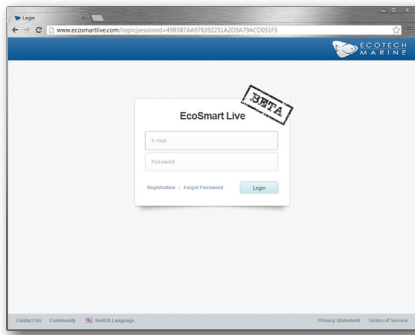


## Registering and Connecting Overview

EcoSmart Live is a web based tool which allows you to configure and program your Radion lights. Your schedule is stored on the server and may be retrieved or updated at any time using a standard web browser.

The Connection Manager, a software utility, must be installed on your computer in order . The Connection Manager relays the information from the website to your lights using your computers USB connection.



**STEP 1:** User Registration is available on the **www.ecosmarlive.com** homepage. Click the *Registration* link to create your account.



The webservice will communicate with your Radion using the connection manager.



**STEP 2:** You will be prompted to download the connection manager the first time you login.

During installation, you will need to supply your website login credentials to the connection manager.



Your Radion must be connected to the computer running the connection manager using USB.



**STEP 3:** Once you have logged in to the website and have installed and logged into the connection manager, connect your Radion using the supplied USB cable.

You are now ready to configure your Radions.

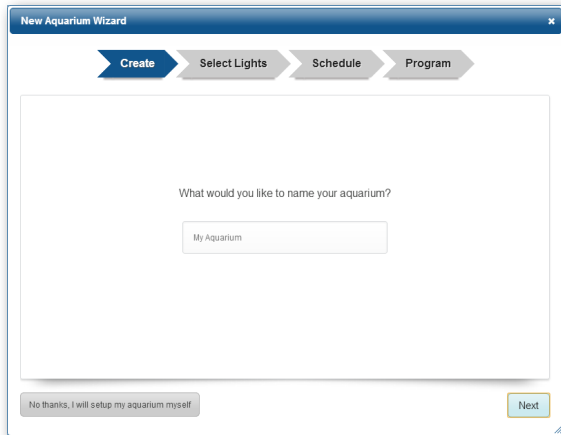
# Aquarium Setup

The fastest way to get your Radions configured for the first time is to use the Aquarium Setup wizard.

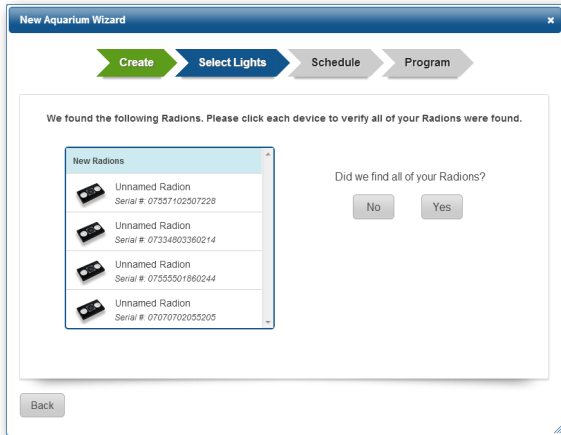
This wizard will walk you through the process of creating a single group of Radions and programming them with one of our provided schedules.

You can customize the schedules at any time after the completion of the wizard.

**Make sure all of your lights are connected to their power supplies and turned on. One light must be connected to the computer using USB.**

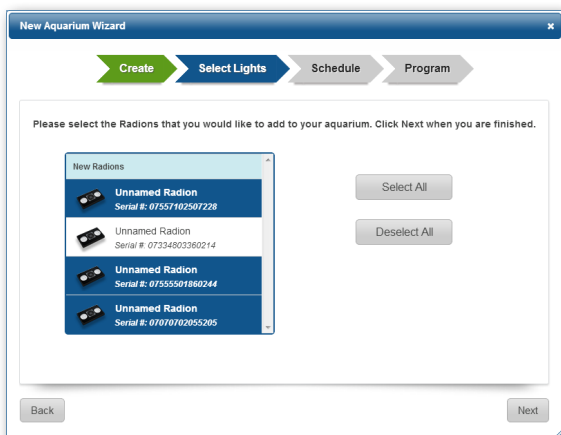


**STEP 1:** Choose the name of your aquarium. This will become the group name of your Radions.



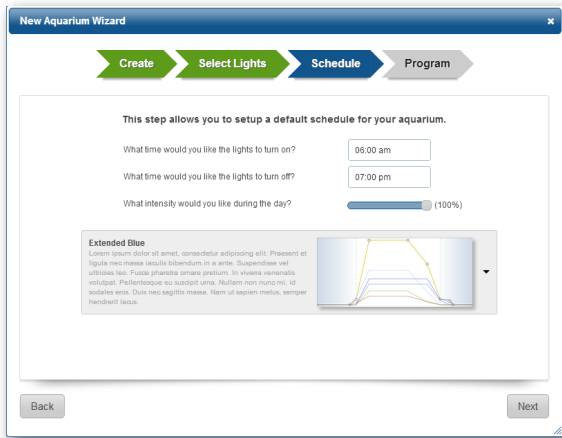
**STEP 2:** The wizard will retrieve the details of your lights and provide a list of devices that are found. Make sure that all of your lights are detected and click Yes.

**TIP!** You can click on each of the lights in the list causing them to flash briefly, enabling you to identify them.



**STEP 3:** Choose the lights you would like to include in your group and click next.

**TIP!** It is recommended that you use a single group for all lights over your aquarium.

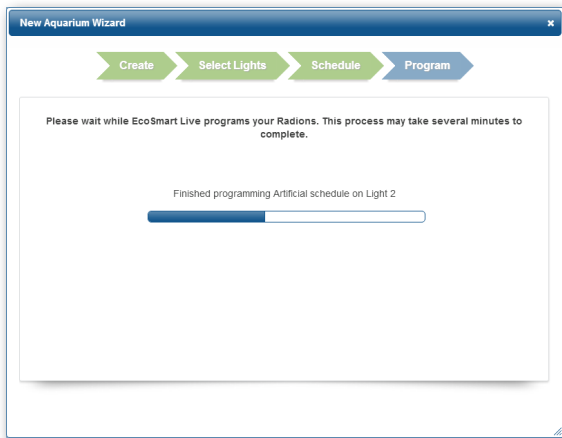


**STEP 4:** On the schedule tab you will select the *START DAY* and *START NIGHT* points on your light, as well as the maximum brightness each day.

There are several pre-built schedules which you can choose from. Some modes have *NIGHT MODE* points which will illuminate the fixture at a lower brightness after the *START NIGHT* time.

Click *Next* once you have made your selections.

**TIP!** You may customize your schedule after the wizard is complete.



**STEP 5:** The wizard will now program the schedule to your fixtures. Once it is complete the Radions will restart and immediately begin the schedule.

# Creating and Customizing a Schedule

## Main Window

There are three main areas of the EcoSmart Live website. The settings menu, the device list, and the daily schedule tab.

### SETTINGS MENU

The settings menu gives access to setup wizards, account profile information, and unit of measure.

### DEVICE LIST

Once your devices have been associated with your user profile, they will be shown in their respective groups here. The Group Manager is also located at the top of the device list if you wish to add or remove lights.

The screenshot displays the EcoSmart Live website interface. At the top, there is a navigation bar with 'Settings...', 'Program All', 'Signed in as Justin Lawyer', and 'Sign Out'. The 'ECOTECH MARINE' logo is on the right. Below the navigation bar, there is a 'Group Manager' button. The main content area is divided into three sections: 'My Aquarium', 'Daily Schedule', and 'Advanced Settings'. The 'My Aquarium' section shows a list of 'Radion Lights' with three items: 'Light 1', 'Light 2', and 'Light 3', each with a 'Program', 'Layout', and 'Identify' button. The 'Daily Schedule' section shows a '24 Hour Cycle' graph with 'Relative Intensity' on the y-axis and time on the x-axis. The graph shows a curve that starts at 11:00 AM, peaks at 02:00 PM, and ends at 05:00 PM. Below the graph, there are 'Start Day' and 'Start Night' input fields with values '11:00:00 am' and '05:00:00 pm' respectively. A 'Preview' button is also present. A 'Schedule Actions...' menu is open, showing options: 'Reset Schedule', 'Import Schedule', and 'Export Schedule'. The footer contains 'Contact Us', 'Community', 'Switch Language', 'NEW! New Features', 'Privacy Statement', and 'Terms of Service'.

### SCHEDULE TAB

The schedule tab is where you create and edit your 24-hour program. Schedule points may be added or deleted to create your desired lighting schedule. Select the Reset Schedule option on the actions menu to select from several preconfigured options.

A more detailed walkthrough the schedule tab is on the follows.

# Daily Schedule Tab

The schedule graph visually represents when your light will turn on, turn off, and what colors will be used over a 24-hour period. Other options include clouds and storm probability.\*

Once a schedule is programmed to a Radion or group of Radions, they will repeat that schedule daily.

**Note:** Storms and clouds are randomly generated and may not occur at the same time every day.

## IMPORT & EXPORT SCHEDULE

Use these options to import a schedule from a file or export a schedule to a file. (i.e., if you wish to share your schedule with another individual.)

## RESET SCHEDULE

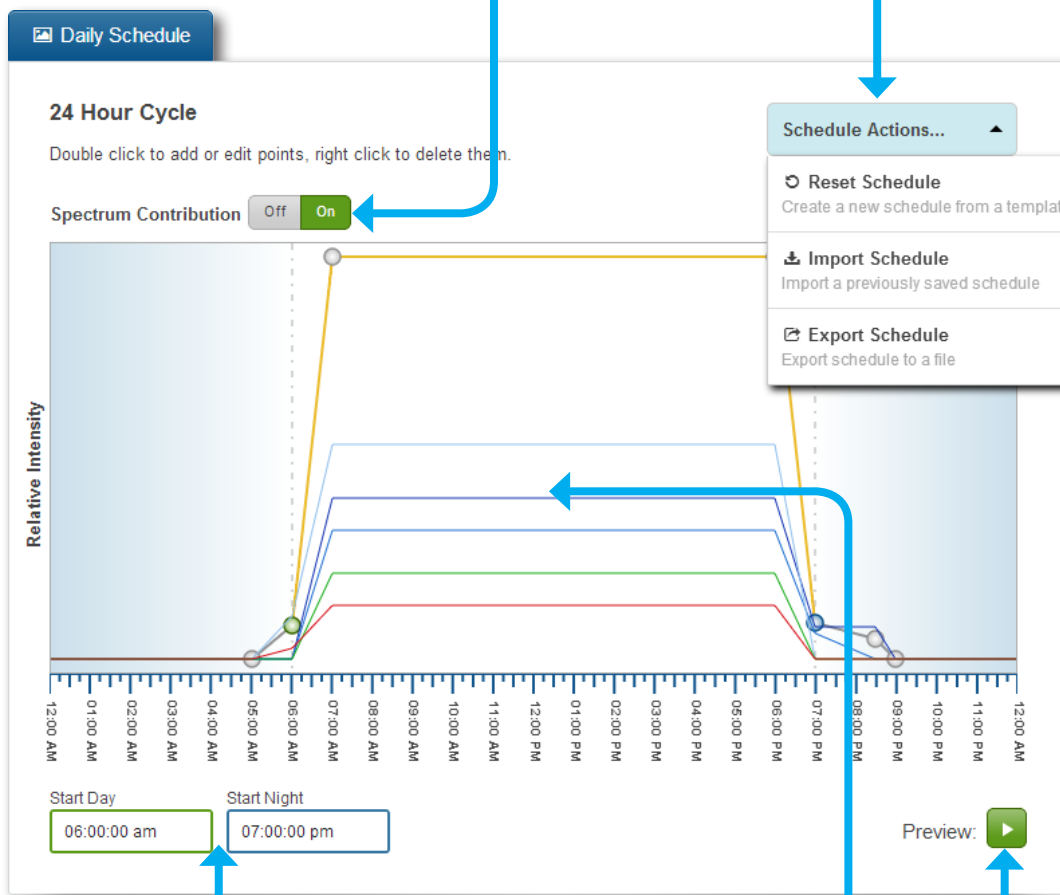
Reset schedule will bring up a window where you can select from a list of preconfigured Radion modes. Some of these modes are customizable after selection.

## SCHEDULE ACTIONS

A dropdown menu to access the import/export and reset schedule tools.

## SPECTRUM CONTRIBUTION

Displays a graph of each individual color channel.



## START DAY & START NIGHT

Shown on the graph as green and blue points. These are the times that the lights will enter day mode and enter into night mode. In night mode the maximum intensity is 20% of the maximum output.

## SCHEDULE GRAPH

The schedule graph is a visual representation of your daily schedule. Double click to add or edit existing points. Right click to remove them. You may also drag points left/right to change their time.

## PREVIEW

Clicking the preview button will give you a 30 second playback of the full 24-hour period.

# Color Selection Palette

The color selection palette is presented whenever you select an existing point to edit or create a new point on the schedule graph. Use this window to adjust the colors, weather, and time of a point in your schedule.

## CHANCE OF STORMS & CLOUDS

Use these sliders to set the chance of storm or clouds occurring between this point and the next. *NOTE: storms and clouds are generated randomly and may not occur at the same time every day.*

## TIME SELECTION

This is the time associated with the currently selected point. Click to edit.

## BRIGHTNESS CONTROL

This slider controls the brightness of all channels. The ratio of each color channel will be preserved.

## COLOR SELECTION

These sliders control the brightness of the individual color channels.

The screenshot shows the 'Color Selection' dialog box with the following components and annotations:

- Color Selection:** Five vertical sliders for 'Royal Blue', 'Blue', 'Cool White', 'Green', and 'Hyper Red', each with a '100 %' label above it. A sixth slider for 'Brightness' is also present with a '100 %' label.
- SPECTRUM:** A graph showing a spectrum with a peak in the blue region (around 450-500 nm) and a smaller peak in the red region (around 650-700 nm).
- Time Selection:** A text input field containing '09:30:00 am'.
- Cloud probability:** A slider set to '0 %' with a sun icon on the left and a cloud icon on the right.
- Storm probability:** A slider set to '0 %' with a sun icon on the left and a storm icon on the right.
- Presets:** A dropdown menu currently set to 'Custom'.
- Save as Preset:** A text input field and a 'Save' button.
- Buttons:** 'Save' and 'Close' buttons at the bottom.
- Annotations:** Blue arrows point from the text labels to the corresponding UI elements: 'COLOR SELECTION' to the color sliders, 'BRIGHTNESS CONTROL' to the brightness slider, 'TIME SELECTION' to the time input field, 'CHANCE OF STORMS & CLOUDS' to the probability sliders, 'SPECTRUM OUTPUT' to the spectrum graph, and 'SAVE & CLOSE' to the bottom buttons.

## SPECTRUM OUTPUT

The output spectrum of the Radion is displayed here.

## SAVE & CLOSE

Click **SAVE** once you are happy with your settings. Click **CLOSE** to discard changes and exit.

## PRESET CONTROLS

You can choose from the available presets or create your own using these controls. To save your own, type the desired name in the box and click the adjacent **SAVE** button.

## Customizing Your Schedule

You can create a custom lighting schedule for your aquarium by creating and deleting points. Radions will automatically fade the light between each point. The color settings of two points and the time that separates them will determine how noticeable the transition is.

- **DAY MODE AND NIGHT MODE:**

- These two periods are defined by the Start Day and Start Night. These times define: Acclimation Period, Moonlighting, and Night Mode for Vortech™ Pumps.

- **GRAPHING CONTROLS:**

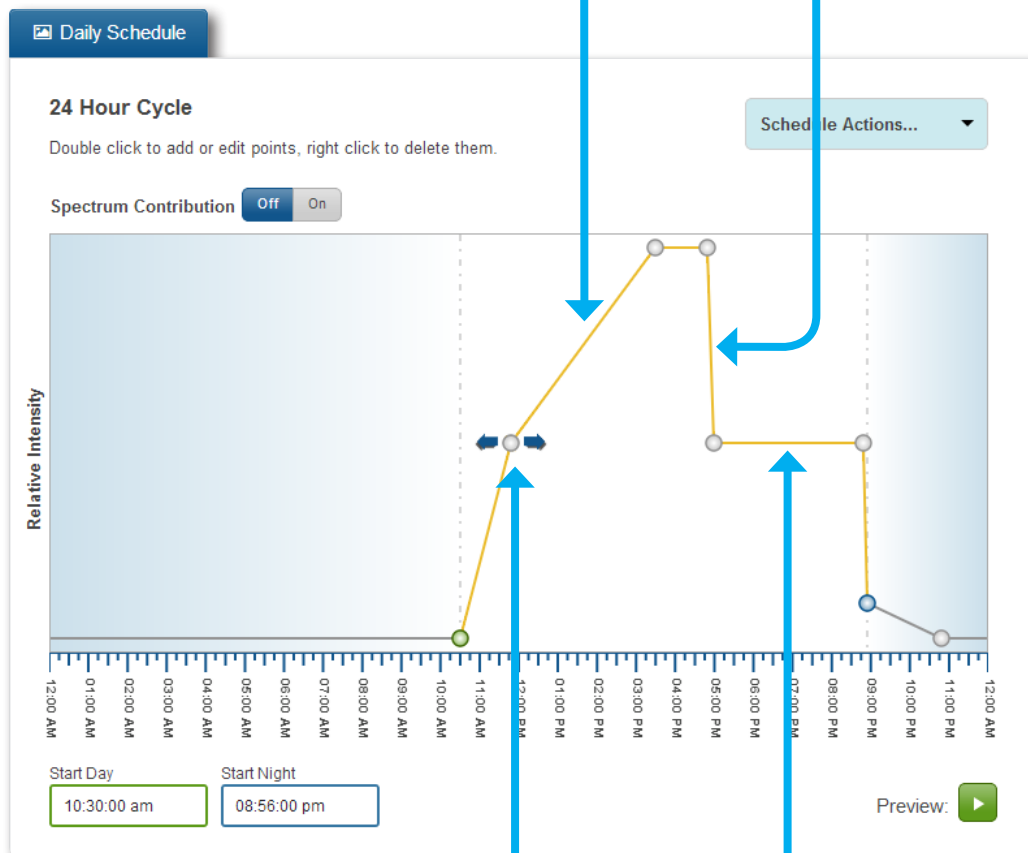
- **DOUBLE-CLICK** to add a control point or edit an existing point.
- **RIGHT-CLICK** on an existing point to delete it.
- **CLICK & HOLD** to drag a point on the graph in time. Start Day & Start night points can also be moved in this method.

### QUICK TRANSITION

Between these two points the light will rapidly fade from 100% to 50%. In this case the time to fade is five minutes.

### SLOW TRANSITION

During this period the lights will slowly increase in brightness from 50% to 100%. In this case over a period of 3hrs 45min.



### MOVE IN TIME

Clicking & Hold a point on the graph to move a point left or right and adjust the time.

### FLAT TRANSITION

A flat line between two points indicates that between these two points no change in color will occur.

## Group Layout

The group layout function allows you to create a traveling sunrise and sunset using your Radion lights. Arrange your lights in their order over the aquarium and choose the offset time. Recommended time is 10 - 15 minutes.

### OPEN GROUP LAYOUT

To set an order by which your lights will turn on and off, select the *LAYOUT* button on the group device list. This is located on the left side of the main screen.

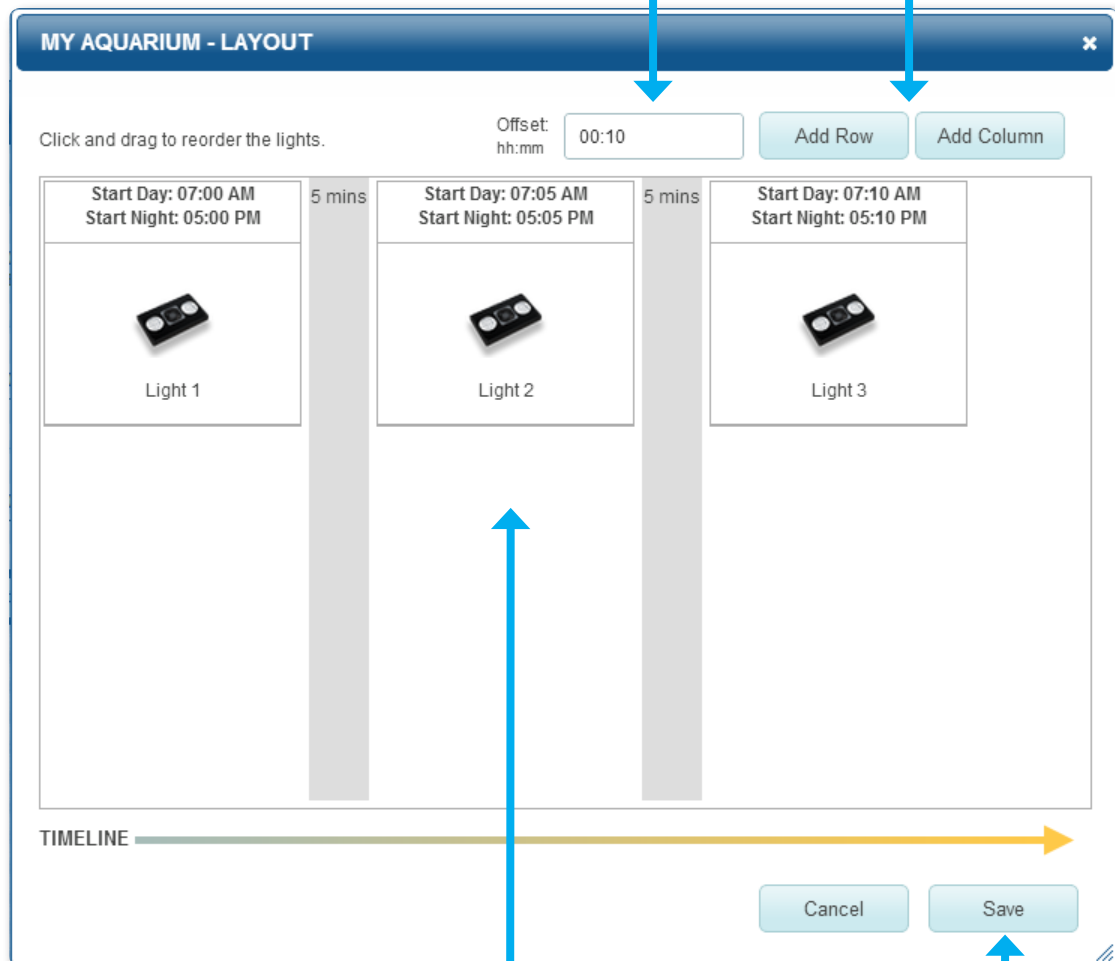
### SET THE NUMBER OF ROWS AND COLUMNS

The offset time is divided between the columns. Two lights in the same column will come on and go off together.

There is no distinction between multiple rows.

### SET THE TOTAL OFFSET TIME

This is the total offset time between the first column and the last column.



### DRAG AND DROP TO ARRANGE

Click and drag the Radion icons around to set the order by which they will turn on and off. Radions will turn on/off from left to right.

### CLICK SAVE TO EXIT

Click *SAVE* to set the arrangement and close the window. Clicking *CANCEL* will discard any changes that were made.

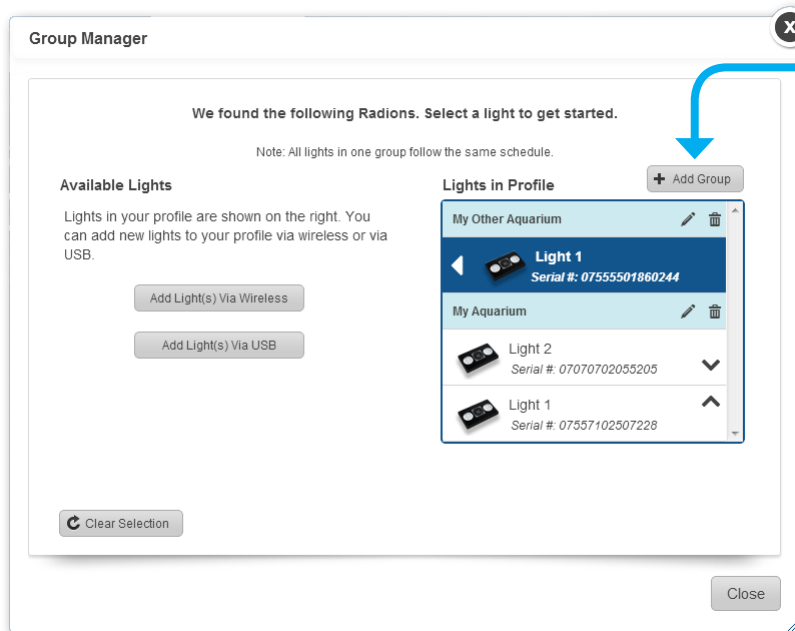
## Creating Groups and Adding Lights

In addition to the Aquarium Setup process, you can also use the *Device Manager* to create and delete groups, as well as add & remove lights from from existing groups.

- When the *Device Manager* opens, it will query and verify that the lights in your profile are available. If a light is not listed, use the controls on the left to add the missing device.

### Creating and Deleting Groups

The groups and lights in your profile will be shown on the right column. You can add or remove groups and lights as well as organize lights within a group.



#### ADD NEW GROUP

If you want to add a new group or Radions, use the *Add Group* button to create the group.

- Click the trash icon to delete the group.
- Click the pencil icon to edit the group name.
- Select a device and click the left-arrow to remove a Radion from the group.
- The up and down arrows will allow you to organize the Radions in the device list.

**TIP!** Deleting a group will move all of the Radions in it to the *Available Lights* column on the left.

### Adding a Light to a New or Existing Group

New Radions and Radions which have not been assigned to a group are listed in the *Available Lights* column. Once they are grouped, they will be displayed in the *Device List* on the *Main Window*.

#### FIRST SELECT THE LIGHT(S) TO ADD

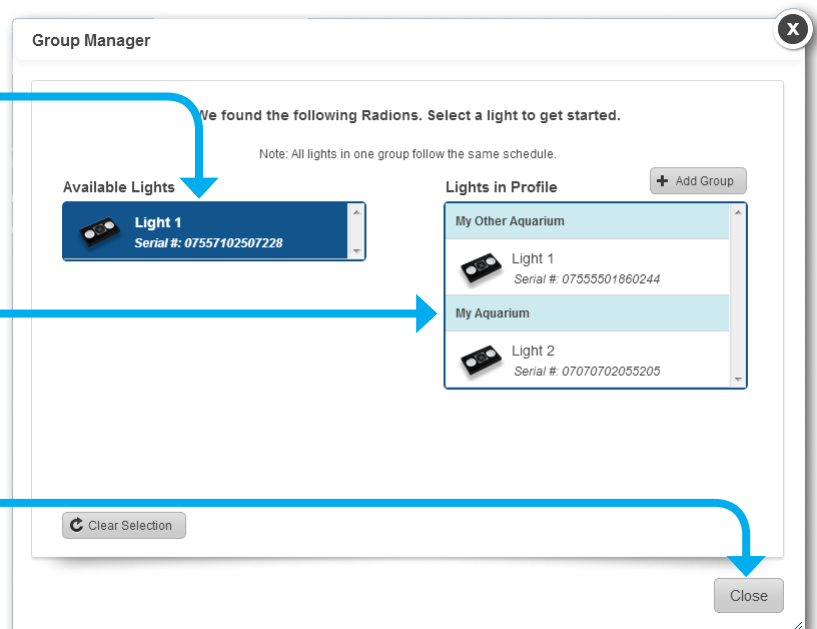
Click on each light in the *Available Lights* column that you wish to add to the group. More than one light can be selected, selected lights will be highlighted in blue.

#### NEXT CLICK THE GROUP NAME

Once you click the group name, the lights will be addressed and assigned to the group.

#### CLOSE TO COMPLETE

Clicking *Close* will return you to the main screen. You will need to program the schedule to your lights.



## Adding a Missing Radion

There are circumstances where a Radion may not be initially identified by the software. Adding missing Radions can be corrected using the Group Manager.

### ADD LIGHT(S) VIA WIRELESS

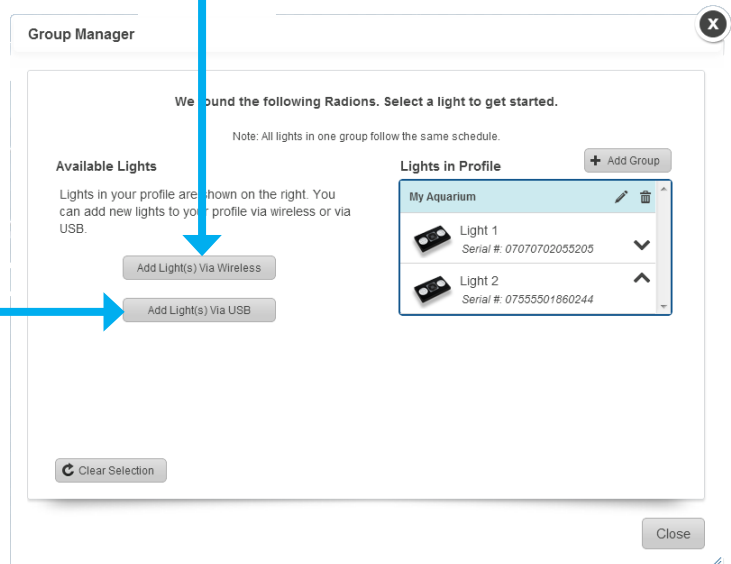
Selecting this option will search for missing Radions using wireless commands across all previous versions of firmware. All Radions must be connected to their power supply and powered on.

**TIP!:** This method is useful when adding one or two lights.

### ADD LIGHT(S) VIA USB

Selecting this option will launch a series of on-screen instructions which will step through the process of plugging the USB cable into each light which is missing.

**TIP!:** Firmware updates are much faster using USB. This method can save a lot of time if several lights require an update.



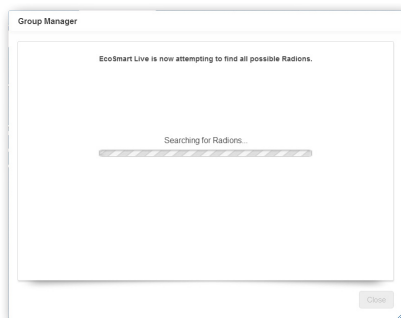
## Add Light(s) Via Wireless

Use *Add Lights Via Wireless* if you have a new Radion which you would like to add to a group.

- After selecting Add Lights Via Wireless, the EcoSmart Live site will look for new, unaddressed, Radions as well as send a query to confirm previously addressed Radions. All lights must be plugged in and running within wireless range to complete correctly.

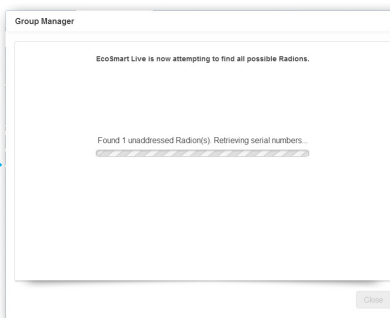
### DISCOVER LIGHTS

A wireless query is sent out, all lights which are within wireless range will respond.



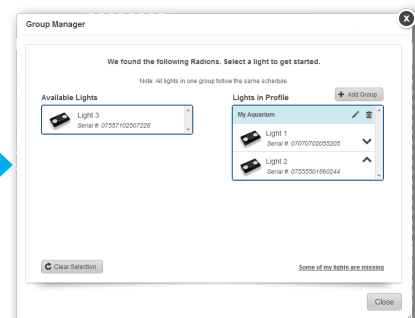
### RETRIEVE DETAILS

The device details are retrieved for all Radions which are discovered.



### RETURN AVAILABLE LIGHTS

Once the device details have been retrieved, the missing lights will be listed as Available.



- Once the new Radions are displayed in the Available Lights column, you can add them to your profile.
- In the event that no new Radions were discovered, you will be returned to the previous screen and may launch the USB method using a direct connection to the Radion.

## Add Light(s) Via USB

Use *Add Light(s) Via USB* if you are migrating several Radions from the desktop software and they need a firmware update, or you have a Radion which is not being discovered using the wireless process.

- The EcoSmart Live site will go through a series of guided steps to upgrade the firmware and reset your Radion, allowing it to become wirelessly discoverable.
- Once you complete the process for all missing Radions, the wireless identification process will be invoked.

**For each Radion you add via USB, you will be prompted through the following five steps.**

### CONNECT USB TO MISSING RADION

Move your USB cable to the missing Radion

### THE SITE WILL DETECT USB DEVICE

The computer will detect the USB device and retrieve the details. The serial number will be reported. Click Next to Continue.

### FIRMWARE VERSION CHECK

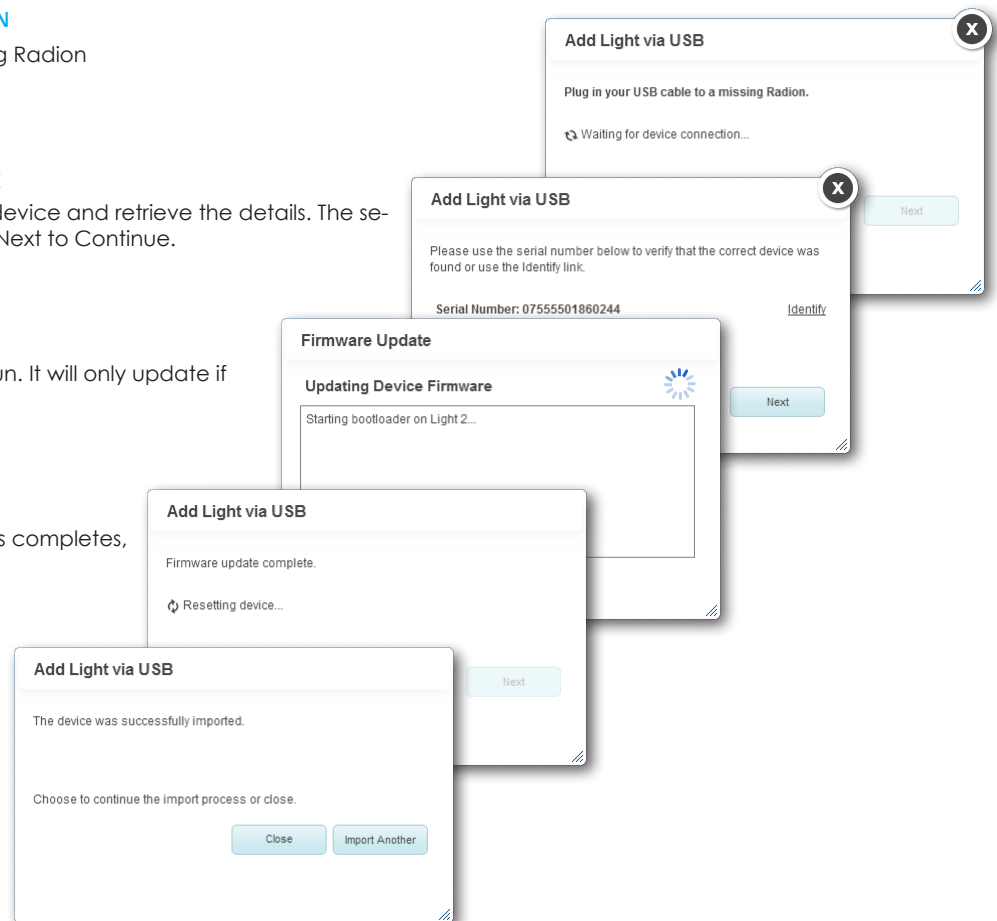
The firmware update process will run. It will only update if necessary.

### FACTORY RESET

Once the firmware update process completes, the Radion will be factory reset.

### COMPLETE

If more than one device is missing, click *Import Another*. Otherwise click *Close* to continue.



### WIRELESS VERIFICATION

Once all missing devices have been updated and reset. ESL will verify that all Radions are now communicating wirelessly.

Upon completion all devices are returned to *Device Manager*

