TRIATEK® LIGHTING

THE NEW STANDARD IN LIGHTING CONTROLS

BASnet LightiView™ User's Guide

ATTENTION

This section serves as a notice of the immediate or potential dangers involved when working with the equipment described throughout this manual. Any person involved in installation, maintenance, or service of the equipment should first carefully examine the equipment and read the instructions contained in this manual to ensure that personal and/or equipment injury is avoided.

The following safety messages are used throughout this manual to alert of immediate or potential danger to life or property:

Hint Indicates a tip or trick to help you with setting up or controlling the BASnet LightView.

DANGER! Indicates an immediately hazardous situation which, if not avoided, will result in death or serious injury.

WARNING! Indicates a potentially hazardous situation which, if not avoided, can result in death or serious injury.

CAUTION: Indicates a potentially hazardous situation which, if not avoided, can result in minor or moderate injury.

CAUTION: Used without the safety alert symbol, indicates a potentially hazardous situation which, if not avoided, can result in personal or property damage. Failure to comply with proper handling of the TRIATEK Lighting products may void your warranty

In addition, this symbol may appear in the margin of specific portions of text as a safety reminder. Applicable instruction steps will be listed beneath the symbol.

Disclaimer

Instructions contained in this user's guide should be performed only by qualified persons in accordance with local and national codes. TRIATEK® Lighting, Inc. and its affiliates assume no responsibility for any consequences related to the improper use of this manual.

What's New in LightView 3.0* ?

(*Present version is called 2.0 in BLV Users Guide.)

New Features

- Dial up modem can be connected to 232 port to serve up the BLV web pages. A selector switch is provided use the 232 port as a console or modem connection.
- Firmware upgrade flash capability. Users can receive a firmware image from TRIATEK Lighting and upload it via the web interface.
- Import groups from LPPK. Previously, users must set up the panel groups in again in BLV even if they already existed in the LPPK file. Now the user creates the panel groups just once in LPPK and simply imports them to BLV.
- Multi-event linking for photocells. Previously, multi-lamp lighting events for photocells were not truly linked resulting conflicting commands sent over the network. Now photocell events can linked in setup to work together. The protocol establishes the correct command for linked multi-lamp levels used in day lighting.
- Event log e-mail option. Users can specify sender address, destination address, and time when event logs are to be automatically emailed. An energy manager could thus arrange for event logs from multi-sites to be sent to his office.
- Motion sensor group can be used to qualify photocell event. Previously, this could only be effectively done in conjunction with hard wire methods to the LMB.
- Lighting groups are now sorted. Previously, the groups were placed at the top of the BLV group list page. This was cumbersome when groups were inserted later and appeared out of numerical order. Now a new entry is inserted in its proper order, according to panel and group number even if added later.
- TI-45-Net global commands. Previously, users needed to call in a separate user ID for each panel. Now a special block of reserved user ID codes can be mapped to multiple panels allowing 1 call to control a BLV Area spanning several panels.

Improvements

- Enhanced logging capability. Events log increased from 30 to 100. Command log increased from 100 to 500.
- Areas increased from 100 to 250.
- Qualifiers increased from 30 to 100.
- Area names appear at top of group-assignment-to-area page. Previously, the page did not identify which area the groups were being assigned to.
- Ignore TI-Net override if overtaken by BLV schedule. Previously, if a TI override On was followed by BLV scheduled ON, the TI would turn Off the circuit during the middle of the scheduled period. Now the TI Off is ignored when superceded by a BLV schedule.
- BLV no longer automatically times out after 6 minutes of inactivity. The timeout is user adjustable.
- Data base converter. A separate program is available to convert databases made in rev's 1.0, 2.0, 2.0a, 2.1, and 2.1.1(=3.0).

Hint:
Use the Table of Contents. It is provided as a map to guide you through the essential items needed for your particular application of LightView.

What's Was New in LightView 2.0 ?

• Daylight Savings Time - Pg 38 - When enabled by the user, this feature will automatically change BLV's clock to Daylight Savings Time when DST is in effect.

• Six Astronomical Events - Pg 25 - Astronomical Events allow lighting events to be scheduled based on sunrise and sunset times forecast by LightView. This feature is ideal for scheduling outdoor lighting or appropriate indoor areas that depend on sunlight illumination.

• Thirty Photocell Events - Pg 24 - Photocell events are used to control lights based on variable sunlight illumination levels. Up to 30 photocells can be placed at different areas so that lighting can be controlled for daylight harvesting or outdoor scheduling. BLV also allows specifi cation of a dead band tolerance to prevent spurious triggering of lights.

• Thirty Continuous Qualifi ers - Pg 22 - Earlier versions of LightView only qualifi ed an event once. This new feature continuously monitors a user-specified group and detects state changes. A state change then triggers user-defi ned actions on a list of areas. This feature is ideal for installations that require a switched input on one panel to control other panels.

• Automatic IP Address Discovery - Pg 7- This feature is ideal for users that connect directly to an BLV module using crossover cables. This allows users to communicate with BLV without reconfi guring their network settings. The process is initiated by pressing a switch on BLV and then accessing any address within the computer's subnet from Internet Explorer. BLV will detect the address requested by Internet Explorer and reconfi gure itself to that address.

• Name up to 1000 Groups - Pg 14 - Earlier versions of LightView control up to 1000 Groups but support assigning a 23-character description to only 254 of the 1000 Groups. The ability to assign 23- character descriptions to up to 1000 Groups is useful for installations that use the "Area and Group Status" feature to override or monitor Group status of an entire lighting network.

• LPPK with LightView - Pg 47 - LightView 2.0 now interfaces with LPPK to allow users to program all TRIATEK Lighting panels connected to LightView over the Internet from any remote location.

• Telephone Interface with LightView - Pg 44 - LightView is configured to work with TI-4500-0-Net, TRIATEK's telephone override interface. Ti- 4500-0-net with LightView provides up to 8191 password–protected user ID's and up to 6 hours of override plus cancellation of on-going override. Voice prompts can be customized by the user.

• Documentation - LightView documentation is presented in two publications: LightView User's Guide and LightView Installers Guide. For basic physical installation and wiring, refer to LightView Installer's Guide. For all other matters, refer to this publication.

To use LightView successfully, three things must be accomplished:

1) LightView must be installed properly.
2) LightView must be set-up to communicate with a Laptop or PC.
3) Once communication is established, LightView must be programmed to control the lighting panels. Once these three items are done, LightView can operate either "stand-alone" or remain connected to the workstation or LAN.

To Install LightView:

• Refer to publication, LightView Installation Guide.

To Set-Up LightView:

• Set an IP address in LightView compatible with the subnet of the workstation or LAN.
• Details are covered in this document's main sections:
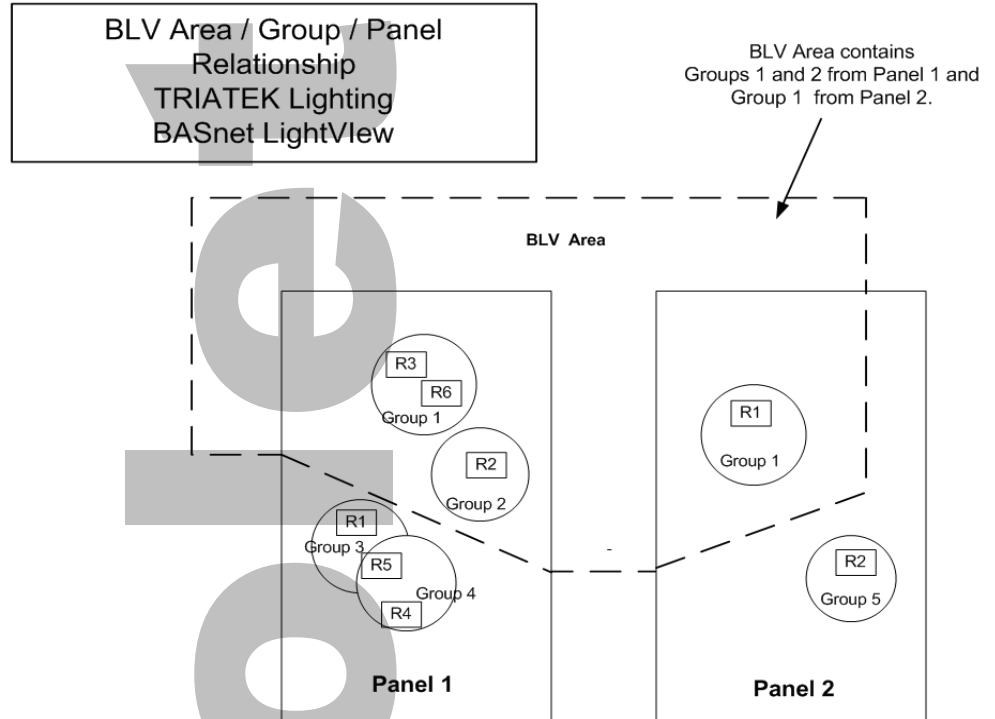   ***Setting Up BLV*** and ***Connecting to BLV***.

To Program LightView:
• Define the Lighting Panel Groups
• Define the Lighting Areas
• Assign the Panel Groups to the Areas
• Schedule the Areas.
• Details are covered in this document's main section: Programming BLV.

Contents
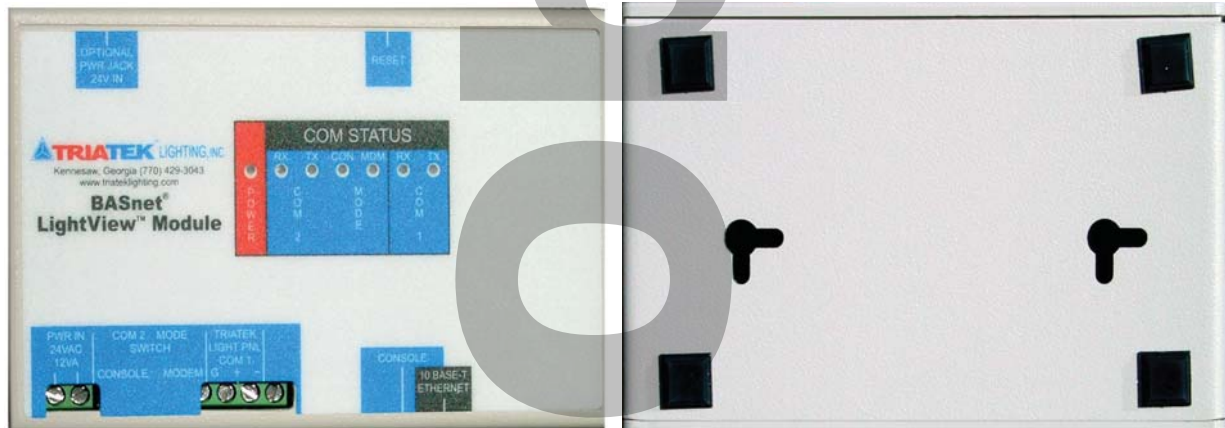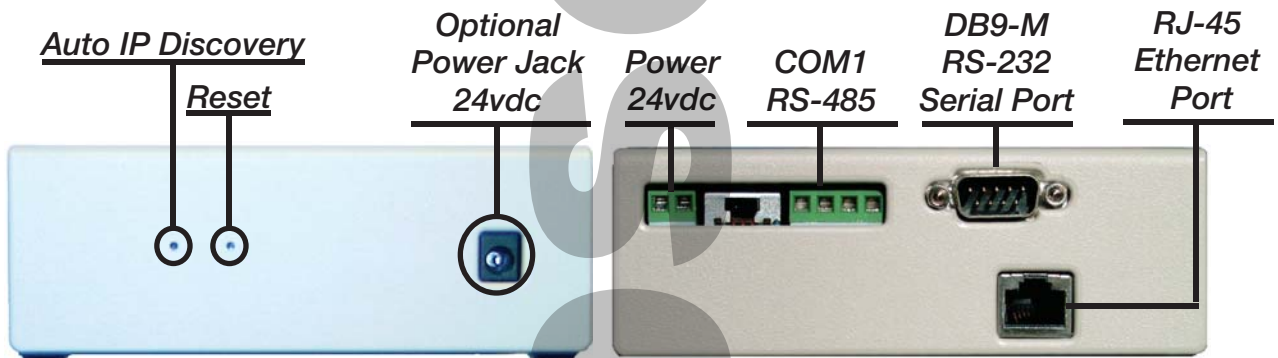
BASnet LightView User's Guide

BASnet LightView Overview

The BASnet® LightView™ (BLV) is a Web-based programming system that enables lighting control from an internet browser. The browser functions to execute scheduled event commands upon pre-defined lighting areas. These areas can be planned and designed with the use of worksheets, and they then can be entered into the module via BLV system.

BLV's functionality is based on a structure that utilizes lighting panels, groups and areas. This structure provides a logical and organized system. Their relationship is defined briefly as follows: Lighting areas are composed of one or more lighting groups, and lighting groups are composed of one or more relays in a lighting panel. Each lighting panel employed by BLV has its own groups assigned to it. A lighting group never spans multiple lighting panels. The browser can handle schedules for up to (inclusive) 100 lighting areas, and 1000 lighting groups. The system allows the user to input, change and view all information related to the lighting areas.

BLV Area / Group / Panel Relationship
TRIATEK Lighting
BASnet LightVIew

BLV Area contains Groups 1 and 2 from Panel 1 and Group 1 from Panel 2.

BLV Area

R3 R6 Group 1
R2 Group 2
R1 Group 3
R5
R4 Group 4

R1 Group 1
R2 Group 5

Panel 1

Panel 2

A summary of the systems components and associated functionality follows:

1.) The Main Menu of links to all pages in the system.

2.) Lighting Groups Assignment where groups are assigned to panels.

3.) Lighting Area Assignment where areas are created and groups are assigned to areas.

4.) Scheduling Events where areas are given actions to perform and grouped by time the actions occur.

5.) Viewing Events of all schedules in the system.

6.) "Today's" Event List displays the events scheduled to occur that day.

7.) Holiday List page provides addition and modification of holidays into the system.

8.) Area and Group Status displays the current ON/OFF states of the areas and groups, allows manual override of the areas and groups, and uploaded maps can be viewed.

9.) System Setup includes system clock alteration, Network address configuration, upload maps, backup and restoration of system database, and deletion of database.

10.) System Logs records any phenomena related to a schedule and an area including creation, modification, and qualification of schedules and success or failure of action on areas, along with the time stamp of these phenomena.

11.) BASnet LightView is able to receive telephone override commands from TRIATEK's TI-4500-NET telephone interface module. See pages 31-33 for details.

12.) BASnet LightView interfaces with LPPK to allow users to program lighting panels connected to BASnet LightView over the Internet from any remote location.

Auto IP Discovery

Reset

Optional Power Jack 24vdc

Power 24vdc

COM1 RS-485

DB9-M RS-232 Serial Port

RJ-45 Ethernet Port

Setting Up BASnet LightView

Automatic IP Address Discovery This feature is ideal for users that connect directly to BLV modules using crossover cables. This allows users to communicate with BLV without reconfiguring the network settings on their laptop or PC. LightView will configure its IP address to be compatible with the user's laptop. Use this feature only with direct connections to BLV.

To use Automatic IP Address Discovery:

• Determine the network IP address of the laptop or PC. Typically, right click "My Network Places" then select Properties.

• Next, select TCP/IP for the ethernet card and then click on the Properties button.

• Connect Laptop or PC to BLV using ethernet cross-over ("null modem") CAT5 cable.

• Open Internet Explorer

• Depress the auto discovery Switch in BLV. See diagram below.

• On the address bar at the top of the Internet Explorer page, enter an IP address within the range of the laptop's subnet.

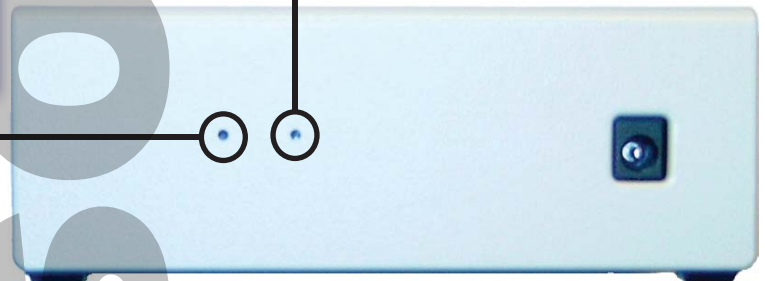• LightView will reconfigure itself to an IP compatible with the laptop's address.

Hint:
Push pin through this hole to activate internal switch for automatic IP discovery. Use this feature only with direct connections to BLV.

Reset

Auto IP Discovery

Configuring BLV Using Serial Console

When Auto IP Discovery cannot be used, set the IP via BLV's serial console and HyperTerminal. The RS-232 serial programming cable is used to set initial low-level system settings such as network addresses and the browser password with a serial console program. It is not necessary to use the serial interface for any future changes of the network addresses because the LightView Browser can be used for this purpose. (See "Setting IP Configuration" on page 28). The browser password, however, can only be changed through the serial console interface. HyperTerminal, which comes standard with most if not all current versions of Microsoft® Windows® is a serial console program that can be used to change the low-level settings.
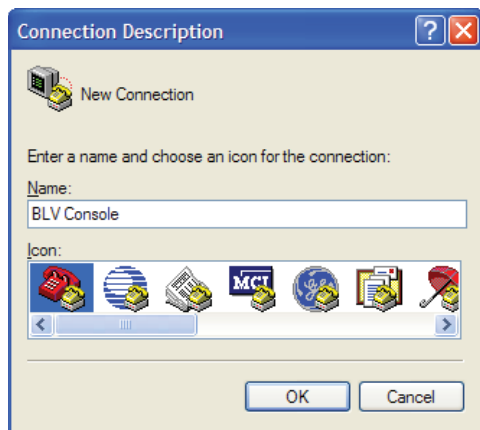
Setting Up HyperTerminal

In order to communicate to the BLV module, the IP, gateway, subnet mask and name server addresses need to be changed. To change each of these settings, firstly, run a terminal program. The example to the left uses HyperTerminal. HyperTerminal can normally be found in Windows Accessories under Communications.

The first window that displays in HyperTerminal is the Connection Description window shown to the left. Name the connection, select an icon, and click "OK". In the next window shown below, select the Communications port the RS-232 cable is connected to on the host computer, and click "OK".

Setting Up BASnet LightView

Setting Up HyperTerminal (continued)

Next, specify communications port information used with the communications port is entered in the "... Properties" window. Select the same values used below and click "OK". These values are required for proper communication with the BLV module. For information concerning the meaning of each field refer to HyperTerminal documentation. If using another terminal program, the format of the fields into which the data is entered will be different, but the same information will need to be supplied.
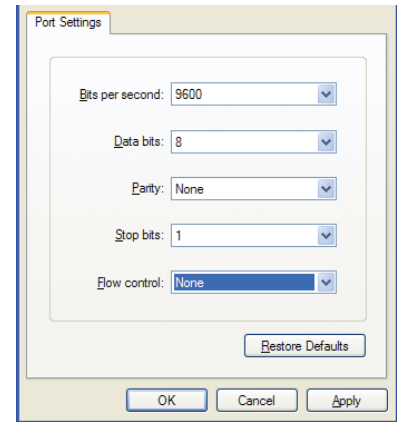
Setting Network Address

After providing the proper communications port settings, the terminal window will open. The "set" command is used to input the network settings which have associated variables. The list of variables and how the "set" command is used to change the variables can be viewed by using the "help" command. Enter "help set" from the keyboard as shown below:

Note: TRIATEK Lighting ships the BLV module with default network settings. If the module will be installed on a LAN these settings must be changed. The default settings are as follows:
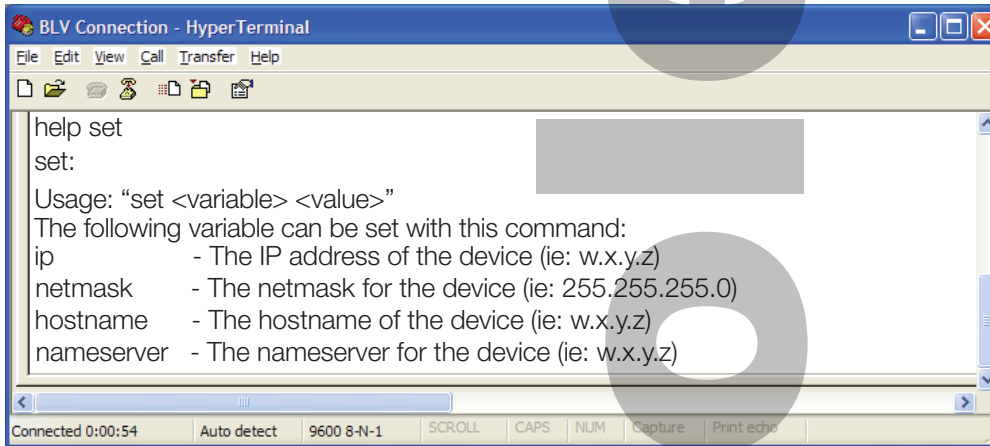
IP address: 192.1.1.1

Netmask: 255.255.255.0

Gateway: 192.1.1.1

Nameserver: 192.1.1.1

Based on help's information shown above the user would, as an example, set the IP address by entering "set ip 199.250.185.179". Each variable listed in help is assigned values in the same manner according to the usage given. The window below shows all network variables being set.

All current values of the network variables can be viewed by using the "show config" command. This command can be used at any point during the console session. It can be used to view the settings before any changes are made and after each and all variables are set.

Hint:
Use the HyperTerminal "show config" command to display or validate the current configuration settings.

Setting Up BASnet LightView

Setting the Password

Unlike the network variables, the password used to enter the BLV system can only be set through the RS-232 serial connection. Not allowing the password to be changed from the browser is a security feature that keeps the password in a single secure location, and this in turn prevents an unintended user who has not been granted access to the physical module from changing the password from another user's browser. It is much easier for someone to change the password from a user's opened browser window than actually getting access to the physical module and an RS-232 cable.

Like the network variables, the password can be set using the "set" command, however, set's usage with the password variable differs from the usage of set with the network variables.

To change the password enter only "set password" and then press the Enter key on the keyboard. The program will then bring the user through a set of prompts to change the password. The program first prompts the user for the old password:
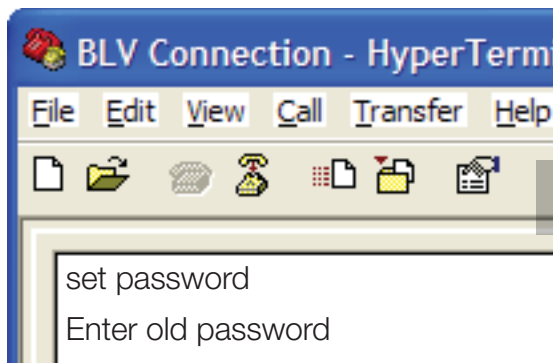
Now enter the old password and press the enter key. If the old password is entered incorrectly it will generate an error:
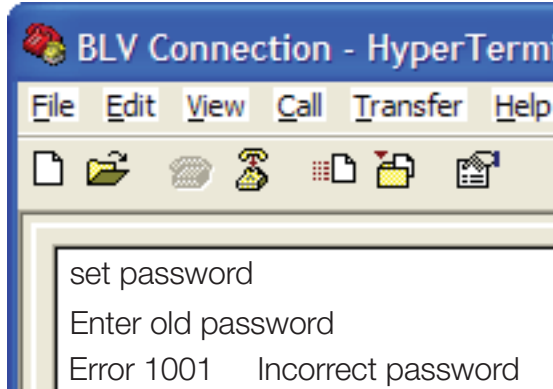
Each time an error is generated, "set password" must be entered again. The program will then compare the entered password with the actual password. If the old password is entered correctly, the program will report "Password Verified", and then prompt the user to enter the new password:
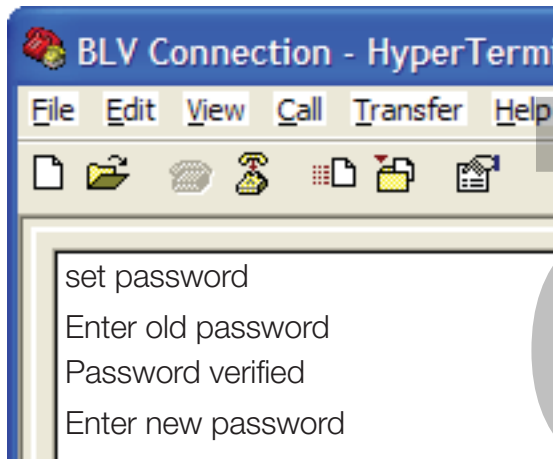
Passwords can be a maximum length of any 9 keyboard characters.

Hint:
If the new password entered is more then 9 characters HyperTerminal will respond with "ERROR 1000 9 character password limit"

Setting Up BASnet LightView

Setting the Password (continued)

set password
Enter old password
Password verified
Enter new password
Reenter new password
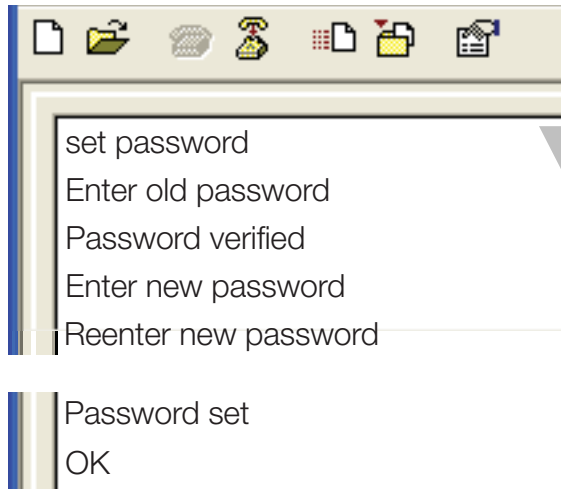
Password set
OK

After entering a new password that is less than or equal to 9 characters, the program will then request the user to reenter the new password to verify that the new password is the intended password of the user.

Hint:
If the new password entered does not match the first password HyperTerminal will respond with "ERROR 1002 Passwords do not match" You will need to restart the "set password" process to proceed

After reentering the password correctly, the program will accept, giving the conformation message "Password set", and make the password change. The user can now connect and login to the BLV.

Connecting to BASnet LightView

Checking the Version of Internet Explorer

Before running the browser ensure Microsoft® Internet Explorer 5.5 Service Pack 2 or a later version of Internet Explorer is employed to run. This information can be found by running Microsoft® Internet Explorer, going to "Help" in the menu bar, and then selecting "About Internet Explorer". See "Version" and "Update Version" in the graphic to the right:

Hint:
Microsoft offers the Internet Explorer brower and all updates for free on it's download website.
http://www.microsoft.com/
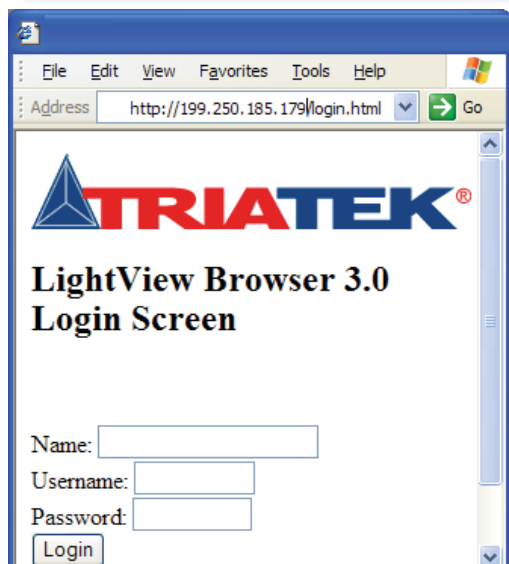
Logging In

The BLV system can be reached by entering the IP address of the LightView module in the URL window of the users internet browser and then hitting [Enter↵] on the keyboard or clicking the "Go" button on the browser next to the address text box. The first page of the system displayed (left) is the login page.

Hint:
If you cannot see the URL window on your browser, you can make it visible by selecting View ➔ Toolbars ➔ Address Bar (make sure there's a ✓ next to "Address Bar")
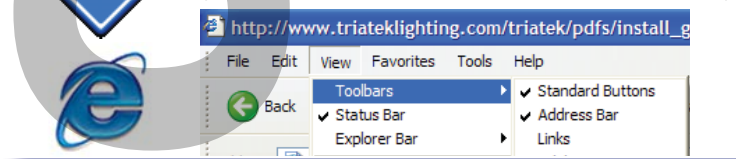
Setting Up BASnet LightView

Logging In (continued)
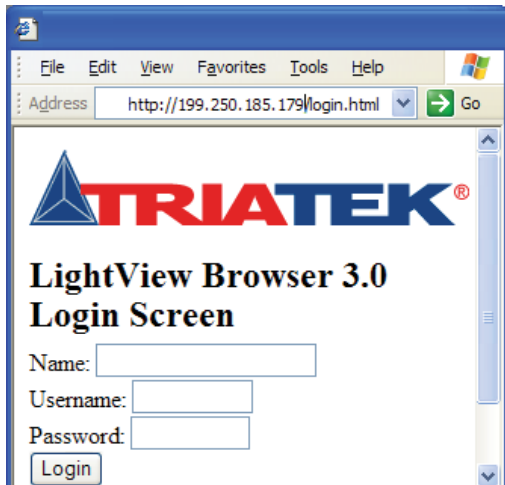
To login, the user should enter their name or some form of identification in the Name box. The username and password, initially are given by TRIATEK Lighting. The user's name is always "manager", and the password is set to "password". The password should be changed by the company for security. For instructions on how to change the password, refer to "Setting the Password" on page 10. Enter the username and password in the text boxes provided.

Hint:
Since the same factory default password is provided with all BASnet LightView modules, the installer should promptly change the password upon installation to prevent unauthorized access to the lighting controls.

Navigating the BASnet LightView

Once the username and password are given, click the 'Login' button. The user is then brought to the main menu (**right**).

From this menu the user can reach all pages of the browser. In addition, most pages in the system provide the capability to reach all other pages by a menu of page links at the bottom of the page. The page menus can be used in conjunction with the back and forward buttons to enable easy navigation throughout the system.

Main Menu

1. Lighting Groups - View, Add, Edit, Delete
2. Lighting Areas - View, Add, Edit, Delete
3. Add Scheduled Event
4. Events List - View, Edit
5. Today's Events List
6. Holiday List - View, Edit
7. Area and Group Status (Applet)
8. System setup
9. View Event and Command Logs
10. Log Out
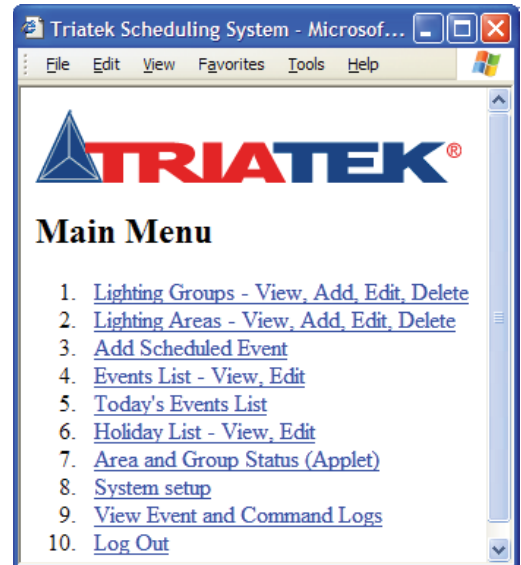
Programming the BASnet LightView

Defining Groups

Defining the lighting groups for each TRIATEK lighting control panel is the fi rst step to program the browser. Each group is assigned relays using the TRIATEK LPPK software. For instructions on how to assign relays to groups see the "LP Controller Users Guide".

Even though groups have already been created using LPPK they need to be entered into BLV in order that
1) they can be controlled by BLV, and
2) they are necessary for the creation of areas. The input process involves assigning a name to a group and the panel the group belongs to.

To input the defined groups with their associated panels, from the main menu, click on 'Lighting Groups - View, Add, Edit, Delete'. This will lead to the 'Group Name Assignments' page. From this series of pages the groups can be defined with their associated panels.
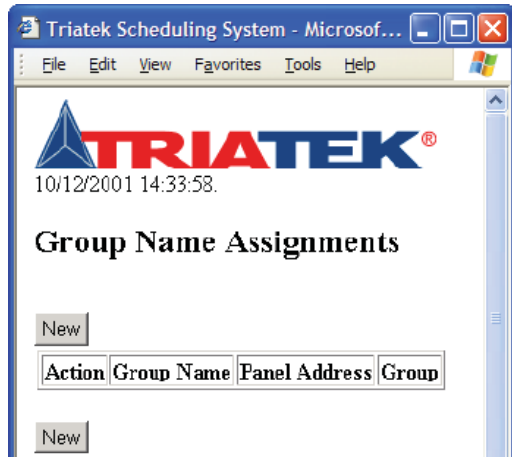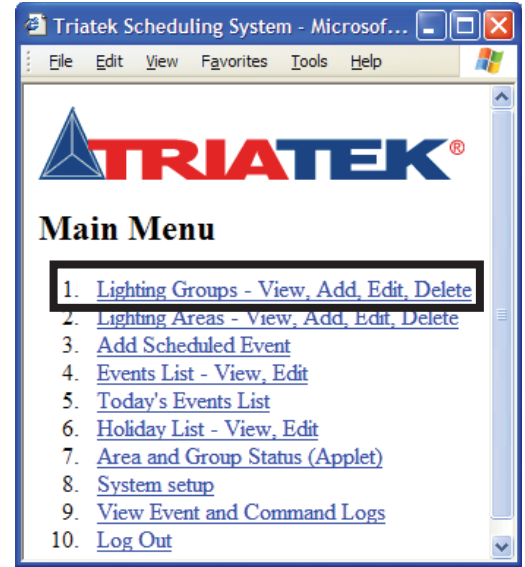
To begin defining, click the new button and the "Group Assignment Form" page will appear. On this page enter the panel and group numbers in the text boxes along with the description.

See "Naming the Schedule" on page 17 for a discussion on naming conventions in BLV.

Group name descriptions are limited to 23 characters.

The BASnet LightView is capable of addressing up to 1000 groups.

To save this item and return to the list of group name assignments, click the save button. If you would like to add more groups without returning to the Group list click the 'save + new' button.

Once all of the groups have been assigned to the panels here, all groups can then be viewed on the 'Group Name Assignments' page which will now contain a list created of the recently added groups.
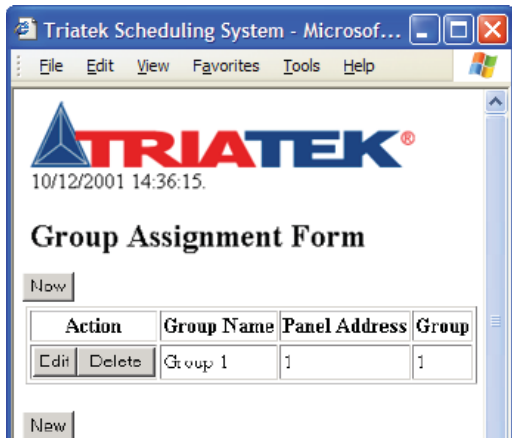
From this page group assignments can be edited or deleted. Clicking the delete button will bring up a confirmation window to prevent accidental deletes.

This feature is included in all pages of the system containing a delete option.

Programming the BASnet LightView

Creating Areas

Following group assignment, areas can be created.

Areas are defined as one or more lighting groups to be controlled. Areas are created beginning in the 'Area List' page.

This page can be reached from the 'Lighting Areas - View, Add, Edit, Delete' link, or simply 'Lighting Areas' from another page menu.

To create areas, click the new button, enter the description name in the 'Add New Area Form' page, and click either the 'Save' button to return to the Area List age where the newly created areas will be displayed, or the 'Save + New' button to name more areas.

See "Naming the Schedule" on page 17 for a additional information on naming conventions in BASnet LightView.

The new areas will show the area name and the number of groups that have been assigned to area. At this point no groups have been assigned, and the number will read 0. (*example displayed below*)
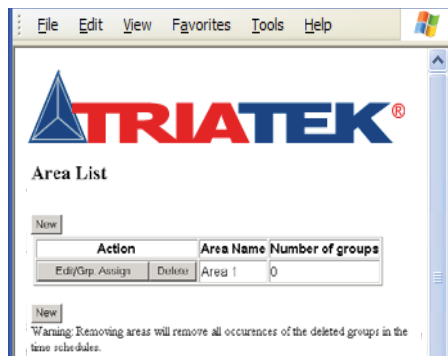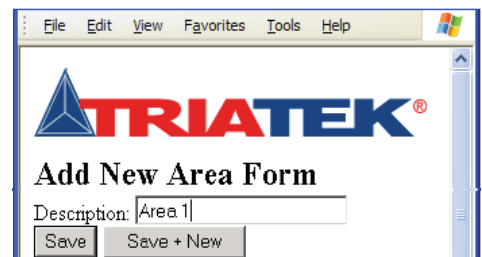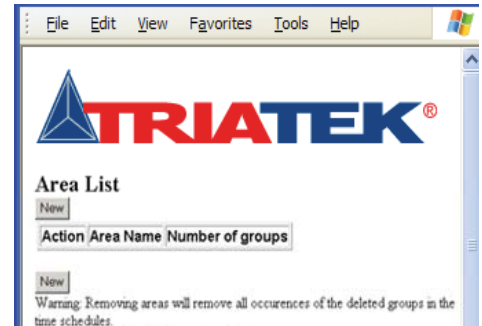
The displayed areas have an edit and delete button. The edit button at this stage allows the user to change the description of the area. As mentioned previously if the user chooses to delete the area confirmation will be requested, moreover, on this page a warning is given. The warning informs the user that deleting an area here will delete all occurrences of that area in the BLV system. The main concern will be the area being deleted from the event list which is described later.
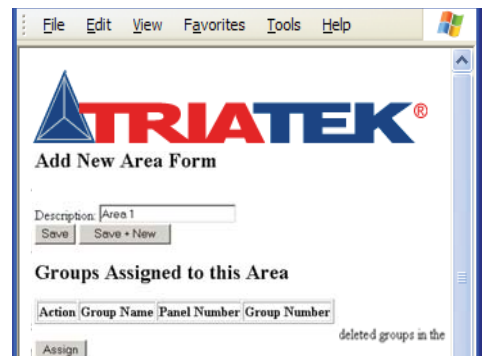
Now these areas need groups assigned to them. Refer to the graphic above. The 'Edit/Grp. Assign' button enables adding one or more of the pre-defi ned groups to an area. Click the 'Edit/Grp. Assign' button of an area and the 'Add new area form' page will display now with a section called "Groups Assigned to this area". Along with the column headings an 'Assign' button is given to assign groups to the area listed. The area description can be edited here as well.

Click the 'Assign' button. The 'Area Assignment Details' page then appears.

Select one of the predefined groups and select 'save' to add only one group to this area or 'save + new' to add additional groups to this area.

Programming the BASnet LightView

Creating Areas (continued)
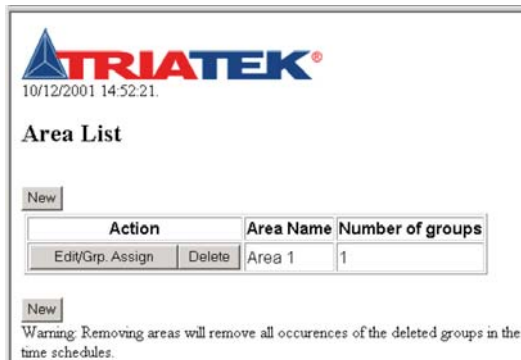
The Add New Area Form will display again but now with the new group and its panel and group number with it.

- To edit the group added to this area click the 'edit' button.
- To delete the group, click the 'delete' button.

Additional groups can also be added to this area by clicking the 'Assign' button and repeating the previous steps.

To now save the area with its new group and return to the Area list to view all created areas, click 'save'. New areascan be created from this current page without returning to the 'Area List page'.

Click the 'Save + New' button to create more areas.

Hint:

Once all groups are assigned to areas, the Area List page with the area description and the number of groups assigned with them will display. A maximum of 250 areas that can be defined.

Creating Schedules

Now that the areas with their respective groups have been created, the last series of steps involve programming the browser to make schedules of events with the areas.

A schedule is where areas are grouped together to perform action commands at the same point of time and for the same duration of time. A schedule is given one start and end time on which to perform the start and end action of each area controlled in the schedule. A schedule may contain one or more areas to control, and each area in the schedule can be assigned ON, OFF, or DO NOTHING actions.

Time in the schedules is displayed and processed as military time. A unique feature of scheduling in BASnet LightView is that more than one area can be assigned to the same schedule. Many of our competitors require a separate schedule for each area. When a large number of areas need to be controlled, multiple-area scheduling can prove to be a more fl exible solution that saves time and energy because the number of programming operations performed by the user is reduced considerably.

To create a scheduled event click the 'Add Scheduled Event' link if you are in the main menu or 'Add Event' link if on another page in the system. Both are linked to the same page. This page has two sections: Event Details and Lighting Area Commands.

Programming the BASnet LightView

Event Details

To edit the group added to this area click the 'edit' button. To delete the group, click the 'delete' button. Additional groups can also be added to this area by clicking the 'Assign' button and repeating the previous steps. To now save the area with its new group and return to the Area list to view all created areas, click 'save'. New areas can be created from this current page without returning to the 'Area List page'. Click the 'Save + New' button to create more areas.

Setting the Duration of the Schedule

The fi rst button in the Event Details section is the 'Use Single Day Schedule/Use Multiple Day Schedule' button. It is a single button that performs two functions. The 'Use Multiple Day' function allows the user to input multiple days in a week on which the schedule will execute and then set a duration via the date range. The 'Use Single Day' function allows the user to schedule for one day and set the date the schedule will execute on.
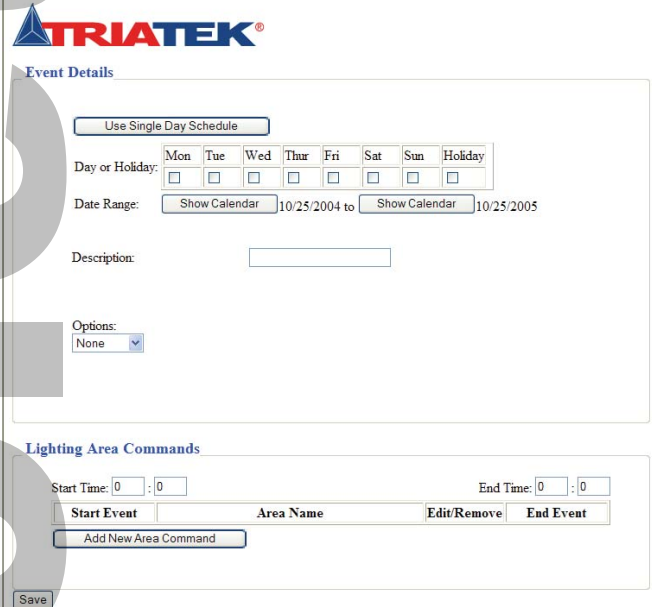
Using Multiple Day Scheduling

When the page is fi rst viewed the button reads 'Use Single Day Schedule', and below the button is an associated row of boxes for each day of the week and a holiday box. Click each box that the schedule is to execute on. The Holiday box is included here to give the user the option of controlling whether or not BLV will execute lighting commands on a holiday. By default the system executes no action on a holiday (See 'Holidays' below to learn how to program holidays into BLV.). Clicking the holiday box here tells BLV to execute the lighting commands even if the current day is a holiday. In order to ensure that the schedule executes on a holiday check the holiday box; otherwise, leave it blank.

Using Single Day Scheduling

To use a single day schedule click the "Use Single Day Schedule" button.

As soon as the button is pushed the boxes for the days of the week disappear and the button will read 'Use Multiple Day Schedule' as shown below.
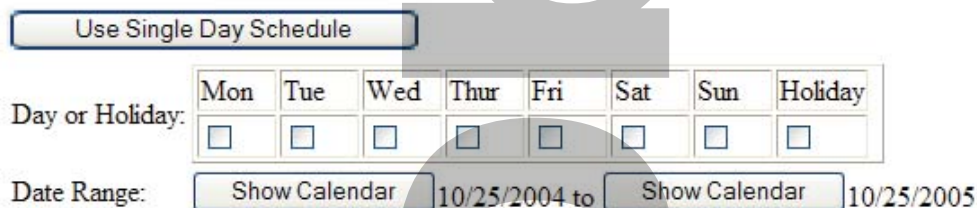
Hint:

Single Day scheduling is typically used only when testing the browser & schedule.

Programming the BASnet LightView

Setting the Date Range

Below the "Single"/"Multiple" day section, is the date range. Single and multiple day scheduling also affects the appearance of the date range. When single day scheduling is selected only one day is needed, therefore one date with its calendar button disappears, and the single date is left. The date range consists of two dates, each with a 'show calendar' button. When the show calendar button is clicked a calendar displays that allows the user to select the month, year and day desired. Once the calendar appears, fi rst select the desired month and year. The order of these two does not matter. Then, select the day the schedule will begin to execute. If single day scheduling is chosen, there will only be one date in the range; this will be the only day to select. For a multiple day schedule repeat these steps for the end of range.

Naming the Schedule
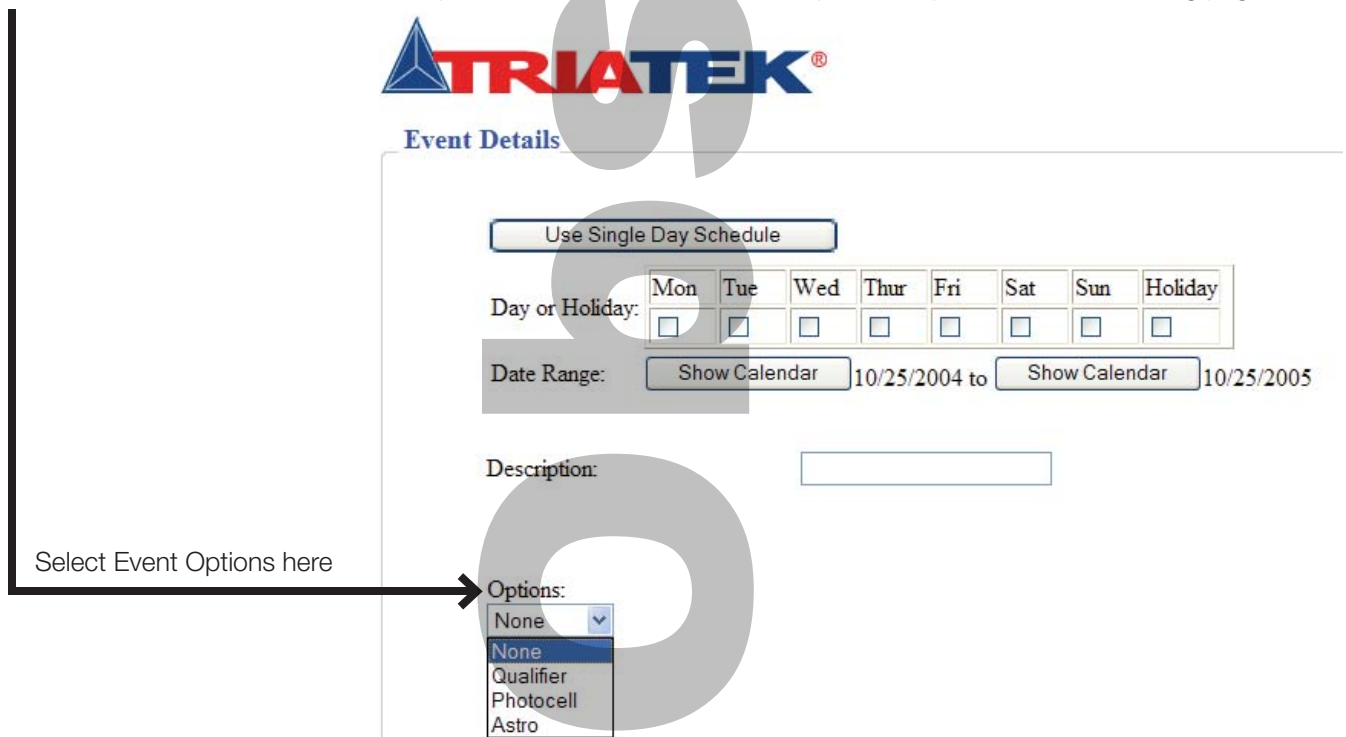
The Schedule is named in the text box adjacent to "Description" in Event Details. Schedules can be according to the programmers needs and preference. Naming of the schedules matches that of groups and areas, i.e., it is best to give them meaningful names, names that describe what they are commanding. For example, if all hallway lights are included in a schedule, an appropriate schedule description could be simply, "all hallways schedule". Naming the schedules also depends on the number and complexity of the lighting areas. If only a few areas are being programmed by only a few schedules they could be named, 'Schedule 1, Schedule 2, etc.' To name the schedule enter the name of the schedule into the 'Description' text box. The description can be a maximum of 23 characters.

Selecting month and year

Event Options

Before creating the scheduled events for areas, consider the scheduled event options: Qualifier, Photo, and Astro. The option chosen generally governs how the scheduled event will be activated. Use the Options button in the Event Details box to select the feature. Select "None" if options are not to be used. Each option is explained on the following page.

Programming the BASnet LightView

Qualifying a Schedule (Thirty Qualifiers Available)

Select "Qualifier" to use the state change of a group to enable a scheduled event to act on an area. When creating a schedule with a qualifier, the user must specify a panel and group to act as the qualifier. The scheduled event will not execute until the qualifier group changes state. i.e., the scheduled event defines a "window" of time and once inside that window, the schedule continuously monitors the qualifier group to detect a state change. Only if the state change is detected, will the scheduled event be carried out.

Switch inputs can be used to enable a qualifier. Typically, lighting panels have switch inputs assigned to groups that are assigned to relays. Inputs from building alarm, card access, and motion detector systems are ideal inputs into the lighting panel to enable groups for use as qualifiers. This feature is ideal for installations that require a switched input on one panel to control groups in other panels.

Make sure that groups defined as qualifiers are not given Serial On Priority using TRIATEK Setup software, LPPK. The Qualifier group is directly controlled only by switch, not serial, commands. However, if the Qualifier group is setup in LPPK with Serial-On priority enabled, switch inputs to the same group will not be able to control the group when preceded by Serial On command.
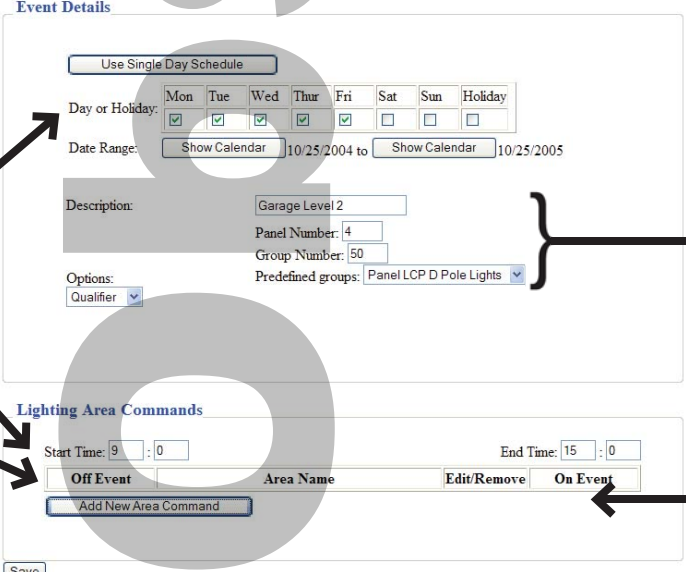
To use qualifier:
- Go to Main Menu ➔ Add Scheduled Event ➔ Options (in Event Details Section) ➔Qualifier.
- Enter the panel and group manually in the boxes or click the arrow and select from the predefined group list box.
- In Lighting Area Commands section of the same page, set the Start and End times for this particular event. You may set 0:00 and 24:00 for no restrictions.
- Select Add New Area Command.
- Under Area Name, select Edit, and then from pull-down box select a predefined Area.
- From Area Name box, select a predefined area.
- From Off Event box, select what the event will do when the qualifier group is off. For example, if "On" is selected in the Off Event box, then the event will turn the scheduled area on when the qualifier transitions to off state.
- From On Event box, select what the event will do when the qualifier group is on. For example, if "Off " is selected in the On Event box, then the event will turn the scheduled area off when the qualifier transitions to on state.
- Click the Save button at the bottom of the page to save these settings in LightView.

Hint:
Remember to click "Save" prior to closing browser window.

Event days & times

Qualifer group defined with these parameters

Select what action to perform when the qualifier group is "Off"

Select what action to perform when the qualifer group is "On"

Programming the BASnet LightView

Photocell (Thirty Photocells Available)

Select the "Photocell" option to have an event control a lighting area based on variable sunlight levels. You must have a TRIATEK Photocell connected to a lighting panel. When creating a schedule with the photocell option, the user must set four parameters: Panel and Channel number, Light Level, Tolerance, and Foot Candle to volts scale. Then, the Dark and Light Events must be defi ned in the Lighting Area Commands section of the same page.
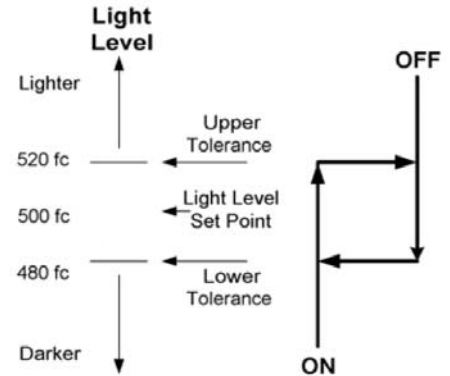
To use the Photocell option:
- Go to Main Menu ➜ Add Scheduled Event ➜ Options (in Event Details Section) ➜ Photocell
- In the Panel and Group boxes enter the panel and group that the photocell is connected to.
- In the Light Level Box, add the Foot Candle level at which the lighting group must change state.
- In the Tolerance box, add the dead band (hysterisis) parameter. For example, if the light level is 500 foot Candles and the tolerance 20 Foot Candles, the dead band will be between 480 and 520 Foot Candles. The light level must pass through both limits of the dead band before the group will change state.
- In the Foot Candle-to-Volts boxes, add the Foot Candles measured at 0 volts and the Foot Candles measured at 5 volts.
- In Lighting Area Commands section of the same page, set the Start and End times for this particular event. (You may set 0 and 24 for no restrictions or enter start and end times to limit the times when the event is allowed to take place; ie, you may need to limit the cell from turning on offi ce lights in the night.)
- Select Add New Area Command
- Under Area Name, select Edit, and then from pull-down box select a predefined Area.
- Under Dark Event, select what state the scheduled area should go to when the ambient Foot Candles are less than the lower dead band limit: On, Off, or Do Nothing.
- Under Bright Event, select what state the scheduled area should go to when the ambient Foot Candles are greater than the upper dead band limit: On, Off, or Do Nothing.
- Click the Save button at the bottom of the page to save these settings.

Hint:
Remember to click "Save" prior to closing browser window.

Event days & times

Photocell connection defined here

Select what action to perform when the ambient light level is less than the light level range

Select what to action perform when the ambient light level is greater than the light level range

Programming the BASnet LightView
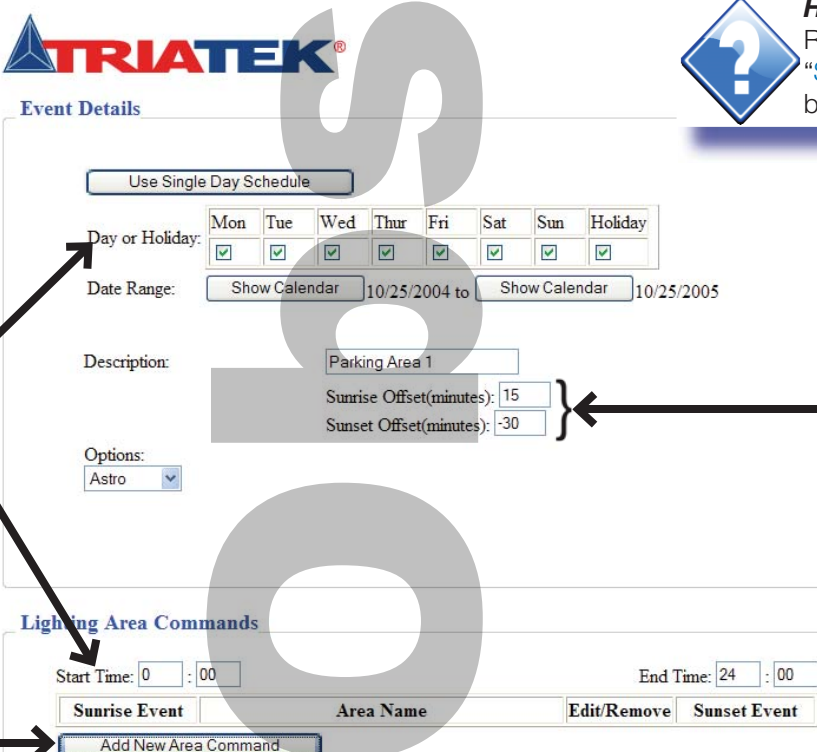
Astronomical Events

Select the "Astro" option to schedule lighting based on sunset and sunrise times. When creating a schedule with the Astro option, the user must enter the offsets from sunrise and sunset on this page and make sure that the proper geographical coordinates and Timezone are entered on the Set Internal Clock section of the System Setup page.

To use the Astro option:
- Go to Main Menu ➜ Add Scheduled Event ➜ Options (in Event Details Section) ➜ Astro
- In the Sunrise Offset box enter the time in minutes to offset the event from actual sunrise time.
  For example: *If actual sunrise time is 6:05 am, and an offset time of 15 minutes is entered, the scheduled event will happen at 6:20 am.*
- In the Sunset Offset box enter the time in minutes to offset the event from actual sunset time.
  For example: *If actual sunset time is 7:50 pm, and an offset time of –20 minutes is entered, the scheduled event will happen at 7:30 p.m.*
- In the Lighting Area Commands section on the same page, enter the start and end times. You may enter 0 and 24 for no restrictions or enter start and end times to limit the scope of when the Astro events are allowed to take place.
- Select Add New Area Command
- Under Area Name, select Edit, and then from pull-down box select a predefined Area.
- Under Sunrise Event, select what state the group should go to when the Sunrise Event takes place: On, Off, or Do Nothing.
- Under Sunset Event, select what state the group should go to when the Sunset Event takes place: On, Off, or Do Nothing.
- Click the Save button at the bottom of the page to save these settings in the BASnet LigthtView.

Go to: System Setup ➜ Set Internal Clock and verify or enter the geographical coordinates for your location. If you do not know your coordinates, you may go to www.TRIATEKlighting.com and obtain coordinate information for your Area. See section, Setting the Internal Clock, regarding entry of coordinates.

Hint:
Remember to click "Save" prior to closing browser window.

Event days & times

Add or subtract offset here to the sunrise and sunset event times

Select what the action to perform when the sunrise event occurs

Select what the action to perform when the sunset event occurs

Programming the BASnet LightView

Lighting Area Commands

Note: Before continuing all areas should have already been defined. Without first defining the areas, no areas can be added to the Schedule. See "Creating Areas" beginning on page 14 for instructions on how to define areas.

Within the 'Lighting Area Command' box areas are assigned to a schedule. This section contains text boxes for entering the start time and end time for the schedule, an 'Add New Area Command' button, that includes text boxes for predefined area selection, along with start and end action selection. A 'Remove' button is also included. This section of the Add Event page is shown below: **Assigning Start and End Times**

Assigning Start and End Times
The Lighting Area Commands box first displays the start and end time text boxes. The start and end time for all the areas in a schedule will be entered here. Time must be entered as military time. The user should note that in military time the first hour of the day is midnight.

In military time standard, midnight is called "twenty-four hundred hours." Normal computer processing with military time uses 00:00 for midnight and not 24:00. A single event's start and end time cannot be spread over 2 days. Start and end actions occur in the same day, and their repetition on following days is set in the Event Details box. Midnight in BLV will be represented as 00:00. To enter the start and end times for the schedule simply click inside the test boxes and enter the times. To create a continuous 24-hour schedule window, enter 00:00 as Start Time and 24:00 as End Time.

Adding New Areas to the Schedule

Next, in the Lighting Area Commands section, the 'Add New Area Command' button is used to add areas to the schedule. Click the 'Add New Area Command' button to add a new area to the schedule.

A new row with area name, start and end event headings will appear, along with an edit/remove button. By default when the Add New Area Command button is clicked, the last area created will appear first with DO NOTHING assigned for start and end events.

To assign a different area to configure, and to assign start and end events click the Edit/Remove button. Text boxes will appear that allow the user to change the start and end events and area will appear.

To change the area to confi gure for the schedule, click the arrow of the text box and select the area:

Programming the BASnet LightView

Lighting Area Commands (continued)

Once an area is selected to add to the schedule, it can not be selected again within the same schedule because one area cannot be controlled twice in one schedule.

This can be verified by adding another area to the schedule:

Lighting Area Commands

Start Time: 6 : 0   End Time: 22 : 0

Start Event	Area Name	Edit/Remove	End Event
Do Nothing ▼	Area 2 ▼	Edit Remove	Do Nothing ▼
Do Nothing	Area 1	Edit Remove	Do Nothing

[Add New Area Command]

In the working example shown through the snap shots of this User's Guide, only two areas have been created. Therefore when the Add New Area Command button is clicked and the area name is selected, only one area is shown in the text box:

To assign start and end events to an area click the edit button. The start and end events for an area are selected in the same manner as the area name under the "Start Event" and "End Event" headings. Start and End events both have three possible actions to execute: ON, OFF, or DO NOTHING. Select one of the actions for the start and end event of the selected area. See display to the right for selections.

Start Event

Do Nothing ▼
Do Nothing
On
Off

End Event

Do Nothing ▼
Do Nothing
On
Off

Note: DO NOTHING is a unique feature because most systems require either an ON or OFF command. However, the user may desire, for example, that switches turn lights ON in the morning and the schedule turn the lights OFF in the evening. To accomplish this one would assign the 'DO NOTHING' action in the morning and OFF action in the evening.

Areas can be removed from the schedule simply by clicking the remove button.

Start Event	Area Name	Edit/Remove	End Event
Do Nothing ▼	Area 2 ▼	Edit Remove	Do Nothing ▼

More areas can now be added to the current schedule or the current schedule can be saved, and a new schedule can be created to add any remaining areas. To save the schedule without adding anymore areas click the 'Save' button just below the Lighting Area Command box. New schedules can be created following the preceding steps.

Viewing All Schedules
Saving the current schedule brings the user to the Event List page:

![TRIATEK logo] 10/25/2001 09:21:04.

Event List

☐ Check this box for auto-refresh.
View events scheduled for today

Action	Description	Start Time	End Time	Date Range	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Hol	Qualifier	ON/OFF	Status	Area Count
Edit Delete	Schedule 1	6:00	22:00	10/2/2001 - 10/2/2001	X	X	X	X	X	X	X	X	Group 1	ON	Qualified	2

Hint: Clicking the auto-refresh checkbox will update this list every 10 seconds.

Programming the BASnet LightView

Viewing Schedules

The event list displays all information pertinent to the Schedule only. No detailed information is given about groups and areas. Only the number of areas employed in each schedule is given. Notice under the 'Action' heading there are 'edit' and 'delete' buttons. The edit button allows each schedule to be edited, and the delete button deletes the Schedule. The start and end times are also displayed along with the days of the week the events are scheduled to occur. As a part of the days a holiday box is also shown. The event list also shows whether or not this schedule is qualified to execute. The group used as the qualifier is also given. The event list displays 'Qualified' in **green** and 'Not qualified' in **red**. In addition, when a schedule is "on schedule" to execute, its entire row of information will be highlighted **blue**.

Action	Description	Start Time	End Time	Date Range	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Hol	Qualifier	ON/OFF	Status	Area Count
Edit Delete	Schedule 1	6:00	22:00	10/25/2001 - 10/25/2001	X	X	X	X	X	X	X	X	Panel:0 Group:0	OFF	Qualified	2

Sample "on schedule" to execute event.

Once the areas in the schedule have executed, another schedule will be highlighted to show that it is the next to execute. Once all schedules for the day have executed the first schedule of the next day will be highlighted again.

Event List page also contains a link to the 'Today's Event List' page. The Event List shows all created schedules; Today's Event List shows schedules for the current day.

Viewing Today's Schedules

TRIATEK®

10/25/2001 10:06:57.

Today's Events List

Time	Description	Action
6:00	Schedule 1	Area 1 ON Area 2 ON
22:00	Schedule 1	Area 1 OFF Area 2 OFF

All events scheduled for the current day are listed in 'Today's Events List' page:

This page lists current schedules, the times they execute and the action occurring at that time. The actions display the areas for the schedule and whether that schedule is ON, or OFF. Today's events are events that either have occurred or will occur.

If no events are scheduled for the current day they will not be listed.

Programming the BASnet LightView

Monitoring and Overriding Areas and Groups

Area List View Map

Action	Area Name	Number of groups	Status
View Status	Area 1	2	On
View Status	Area 2	2	Off

Back to Main Menu

Area Status

☐ Check this box for auto-refresh.

The TRIATEK Lighting BASnet LightView enables the user to monitor and override the current ON/OFF status of all areas and groups scheduled in the system.

The 'Area and Group Status' page shown below is used for this purpose. The page can be reached from the 'Area and Group Status' link in the main menu.

Hint:
Clicking the auto-refresh checkbox will update this list every 10 seconds.

The page utilizes a frame layout divided into two sections: Area List at the top and Area Status at the bottom. The top section provides a list of areas with the number of groups in each area and the ON/OFF status of each area. Detailed information for the groups in the area and immediate action buttons or manual override buttons for the areas and groups can be accessed via the Action button. Each Action button when clicked shows the detailed information for an area and all groups in that area in the bottom section of the page.

Area List View Map

Action	Area Name	Number of groups	Status
View Status	Area 2	2	Off
Hide Status	Area 1	2	Off

Back to Main Menu

Area Status

☐ Check this box for auto-refresh.

Area 1

Status: Off
Area Immediate Action: On Off

Group Name	Panel	Group	Status	Cause	Immediate Action
Group 2	2	1	Off	Serial	On Off
Group 1	1	1	Off	Serial	On Off

The Action button shows hide status when the status is displayed in the bottom section, and 'View Status' when no details are shown.

Area Status first provides control of the auto refresh similar to the Event List. See "Event List" for an explanation of this feature. This section then displays the Area description, and its current status below it.

Below status, ON and OFF buttons are provided to send an immediate command to the entire area. When either ON or OFF commands are executed for the area the page will update and its status will display the current state. The states for each group in the area will also be updated. Their updated state is displayed in the status column heading.

Immediate ON/OFF commands can also be executed for each group. Their status will update accordingly.

Using the ON or OFF buttons in the Area Status section will switch the associated relays to the ON or OFF state and hold them in that state until the next scheduled action for that group executes, or a switch input commands the group to a different state. If no scheduled or switch action is given, then no change will occur.

Programming the BASnet LightView

Viewing Cause Data

The group detail information of the Area Status frame also has a "Cause" heading. Cause data reports what caused the lighting groups to be in their current status. Cause data can prove to be helpful information when unplanned or unexpected lighting events occur in a building. For example, if lights were expected to be in a certain state at certain point in time, the user can determine the source of the event that caused a group to be in that state. The cause data should be read in conjunction with the status data. There are three possible data values that can be reported as "Cause". They include: "-", "Serial", and "Switch". BLV sends and receives signals to and from the lighting panels via an RS-485 twisted pair network. When this connection is broken, BLV will be unable to send and receive signal commands to and from the lighting panel. When the connection is breached the status data will read "Timeout", and the cause data will read "-"; the "-" indicates there is no connection. The example shown directly below displays the Cause report generated from disconnecting the RS-485 cable from the BLV module:

Group Name	Panel	Group	Status	Cause	Immediate Action
Group 2	2	1	Timeout	-	On Off
Group 1	1	1	Timeout	-	On Off

Any signals that originate with the BLV module, including schedule commands and manual override button commands, are included in the "Serial" cause.

Example Cause reports for a Timeout and an immediate ON action to an area can be viewed to the right.

Group Name	Panel	Group	Status	Cause	Immediate Action
Group 2	2	1	On	Serial	On Off
Group 1	1	1	On	Serial	On Off

Lighting panel control boards may receive switch inputs. Switch inputs to the lighting panels generate lighting events by any kind of lighting switch in a building.

A switch input must be assigned to a group in order for BLV to track its event. Any switch events from inputs that are included in groups in BLV will generate a "Switch" cause. An example of a switch input event on Group 2 is displayed below:

Notice the added number to the "Switch" report. The number displays the number of the switch input through which the event was executed. TRIATEK Lighting Panel Controller boards carry up to either 16 or 24 switch inputs depending on the model. See

Group Name	Panel	Group	Status	Cause	Immediate Action
Group 2	2	1	Off	Switch: 1	On Off
Group 1	1	1	On	Serial	On Off

TRIATEK "LP Controller Users Guide" for more information. The "Switch" cause will always be reported in the form "Switch: N", where N is the switch input number on the TRIATEK LP Controller.

Viewing Graphics

The LightView Browser also enables uploading and viewing a graphical image. With this feature the user has on-board access to any graphical display of the building's lighting architecture. The map used for this purpose should be in "Portable Network Graphics" (.png) format. The maximum size of the file is 20KB. PNG files can be produced by converting AutoCAD and other graphical software image type files. Most software packages like the aforementioned that produce the graphics can also convert them. Macromedia® Fireworks® Software may prove especially useful because it not only converts images to the PNG format, but it also creates the PNG file format. When images are converted to the PNG format the image size is reduced considerably. The example graphic shown below was originally a 867MB CAD file, that when converted became 5.5KB png format graphic.

Refer to Upload Map under System Setup to learn how to upload the graphic. To view an uploaded graphic, click 'View Map' on the 'Area and Group Status' page. A separate Internet Explorer window will appear to display the graphic.

Programming the BASnet LightView

Viewing Graphics (continued)

In practice, the graphic used by the programmer will have more meaningful information, showing representations of the lighting areas including their component lighting panels and groups and their status.

After the graphic is uploaded and viewed once in a login session, it will no longer need to be uploaded to be viewed again. After viewing the map and closing the window it is displayed in, the map can be reviewed by clicking 'View Map' again. The map will automatically display without uploading in consecutive viewings.

Maps can only be uploaded and viewed one map at a time. To view an addtional map, the procedure is the same. However, uploading a new map will replace the current map loaded into the system.

Creating Holidays

Creating a holiday in BASnet LightView tells the system not to execute scheduled events on that day. The system can hold a maximum of 30 holidays. Holiday's are programmed from the 'Holiday List' page. To program holidays into the system go to the 'Holiday' link.

The 'Holiday List' page is shown to the left:

The holiday page enables addition of holidays along with editing and removal of each holiday. To begin adding holiday click the 'Add New Holiday' Button.

This will then cause the Holiday Details Form page to display (left):

Enter the month and day in their respective boxes and click the 'Add/Modify' button. This will then produce an updated Holiday List page with the new Holiday and separate 'Modify Selected Holidays' and 'Remove Selected Holidays' buttons added to the page.

To modify a holiday, fi rst click inside the circle under the "ID" heading for the holiday. To remove a holiday from the list, click inside the box included under the "Remove" heading. The selected holiday is then modifi ed or removed by clicking the 'Modify...' or 'Remove...' button.

To add a new holiday to the list, click the 'Add New Holiday button' and repeat the preceding steps. To modify, click the modify button. This will bring up the 'Holiday Details Form' again. Edit the holiday via the text boxes and click 'Add/Modify'.

Programming the BASnet LightView

Viewing System Logs

TRIATEK®

10/25/2001 22:00:09.

Event Log

ID	Time (MM/DD/YYYY HH:MM:SS)	Description	Result
1	10/25/2001 22:00:00	Schedule 1	Executed
2	10/25/2001 21:59:01	Schedule 1	Modified
3	10/25/2001 09:59:10	Schedule 1	Modified
4	10/25/2001 09:58:47	Schedule 1	Modified
5	10/24/2001 17:01:27	Schedule 1	Modified

Select an entry and click on the button to view log of area commands.

[View Area Command Log]

Any user modifications or command actions to areas and groups will be recorded in the "Event Log" page. This page lists all schedules, the time and date occurred with them and the result of that action. Results either can be "executed" or "modified. The page holds a maximum of 30 event logs. After 30 logs are displayed, new logs begin to replace old logs.

Below the event logs is a 'View Lighting Area Command Log' button. This option enables viewing whether any action commands to groups failed or succeeded.

Command logs can be viewed for a specifi c schedule event log only. To view the log commands for a specifi c schedule log select one of the schedule ID's and then click the 'View Area Command Log' button. The 'Lighting Area Command Log' page will display.

Logs that represent only modification to areas and not action commands will not have a command log entry. The 'Lighting Area Command Log' page will display the date, time, panel address, group number, action performed and whether that action succeeded or failed. The Lighting Area Command Log page holds 100 logs; its logs are replaced in the same manner as the event logs.

ID	Time (MM/DD/YYYY HH:MM:SS)	Panel Address	Group	Action	Result
1	10/25/2001 10:19:00	1	1	Off	Success
2	10/25/2001 10:15:00	2	1	On	Success
3	10/25/2001 10:15:00	1	1	On	Success

System Setup

TRIATEK®

Setup Menu

Version: 3.0

- Set internal clock.
- Set IP configuration.
- Upload map.
- Other options.
- Backup and download database to file.
- Upload and restore system database from file.
- Merge LPPK database.
- Upgrade Firmware.

Delete system database.

The System Setup page is provided in the browser

(1) to make low level configuration settings without having to use the serial interface,

(2) for uploading graphics, and

(3) for performing backup and restoration of data.

Low level configuration settings include setting the internal clock and changing network settings.

System Setup page is shown (left):

Hint:
Use the Delete system database option only as a last resort.

Programming the BASnet LightView

Setting Coordinates and the Internal Clock

Enter the current mm, dd and yyyy. The ability to set the internal clock is most useful for testing the operation of the schedules, and currently the only way to stop all schedules at once is to change the time on the internal clock. Click the 'Set Internal Clock' link to enter time and date settings. All time in BLV is expressed in military time. Note: Midnight in military time is not "24:00". Its is 00:00. See discussion of military time in the section, "Assigning Start and End Times"

Internal Clock Setup Form

10/26/2004 9:21:44 Sunrise 6:51 Sunset 17:49

Warning: Changing the clock will reset all pending TI timers

Latitude: 33.859996
Longitude: -84.279991
Timezone: -5

DST: OFF
Month(mm): 10
Day(dd): 26
Year(yyyy): 2004
Hour(hh): 09
Minute(mm): 21
Second(ss): 44

[Update Time]

Enter the local coordinates for Latitude, Longitude and Timezone. The proper local coordinates are necessary for the Astro feature to function properly. The format for coordinates is Degrees.decimal (example 84.29). Latitudes above the equator are positive and longitudes west of Greenwich are negative. A look-up table for co-ordinates of U.S. Cities is provided at the end of this document and also on the website at www.TRIATEKlighting.com

- In the Latitude box, enter the latitude for your location in degrees. Latitudes north of the equator are positive.
- In the Longitude box, enter the longitude for your location in degrees. Longitudes north of the equator are positive.
- Enter the Timezone as the Greenwich Mean Time (GMT) offset. For example, USA EST Timezone is –5 and PST is –8.
  To add sunrise and sunset offsets for a particular event, go to section on Adding Schedule Events, Astro Option.
- The Daylight Savings (DST) adjustment is disabled by default. Enable this feature and schedules will execute at the correct time when Daylight Savings is in ef In the Longitude box, enter the longitude for your location in degrees

Longitudes west of Greenwich, England are negative.
- In the Timezone box, enter your local timezone. The timezone is the Greenwich Mean Time (GMT) offset. For example, USA EST timezone is –5 and PST is –8 (GMT) offset.
- Click the Update Time button at the bottom of the page to save these settings in LightView.

Setting IP Configuration

TRIATEK ships the BLV module with default network settings.

If the browser must be moved to a different network or subnet, the settings can be changed in System Setup. Select the 'Set IP Configuration' link, and enter the new network addresses for browser IP, Subnet mask, Gateway, and the Domain Name Server (DNS). After all addresses have been entered click 'update configuration'. The 'Set IP Configuration' page is shown to the right:

It should be noted that once the configuration changes the old IP address for the browser can no longer be used to reach BASnet Lightview. The URL of the new IP address must be used. This note is included as a warning on the "Set IP Configuration" page.

IP Configuration Form

10/26/2004 9:35:54 Sunrise 6:51 Sunset 17:49

IP address: [   ]
Gateway: [   ]
Netmask: [   ]

Warning: Make sure the settings are correct. After submitting information, webpages on the current IP will not be accesible anymore. Go to the new IP address instead.

[Update Configuration]

Programming the BASnet LightView

Uploading Graphics

Graphic files can also be uploaded into the BLV system, from the 'Map Upload' page. This page can be reached from System Setup by clicking the 'Upload Map' link. For a detailed discussion on the use, size, and type of the graphic, see "Viewing Graphics" on page 25. Graphics to upload into BLV should be of type PNG and should be no more than 20KB in size. To up load the graphic click on 'View Map' link. The 'Map Upload' page will appear:

Map Upload
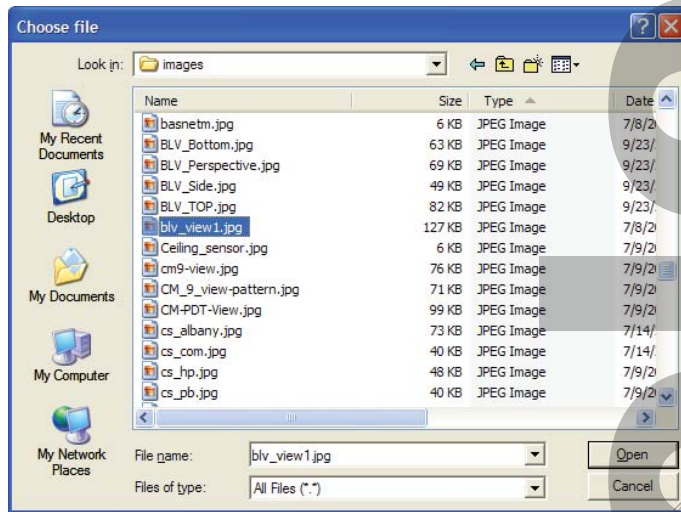
Please select a JPG image file that's less than 200 KBytes. This map will be displayed in the area and group status section.

If you know the path of the file it can be entered manually into the text box. To choose the file from a location on the local machine or network, click the Choose button. Then locate the PNG file to upload. Click "Open" to upload the file.

Once the file has been uploaded, the file can be viewed from the 'Area and Group Status' page. For instructions on how to view the map, see "Viewing Graphics" on page 25

Programming the BASnet LightView

Backup and Restoration of Data

The BASnet LightView also provides backup and restore features found in System Setup. All data saved via the browser is stored in the Random Access Memory (RAM) on the main board, and it remains in RAM by virtue of the battery attached underneath the module. Therefore even on a power loss to the module the data should remain intact. The main purpose of the backup feature is to have data on a file that is readily accessible when data needs to be restored without having to reprogram the module. Although this file initially resides in RAM on the module board it can be moved to a local PC or to any machine on an accessible network using the backup and download function, and then it can be moved back again to the module using the upload and restore function. The procedures for backing up database to file and restoring the database from file is described below.

Backing up data

To back up all configuration data select 'Backup and download database to file' link from System Setup. Selecting this option will store a file named 'save.dat', on the module board in RAM. Once the link is selected and the data has been written to file, a file download window will appear that prompts the user to either open the file from its current location or to save this file to disk.
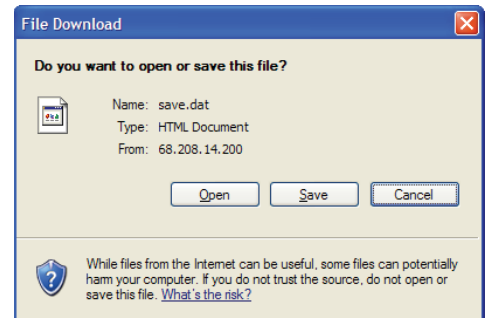
The file can be opened, but it is encoded for use by BLV and not the user. Interpreting the construction of this file is outside the scope of this user guide; however, if the user would like to learn its structure it would then be possible to create this file without having to reenter data into BLV. This could prove useful if the file is ever deleted without being backed up.

Programming the BASnet LightView

Backing up data (continued)

To download the file click, "Save this file to disk", and click the 'OK' button. A 'Save As' window will then appear. (*Screen appearance will vary by operating system version*)

Select the destination folder to save "save.dat". In the "Save as type" field chose "Text Document" or "Text File". Click the "save" button. The file has now been backed up to the specified location.

Hint:

When in doubt as to where to save a file, save it in the default directory provided.
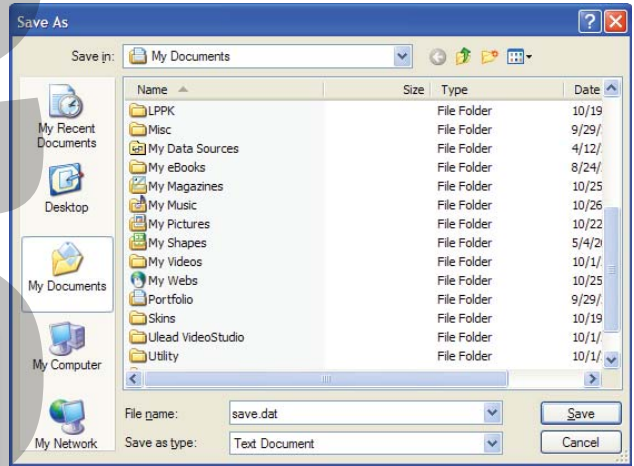
Restoring data

Only when data has been backed up to file can the user restore upload and restore the database. Upload and restore performs essentially the opposite functions as backup and download.

To upload and restore the database, from System Setup click the "Upload and restore system database from file" link. Instead of a window appearing here, the link brings the user to another page in the system, the "Database Upload" page.

If the user knows the path of the file, it can be entered directly into the text box, or the user can browse their computer or network and select the file. To browse for the file, click the "Browse..." button. A window titled, "Choose file" will appear. This window is similar to the 'Save As' window used with backup and download; instead of saving here the file is being chosen to upload.

Database Upload

Please select a valid LightView data file. This is typically a DAT file.

Locate the file, select it and click "Open" as shown (right):

The file with it's path will appear in the text box of the database upload page.

Now click the "Upload and Restore" button. This will bring the user back to the Event List page, where the uploaded and restored data will be displayed.
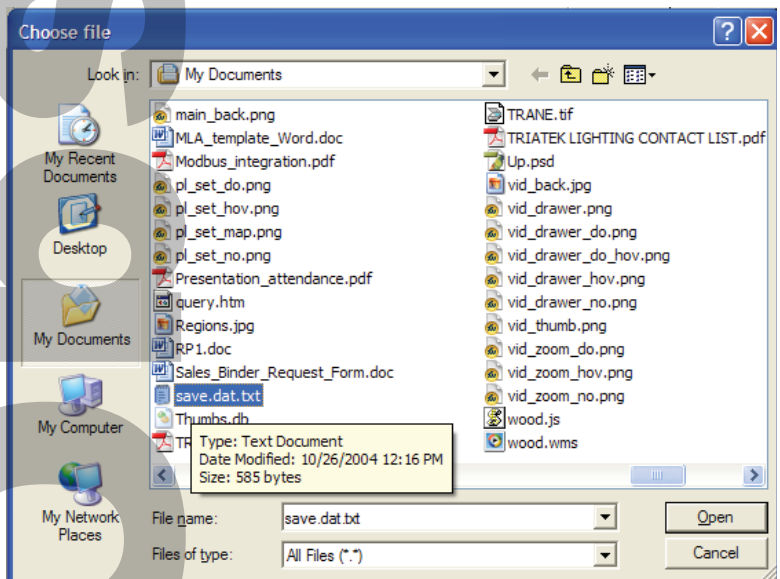
Database Upload

Please select a valid LightView data file. This is typically a DAT file.

C:\Documents and Setti   Browse...

Upload and Restore

Programming the BASnet LightView

Deleting the System Database

TThe final option in System Setup is deleting the system database. Deleting the database essentially clears the save. dat file. The file still exists in system memory, but once deleted the file will contain no data. When the link is clicked a confirmation window will appear.

To delete the database click the 'Delete System Database' link on the System Setup page. Click "OK" in the confi rmation window. The page will then reset itself to the same form as a "bare" installation. This implies that not only will group, area and event information be cleared, but so will all log information. It is a good idea to always ensure there is a backup copy of the save.dat file should the file be deleted accidentally.
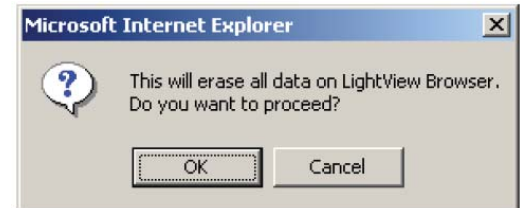
Telephone Override with BASnet LightView

Overview

BASnet LightView is factory configured to work with TRIATEK's TI-4500-0-Net telephone override interface. With this option, the TI-4500-0-Net will have a unique address and sit on the RS-485 network just like a TRIATEK lighting panel as shown below. LightView can connect to as many as 4 TI-4500-0-Net units on the same network. Addresses 252, 253, 254, 255 are reserved in LightView for this purpose. Mapping the TI Outputs to the Panel Groups in LightView It is important to remember that a user will call the TI and enter a pre-set User ID number corresponding to the lighting circuit for his space in the building. For this to happen, the following associations must be mapped into the system by the installer:

1.) At each lighting panel, relays or breakers are assigned to the appropriate lighting Panel Group using LPPK.
2.) Each lighting panel is assigned a unique address on the RS-485 network using LPPK or the panel controller's push buttons.
3.) In the LightView module, the Panel Groups must be defined including the panel address 1-251, and the Panel Group. This is done using MS Internet Explorer browser as explained in earlier sections of this BLV User Guide. The Panel Groups are the same ones previously defined above, using LPPK.

Assigning the User a Telephone Override Code

Before a user's ID# can be assigned, the installer or administrator must determine which Panel Address and Panel Group contains the user's lighting circuit. This number is fixed since it is completely determined by the location of the lighting circuit relay in its uniquely addressed panel. The installer or administrator can then use the circuit location to look up the ID number in a special table provided by TRIATEK or calculate it by special equation provided by TRIATEK. The equation is:

ID = [(Panel Address #) x 64] + Panel Group #.

The look-up table is provided with TI-4500-0-Net for BLV or can be found at the TRIATEK Lighting web site. Go to www. triateklighting.com then select in succession these buttons/links:

Products ➔ BASnet LightView Module ➔ TI/BASnet ID Table.

Although the ID is completely fixed, the option to protect access to the ID by a password can be enabled in the TI-4500.

Telephone Override with BASnet LightView

Range of ID Numbers

The User ID numbers in the TI-4500-0-Net are preset to the TRIATEK lighting panel groups in LightView. The range of Panel Groups controlled by TI/BLV is Panel address 1 Group1 through Panel address 127 Group 60. This range of 7,620 panel groups can be accessed by one TI module or spread over as many as 4 TI modules on the same RS-485 network connected to one BLV. However, one BLV can only control up to 1000 Panel Groups. Thus, although only 1000 Panel Groups can be defined by BLV, these 1000 groups may be defined within a range of 7,620 possible Panel Groups.

Steps to Set-up TI-4500-Net with LightView

In order to set up the override system, the following simple steps should be considered. In these steps, 3 areas are configured: the TI-4500-Net, the lighting panels and the LightView module. For this application of TI-4500, insure that the Output Hold Time in the TI Master Commands be not less than 20 seconds.

1. Refer to TI-4500 Installation Guide for the following:
    a. Wiring power supply to TI-4500.
    b. Battery Backup
    c. Telephone Connections
    d. LED Indications
    e. Master Operation
        (1) Output hold time must not be less than 20 sec for this application.
    f. Binary outputs mentioned in the TI install guide are pre-wired into an I/O module in the TI enclosure for this application (TI-4500-Net).
2. Refer to the wiring diagram below for the following:
    a. Locate the network I/O module below the TI main board and connect it to the lighting panel RS-485 network. This module is factory addressed at 252. (Three additional TI-4500-0-Net devices can be included on the network but must be addressed 253-255.) Lighting panels on the network with TI-4500-0-Net must be addressed between 1-127 if they are to be commanded by the LightView for requests for telephone override. Other panels may be addressed between 1-255.
    b. Connect the RS-485 twisted pair to the LightView BASnet RS-485 port A.
3. In order for the TI-4500 to interface with the BASnet LightView browser, Lighting panel Groups and Areas must be defined and assigned just as they would be in a BASnet LightView system without a TI interface. Refer to earlier sections of the BASnet LightView User's Guide.
4. Refer to TI/BASnet ID Tables to identify TI user ID numbers (see TI Master Operation in 1 above).
    Otherwise use ID# = **[(Panel Address) x 64] + Panel Group Number**
    a. In order to assign a particular area of lighting to the Telephone Override, the administrator must determine which lighting panel address and panel group number the lights belong to. The lighting area to be overridden cannot be smaller than a lighting panel group as assigned in the lighting panel program ming. (Refer to LP Controller User's Guide - Configuring Outputs)
    b. In addition, the lighting panel and group must also be defined as a "Group" in the BASnet LightView Browser. Normally, this group is also assigned to an "Area" also defined in LightView.
    c. The User ID referred to by the TI Install and Setup Guide actually refers to a particular building space. This number is completely determined by the lighting panel network address and group number. The group number identifies the relay and circuit within that panel that is supplying the lights with power.
    d. Once this number is determined, it merely needs to be assigned to the appropriate user. The system does the rest. The user can then call the TI-4500, answer the voice prompts and obtain the desired override On of lights after normal scheduled hours.
5. General Operation:
    a. Passwords may be enabled or disabled as explained in the TI-4500 Installation Guide - Master Operation
    b. Overrides may be requested in increments of 1 hour for 1 to 6 hours. A "7"will cancel the present override.
    c. The system uses "Last Command Rules" logic in relation to Light Schedules in BASnet and local wall switch commands. If an off-sweep of building lights in BASnet occurs shortly after a request of override, merely call in again to begin a new period of telephone override.

TRIATEK LIGHTING
THE NEW STANDARD IN LIGHTING CONTROLS

Telephone Override with BASnet LightView

Wiring Diagram - Telephone Interface with BASnet LightView

RJ-45 Crossover
Ethernet Cable

RJ-45 Plug
Pin 1

Clip is pointed
away from you.

T-568B

T-568B

IBM Compatible PC or Laptop

RJ-45 Straight-Through
Ethernet Cable

RJ-45 Plug
Pin 1

Clip is pointed
away from you.

T-568B

T-568B

CAT 5

Ethernet Hub, Router or Switch

RS-485

Telephone Interface
TI-4500-NET
Address 252-255

TI-4000 SERIES
Telephone Override System

Dedicated RJ11
Phone Line

TI-4500-Net
Lighting Main Board

RS-485

Lighting Panel
Address 1-251

Lighting Panel
Address 1-251

LPPK with BASnet LightView

BASnet LightView allows users to program all TRIATEK panels connected to BLV over the Internet from any location. The workstation must be running version LPPK. When using LPPK with LightView, scheduled lighting events will still take place. During LPPK programming activities via LightView, response times on LPPK may be noticeably slower, because LightView is being shared.

Enter IP of LightView

Enter Username and Password of LightView

Select radio button "Internet"

To use LPPK via BASnet LightView:
- Have the PC or Laptop connected to LightView as described in section "Connecting to BLV".
- Start LPPK and on connect screen, select radio button "Internet".
- Still on the Connect screen, enter the IP address for LightView in the box "Hostname"
- Enter the Username and Password
- Click the Connect button
- LightView will authenticate the connection
- Continue normal programming with LPPK.
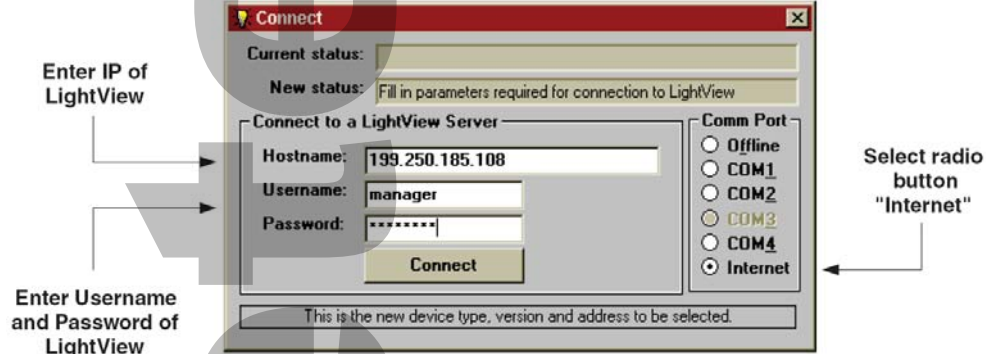
BASnet LightView Programming Worksheets

BASnet Programming Worksheet - Area and Group Assignments

Area Description (23 Character limit)	Group Desciption (23 Character limit)	Panel # 1-255	Group # 1-60

BASnet LightView Programming Worksheets

BASnet Programming Worksheet - Holidays

Holiday	Month	Day

BASnet LightView Programming Worksheets

BASnet Programming Worksheet - Schedules

Schedule	Area name	Day of Week								Start Date	End Date	Start Time	Start Action	Stop Action
Description	Scheduled	Mon	Tue	Wed	Thu	Fri	Sat	Sun	Hol	mm/dd/yy	mm/dd/yy	hh:mm	Do nothing, ON or OFF	Do nothing, ON or OFF

BASnet LightView Programming Worksheets

Latitude-Longitude (decimal and degrees/minutes/seconds) of US Cities used by permission (www.realestate3d.com)

1. Use Decimal Format
2. Add Negative sign when entering a Longitude into Lightview.

Code	BASnet Lat/Lon	Latitude	Longitude	City / State
[AUO]	32.67 85.44	32 40 11	85 26 24	Auburn, AL
[BHM]	33.57 86.75	33 34 11	86 45 0	Birmingham,AL
[ANC]	61.17 150.02	61 10 11	150 1 12	Anchorage,AK
[FAI]	64.82 147.87	64 49 11	147 52 11	Fairbanks,AK
[FLG]	35.13 111.67	35 7 48	111 40 11	Flagstaff,AZ
[PHX]	33.43 112.02	33 25 48	112 1 11	Phoenix,AZ
[LIT]	35.22 92.38	35 13 12	92 22 47	LittleRock,AR
[CRQ]	33.13 117.28	33 7 48	117 16 47	Los Angles,CA
[TVL]	38.90 120.00	38 54 0	120 0 0	San Francisco,CA
[DEN]	39.75 104.87	39 45 0	104 52 12	Denver,CO
[FCS]	38.68 104.77	38 40 48	104 46 11	FortCarson,CO
[BDR]	41.17 73.13	41 10 11	73 7 47	Bridgeport,CT
[HFD]	41.73 72.65	41 43 47	72 39 0	Hartford,CT
[DOV]	39.13 75.47	39 7 48	75 28 12	Dover,DE
[IAD]	38.95 77.46	38 57 0	77 27 35	Washington/Dulles,DC
[XMR]	28.47 80.55	28 28 11	80 33 0	CapeCanaveral,FL
[EYW]	24.55 81.75	24 32 59	81 45 0	KeyWest,FL
[ATL]	33.65 84.42	33 39 0	84 25 11	Atlanta,GA
[CSG]	32.52 84.93	32 31 12	84 55 48	Columbus,GA
[HNL]	21.35 157.93	21 21 0	157 55 47	HonoluluInt,HI
[LNY]	20.80 156.95	20 47 59	156 56 59	Lanai-Lanai,HI
[BOI]	43.57 116.22	43 34 11	116 13 12	Boise,ID
[IDA]	43.52 112.07	43 31 12	112 4 11	IdahoFalls,ID

BASnet LightView Programming Worksheets

Latitude-Longitude (decimal and degrees/minutes/seconds) of US Cities used by permission (www.realestate3d.com)

1. Use Decimal Format
2. Add Negative sign when entering a Longitude into Lightview.

Code	BASnet Lat/Lon	Latitude	Longitude	City / State
[ARR]	41.77 88.32	41 46 12	88 19 11	Aurora,IL
[ORD]	41.98 87.90	41 58 47	87 54 0	Chicago/O'hare,IL
[IND]	39.73 86.27	39 43 47	86 16 11	Indianapolis,IN
[DSM]	41.53 93.65	41 31 47	93 39 0	DesMoines,IA
[DDC]	37.77 99.97	37 46 12	99 58 12	DodgeCity,KS
[TOP]	39.07 95.62	39 4 11	95 37 12	Topeka,KS
[BWG]	36.97 86.43	36 58 12	86 25 48	BowlingGreen,KY
[SDF]	38.18 85.73	38 10 48	85 43 48	Louisville,KY
[BTR]	30.53 91.15	30 31 48	91 9 0	BatonRouge,LA
[MSY]	29.98 90.25	29 58 47	90 15 0	NewOrleans,LA
[BGR]	44.80 68.82	44 47 59	68 49 11	Bangor,ME
[BHB]	44.45 68.37	44 27 0	68 22 12	BarHarbor,ME
[BAL]	39.18 76.67	39 10 48	76 40 11	Baltimore,MD
[SBY]	38.33 75.50	38 19 48	75 30 0	Salisbury,MD
[BOS]	42.37 71.03	42 22 11	71 1 47	Boston,MA
[DET]	42.42 83.02	42 25 11	83 1 11	Detroit,MI
[GRR]	42.88 85.52	42 52 48	85 31 11	GrandRapids,MI
[FRM]	43.65 94.42	43 39 0	94 25 11	Fairmont,MN
[STP]	44.93 93.05	44 55 48	93 3 0	SaintPaul,MN
[GPT]	30.40 89.07	30 23 59	89 4 11	Gulfport,MS
[TUP]	34.27 88.77	34 16 12	88 46 11	Tupelo,MS
[COU]	38.82 92.22	38 49 11	92 13 12	Columbia,MO
[MKO]	35.66 95.36	35 39 35	95 21 36	Muskogee,MO

BASnet LightView Programming Worksheets

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1. Use Decimal Format
2. Add Negative sign when entering a Longitude into Lightview.

Code	BASnet Lat/Lon	Latitude	Longitude	City / State
[BIL]	45.80 108.53	45 47 59	108 31 47	Billings,MT
[WEY]	44.65 111.10	44 39 0	111 5 59	WYellowston,MT
[ANW]	42.58 99.98	42 34 48	99 58 48	Ainsworth,NE
[OMA]	41.30 95.90	41 17 59	95 54 0	Omaha/Eppley,NE
[RNO]	39.50 119.78	39 30 0	119 46 47	Reno,NV
[HTH]	38.55 118.63	38 32 59	118 37 47	Hawthorne,NV
[CON]	43.20 71.50	43 12 0	71 30 0	Concord,NH
[ACY]	39.45 74.57	39 27 0	74 34 11	AtlanticCity,NJ
[TTN]	40.28 74.82	40 16 47	74 49 11	Trenton,NJ
[ABQ]	35.05 106.60	35 2 59	106 35 59	Albuquerque,NM
[SVC]	32.63 108.17	32 37 48	108 10 11	SilverCity,NM
[ALB]	42.75 73.80	42 45 0	73 48 0	Albany,NY
[JFK]	40.65 73.78	40 39 0	73 46 47	NewYork/JFK,NY
[AVL]	35.43 82.55	35 25 48	82 33 0	Asheville,NC
[CLT]	35.22 80.93	35 13 12	80 55 48	Charlotte,NC
[BIS]	46.77 100.75	46 46 12	100 45 0	Bismarck,ND
[FAR]	46.90 96.80	46 54 0	96 48 0	Fargo,ND
[CAK]	40.92 81.43	40 55 11	81 25 48	Canton,OH
[CVG]	39.05 84.67	39 2 59	84 40 11	Cincinnati,OH
[OKC]	35.40 97.60	35 24 0	97 35 59	OklahomaCty,OK
[TUL]	36.20 95.90	36 12 0	95 54 0	Tulsa,OK
[PDT]	45.68 118.85	45 40 48	118 50 59	Pendleton,OR
[RDM]	44.27 121.15	44 16 12	121 9 0	Redmond,OR

BASnet LightView Programming Worksheets

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1. Use Decimal Format
2. Add Negative sign when entering a Longitude into Lightview.

Code	BASnet Lat/Lon	Latitude	Longitude	City / State
[ABE]	40.65 75.43	40 39 0	75 25 48	Allentown,PA
[CXY]	40.22 76.85	40 13 12	76 50 59	Harrisburg,PA
[PVD]	41.73 71.43	41 43 47	71 25 48	Providence,RI
[CAE]	33.95 81.12	33 57 0	81 7 12	Columbia,SC
[SPA]	34.92 81.96	34 55 11	81 57 35	Spartanburg,SC
[ABR]	45.45 98.43	45 27 0	98 25 48	Aberdeen,SD
[FSD]	43.58 96.73	43 34 48	96 43 48	SiouxFalls,SD
[CHA]	35.03 85.20	35 1 47	85 11 59	Chattanooga,TN
[TYS]	35.82 83.98	35 49 11	83 58 48	Knoxville,TN
[AUS]	30.30 97.70	30 17 59	97 41 59	Austin,TX
[DFW]	32.90 97.03	32 54 0	97 1 47	Dallas/FW,TX
[CDC]	37.70 113.10	37 42 0	113 5 59	CedarCity,UT
[PVU]	40.22 111.72	40 13 12	111 43 12	Provo,UT
[BTV]	44.47 73.15	44 28 12	73 9 0	Burlington,VT
[LYH]	37.33 79.20	37 19 48	79 11 59	Lynchburg,VA
[RIC]	37.50 77.33	37 30 0	77 19 48	Richmond,VA
[SEA]	47.45 122.30	47 27 0	122 18 0	Seattle,WA
[TIW]	47.27 122.58	47 16 12	122 34 48	Tacoma,WA
[HTS]	38.37 82.55	38 22 11	82 33 0	Huntington,WV
[MSN]	43.13 89.33	43 7 48	89 19 48	Madison,WI
[MKE]	42.95 87.90	42 57 0	87 54 0	Milwaukee,WI
[COD]	44.52 109.02	44 31 12	109 1 11	Cody,WY
[P60]	44.55 110.42	44 32 59	110 25 11	Yellowstone,WY