

Installation & Maintenance Guide

XS UV REEF LED FIXTURES

Item #	Product Description
420309	14" XS UV x 25 LED, 91W
420310	34" XS UV x 50 LED, 164W
420311	46" XS UV x 75 LED, 246W



WELCOME & TABLE OF CONTENTS

WELCOME!

Thank you for purchasing an AquaticLife® Light Fixture for use with your aquarium!

We know you value quality and innovation and will be pleased with this product's performance.

We encourage you to take a few minutes to become familiar with this manual and note items that apply to your particular model. Select parts and accessories can be purchased direct from Aquatic Life for customizing your fixture.

For additional information, please visit www.aquaticlife.com.

IMPORTANT:

- 1) Install Software before connecting Light Fixture to Computer.
- 2) Follow set-up instructions step-by-step.

TABLE OF CONTENTS



This symbol indicates “**WARNINGS**” that are essential in order to protect against injury to people or damage to equipment.



This symbol indicates “**NOTES**” that are specific instructions on how to operate, control, adjust or maintain the units.



This symbol indicates “**TIPS**” that are intended to offer helpful advice for a better user experience.



Copyright © Aquatic Life, LLC
All rights reserved.

No part of this document may be reproduced, stored in a retrieval system, or transmitted in any form or by any means without the prior written consent of Aquatic Life, LLC.

Aquatic Life, LLC
Commerce, CA 90040
Toll-Free US only: (888) 548-3480
Outside the US: 1-818-768-6943
customersupport@aquaticlife.com

Check us out on...



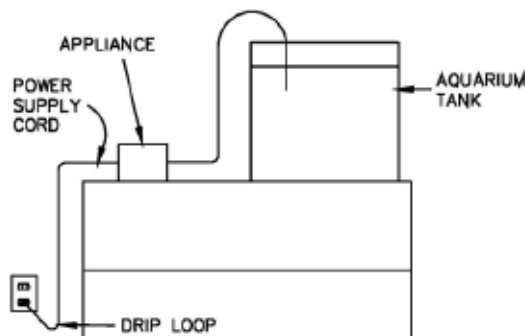
Safety Instructions	3
Warnings	3
Parts & Specifications	4
Parts Diagram	4
Product Specifications	4
Installation	5-9
Computer Requirements	5
Software Installation	5-7
Power	8
USB Connection	8
Operation	9-22
Fixture Display and Remote	9
Using T-Time Software	10
Main Menu	11
Color Dashboard	11-13
Auto Dashboard	13-15
Functions Dashboard	16-18
General Dashboard	19
Using the Remote Control	20
Suspension System	21
Aquarium Frame Mounts	22
Fixture Placement & Adjustment	22
Acclimating Corals	23
Maintenance	23
Warranty	24
Appendix A - Verify and Install .NET Framework Windows XP	25-26
Appendix B - Verify and Install .NET Framework Windows Vista	27-29
Appendix C - Creating a 24 Hour light cycle “Trace”	30-34
Appendix D - LED Layout & Lenses	35
Appendix E - Fixture Selection Guide	36



WARNING

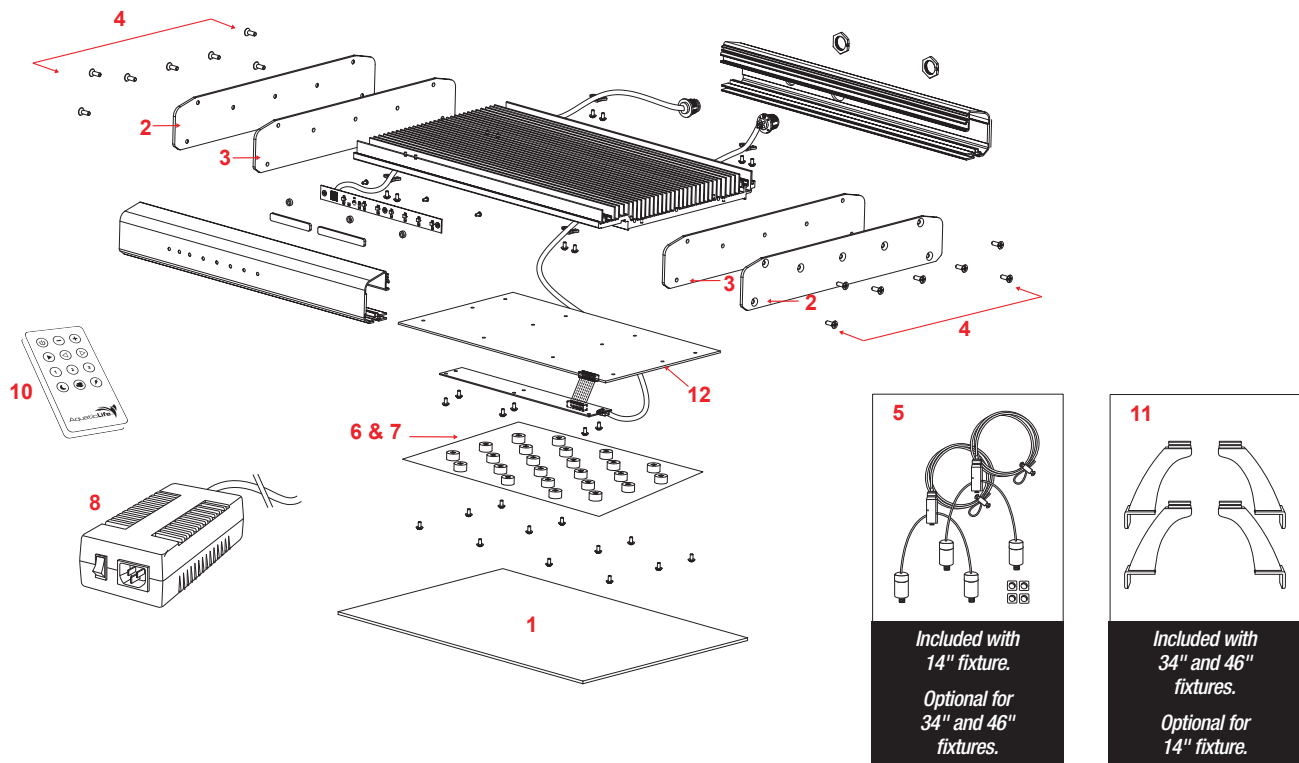
TO GUARD AGAINST INJURY, BASIC PRECAUTIONS SHOULD BE OBSERVED, INCLUDING THE FOLLOWING:

- A) **READ AND FOLLOW ALL SAFETY INSTRUCTIONS.**
- B) **DANGER** – To avoid possible electric shock, special care should be taken since water is employed in the use of aquarium equipment. For each of the following situations, do not attempt repairs by yourself; return the appliance to an authorized service facility for service or discard the appliance:
- 1) If the appliance falls into the water, DON'T reach for it! First unplug it and then retrieve it. If electrical components of the appliance get wet, unplug the appliance immediately. (Non-immersible equipment only)
 - 2) If the appliance shows any sign of abnormal water leakage, immediately unplug it from the power source. (Immersible equipment only)
 - 3) Carefully examine the appliance after installation. It should not be plugged in if there is water on parts not intended to be wet.
 - 4) Do not operate any appliance if it has a damaged cord or plug, or if it is malfunctioning or has been dropped or damaged in any manner.
 - 5) To avoid the possibility of the appliance plug or receptacle getting wet, position aquarium stand and tank to one side of a wall-mounted receptacle to prevent water from dripping onto the receptacle or plug. A "drip loop," shown in the figure below, should be arranged by the user for each cord connecting an aquarium appliance to a receptacle. The "drip loop" is that part of the cord below the level of the receptacle, or the connector if an extension cord is used, to prevent water traveling along the cord and coming in contact with the receptacle. If the plug or receptacle does get wet, DON'T unplug the cord. Disconnect the fuse or circuit breaker that supplies power to the appliance. Then, unplug and examine for presence of water in the receptacle.
- C) Close supervision is necessary when any appliance is used by or near children.
- D) To avoid injury, do not contact moving parts or hot parts such as heaters, reflectors, lamp bulbs, and the like.
- E) Always unplug an appliance from an outlet when not in use, before putting on or taking off parts, and before cleaning. Never yank the cord to pull the plug from outlet. Grasp the plug and pull to disconnect.
- F) Do not use an appliance for other than intended use. The use of attachments not recommended or sold by the appliance manufacturer may cause an unsafe condition.
- G) Do not install or store the appliance where it will be exposed to the weather or to temperatures below freezing.
- H) Make sure an appliance mounted on a tank is securely installed before operating it.
- I) Read and observe all the important notices on the appliance.
- J) If an extension cord is necessary, a cord with a proper rating should be used. A cord rated for less amperes or watts than the appliance rating may overheat. Care should be taken to arrange the cord so that it will not be tripped over or pulled.
- K) For added safety, the appliance must be plugged into a receptacle controlled by a GFCI (ground fault interrupter) circuit breaker. The device must be properly connected to a grounded three-prong receptacle.
- L) This appliance is intended FOR HOUSEHOLD USE ONLY.
- M) This Light Fixture is required to be used over a covered aquarium. A glass top or protective barrier is required to minimize the fixture's exposure to water.
- N) **SAVE THESE INSTRUCTIONS**



3W LED LIGHT FIXTURES PARTS / SPECS

PARTS DIAGRAM



Parts List

	14 in (420309)	34 in (420310)	46 in (420311)
① Lens Cover Acrylic	9000537	9000535	9000536
② End Plate Exp LED 3W (universal)	9000594	9000594	9000594
③ End Plate Blue Accent LED 3W (universal)	9000595	9000595	9000595
④ Screws LED 3W End Plate/Accent Plate (14 PK)	9000596	9000596	9000596
⑤ Suspension Hardware	470281 (Included)	470281 (Optional)	470281 (Optional)
⑥ Reflector LED 100 Deg (6 PK) XPG	9000573	9000573	9000573
⑦ Reflector LED 80 Deg (6 PK) XPE	9000574	9000574	9000574
⑧ Power Supply (complete w/switch & disconnect)	9000525	470129	470129
⑨ USB A Male to USB Mini Cable (3 meters) (not pictured)	9000531	9000531	9000531
⑩ Remote	9000587	9000587	9000587
⑪ Aquarium Frame Mounts	470262 (Optional)	470262 (Included)	470262 (Included)
⑫ XS UV LED Board	470312	470312	470312
Optional Reflector LED 60 Deg (6 PK) XPE (not pictured)	9000575	9000575	9000575

Product Specifications

	14 in (420309)	34 in (420310)	46 in (420311)
Rated Voltage:	115/230V	115/230V	115/230V
Rated Cycle:	50-60Hz	50-60Hz	50-60Hz
Power Cord:	1.8 Meter	1.8 Meter	1.8 Meter
Fixture Cord:	3 Meters	3 Meters	3 Meters
USB Connection:	3 Meters	3 Meters	3 Meters

3W LED LIGHT FIXTURES INSTALLATION



COMPUTER REQUIREMENTS

Your new Aquatic Life 3W LED Light Fixture includes electronic components that can be programmed to control the LED's. This fixture was assembled in California and pre-programmed with three lighting cycles and 18 preset colors. The software designed to customize your fixture is available for download from the Aquatic Life website www.aquaticlife.com. At a minimum, it is necessary to install the software on your computer to set the time on the light fixture for proper operation. It is important to follow the set-up procedures **step-by-step** to ensure your fixture connects properly to the software.

REQUIREMENTS:

Computer Type:

- PC (Mac is not supported at this time)

Operating System:

- Windows XP (Service Pack 3 installed)
- Windows Vista
- Windows 7v
- Windows 8

Internet Browsers:

- Microsoft Internet Explorer 8 or 9 (IE8 or IE9)
- Safari 5



WARNING

WARNING DO NOT CONNECT THE LIGHT FIXTURE TO THE COMPUTER UNTIL THE SOFTWARE IS INSTALLED.

SOFTWARE INSTALLATION

1) If you are running Windows XP, it is necessary to have Microsoft .NET Framework 2.0 Service Pack 1 or 2 (x86) installed on your computer. If you are running Windows Vista, you will need .NET Framework 3.5 Service Pack 1. If you have Windows Update turned on, there is a good chance your computer already has the .NET component installed, but it is important to verify.

2) **Windows XP Users** – See Appendix A (page 25) for instructions on how to verify you have the correct .NET Framework installed and if not, how to install. Proceed to Step 3.

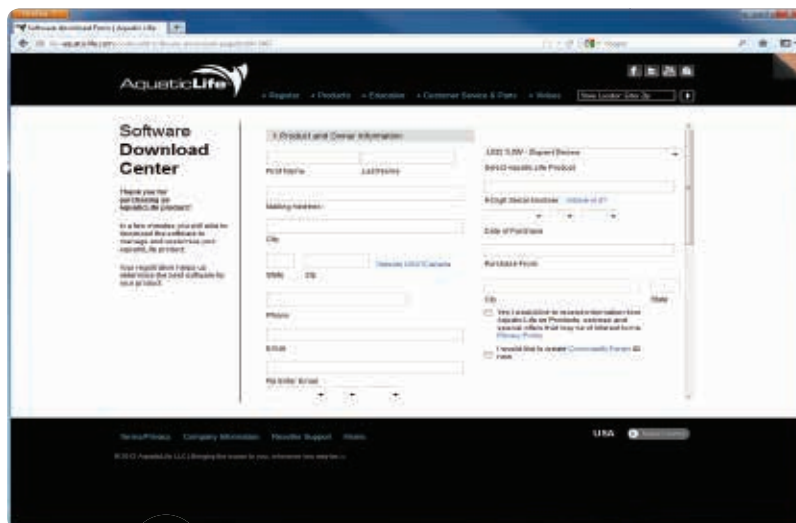
Windows Vista Users – See Appendix B (page 27) for instructions on how to verify you have the correct .NET Framework installed and if not, how to install. Proceed to Step 3.

Windows 7 & Windows 8 Users – Proceed to Step 3.

3) With your computer connected to the internet, go to www.aquaticlife.com and find your light fixture under the "+Products" menu at the top of the website.

4) Select Software Download.

NOTE: .NET (pronounced "dot net") is a programming framework created by Microsoft that developers can use to create applications more easily. If you are running Windows XP or Windows Vista, the .NET framework is needed to use the Aquatic Life software to program your LED Light Fixture.



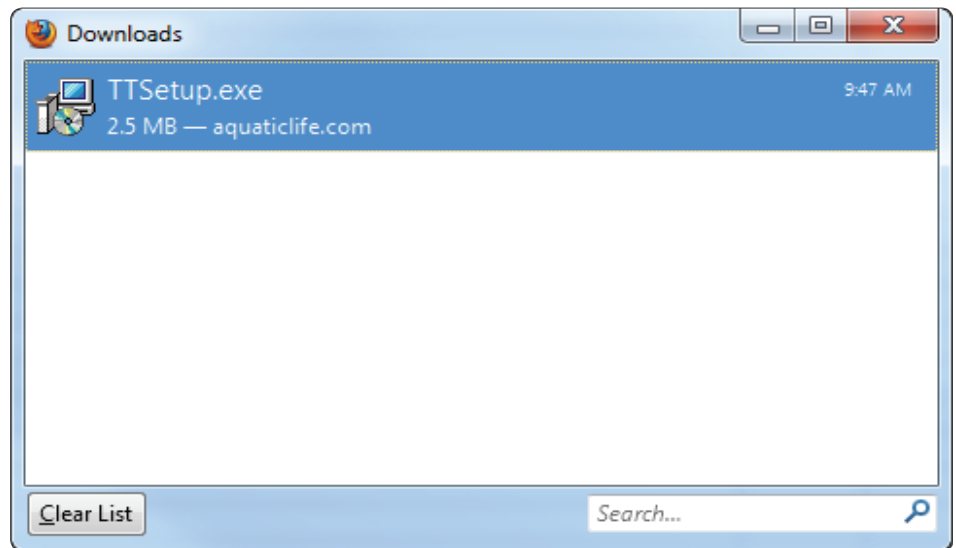
3W LED LIGHT FIXTURES INSTALLATION

SOFTWARE INSTALLATION (CONTINUED)

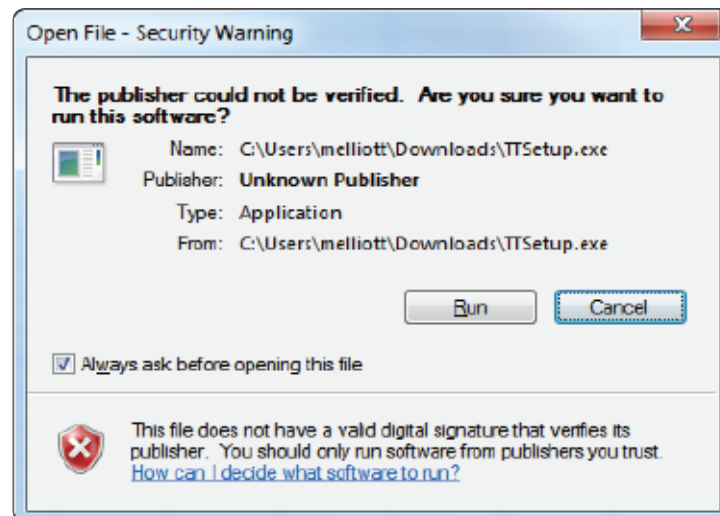
On the Software Download Center webpage, you will be asked to register your Aquatic Life light fixture. You will need the unique nine digit serial number associated with your fixture to register the fixture and obtain the "Key" needed to download the software. The serial number is located on the back of the light fixture and contains nine digits.

After you complete the needed registration information, select the "Request Key" button and follow the instructions on the website.

When prompted, select "Save File".



Double-click on the program and select "Run".

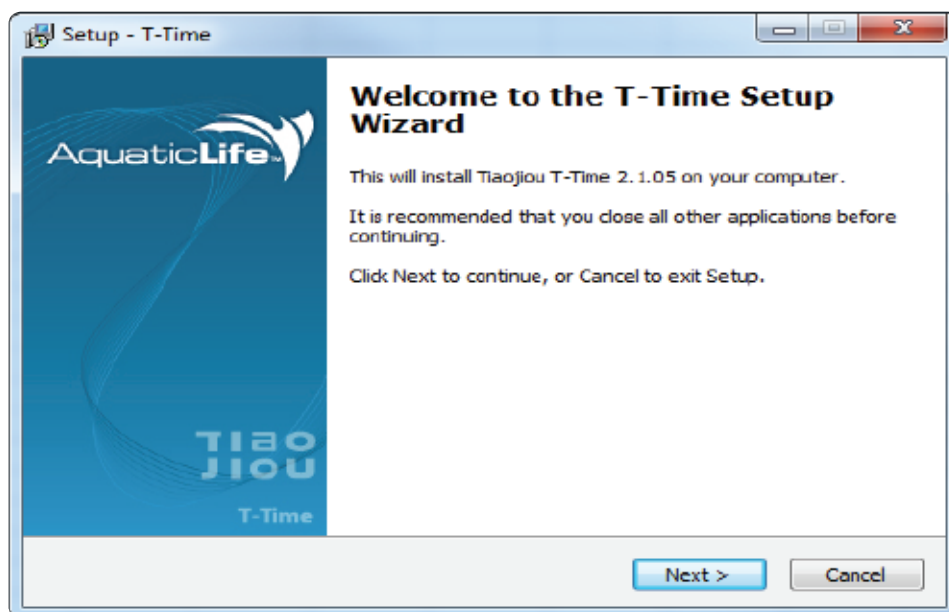


Run the set-up wizard.

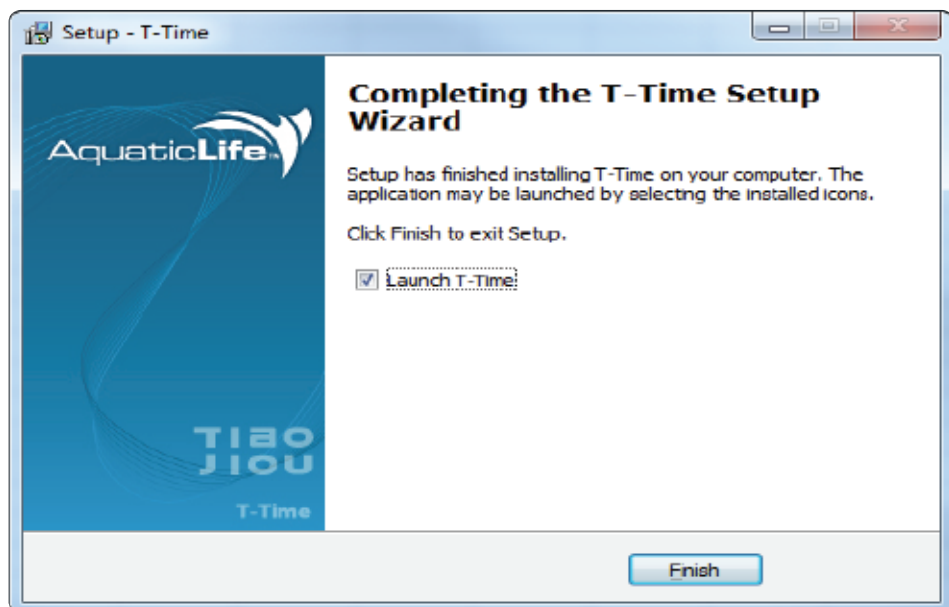
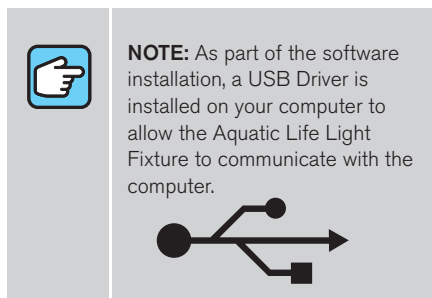
3W LED LIGHT FIXTURES INSTALLATION

SOFTWARE INSTALLATION (CONTINUED)

5) Click Next.



6) When the software has finished installing, click finish.



3W LED LIGHT FIXTURES INSTALLATION

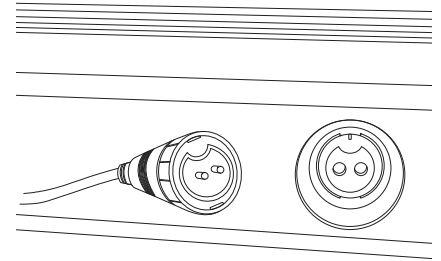
POWER

The Aquatic Life 3W LED Light Fixture is powered by a remote Power Supply. The cUL Approved Power Supply will work with 110V and 220V with no extra adapters or switches.

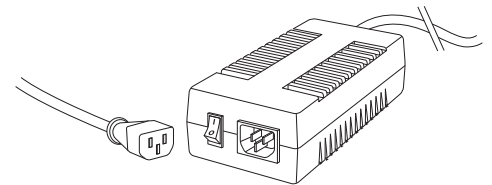


TIP: The cord is "KEYED" and can be placed into the fixture only one way.

- 1) Plug the cord connected to the power supply into the back of the Light Fixture and secure by turning the outer ring on the cord in a clockwise direction until snug.

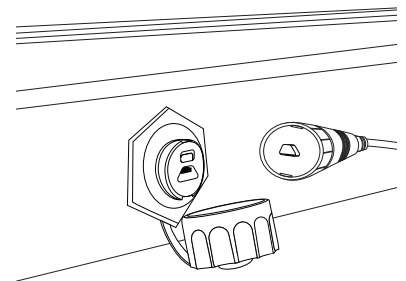


- 2) Connect the female end of the power cord into the Power Supply and then the standard plug side into a grounded outlet (GFCI). Rock the power switch on the Power Supply.



USB CONNECTION

- 1) Remove the protective cap from the USB port on the back of the fixture. The cap is attached to the fixture and should not be removed from the fixture.



- 2) Use the included USB mini to USB A male wire to connect the fixture to the PC computer.



WARNING: DO NOT attach the fixture to the computer if you have not installed the software. If attached prior to software installation, the fixture may need to be shipped back to Aquatic Life for repair.



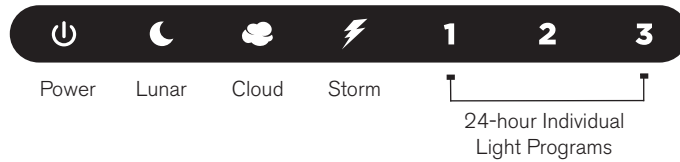
WARNING: Do NOT leave the USB cable connected to the computer when not in use. Use the included protective cap to cover the USB connection on the back of the Light Fixture to prevent damage from water and salt.



TIP: USB Cables are capable of transmitting quality data over a maximum of sixteen feet of cable. To ensure proper operation, Aquatic Life recommends using the cable provided or installing a Wireless USB Adapter.

3W LED LIGHT FIXTURES OPERATION

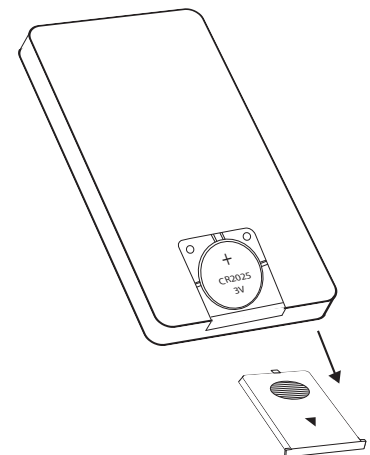
FIXTURE DISPLAY AND REMOTE



- Power ON/OFF
- Auto Mode Power Adjustment
- Demonstrate the existing Auto Selection
- Color Mode Selection
- Auto Mode Trace Selection
- Lunar Mode ON/OFF
- Cloud Mode ON/OFF
- Storm Mode ON/OFF

The Remote is powered by one 3V Lithium Battery (CR2025). To use the Remote for the first time, install the battery and the contacts inside the Remote. The battery life depends on the usage.

When using the Remote, always point it toward the front of the Light Fixture. The Infrared Sensor is located on the front of the Light Fixture between the Power and Lunar LED indicators.



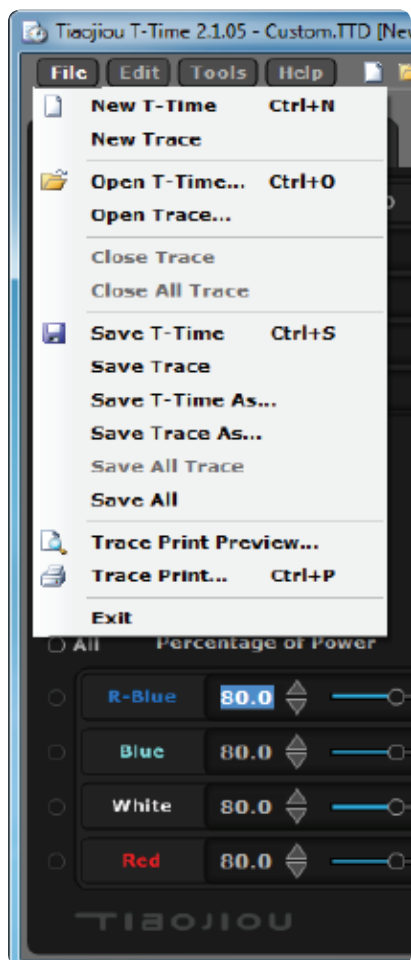
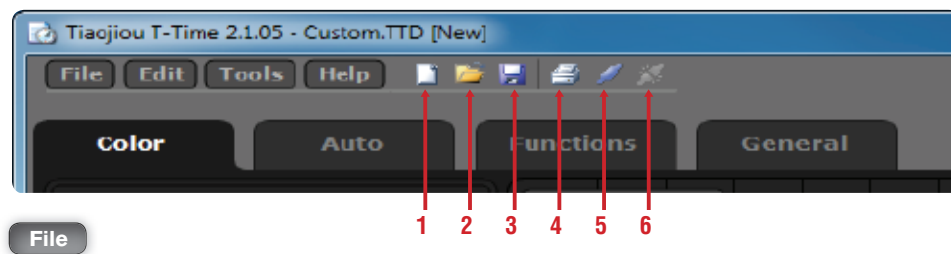
3W LED LIGHT FIXTURES OPERATION

USING T-TIME SOFTWARE

The T-Time Software enables custom programming of the LED's in the Aquatic Life Fixture. Included in this customization is the ability to create 18 different light color combinations, three 24 hr cycles, control cloud cover, lightning storms and lunar light. Once programmed, the Light Fixture is controlled with the handheld Remote.

There is a toolbar menu that remains at the top of the T-Time Screen and four dashboards available depending on the tab selected. The four dashboards are Color, Auto, Functions and General. Becoming familiar with the main menu and dashboards will make customizing your lighting easier.

MAIN MENU



- 1 New T-Time** - Allows you to start "fresh" with no Traces, Colors or other customizations. If you have customized T-Time already and select "New T-Time" you will be prompted to save what you have already created. The file format for T-Time is .TTD.

New Trace - Opens a "fresh" Auto Dashboard where you can create a new Trace. The previous Trace can still be accessed using the drop-down menu on the Auto Dashboard. Creating a New Trace does not change the settings on the Color, Functions or General Dashboards. The file format for a Trace is .TTT.

- 2 Open T-Time** - Allows you to open a previously saved .TTD file.

Open Trace - Allows you to open a previously saved .TTT file.

Close Trace - Allows you to close a specific Trace so it does not appear on the Auto Dashboard drop-down menu. If you have not saved the changes to the Trace, you will be prompted to save before closing the Trace.

Close All Trace - Allows you to close all open Traces so they do not appear on the Auto Dashboard drop-down menu. If you have not saved the changes to the Traces, you will be prompted to save all before closing the Traces.

- 3 Save T-Time** - Allows you to save all of the customization you have made to the T-Time software. The file format for T-Time is .TTD.

Save Trace - Allows you to save a specific Trace for future reference or sharing with other users. The file format for a Trace is .TTT.

Save T-Time As - Similar to Save T-Time, but allows you to change the name prior to saving the .TTD file.

Save Trace As - Similar to Save Trace, but allows you to change the name prior to saving the .TTT file.

Save All Trace - Similar to Save Trace, but after the first Trace is saved, you will be prompted to save all open Traces one at a time.

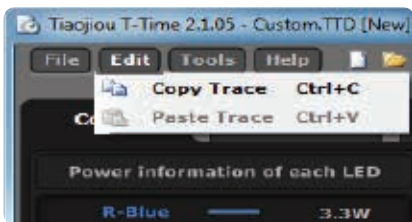
Save All - Allows you to save all open .TTD and .TTT files one-by-one.

Trace Print Preview - Allows you to view the Trace as it will be printed prior to sending the file to your printer.

- 4 Trace Print** - Allows you to send a copy of the Trace to printer(s) connected to your computer.

Exit - Closes the T-Time software. If you have not saved any changes, you will be prompted to save changes prior to exiting the software.

3W LED LIGHT FIXTURES OPERATION





MAIN MENU (CONTINUED)

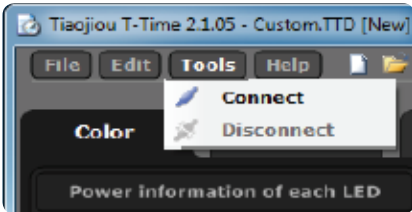
Edit

Copy Trace – Allows you to copy a Trace from the Trace being viewed on the Auto Dashboard. The copy is stored on a special clipboard within the T-Time software, not in Windows.

Paste Trace – Allows you to transfer a Trace that has been copied to a different Trace screen on the Auto Dashboard. You can paste to a new Trace or an existing Trace. If you paste to an existing Trace, the pasted copy will overwrite whatever trace is currently being viewed on the Auto Dashboard.

Tools

-  **5 Connect** – Creates the connection between the T-Time software and Aquatic Life Expert Light Fixture. When connected, the word "Online" will be present at the bottom of each Dashboard.
-  **6 Disconnect** – Breaks the connection between the T-Time software and the Aquatic Life Expert Light Fixture. When disconnected, the word "Offline" will be present at the bottom of each Dashboard.



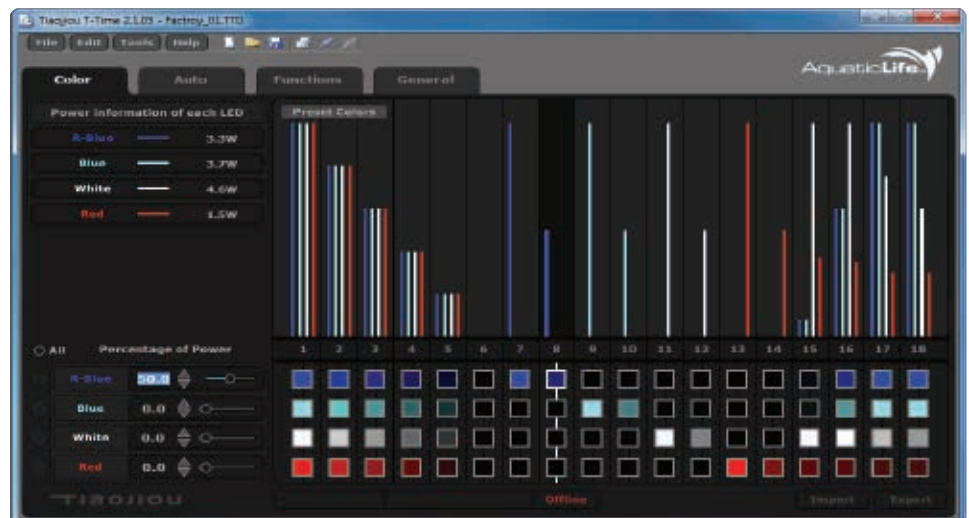
COLOR DASHBOARD

The Color Dashboard allows you to create 18 different preset color combinations and intensities of light that can be loaded into the Light Fixture and controlled by the handheld Remote. Use these colors when you want to view the aquarium under light that does not change according to the clock in the fixture.

For example, your fixture is operating throughout the day and you have created a sun-up, sun-down routine. Friends are visiting and you want to show them the aquarium, but only the moonlights are operating. You can use the Remote to access any one of the 18 customized colors/intensities you have created and show your friends the aquarium. When you are finished, you can use the Remote to return to the programmed daily lighting cycle you have created.



TIP: When buttons are grayed-out, they are not active. Often, connecting the fixture to the T-Time software will activate the buttons.



3W LED LIGHT FIXTURES OPERATION

COLOR DASHBOARD (CONTINUED)

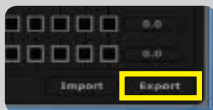
There are four different colored LED's in the Aquatic Life 3W Expert Light Fixture; Royal Blue, Blue, White and Red. The T-Time software allows you to create different combinations of these colors on the Color Dashboard. There are four ways to achieve the same results when creating custom colors.

- 1 Using your computer keyboard, enter the percent values for each color LED.
- 2 Click on the up and down arrows to increase or decrease the percent value for each color LED.
- 3 Slide the button to the right and left to adjust the percent values for each color LED.
- 4 Slide the vertical bar up and down to adjust the percent value for each color LED.

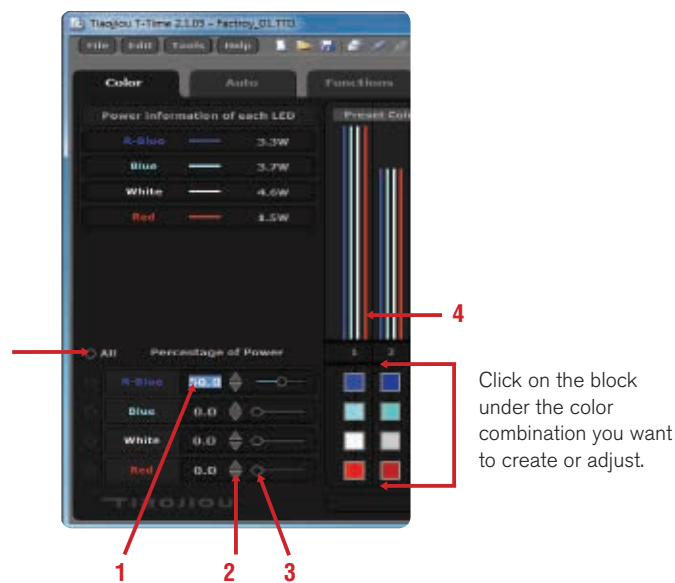
TIP: Use the Import button to load the existing Aquatic Life Light Fixture Color, Auto and Functions dashboards settings into the T-Time Software.



Use the Export button to transfer your Color, Auto and Functions dashboards settings from the T-Time Software to the Aquatic Life Light Fixture.

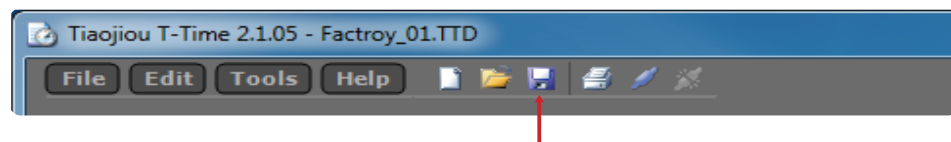


To proportionally adjust the percent values for all of the LED's that are being used in one of the eighteen combinations, select the "All" button. Then use the mouse to drag the four vertical bars to the desired percentages.



NOTE: The 400nm and 420nm LED's are controlled with the other LED's on the Royal Blue channel.

NOTE: The white channel includes two royal blue LED's per LED board.




To save the combination of LED colors you have created, click on the disk icon in the top toolbar.

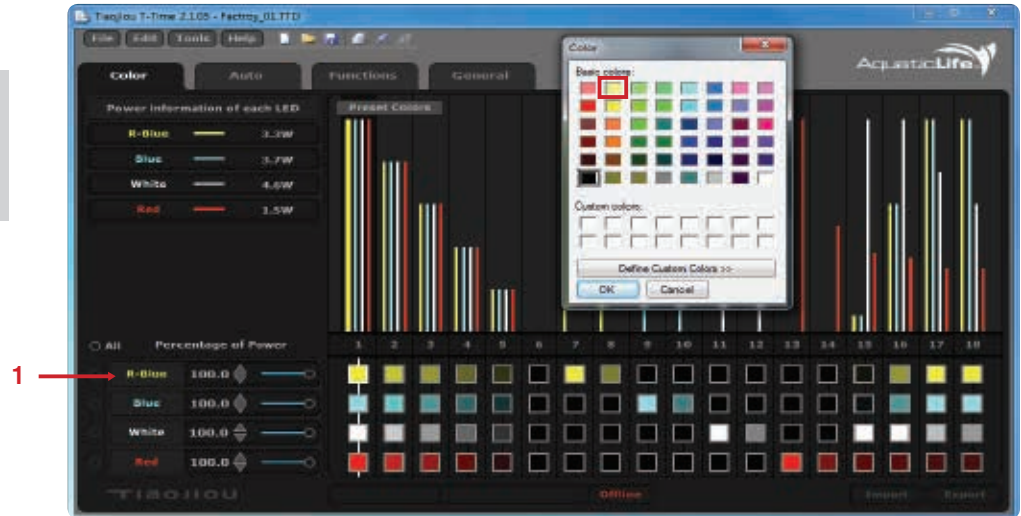
3W LED LIGHT FIXTURES OPERATION

COLOR DASHBOARD (CONTINUED)

You can customize the color on your computer screen that represents each of the four LED colors.

- 1 Click on the color you want to customize and a color palette will open.

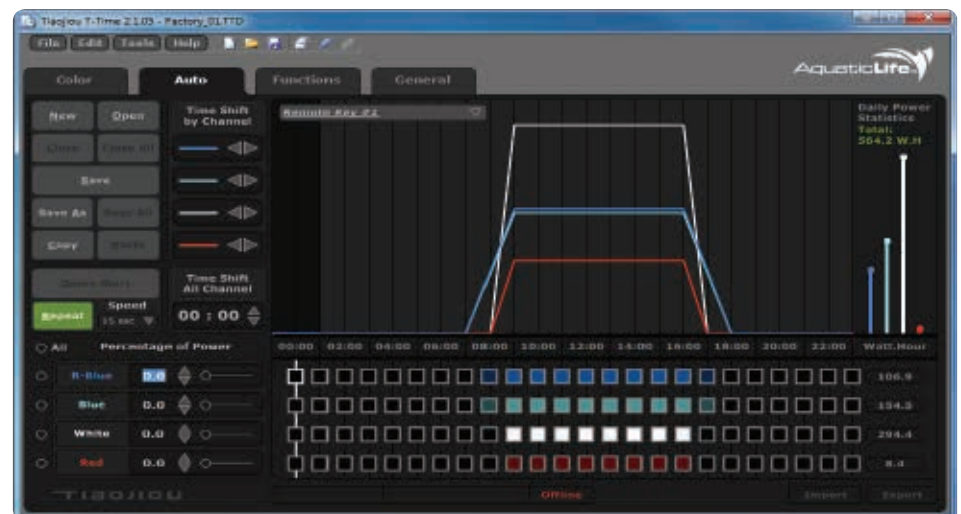
 **NOTE:** You are changing only the color that represents the LED color, not the actual LED color.



In this example, we opened the color palette, selected a yellow color and now our screen uses yellow to represent the Royal Blue LED on the Dashboard.

AUTO DASHBOARD

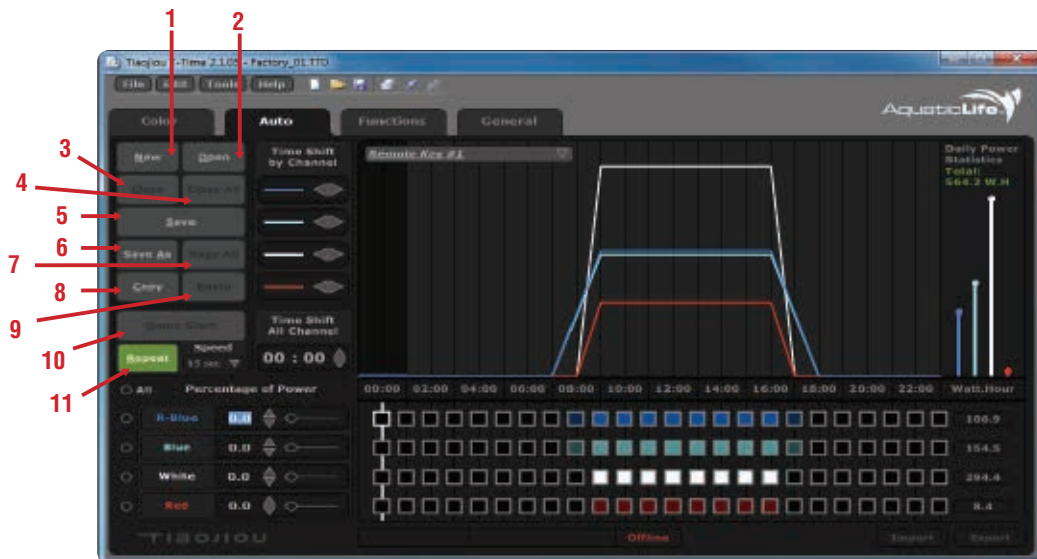
The Auto Dashboard allows you to create daily light cycles, which are comprised of Traces. A "Trace" is the intensity of each color of LED over a 24 hour period. Lunar Light, Cloud Cover and Thunder Storms are not included in your Traces. These lighting options are managed on the Functions Dashboard.



Some of the buttons on the Auto Dashboard are only active when the Aquatic Life Expert Light Fixture is connected to the T-Time software. If a button is grayed-out, the option is not available offline or the action cannot be completed.

3W LED LIGHT FIXTURES OPERATION

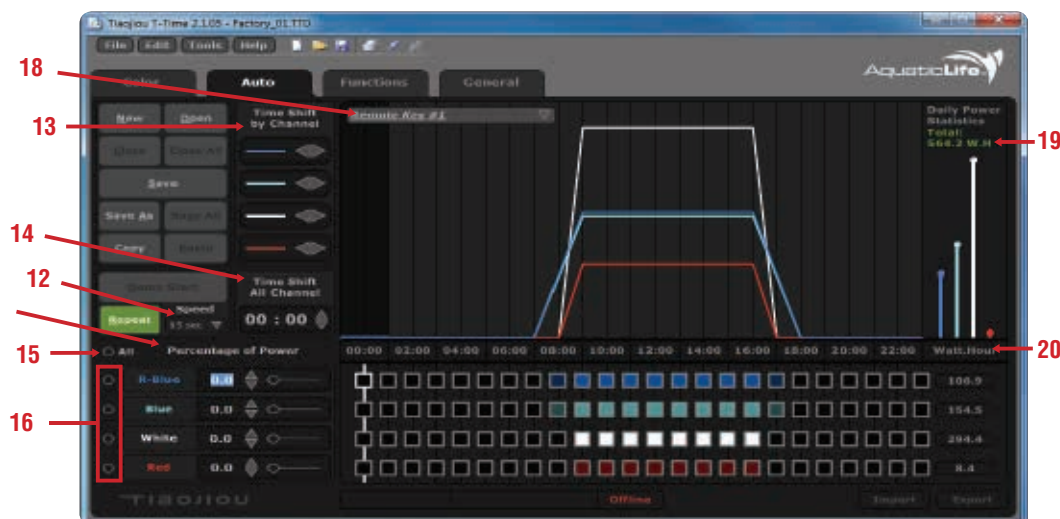
AUTO DASHBOARD (CONTINUED)



- 1 New** – Opens a “fresh” Auto Dashboard where you can create a new Trace. The previous Trace can still be accessed using the drop-down menu (18) on the Auto Dashboard. Creating a New Trace does not change the settings on the Color, Function or General Dashboards. The file format for a Trace is .TTT.
- 2 Open** – Allows you to open a previously saved .TTT file.
- 3 Close** – Allows you to close a specific Trace so it does not appear on the Auto Dashboard drop-down menu. If you have not saved the changes to the Trace, you will be prompted to save before closing the Trace.
- 4 Close All** – Allows you to close all open Traces so they do not appear on the Auto Dashboard Trace Drop-Down Menu. If you have not saved the changes to the Traces, you will be prompted to save all before closing the Traces.
- 5 Save** – Allows you to save a specific Trace for future reference or sharing with other users. The file format for a Trace is .TTT.
- 6 Save As** – Similar to Save Trace, but allows you to change the name to saving the .TTT file.
- 7 Save All** – Allows you to save all open .TTD and .TTT files one-by-one.
- 8 Copy** – Allows you to copy a Trace from the Trace being viewed on the Auto Dashboard. The copy is stored on a special clipboard within the T-Time software, not in Windows.
- 9 Paste** – Allows you to transfer a Trace that has been copied to a different Trace screen on the Auto Dashboard. You can Paste to a new Trace or an existing Trace. If you Paste to an existing Trace, the pasted copy will overwrite whatever trace is currently being viewed on the Auto Dashboard.
- 10 Demo Start** – When the T-Time software is connected to the Aquatic Life Light Fixture, you can use the Demo function to view the Traces you have created and are currently displayed on the active Dashboard. The Demo will take you through an entire 24 hour cycle between 15 seconds and 3 minutes depending on the time selected from the Speed (12) drop-down menu (page15).
- 11 Repeat** – When selected, the Repeat button is a green color. Used in conjunction with the Demo Start button, the Traces will continue to loop until stopped.

3W LED LIGHT FIXTURES OPERATION

AUTO DASHBOARD (CONTINUED)



TIP: Refer to Appendix C (page 30) for a step-by-step example of creating a 24 hour cycle with four Traces for a Marine Aquarium. Visit www.aquaticlife.com to download ready-to-import 24 hour cycle Traces. Once downloaded, you can import into the T-Time software and use as is or modify before Exporting into your Aquatic Life Light Fixture.



- 12 Speed** – Used to control the compressed length of time for a 24 hour cycle. This is used in conjunction with the Demo Start function.
- 13 Time Shift by Channel** – Easily shift each color LED Trace in one hour increments by using the left and right arrows below the Time Shift by Channel heading.
- 14 Time Shift All Channels** – Easily shift the hours and minutes for all of the traces at the same time. Click on the hours or minutes and then use the keyboard to enter the new time or the up and down arrows to adjust the time.
- 15 All** – Use the All button to proportionally adjust the percent values for all of the LED's Traces on the active Auto Dashboard. When selected, the Trace window is outlined. Use the mouse to drag all of the traces up or down to adjust the percent light intensity.
- 16 Trace Increase/Decrease** – Select one to four of the LED Traces that you would like to increase or decrease the light intensity. The selected Traces will appear on the screen as bold.
- 17 Percentage of Power** – When each hour of a cycle is selected, the percentages of power going to each color of LED are displayed. The percentages can be adjusted by dragging the Traces on the screen, using the keyboard to manually enter the percentage value, using the up and down arrows to the right of the values or the small horizontal sliding bars to the right of the values.
- 18 Trace Drop-Down Menu** – This drop-down menu shows all open Traces as well as the Traces that can be uploaded to the Aquatic Life Light Fixture and controlled by the handheld Remote. When the Auto Dashboard is first opened, the default Trace Drop-Down is "Remote Key 1". Remote Key 1, 2 and 3 cannot be deleted because these are the three daily cycles that can be uploaded to the Aquatic Life Light Fixture. You can create as many Traces as desired and use the Copy & Paste functions to transfer your custom Traces to the Remote Keys.
- 19 Daily Power Statistics** – The total Watts used in the 24 hour period by all four color LED's based on the light cycle created. If the Aquatic Life Light Fixture has never been connected to the T-Time software, the default calculations will be based on the 14inch Light Fixture model. Once the Aquatic Life Light Fixture has been connected to the T-Time software, the software will automatically adjust to calculate the power usage for the correct size fixture.
- 20 Watt.Hour** – The Watts used in a 24 hour period by the Royal Blue, Blue, White and Red LED's. Once the Aquatic Life Light Fixture has been connected to the T-Time software, the software will automatically adjust to calculate the power usage for the correct size fixture.

3W LED LIGHT FIXTURES OPERATION



NOTE: The Lunar, Cloud and Storm functions do not work when the fixture is operating in one of the 18 Color Modes.

FUNCTIONS DASHBOARD

The Functions Dashboard is where you control the Lunar Cycle, Cloud Settings and Storm Settings.

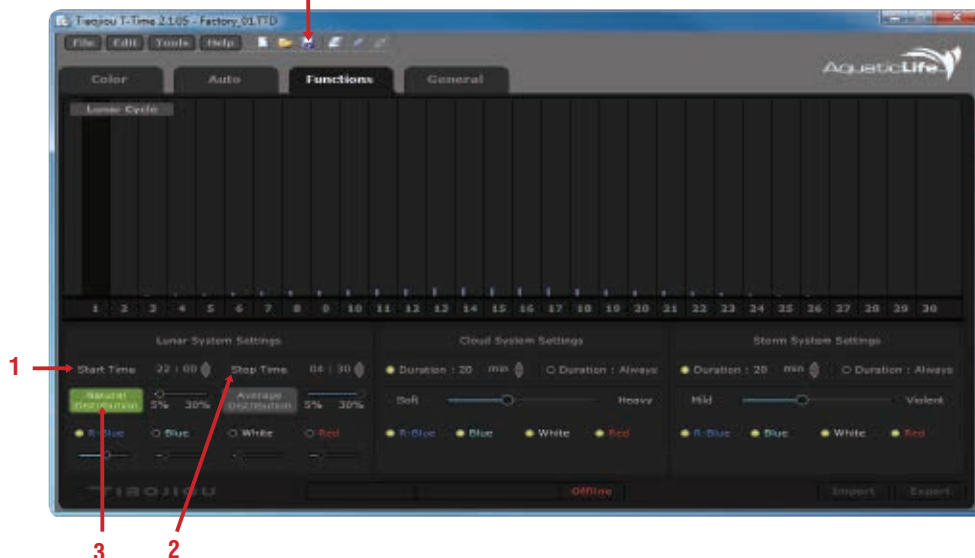
The programmed Lunar Cycle, Cloud and Storm and activated using the handheld remote control when the fixture is operating in Auto Mode 1, 2 or 3.

Functions Dashboard Overview

To save your Functions Dashboard settings, click on the disk icon in the top toolbar

TIP: The Aquatic Life Light Fixture uses a 24 hour clock so there is no confusion between AM and PM.

AM / PM	24 Hr. Clock
12:00 AM	0:00
1:00 AM	1:00
2:00 AM	2:00
3:00 AM	3:00
4:00 AM	4:00
5:00 AM	5:00
6:00 AM	6:00
7:00 AM	7:00
8:00 AM	8:00
9:00 AM	9:00
10:00 AM	10:00
11:00 AM	11:00
12:00 PM	12:00
1:00 PM	13:00
2:00 PM	14:00
3:00 PM	15:00
4:00 PM	16:00
5:00 PM	17:00
6:00 PM	18:00
7:00 PM	19:00
8:00 PM	20:00
9:00 PM	21:00
10:00 PM	22:00
11:00 PM	23:00



Lunar System Settings

The Aquatic Life Expert Series Light Fixture includes a Lunar function that can be programmed independently of the three 24 hour light cycles .

- 1 Start Time** – Select the Hour and Minutes with your mouse and then use the keyboard to enter the start time for the lunar lighting. You can also select the Hour and Minutes and use the up and down arrows to adjust the time.
- 2 Stop Time** - Select the Hour and Minutes with your mouse and then use the keyboard to enter the end time for the lunar lighting. You can also select the Hour and Minutes and use the up and down arrows to adjust the time.
- 3 Natural Distribution** – When the Natural Distribution function is used, the lunar light will increase and decrease over a thirty day period. You can control the percent intensity of all LED's or the four colors of LED's independently; however, the thirty day cycle will remain.



FUNCTIONS DASHBOARD (CONTINUED)

- 4 Average Distribution** – When the Average Distribution function is used, the lunar light will be constant over a thirty day period. You can control the percent intensity of all LED's or the four colors of LED's independently.



- 5 LED Color Selection** – Select one to four of the colored LED's to be included in the Lunar System. Once selected, adjust the intensity of each color to the desired amount.

Cloud System Settings



TIP: Select Duration: Always and Soft cloud cover to have the intensity of your 24 hour light cycle randomly change throughout the day.

The Aquatic Life Expert Series Light Fixture includes a cloud function that can be programmed independently of the three 24 hour light cycles.

When a cloud setting is active, the feature will be highlighted yellow. The following cloud customization is available:



- 1** Duration is the length of time that the cloud cover lasts. You can select 1 to 250 minutes (4 hours) of cloud cover or have constant cloud cover. When any amount of duration is selected, the cloud cover will randomly move from lighter cover to darker cover.
- 2** Slide the button left to right to adjust the intensity of the cloud cover (Soft to Heavy).
- 3** Select which of the four colored LED's are affected by the cloud cover.
- 4** With the fixture connected to the T-Time program, select "Export" to transfer your custom settings to the Aquatic Life light fixture.



NOTE: . For the Lunar, Cloud, and Storm functions to work, the Light fixture must be in Auto Mode 1, 2 and 3.



When the fixture is disconnected from the computer, activate the cloud cover by pressing the Cloud button on the handheld Remote. The cloud indicator light on the front of the light fixture will illuminate. About one minute will pass before the cloud cover begins. The cloud cover will last as long as the duration is set and then will automatically turn off. To active again, press the cloud button on the handheld Remote.

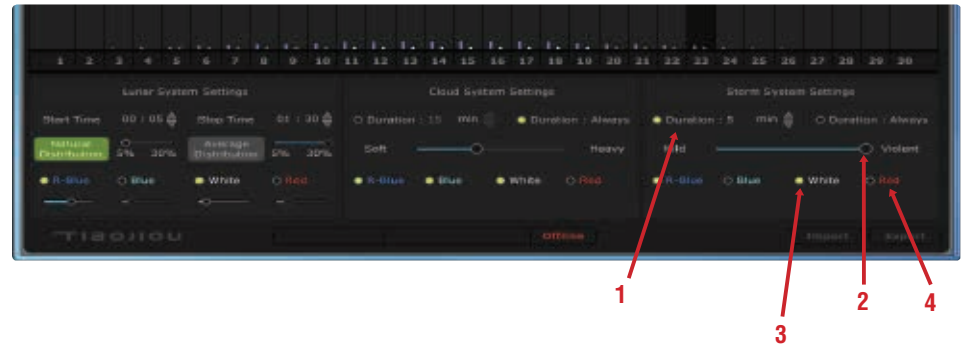
In the example, the Duration is set for 15 minutes, with medium cloud cover. The cloud cover will not affect the 24 hour light cycle programming of the red LED's on the fixture. Once the Cloud button is pressed on the handheld Remote, the cloud cover will begin and last for 15 minutes before ending. When the cloud cover ends, the indicator light on the front of the Light Fixture will turn off.

FUNCTIONS DASHBOARD (CONTINUED)

Storm System Settings

The Aquatic Life Expert Series light fixture includes a thunder storm function that can be programmed independently of the three 24 hour light cycles.

When a storm setting is active, the feature will be highlighted yellow. The following storm customization is available:



- 1 Duration is the length of time that the thunder storm lasts. You can select 1 to 250 minutes (4 hours) of storm or have constant thunder storm.
- 2 Slide the button left to right to adjust the intensity of the thunder storm (Mild to Violent).
- 3 Select which of the four colored LED's are used in the lightening storm. When the storm happens, the LED's that are on the 24 hour light cycle will begin to dim and then the storm will take place using the LED's selected.
- 4 With the fixture connected to the T-Time program, select "Export" to transfer your custom settings to the Aquatic Life light fixture.

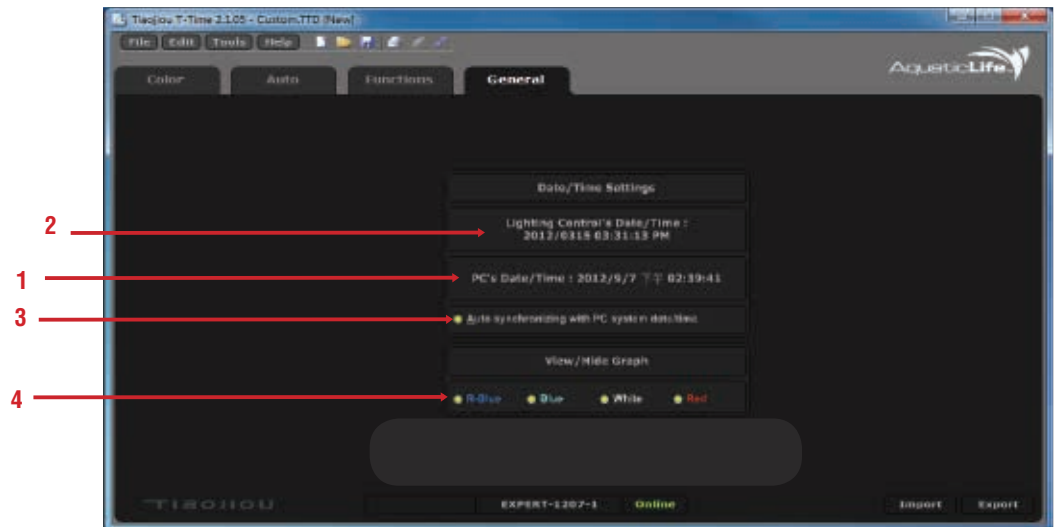


When the fixture is disconnected from the computer, activate the thunder storm by pressing the Storm button on the handheld Remote. The storm indicator light on the front of the light fixture will illuminate. About one minute will pass before the lightening storm begins. The storm will last as long as the duration is set and then will automatically turn off. To active again, press the Storm button on the handheld Remote.

In the example, a violent storm using Royal Blue and White LED's is set to last five minutes. Once the Storm icon is pressed on the handheld remote, the lightening storm will begin and last for 5 minutes before ending. When the storm ends, the indicator light on the front of the Light Fixture will turn off.

GENERAL DASHBOARD

The General Dashboard is where you synchronize the time on your computer with the clock on the Light Fixture.



Date/Time Settings

- 1 Date and Time of your computer. If your computer does not have the correct date or time, you will need to set your computer to be able to set the correct time on your Aquatic Life light fixture.
- 2 When the fixture is connected to the T-Time software (Online), the fixture's date and time will be visible.
- 3 Select, Auto to synchronize the date and time between your computer and Aquatic Life Light Fixture.

View/Hide Graph

- 4 When selected, the graphs are visible on the Color and Auto Dashboards.

USING THE REMOTE CONTROL

The Aquatic Life Expert Series Fixture does not have controls on the fixture itself. All functions are controlled by a handheld Remote Control. It is important to point the Remote directly at the fixture to transmit the infrared signal.



NOTE: The Remote Control will only function after the Light Fixture has been disconnected from the T-Time Software.



- 1 Power ON/OFF** – When the power to the fixture is ON, at least one light will also be illuminated on the front display. If no lights are illuminated, the power is OFF.
- 2 -/+ Keys** – Use the minus and plus buttons to change the intensity of the 24 hour light cycle that is currently operating.
- 3 Demo** – The Demo button will run the selected 24 hour light cycle in a compressed time period.
- 4 Left Arrow / Right Arrow** – Pressing either the left or right arrow buttons will place the fixture into the Color Mode. In the T-Time Software, there are 18 different color modes that can be programmed and exported to the light fixture. When a double-beep is heard, the end of the 18 colors has been reached. All three blue 1, 2 and 3 indicator lights will be illuminated when in Color Mode.
- 5 1, 2, 3** – Pressing buttons 1, 2 or 3 will activate the corresponding 24 hour light cycle that has been exported into the light fixture from the T-Time Software.
- 6 Lunar, Cloud, Storm** – Pressing one of these buttons will activate the various specialty lighting effects.

SUSPENSION SYSTEM

Tools required for installation:
Phillips #2 Screwdriver

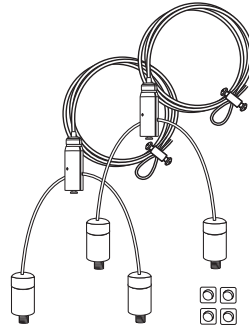


WARNING: If mounting to the ceiling, suspension hardware should be mounted into a secure surface only. Do not mount hardware directly into drywall/gypsum board or any similar material. Mounting hardware **MUST** be attached securely and into wood supports that can handle 100lbs or more.



TIP: Use optional Universal Fixture Hangers on your aquarium stand. (Item # 370210)

PARTS LIST

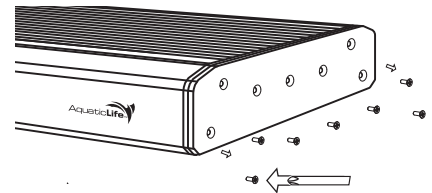


(Quantity 2) Suspension Wire & Connectors

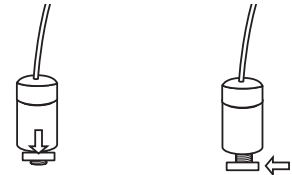
(Quantity 4) Suspension Connector Nuts

FIXTURE ATTACHMENT

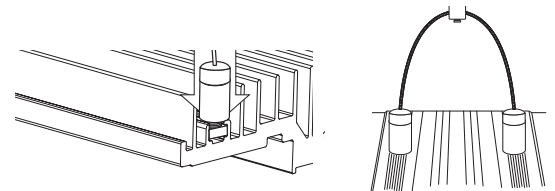
- 1) Remove the metal and blue Endplates from one side of the Light Fixture by removing the seven Phillips Head screws.



- 2) Loosen each of the four Connector Nuts on the base of the Connectors.



- 3) Slide the Connector with Nut into the channels as shown.



- 4) When the Connectors are in the desired location, twist the top of each of the four Connectors clockwise to lock the Suspension System into place.

- 5) Reattach the metal and blue Endplates.

FIXTURE PLACEMENT AND ADJUSTMENT



WARNING: It is extremely important to make sure the anchor is tight and cannot move, this is the part that keeps the fixture secure to the ceiling.



WARNING: If mounting to the ceiling, suspension hardware should be mounted into a secure surface only. Do not mount hardware directly into drywall/gypsum board or any similar material. Mounting hardware **MUST** be attached with hooks and into wood supports that can handle 100lbs or more.



NOTE: If using a fixture hanger to suspend your Light Fixture, place the loop of the wire around the fixture hanger.



NOTE: The metal Anchors ship attached to the Aquarium Frame Mounts.



NOTE: Not all of the Aquarium Frame Mounts are the same. Position the Mounts so that they angle away from the fixture to provide a wide stable base.

To adjust the height of the fixture above the aquarium, first make sure the wire anchor is tight to the wire and that there is a loop that can be placed over the hook in the ceiling or light fixture hanger.

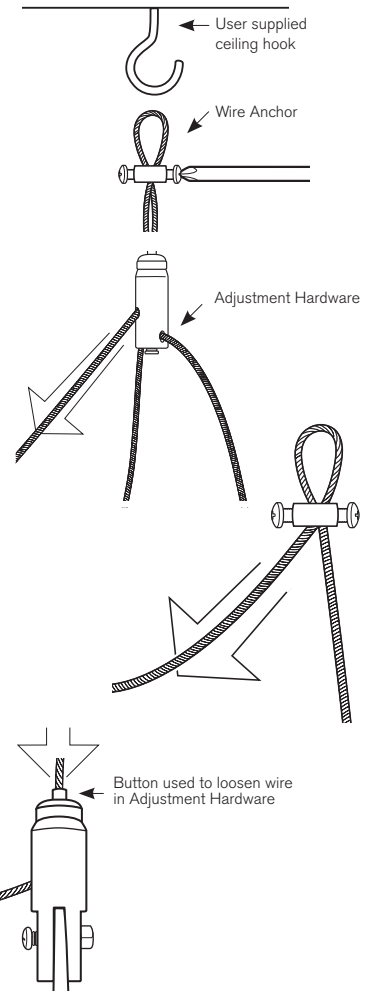
Place the wire loop onto the hook and allow the wire to suspend from the hook.

Pull any excess wire through the Adjustment Hardware located above the fixture. Level the fixture and measure the amount of extra wire pulled through the Adjustment Hardware. You will need the measurement for the next step in installation.

Remove the suspension wires from the hooks. Loosen the two screws located in the Wire Anchor so that the wire can slide freely in the anchor. The amount of **extra** wire pulled through the Adjustment Hardware should now be pulled through the wire anchor.

After the **extra** wire is pulled through the Wire Anchor, secure the two screws in the anchor. Place the loop in the suspension wire back over the hooks in the ceiling.

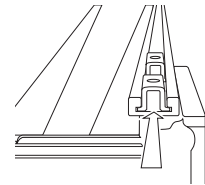
To loosen the wire pulled through the Adjustment Hardware, press the small button that is positioned around the wire at the top of the Adjustment Hardware. Gently pull down on the Adjustment Hardware until the fixture is back to where originally measured.



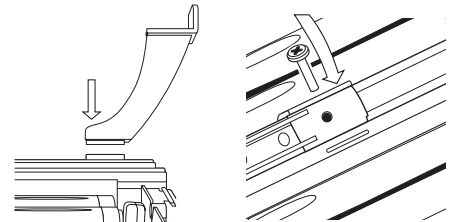
AQUARIUM FRAME MOUNTS

The Aquatic Life 34 in and 46 in Expert Series Fixtures include Frame Mounts for easy placement above the aquarium (optional for 14 in).

1) With the End Plates removed, attach the four Aquarium Frame Mounts. Slide the metal anchors into the channel located on the bottom side of the light fixture. Place two anchors per channel; two for the front and two for the back.



2) Place each Aquarium Frame Mount over a metal Anchor and insert the included screw through the Mount and into the Anchor. Tighten the screw until the Anchor pulls against the inside of the channel and secures the Mount. Reattach the end plates to the fixture.



3) Place the fixture over a covered aquarium and adjust (slide) the Aquarium Frame Mounts so that the base of each Mount is firmly resting on the aquarium frame. Tighten the screws to secure the Mounts to the fixture.



ACCLIMATING CORALS

The Aquatic Life Expert Series LED Light Fixture is capable of producing higher PAR values than many fixtures on the market. For this reason, it is important not to "bleach" your corals by increasing the intensity of light too quickly.

Acclimating corals is easy with the Aquatic Life light fixture because you can control the intensity of light using the handheld Remote control.

With the fixture over the aquarium, begin using Auto Mode # 1, 2 or 3. Once in Auto Mode, you can use the Minus button on the Remote control to reduce the intensity of all four colored LED's proportionally. Follow these simple steps:

- 1** Press the Minus button until you have reduced the light intensity by about half. IMPORTANT: count the number of times you press the Minus button and keep this number.
- 2** Press the Demo button to view the 24 hour light cycle intensity in a short period of time. Verify that during the brightest part of the light cycle, the intensity is about half of what you actually desire.
- 3** Every three days, press the Plus button on the remote one time.

Continue to press the Plus button each day until you have pressed it an equal number of times to the amount you pressed the Minus button.

MAINTENANCE



WARNING: The fixture is not waterproof. Do not spray or submerge the fixture.



TIP: Keep the Acrylic Lens Cover and Glass Cover over the aquarium clean to allow maximum light penetration into the aquarium.

HOUSING

Unplug the 3W LED Light Fixture and wipe the housing with a clean moist/semi dry cloth to remove dust, salt and other debris that may have built-up on the fixture.

LENS COVER

Wipe the Acrylic Lens Cover with fresh water or an acrylic cleaner to maintain peak light transmission. If the Lens Cover is allowed to become dirty, it will reduce the amount of light that is emitted into the aquarium.

REGISTERING YOUR PRODUCT(S) WITH AQUATIC LIFE

Register your product online at: www.AquaticLife.com

Benefits of Registraton:

Confirmation of Ownership

Provides a record in the event you need to contact us about your product in the future.

Your Safety

Allows us to contact you with important product notifications.

Improved Product Support

Helps us continue to tailor our products and services to meet your needs.

LIMITED WARRANTY (UNITED STATES AND CANADA)

Aquatic Life, LLC warrants that this product (excluding lamps and media) shall be free from defective electrical components and leaks or cracks due to defects in materials or workmanship for a period of twelve (12) months from the date of purchase. If a defect is shown, Aquatic Life, LLC will, at Aquatic Life's sole discretion, either repair or replace the product without charge. No cash refunds will be made. This warranty is provided solely to the original consumer purchaser of the product and may not be transferred or assigned.

This warranty does not apply to damage resulting from accident, misuse, abuse, lack of reasonable care, failure to follow safety and installation instructions, use of the product with non-standard electrical service, or any other defect not resulting from defects in the electrical components of the product or defects in materials or workmanship. This warranty will not be effective unless and until the Aquatic Life product is shown to have been used in accordance with the safety and installation instructions accompanying the product.

THIS CONSTITUTES AQUATIC LIFE'S ENTIRE WARRANTY AND AQUATIC LIFE MAKES NO OTHER WARRANTIES, WHETHER EXPRESS OR IMPLIED, WITH RESPECT TO THE PRODUCT. AQUATIC LIFE, LLC SPECIFICALLY DISCLAIMS ANY AND ALL IMPLIED WARRANTIES, INCLUDING, WITHOUT LIMITATION, WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. IF AQUATIC LIFE, LLC CANNOT LAW FULLY DISCLAIM IMPLIED WARRANTIES UNDER THIS LIMITED WARRANTY, ALL SUCH WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE LIMITED IN DURATION TO THE DURATION OF THIS WARRANTY. AQUATIC LIFE IS NOT RESPONSIBLE FOR DIRECT, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES RESULTING FROM ANY BREACH OF WARRANTY OR CONDITION, OR UNDER ANY OTHER LEGAL THEORY. AQUATIC LIFE, LLC EXPRESSLY DISCLAIMS ALL ALLEGED DAMAGES FOR LOSS OF MARINE LIFE, PERSONAL INJURY, AND/OR PROPERTY DAMAGE.

Some states and provinces do not allow the exclusion or limitation of incidental or consequential damages or exclusions or limitations on the duration of implied warranties or conditions, so the above limitations or exclusions may not apply to you. This warranty gives you specific legal rights, and you may also have other rights that vary by state or province.

Aquatic Life, LLC shall not have any obligations under this warranty unless the owner notifies Aquatic Life, LLC in writing of any alleged defect(s) within 30 days of discovery of the defect(s). Any notice to Aquatic Life, LLC must be delivered by United States or electronic mail to the following address:

U.S. Mail
Aquatic Life, LLC
2416 W. Victory Blvd, #136
Burbank, CA 91506

Electronic Mail: customersupport@aquaticlife.com

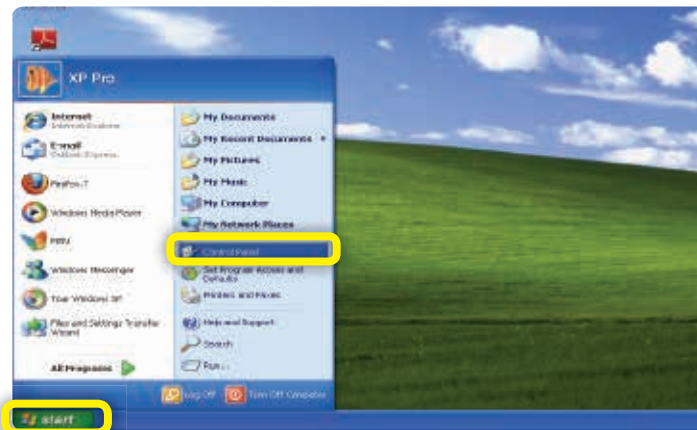
Aquatic Life, LLC shall be allowed a reasonable period of time to investigate any warranty claim and to perform any testing Aquatic Life, LLC deems necessary to determine the cause of the defect. This warranty shall be interpreted under the laws of the State of California.

VERIFY AND INSTALL .NET FRAMEWORK WINDOWS XP

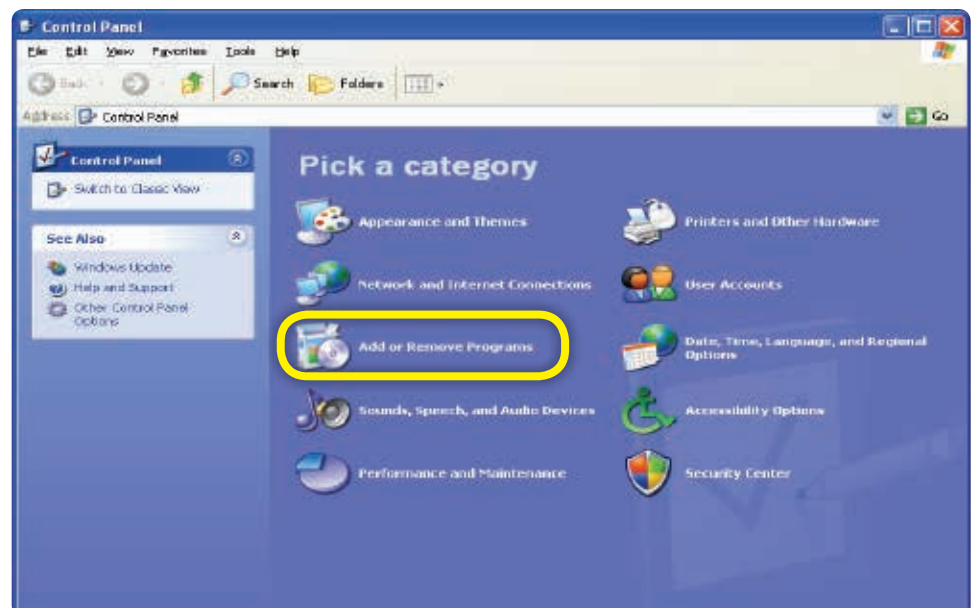
The T-Time software requires a .NET Framework 2.0 to operate correctly on your computer running Windows XP. If you have previously installed service pack updates, it is likely that you already have the correct Framework 2.0 installed.

VERIFY .NET FRAMEWORK

1) Click Start then Control Panel.

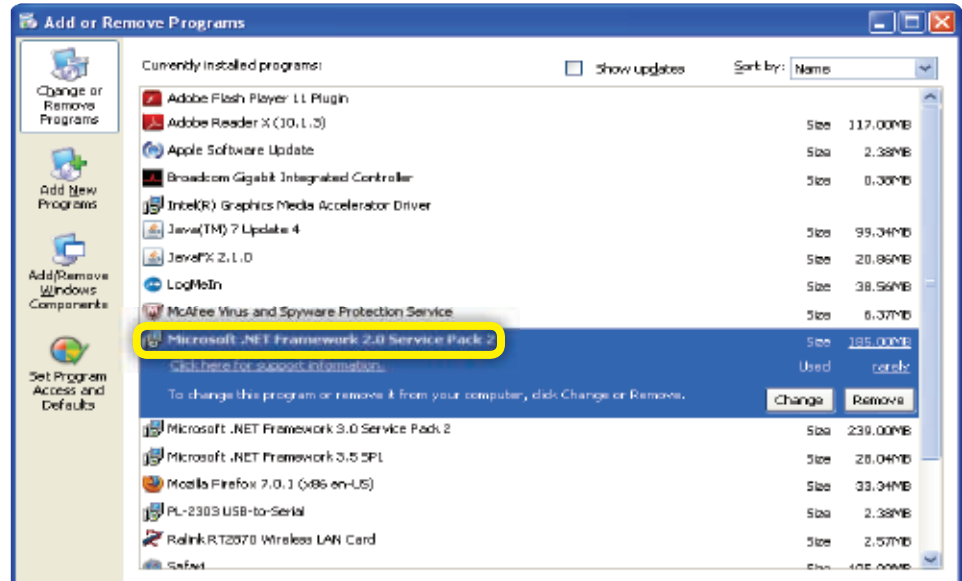


2) Click Add or Remove Programs



VERIFY AND INSTALL .NET FRAMEWORK WINDOWS XP (CONTINUED)

3) Once all of the currently installed programs are displayed, locate the Microsoft .NET Framework 2.0 as in the example below. If you can not locate the .NET Framework 2.0, proceed to Step 4 to download and install the .NET Framework.

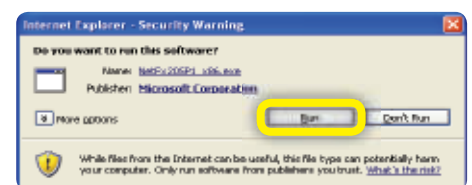
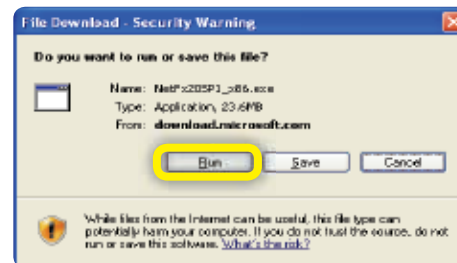


VERIFY .NET FRAMEWORK

4) Download the .NET files from the Microsoft Website.

http://download.microsoft.com/download/0/8/c/08c19fa4-4c4f-4ffb-9d6c-150906578c9e/NetFx20SP1_x86.exe

5) When prompted, select Run.



6) Your computer is now ready to install the T-Time software.

VERIFY AND INSTALL .NET FRAMEWORK WINDOWS VISTA

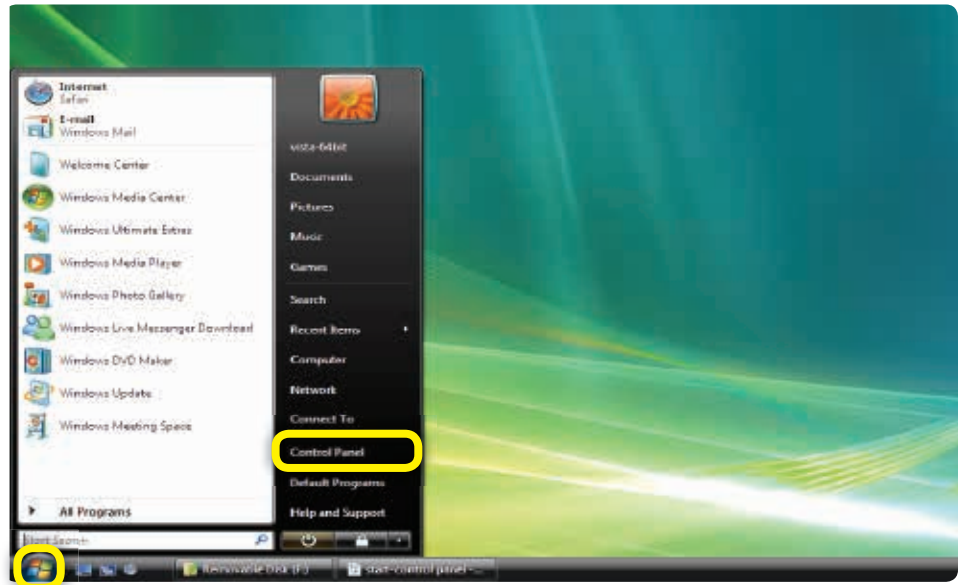
The T-Time software requires a .NET Framework 3.5 to operate correctly on your computer running Windows Vista. If you have previously installed service pack updates, it is likely that you already have the correct Framework 3.5 installed.

NOTE: .NET (pronounced "dot net") is a programming framework created by Microsoft that developers can use to create applications more easily. If you are running Windows XP or Windows Vista, the .NET framework is needed to use the Aquatic Life software to program your LED Light Fixture.

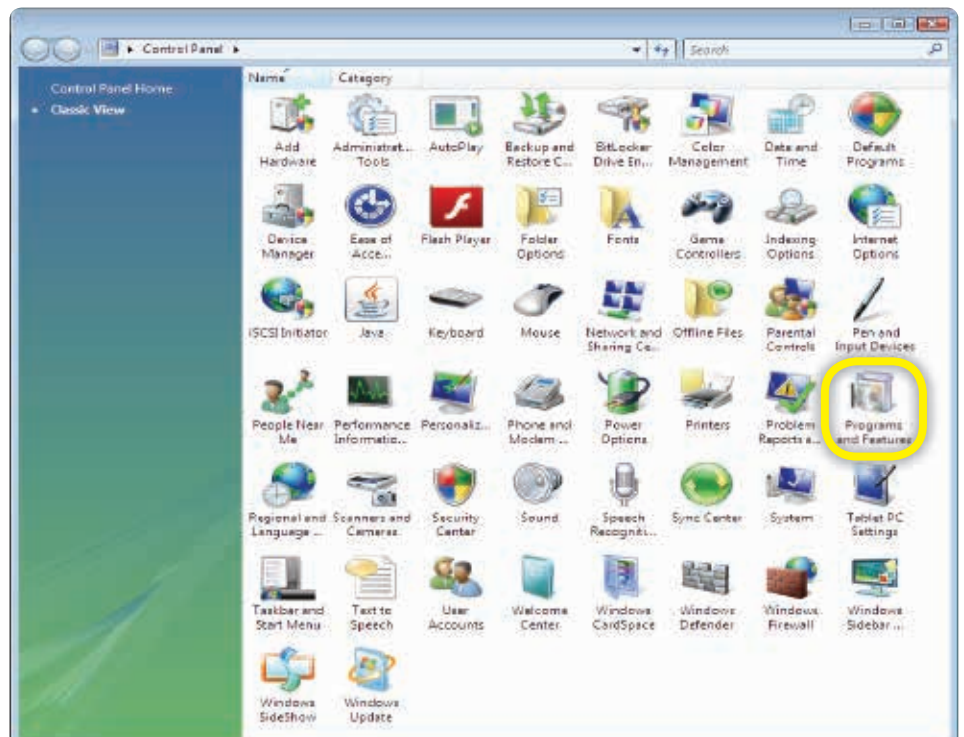


VERIFY .NET FRAMEWORK

1) Click Start then Control Panel.

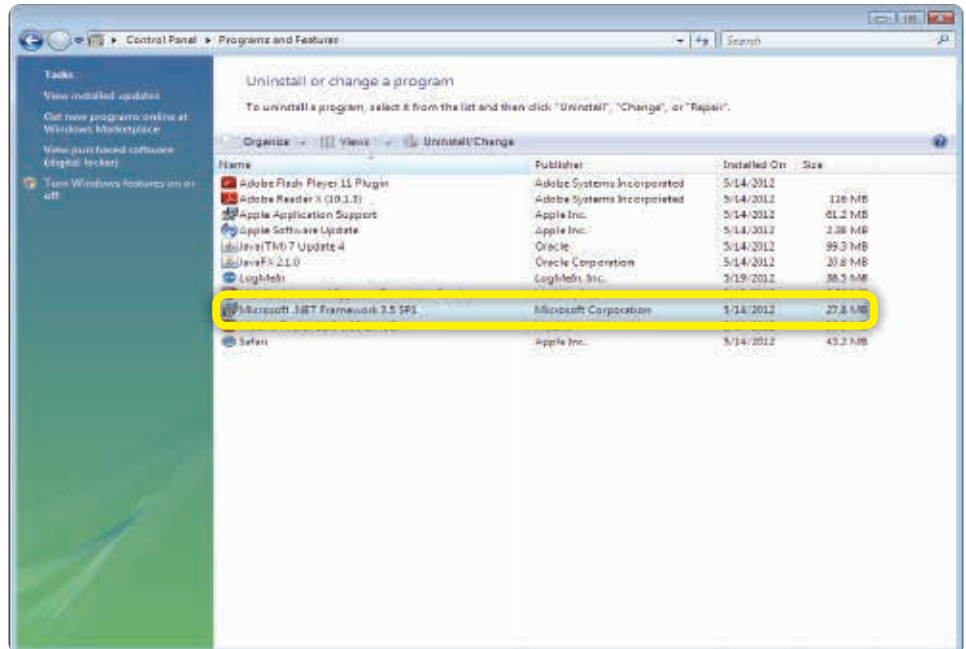


2) Double Click Programs and Features



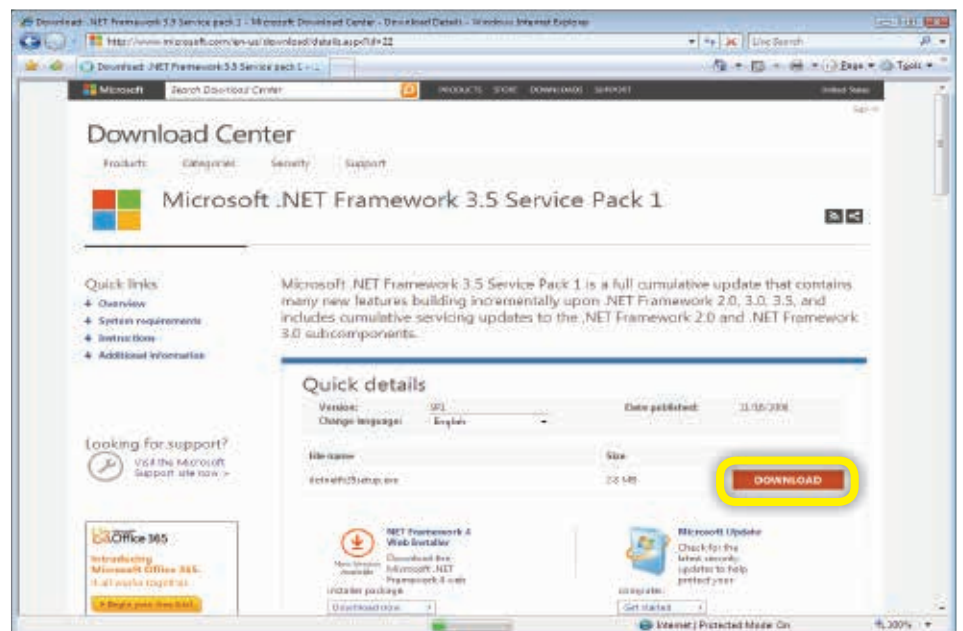
VERIFY AND INSTALL .NET FRAMEWORK WINDOWS VISTA (CONTINUED)

3) Once all of the currently installed programs are displayed, locate the Microsoft .NET Framework 3.5 as in the example below. If you can not locate the .NET Framework 3.5, proceed to Step 4 to download and install the .NET Framework.



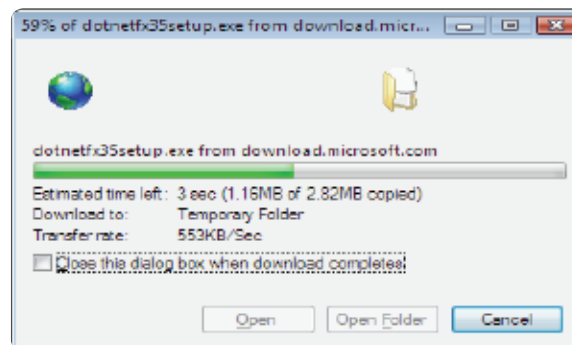
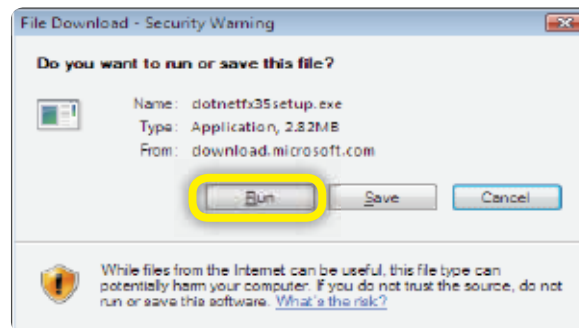
INSTALL .NET FRAMEWORK

4) Download the .NET files from the Microsoft Website.
<http://www.microsoft.com/en-us/download/details.aspx?id=22>



VERIFY AND INSTALL .NET FRAMEWORK WINDOWS VISTA (CONTINUED)

5) When prompted, select Run

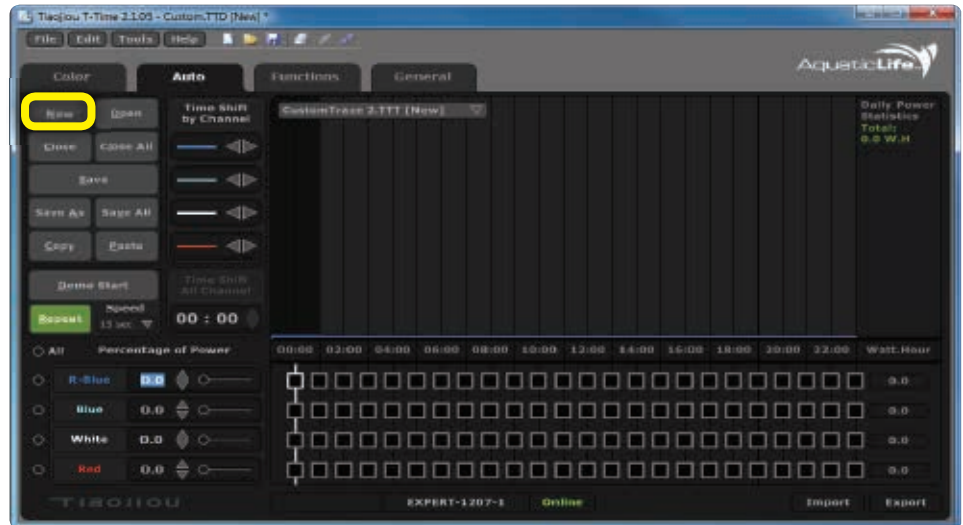


6) Your computer is now ready to install the T-Time software.

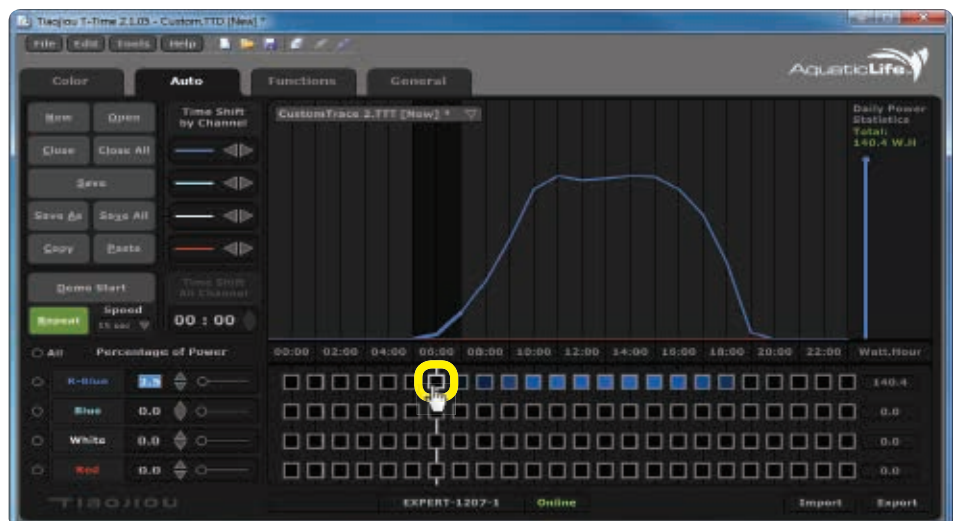
CREATING A 24 HOUR LIGHT CYCLE “TRACE”

The following example shows step-by-step instructions on how to create a 24 hour light cycle using the Blue, Royal Blue, White and Red LED's. The four Traces are then saved and copied to one of the Remote Keys.

- 1) With the T-Time Software Open, Click New on the Auto Dashboard. The Traces can be created with or without the Light Fixture connected to the software

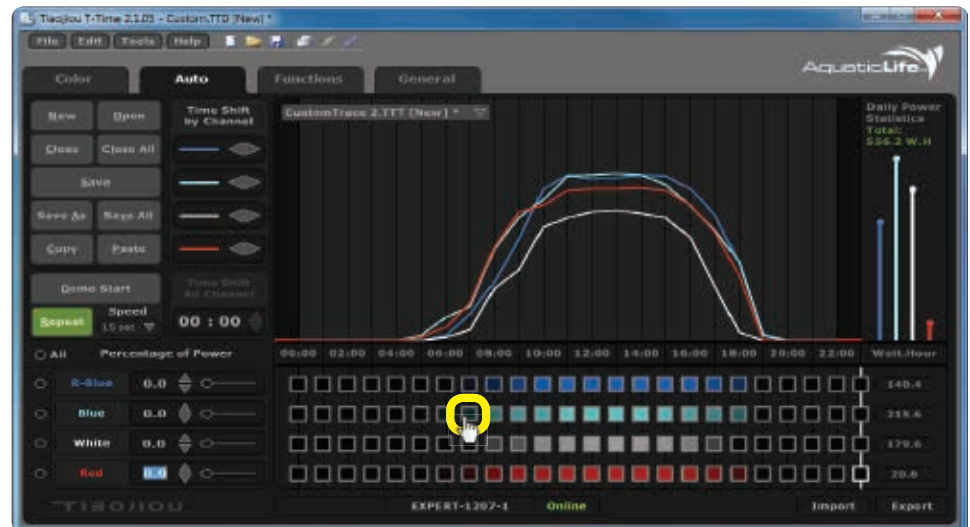


- 2) Click on one of the squares across from the R-Blue. Then using your mouse and pointer, drag R-Blue graph into the desired location.



CREATING A 24 HOUR LIGHT CYCLE “TRACE” (CONTINUED)

3) When finished with the R-Blue, click on one of the boxes across from the Blue and form the light graph as desired. Repeat for the White and Red Traces.

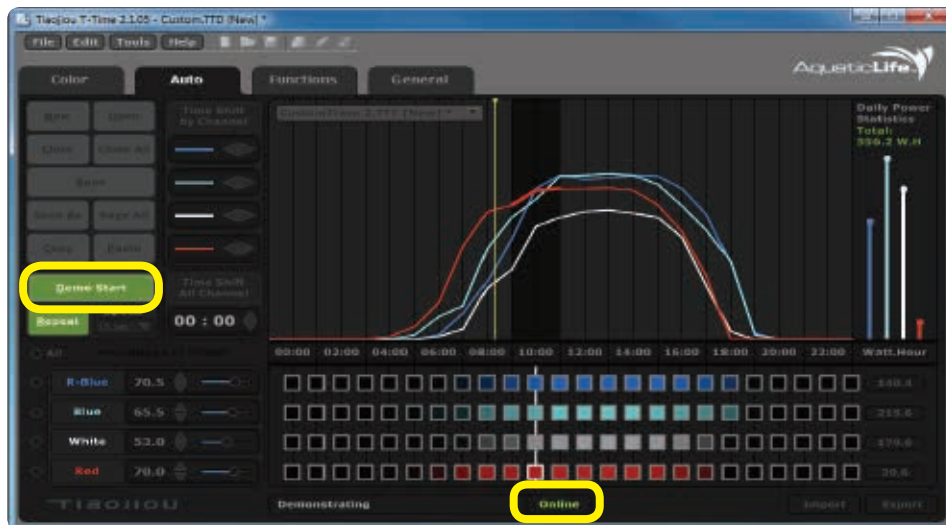


4) When finished, you will be able to see the daily power usage for each of the four LED's along with a total. Now you have decided you would like the Red LED's to begin a little earlier, but you like the graph created. You can Time Shift the RED graph to start one hour earlier by pressing the left arrow. Notice, the RED LED's will now start earlier.



CREATING A 24 HOUR LIGHT CYCLE “TRACE” (CONTINUED)

5) To view your light cycle, connect the Aquatic Life Light Fixture to the T-Time Software. When Online is displayed, click the Demo Start button on the dashboard. You can control the speed of the Demo using the drop-down menu. As the Demo is running, a line will indicate which lights are on according to your graph.



6) The Light Cycle that you have created can now be saved to the Light Fixture. The Aquatic Life Expert Series Light Fixture can store three separate 24 hour Light Cycles (Traces). The Light Cycles that are exported to the Fixture are labeled Remote Key #1, Remote Key #2 and Remote Key #3. First, save your newly created Light Cycle to your computer

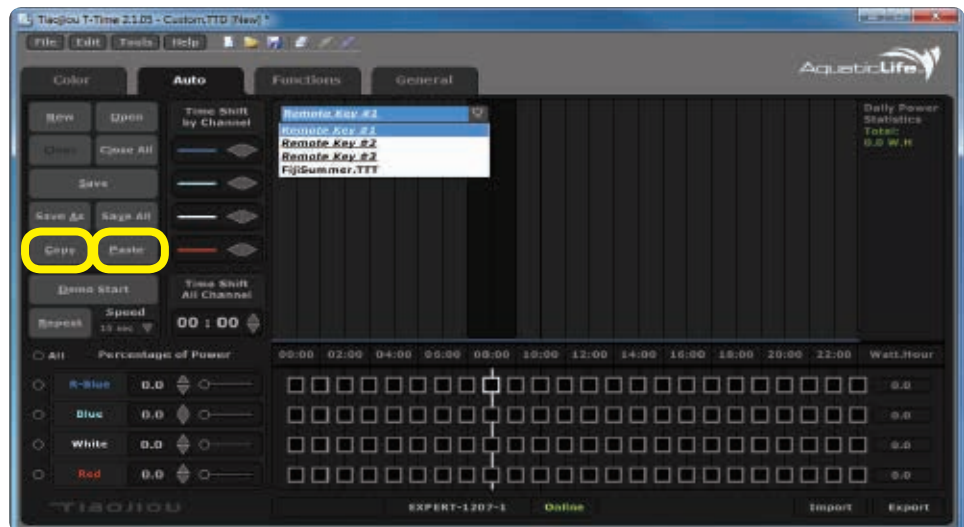


CREATING A 24 HOUR LIGHT CYCLE “TRACE” (CONTINUED)

7) Select Save As, and designate the location on your computer where you would like to store your Light Cycle. In this example, we called our new light cycle, FijiSummer.



8) To save the FijiSummer Light Cycle to one of the Remote Keys, use the Copy and Paste functions. With the FijiSummer displayed, click on the Copy button. Change the display on the Auto Dashboard to the Remote Key #1. Then click on the Paste button.



CREATING A 24 HOUR LIGHT CYCLE “TRACE” (CONTINUED)

9) The new FijiSummer Light Cycle is now the Remote Key #1. With the Light Fixture still connected (Online) with the software, select Export.



10) The Light Fixture can now be disconnected from the software by pressing the Disconnect Fixture icon on the top toolbar. Refer to page 20 for details on how to use the Remote Control to control the Light Fixture.



NOTE: The names of the Remote Key's cannot be changed because they are what can be Exported into the Aquatic Life Light Fixture. Use the Copy and Paste functions to transfer your Traces to the Remote Keys.



LED LAYOUT & LENSES

Much planning went into the placement and colors of the CREE LED's in the Aquatic Life Expert Series Light Fixtures to provide the optimum lighting for a marine aquarium.

LED TYPE	COLOR	LENS	14 in (420309) QUANTITY	34 in (420310) QUANTITY	46 in (420311) QUANTITY
CREE XTE	White	100 degree	6	12	18
CREE XTE	Royal Blue	80 degree	6	12	18
CREE XPE	Blue	80 degree	8	16	24
Semileds 420nm	Actinic Blue	80 degree	2	4	6
Semileds 400nm	Violet	No lens	1	2	3
Semileds 620nm	Red	No lens	2	4	6



NOTE: Your Aquatic Life XS UV Fixture incorporates three LED's the emit light in the 400-420nm wavelength to more closely match what corals naturally receive from sunlight. These near Ultraviolet LED's are in the 400nm range and will emit a bluish/purple light, helping the corals with photosynthesis.

LED SCHEMATIC:



REPLACING OR CHANGING LENSES

- 1) Remove the seven Phillips Head screws from the metal and blue acrylic Endplates on one side of the fixture.
- 2) Slide the Acrylic Lens Cover out the end of the fixture.
- 3) Carefully, pull the Lens on the LED straight-up. DO NOT TWIST or damage could occur to the LED.
- 4) Remove paper from back of lens.
- 5) Install the new Lens over the LED by pressing it straight down onto the LED. Friction and tape will hold the Lens in place over the LED.
- 6) Reinstall the Acrylic Lens Cover and Endplates.

FIXTURE SELECTION GUIDE

Your Aquatic Life Expert Series LED Light Fixture is designed to grow Corals at depths up to 30 inches, while using the least amount of power. This is achieved by the placement of the LED's and Lenses on the LED's. The following guide will help you determine which corals can grow at various depths in your aquarium.

14 in (420309)	34 in (420310)	46 in (420311)
24" x 24" Footprint	24" x 36" Footprint	24" x 48" Footprint



Fish Only



Low Light Corals - Soft Corals

Mushrooms, Polyps, Zoanthid Polyp, Xenia, Toadstool, Kenya Trees, Green Star Polyps, Button Polyps



Medium Light Corals - Large Polyp Stony (LPS)

Frogspawn, Torch, Bubble, Hammer, Candy, Duncan, Galaxea, Pagoda Chalice, Acanthastrea, Favia, Favites, Elegance, Blastomussa, Scolymia



High Light Corals - Small Polyp Stony (SPS)

Acroporas, Montipora, Millepora, Pocillopora, Seriatopora



Bringing the Ocean to You, Wherever You
May Be and Life Rewards are trademarks of
Aquatic Life LLC
Commerce, CA 90040
www.aquaticlife.com

© Copyright Aquatic Life LLC

P/N 9000755 01/2014