Online Options** menu.
- LIAISON will search for the first four addresses of power panels. For each panel located, circuit information will be received.
- To check for more panel addresses, click **More Panels**. LIAISON will search for the next four addresses.
- If any changes are made to the system, click **Update Details** to refresh the Control Unit and Zone and load type assignments. This feature can be useful during installation or troubleshooting.
- Click on **Done** to close *Online Power Panels*.



Communicate with the GRX-PRG in Real Time

All commands available through the user interface can also be sent using a terminal or equivalent device. To use the terminal interface available with LIAISON:

- Select **Terminal** from the **Online Options** menu.
- Refer to the *GRAFIK Eye RS232 Protocol* help file installed in the LIAISON program group for commands that can be entered and data that can be received from this screen. For a complete set of printed commands, refer to the *GRAFIK Eye RS232 Protocol* (Lutron P/N 040-138).



Retrieve the Current System Configuration from the GRX-PRG

In many instances, the programming of the *GRAFIK Eye* system may be done using conventional programming methods instead of *LIAISON*. Or perhaps, *LIAISON* may be used for the initial programming and final adjustments to the lighting are done in the space. In these instances, it would be desirable to recover the system configuration in a format that could be reviewed or reused at a later time. Most system information can be recovered; including presets, communication information, Timeclock events, Super Sequence data, calendar exceptions, and default schedules configuration. The only data that cannot be retrieved are Accessory Control names, system location, and customer circuit information. To retrieve the current system configuration:

- Once communication has been established between the PC and the Interface Control, select **Decompile** from the **Online Options** menu. The *LIAISON Decompiler* screen will contain messages pertaining to the current status of the retrieval. The first step of decompiling is to select a file name for saving the configuration. A warning will appear if the file already exists. After retrieving the data, you will be prompted to switch to Edit Mode. If you would like to view or edit the currently installed system, switch to Edit Mode where the decompiled file will be open; otherwise, if additional monitoring to the system file is desired, remain in the Online Mode.

Finally . . .

Switching between Edit Mode and Online Mode

After starting *LIAISON*, it is still possible to switch between **Create or Edit a Project from File** and **Go Online with System** modes. From either mode, select the **File** menu. Depending on the current mode of operation, select either **Go to Online Mode** or **Go to Edit Mode**.

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