Network Module
for ColorLogic® Pool/Spa Lights

Owner's Manual

AQL-COLOR-MODHV

Hayward Pool Product
620 Division Street, Elizabeth, NJ 07207
www.hayward.com

USE ONLY HAYWARD GENUINE REPLACEMENT PARTS

FOR FURTHER INFORMATION OR CONSUMER TECHNICAL SUPPORT, VISIT OUR WEBSITE AT www.hayward.com
IMPORTANT SAFETY INSTRUCTIONS

Before installing or servicing this electrical equipment, turn power supply OFF.

WARNING – Read and follow all instructions in this owner’s manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

WARNING – This product should be installed and serviced only by a qualified professional.

CAUTION – All electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electric Code (NEC).

ATTENTION INSTALLER – THIS MANUAL CONTAINS IMPORTANT INFORMATION ABOUT THE INSTALLATION, OPERATION, AND SAFE USE OF THIS PRODUCT THAT MUST BE FURNISHED TO THE END USER OF THIS PRODUCT. FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

WARNING – Risk of Electric Shock. All electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply.

WARNING – Ground Fault Circuit protection must be used in the circuit, however, all electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electric Code (NEC).

IMPORTANT - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

WARNING – Networked ColorLogic Lights and related electrical connections are receiving electrical power at all times, even when the lights are OFF! Turn off power at the main breaker before servicing ColorLogic lights.

HAYWARD® Pool Products Limited Warranty

To original purchasers of this equipment, Hayward Pool Products, Inc. warrants its Universal ColorLogic® and CrystalLogic® pool and spa lights, niches, pool light transformers, and couplers to be free from defects in materials and workmanship for a period of ONE (1) year from the date of purchase, when used in single family residential applications.

The limited warranty excludes damage from freezing, negligence, improper installation, improper use or care of the pool or spa, Acts of God. Parts that fail or become defective during the warranty period shall be repaired or replaced, at our option, within ninety (90) days of the receipt of defective product, barring unforeseen delays, without charge.

Proof of purchase is required for warranty service. In the event proof of purchase is not available, the manufacturing date of the product will be the sole determination of the purchase date.

To obtain warranty service, please contact the place of purchase or the nearest Hayward Authorized Service Center. For assistance on your nearest Hayward Authorized Service Center please visit us at www.hayward.com.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

The Hayward Pool products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its' pool products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature.

Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.
Round Pools

If the diagram below resembles your pool, shade in the appropriate lights and fill out the corresponding information. Modify the drawing by add additional lights or information, if necessary. It may be easier to hand draw your pool using the blank space on page 17. If so, be sure to add all of your lights and labeling information to your drawing. This diagram will aid in programming and will be a useful references for any future changes.

Irregular Shaped Pools

Hand draw your pool below. Label the location of each light and fill out all corresponding information as shown on the previous two pages. This diagram will aid in programming and will be a useful references for any future changes.

ColorLogic 4.0 Program Table

<table>
<thead>
<tr>
<th>Number</th>
<th>Function</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Fixed Color</td>
<td>Deep Blue Sea</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>2</td>
<td>Fixed Color</td>
<td>Afternoon Skies</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>3</td>
<td>Fixed Color</td>
<td>Cloud White</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>4</td>
<td>Fixed Color</td>
<td>Sangria</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>5</td>
<td>Fixed Color</td>
<td>Rainbow</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>6</td>
<td>Fixed Color</td>
<td>Harmony</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>7</td>
<td>Show</td>
<td>Twilight</td>
<td>Slow Color</td>
</tr>
<tr>
<td>8</td>
<td>Show</td>
<td>Tranquility</td>
<td>Blue/Cyan/White Fade</td>
</tr>
<tr>
<td>9</td>
<td>Show</td>
<td>Gamblin</td>
<td>Blue/Green/Magenta</td>
</tr>
<tr>
<td>10</td>
<td>Show</td>
<td>USA!</td>
<td>Red/White/Blue Switch</td>
</tr>
<tr>
<td>11</td>
<td>Show</td>
<td>Mardi Gras</td>
<td>Fast Random Fade</td>
</tr>
<tr>
<td>12</td>
<td>Show</td>
<td>Cool Cabaret</td>
<td>Slow Random Fade</td>
</tr>
<tr>
<td>13</td>
<td>Show</td>
<td>Rainbow</td>
<td>Rainbow</td>
</tr>
<tr>
<td>14</td>
<td>Show</td>
<td>Harmony</td>
<td>Blue/Green Fade</td>
</tr>
<tr>
<td>15</td>
<td>Show</td>
<td>Custom Fade</td>
<td>Uses the 5 fixed colors from 2-6</td>
</tr>
<tr>
<td>16</td>
<td>Show</td>
<td>Custom Chase</td>
<td>Uses the 5 fixed colors from 2-6</td>
</tr>
</tbody>
</table>

Universal ColorLogic Program Table

<table>
<thead>
<tr>
<th>Number</th>
<th>Function</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Show</td>
<td>Voodoo Lounge</td>
<td>Fast Color Show</td>
</tr>
<tr>
<td>2</td>
<td>Fixed Color</td>
<td>Deep Blue Sea</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>3</td>
<td>Fixed Color</td>
<td>Afternoon Skies</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>4</td>
<td>Fixed Color</td>
<td>Cloud White</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>5</td>
<td>Fixed Color</td>
<td>Sangria</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>6</td>
<td>Show</td>
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<td>Show</td>
<td>Custom Fade</td>
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<tr>
<td>15</td>
<td>Show</td>
<td>Custom Chase</td>
<td>Uses the 5 fixed colors from 2-6</td>
</tr>
</tbody>
</table>
Installation

Installation of the ColorLogic Network Module requires that it be mounted and wired inside of the Pro Logic enclosure. The module is designed to mount into a cutout in the wall of the enclosure. If your enclosure does not provide this cutout, the Pro Logic is not compatible with the ColorLogic Network Module. The following information offers detailed instructions on how to mount and wire the ColorLogic Network Module to the Pro Logic pool control. Before performing any installation steps, remove power completely to the Pro Logic’s subpanel. Remove the front panel and follow the instructions below.

Mounting

1. Remove the plastic plate at the cutout where the Network Module will be mounted. If there is no cutout, your Pro Logic enclosure will not support the installation of the Network Module. Contact Hayward Technical Support at 908-355-7995 for more information. Holding the Network Module at an angle, insert the top front of the module into the designated area shown in step 1 above.

2. Keeping the front of the Network Module in its place, move the top rear of the module into the cutout as shown in step 2.

3. With the top of the Network Module in contact with the cutout, swivel the bottom of the module so it inserts into the cutout completely. Refer to step 3.

4. The Network Module can now be “snapped” into place by pushing down as shown in step 4. Before pushing down, you may have to raise the module slightly to get the bottom channel of the module to fit securely into the cutout.

Wiring

Follow the local code, NEC (CEC) codes and the circuit breaker manufacturer’s rating requirements regarding the size and temperature rating for wiring.

The ColorLogic Network Module uses power line communications to individually control each networked light. For successful communications, the same bus must be used to power both the Network Module and any networked light(s). This is not a concern when using just one circuit breaker (see diagram on page 3 and 4) but must be considered if the installation requires two or more. The diagram on page 5 show an installation using two circuit breakers. The communications signal is passed from the Network Module, through the bus, and on to the lights. If these two specific circuit breaker positions are not available in your installation, be sure to locate the two circuit breakers on the same bus. Refer to the diagram on page 4 for installations up to 8 ColorLogic lights and page 5 for installations up to 16 lights. Contact Hayward at 908-355-7995 for installations requiring more than 16 lights.

Rectangular Pools

If the diagram below resembles your pool, shade in the appropriate lights and fill out the corresponding information. Modify the drawing by add additional lights or information, if necessary. It may be easier to hand draw your pool using the blank space on page 17. If so, be sure to add all of your lights and labeling information to your drawing. This diagram will aid in programming and will be a useful references for any future changes.

<table>
<thead>
<tr>
<th>LT Number: ___</th>
<th>Sequence: ___</th>
<th>Aux: ___</th>
</tr>
</thead>
<tbody>
<tr>
<td>LT Number: ___</td>
<td>Sequence: ___</td>
<td>Aux: ___</td>
</tr>
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<td>Aux: ___</td>
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<tr>
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<td>Sequence: ___</td>
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</tr>
<tr>
<td>LT Number: ___</td>
<td>Sequence: ___</td>
<td>Aux: ___</td>
</tr>
<tr>
<td>LT Number: ___</td>
<td>Sequence: ___</td>
<td>Aux: ___</td>
</tr>
<tr>
<td>LT Number: ___</td>
<td>Sequence: ___</td>
<td>Aux: ___</td>
</tr>
</tbody>
</table>
Troubleshooting

**ColorLogic Lights system is not recognized by the Pro Logic and no ColorLogic menu options are shown.**

Verify that the green Lights indicator automatically turns on upon applying power to the Pro Logic. If the indicator does not turn on, the Pro Logic is not communicating with the Network Module which means you should check the RS-485 connection (i.e., the four wire connection) between the Pro Logic main board and the Network Module.

**Lights occasionally dim and brighten?**

ColorLogic lights have internal thermal protection and will automatically dim the LEDs if the light temperature rises to 90°C or greater. The light will go back to normal brightness as soon as the condition is corrected.

**How can I tell if the lights are operating correctly?**

Power off the lights for at least one minute. Once power is applied to the light, it should immediately turn on an all white light for approximately fifteen seconds. If the light is installed with a pool controller and has been configured with a working Network Module, the light will flash red, green and blue (red and green for Universal ColorLogic) before turning off after fifteen seconds of white has been displayed. For larger systems, this cycle of red and green can last up to 3 minutes. If the light is set up to run in a stand alone mode, it will start the light show after the fifteen seconds of white light.

**Lights are not found during the “Find ColorLogic Lights” operation.**

This occurs if the lights are not wired correctly. The lights and Network Module must be on the same power phase. Refer to the wiring diagram for more details. **Lights that are found do not blink during the identification process.**

One common source of this problem is improper wiring. Verify that the lights and Network Module are on the same phase. Refer to the wiring diagram for more details. Use the “Left Arrow” to return to the previous light and then continue to identify the lights using the right arrow.

**Multiple lights blink at the same time during the identification process.**

During the identification process only a single light should be blinking at any given time. Each time the right arrow is pressed, a command is sent to turn off the current light and to start the next light blinking. If two lights are blinking, previous light did not process the command to turn off. Use the “Left Arrow” to return to the previous light and then continue to identify the lights using the right arrow.

**Lights are running different shows when they should all be running the same show.**

Each light maintains a local set of information which identifies the AUX buttons it is assigned to. Each light also maintains a local copy of the actions (e.g., which light show to run when an AUX button is pressed) it takes in response to the AUX button. If the settings menu is adjusted when a light is powered off or not connected to the network, information can get out of sync with the other lights. When this happens, the corrective action is to adjust the settings for the AUX while the light is powered on.

**Can I mix UCL and Gen 4.0 lights on the same system?**

Yes, but the lights will be set up to run in the Gen 4.0 light shows. The operating mode of the lights can be seen using the “Diagnostic Menu -> CLL Light Software” + keys. When the lights are running in UCL mode, the firmware version for the light will be displayed as “UCL,” otherwise the firmware version will be displayed as “CL xxx”.

**WARNING - Networked ColorLogic Lights and related electrical connections are receiving electrical power at all times, even when the lights are OFF. Turn off power at the main breaker before servicing ColorLogic lights.**
Wiring up to 8 Universal ColorLogic and/or Generation 4 Lights using GFCB

12V Universal ColorLogic Lights
(GFCI not necessary when using Hayward LFGU71000 niche)

3 Light Maximum
on each LTBY11300

120V Generation 4 ColorLogic Lights

FAQs

Even when the lights are off, why does the Lights indicator on the Pro Logic control panel always turn on whenever the Pro Logic is turned on?
The Lights indicator reflects the state of power to the lights and power is always applied to the lights when the pool controller is on. The Lights indicator is on to indicate that power is applied to the lights. The lights run a light show, turn on, or turn off under program control which is initiated from the Pro Logic. In general, lights will have power applied even if the lights are not displaying visible light.

Can the Lights relay be configured when used with a Universal ColorLogic or Generation 4 Lights system?
No. The Pro Logic automatically assigns the Lights relay to the networked ColorLogic lights and enables power to the light. Lights are always powered when the pool controller is powered on. To force this relay off, use Service Mode or System Off mode.

How does the Lights button work?
The Lights button is used for emergency white lighting of the pool. The Lights button sends a command to toggle the light state. The lights will either turn on (full white) or off. If you press the button and the lights remain off, press the button again to turn the lights on full white. If you press the button and the lights stay on, press the button again to make the lights turn off. Normal color operation of the lights is done through Aux buttons.

Can lights be assigned to multiple Aux buttons?
Yes. Moreover, different light shows can be set up for each Aux button. For instance, a light can be assigned to Aux 1 and Aux 2. Aux 1 can be set to Voodoo Lounge while Aux 2 can be set to Deep Blue Sea.

What happens when lights are assigned to multiple Aux buttons?
Lights process the command associated with the last button which was turned on. For example, assign lights to Aux 1 and Aux 2 and then Aux 1 set up to run Deep Blue Sea, and Aux 2 set to run Emerald. Press Aux 1 and the light will run Deep Blue Sea, and then press Aux 2 and the light will run Emerald. Both Aux 1 and Aux 2 indications (LEDs) will be illuminated. You can then press Aux 1, its LED will turn off but the light will still be running the Aux 2 show (i.e., Emerald). If you press Aux 2, the light show (i.e., Emerald) will turn off and the Aux 2 LED will also turn off.

Aux 1 and Aux 2 are both off and you press Aux 1 (to start Deep Blue Sea) and then Aux 2 (to start Emerald), the lights will remain in the Emerald show. If you then press Aux 2 to stop Emerald, the light will turn off along with the Aux 2 LED. The Aux 1 LED will still be illuminated when this happens. The Aux 1 LED can be turned off by pressing the Aux 1 button again.

Do all lights have to be assigned to the same Aux button?
No. A subset of lights can be assigned to any Aux button. For instance, if you are using a Pro Logic with eight Aux buttons, pool lights can be assigned to Aux 4 and spa lights can be assigned to Aux 5. If Aux 4 and Aux 5 are set up this way, different light shows can be assigned to Aux 4 and Aux 5. Moreover, if lights are separated between pool and spa, both the pool and spa lights can run different light shows at the same time. Another Aux can run all the lights at once.

Can light show settings be changed while a show is running?
Yes. The settings for a show can be changed while a show is running. If you pause a few seconds between key presses, you will be able to see the effect of the changes while the show is running. For instance, if you are adjusting the speed parameter (using the settings menu) while a show is running, you can see the effect of speeding or slowing down the show.

How do lights go from stand alone mode to program control mode?
Lights are originally shipped in stand alone mode. This mode allows the light shows to be controlled using power line interrupts (toggling power to the light) and is similar to the previous generation lights. The lights automatically go into program control mode when they are configured with a Pro Logic pool controller and AQL-COLOR-MODHV.

How do lights go from program control mode to stand alone mode?
Lights which have been installed and configured with a pool controller can be returned to stand alone mode by using the “Reset ColorLogic” option in the Pro Logic configuration menu.

Can I mix Universal ColorLogic and/or ColorLogic Generation 4 lights with ColorLogic 2.5 lights in stand alone mode?
Universal ColorLogic lights can be configured to run with ColorLogic Gen 4.0 lights. They can also be configured to run with Gen 2.5 lights. The procedure for configuring the lights is in the Universal ColorLogic light installation manual.
NOTE:  When using more than one circuit breaker to power Universal ColorLogic or Generation 4 ColorLogic Lights, be sure that the breakers AND the Network Module feed are on the same phase of power.

In Example 2, the pool has eight lights which are identified as 1-8 using a clockwise rotation around the pool starting from the left. The light numbers are specified when the lights are installed using the ColorLogic configuration process (refer to the "Identify ColorLogic" section on page 6). All lights are assigned to Aux 1 and use their light number as their sequence number. The lights are set up to run USA light show with motion using the settings menu. When Aux 1 is turned on, the USA light show will start with Light 1 and move around the pool to Light 8. Each light will cycle through red, white, and blue.

In addition, the show will appear to move around the pool as the lights show will start at different times based on the sequence number and speed of the show.

In this example, the sequences assigned to lights configured with Aux 2 are paired on both side of the pool. Lights 1 and 5 are not assigned to Aux 2. The settings menu will be used to select the custom chase light show for Aux2 with motion set to 1.0 and the speed will be set to x2 for more rapid change. The custom chase will use the fixed colors set for light shows 2 through 6. The actual color desired for each of these shows (i.e., 2 through 6) can be changed and the color selected for show 6 will be off. When the show begins, the colors will move from the left end of the pool to the right. Adjust the motion and speed settings as desired.

NOTE: When using more than one circuit breaker to power Universal ColorLogic or Generation 4 ColorLogic Lights, be sure that the breakers AND the Network Module feed are on the same phase of power.
Configuration

After the Network Module has been installed and wired, the Pro Logic must be configured and programmed to operate the ColorLogic networked lights. Note that if Universal Color Logic Lights are mixed with Gen 4.0 ColorLogic Lights, the Pro Logic will set the lights to operate in Gen 4.0 mode (i.e., to use the Color Logic 4.0 Program Table). Otherwise if only Universal Color Logic lights are used, the Pro Logic will configure the lights to use the Universal ColorLogic Program Table.

ColorLogic Configuration

During ColorLogic configuration, the Pro Logic will find all networked lights (Generation 4 ColorLogic and/or Universal ColorLogic) in the system and assign an identification number to each using the prefix “LT”. After all lights are found, the user has the option of using the default LT number or changing to one that is different. For installations using multiple lights, it may be helpful for the user to use a diagram of the pool/spa and label each light with its corresponding LT number. Use pages 15-17 for this purpose. Refer to this diagram when programming light shows and fixed colors.

Configuration of the ColorLogic Networked lights takes place within the Pro Logic’s Configuration Menu. Instructional screens and button functions are shown below and follow the same convention as the Pro Logic manuals. For more detailed information about using the Pro Logic menu system, refer to the Pro Logic Operation Manual.

To access the Configuration Menu

- Press repeatedly until “Configuration Menu” is displayed
- Press BOTH buttons SIMULTANEOUSLY for 5 seconds to unlock

Configuration Menu-Locked

Move to configuration menu items

- Advance to the ColorLogic Configuration Menu. NOTE: The configuration menu automatically “locks” after 2 minutes if no buttons are pressed.

Stop any running light show(s) before entering the ColorLogic Configuration Menu. Do not attempt to send any commands from a remote control or from the Pro Logic local display keypad while configuring ColorLogic lights. Once the ColorLogic configuration process begins, there is no way to exit and the process must be completed.

ColorLogic Configuration Menu

Find ColorLogic

- Search for ColorLogic lights connected to Network Module
- Skips to “Identify ColorLogic”, if lights have previously been found
- If not, move to previous/next menu item

Cycling Power to CL Lights... Please wait

Power cycles the ColorLogic light(s), may take 1 minute or more
- Watch, do not press any buttons while waiting

Searching

Search for ColorLogic light(s), may take up to 5 minutes

- Search completed

Find Completed

3 lights(s) found

- Push any button to advance

Identify ColorLogic

- Assigns numbers to the ColorLogic lights found
- Move to next ColorLogic light found

Find ColorLogic LT1

- Push to activate ColorLogic options
- Move to previous/next configuration menu

Seq

- This is the sequence number assigned to the light when it was assigned to an Aux using the configuration menu. This tells what position it has in shows that move. Several lights can have the same sequence number, depending on the motion effects that are desired. A typical setup is to choose the sequence number to be the same as the light number. If you will not be using shows that move, the sequence numbers are not important.

Aux

- This is the Aux button to which the light is assigned. Note that several lights can be assigned to each Aux button.

Num

- This is the light number which is assigned to the light when it is installed. This number identifies each light and is unique from 1 to the number of lights in the pool, Ex. LT1, LT2,... etc.

Examples

Note the terms below when reviewing the following examples.

- **Num** - this is the light number which is assigned to the light when it is installed. This number identifies each light and is unique from 1 to the number of lights in the pool. Ex. LT1, LT2,... etc.

- **Seq** - this is the sequence number assigned to the light when it was assigned to an Aux using the configuration menu. This tells what position it has in shows that move. Several lights can have the same sequence number, depending on the motion effects that are desired. A typical setup is to choose the sequence number to be the same as the light number. If you will not be using shows that move, the sequence numbers are not important.

- **Aux** - this is the Aux button to which the light is assigned. Note that several lights can be assigned to each Aux button. Also, a single light can be assigned to several Aux buttons. You can set up your pool so that each Aux button can run a different light show or a separate group of lights.

Light Shows

The ColorLogic Lights system provides a higher level of control over pool/spa light shows than previous products. You can modify the operation of existing light shows by adjusting the brightness, speed, and by adding motion effects to the show. In addition, you can create custom light shows by changing the colors displayed for shows two through six. Moreover, the light shows and customization is specific to each Aux button that is assigned to the ColorLogic Lights system.

Once the ColorLogic Lights have been installed and configured with the Pro Logic pool controller, control of the lights is a two step process. In the first step, specific lights must be assigned to an Aux button using the “Configuration” menu. The assignment to the Aux button includes a Sequence number which will be used for shows that use motion. In the second step, the specific details of the light show can be set up using the “Configuration” and “Settings” menu.

Examples

In Example 1, Light 1 is assigned to Aux 1 (using the configuration menu) and set up to show the Deep Blue Sea fixed color using the settings menu. Light 2 is assigned to Aux 2 and set up to show the Sangria color. Deep Blue Sea and Sangria are both non-moving shows and will produce fixed colors. If Aux 1 and Aux 2 are turned on, the side of the pool with the Light 1 (Deep Blue Sea) will be blue and the side of the pool with Light 2 will be red (Sangria).

<table>
<thead>
<tr>
<th>Aux</th>
<th>Seq</th>
<th>Num</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
</tbody>
</table>

Identify ColorLogic

NOTE: For applications that involve multiple lights, it may be helpful to draw a simple diagram of your pool/spa and record the LT number for each light location.
After all lights are found, each light will need to be assigned an identification number. These numbers will be shown as LT1, LT2, LT3,... depending on how many lights are found. The number will identify the light for all future programming of shows, colors, etc.

The Pro Logic will assign default LT numbers to the lights that are found. During this process, the ColorLogic light will blink and the default number will be displayed. If the default number is not desired, use the "*" or "#" buttons to choose an alternative unique LT number up to the actual number of lights that were found. When the number is acceptable, push the "*" button to advance to the next light and select another LT number. Continue until all lights have been assigned an LT number then push the ">" to exit the ColorLogic configuration menu. All lights should now be off.

NOTE: Once a light has been assigned, you can go back and view the assignment using the left arrow ("<") , but you can not make a change unless the ColorLogic lights configuration is reset.

Resetting ColorLogic Lights Configuration
The ColorLogic lights configuration can be reset if desired. Use this procedure when:
- adding a light to the system
- removing a light from the system
- reassigning an LT number to an existing light

To reset the ColorLogic lights configuration:
- Press repeatedly until “Configuration Menu” is displayed
- Press BOTH buttons SIMULTANEOUSLY for 5 seconds to unlock
- Initiate reset of all ColorLogic configuration parameters
- Reset all ColorLogic configuration parameters
- Move to next menu item

NOTE: When resetting ColorLogic, be sure not to confuse the Default Configuration reset with the ColorLogic Configuration reset. If the Default Configuration is reset, all pool control functions of the Pro Logic will require reprogramming.

### Aux Configuration

Any Aux output can be configured to control a ColorLogic fixed color or light show (Aux is used as the example below). A virtual Aux output can also be used on Pro Logic Virtual models (see the Pro Logic manual for more information). A ColorLogic light can be assigned to more than one Aux and if more than one show is desired, additional Aux outputs can be configured.

- **Aux1 Config**
  - to view/change
  - Push to access Aux options
  - Move to previous/next configuration menu

- **Aux1 Name**
  - Rotates between all available names
  - Move to next menu item

- **Aux1 Function**
  - Rotates between Manual On/Off (default), Countdown Timer or Timeclock
  - Move to next menu item

- **Aux1 Relay**
  - Toggle to ColorLogic
  - Move to next menu item

- **Aux1 Assign**
  - Toggle between No (default) and Yes
  - Move to next menu item

- **Aux1 Sequence**
  - Allows selection of sequence number
  - Move to next menu item
Aux1 Function
To assign any Aux to control a ColorLogic program, the Aux function must be set to Manual On/Off, Countdown Timer, or Timeclock. If any other selection is made, the Aux will not be able to control the ColorLogic lights(s). Refer to the Pro Logic manual for more information on how these functions operate.

Aux1 Relay
Use the “+” and “-” buttons to select “ColorLogic”. Note that the Aux relay will continue to function even though the Aux function has been assigned to control a fixed color or light show. It will energize and de-energize when the ColorLogic program is started and stopped. This allows the user to wire other features that can be started/stopped at the same time as the lights.

Aux1 Assign
The ColorLogic displays the ColorLogic lights that have been found and allows the user to select whether to include them on this Aux when operating fixed colors or light shows. Advance through all lights (identified by their LT number) and select “Yes” or “No”. The corresponding light will blink during this process.

Aux1 Sequence
The Pro Logic allows the user to select the order in which the lights will illuminate during a light show. For each light (identified by their LT number), select the order placement (from “1st” to “32nd”) using the “+” and “-” buttons. The corresponding light will blink during this process. When displaying a fixed color, all assigned lights will be illuminated all the same time.

Programming
After configuring the Pro Logic, the Aux output must be programmed to operate the assigned ColorLogic lights. Light shows and fixed colors are programmed differently and will require different input from the user. Programming the ColorLogic lights takes place within the Settings Menu of the Pro Logic control. To enter the Settings Menu, push the “Menu” button until “Settings” is displayed. Push the “<” or “>” buttons until the desired Aux is displayed then follow the sequence below.

Light Shows
- Push to access the Aux Settings
- Rotate to previous/next setting menu
- Rotate between all available light shows and fixed lights
- Move to next menu item
- Rotate between all available speed selections
- Move to previous/next menu item
- Rotate between all available motion selections
- Move to previous/next menu item
- Adjust brightness setting
- Move to previous/next settings menu

Aux1 Program
- Select the desired ColorLogic program using the “+” or “-” buttons. If a fixed color is desired, skip to page 9 for programming information. The Pro Logic will rotate between all factory default selections. Description of the ColorLogic programs can be found on the color laminated card included with the ColorLogic Network Module as well as page 1 in this manual. NOTE: For ColorLogic 4.0, the Custom Fade and the Custom Chase light shows will display the 5 fixed colors in the following order: 2, 4, 6, 7, and 11. For Gen 4.0 ColorLogic Lights, the fixed colors will be displayed in the following order: 2, 3, 4, 6, and 5. The number on the right of the fixed color name is the color location in the color chart diagram located on the color laminated card.

Aux1 Speed (not available for Fixed colors)
After a program has been selected, the Pro Logic will prompt the user for the desired speed. This is the speed at which the entire sequence will run. Use the “+” and “-” buttons to increase or decrease the speed. The selectable range is 1/16 to x16 (default is x1). The maximum speed for the Harmony and Rainbow light shows is x1, regardless of setting. Note that a programmed light show will restart when a change is made to the speed.

Aux1 Motion (not available for Fixed colors)
The motion selection affects two aspects of a light show; the order in which the lights are illuminated and the fixed delay between each light in the sequence. The overall effect is to change the amount of motion or flow across the lights.

Aux1 Brightness
Use the “+” or “-” buttons to adjust the brightness of the fixed color from 20% to 100% (100% is default). Note that a programmed light show will restart when a change is made to brightness.

Fixed Colors
- Push to access the Aux Settings
- Rotate to previous/next settings menu
- Rotates between all available light shows and fixed lights
- Changes color of fixed light
- Changes color of fixed light
- Changes color of fixed light
- Changes color of fixed light
- Changes color of fixed light
- Push to reset color to the factory setting
- Move to previous/next menu item
- Move to next menu item
- Adjust brightness setting
- Move to previous/next settings menu

Aux1 Program
Select the desired fixed color using the “+” or “-” buttons. A description of these selections can be found on the color laminated card included with the ColorLogic Network Module and on page 1 of this manual. For Universal Color Logic lights, the fixed colors will be displayed in the following order: 2, 4, 6, 7, and 11. For Gen 4.0 ColorLogic Lights, the fixed colors will be displayed in the following order: 2, 3, 4, 6, and 5. The number on the right of the fixed color name is the color location in the color chart diagram located on the color laminated card.

Changing Colors
Select the desired fixed color and press “+” or “-” to change the color. The name will change to “Custom Color” and the number to the right will change to a new value. Refer to this number and the color chart to determine the desired color. Press “+” to save the new color.

For ColorLogic 4.0, if any of the factory fixed colors are changed, Program 15 (Custom Fade) and Program 16 (Custom Chase) will use the new fixed color(s) in their light shows.

For Universal Color Logic, factory fixed colors 2, 4, 6, 7, and 11 are used for shows 20 and 21. Changing these colors will be reflected in shows 20 and 21.

Reset Color
After a custom color is saved, the option to reset back to the factory set color is displayed. Use this option to “undo” changes and return back to the original default color in the Program Table on page 1. Push “+” to reset the color back to the factory default and progress through the displays to confirm.

Aux1 Brightness
Use the “+” or “-” buttons to adjust the brightness of the fixed color from 20% to 100% (100% is default). Note that a programmed light show will restart when a change is made to brightness.
Aux1 Function
To assign any Aux to control a ColorLogic program, the Aux function must be set to Manual On/Off, Countdown Timer, or Timeclock. If any other selection is made, the Aux will not be able to control the ColorLogic lights(s). Refer to the Pro Logic manual for more information on how these functions operate.

Aux1 Relay
Use the “+” and “-” buttons to select “ColorLogic.” Note that the Aux relay will continue to function even though the Aux function has been assigned to control a fixed color or light show. It will energize and de-energize when the ColorLogic program is started and stopped. This allows the user to wire other features that can be started/stopped at the same time as the lights.

Aux1 Assign
The Pro Logic displays the ColorLogic lights that have been found and allows the user to select whether to include them on this Aux when operating fixed colors or light shows. Advance through all lights (identified by their LT number) and select “Yes” or “No.” The corresponding light will blink during this process.

Aux1 Sequence
The Pro Logic allows the user to select the order in which the lights will illuminate during a light show. For each light (identified by its LT number), select the order placement (from “1st” to “32nd”) using the “+” and “-” buttons. The corresponding light will blink during this process. When displaying a fixed color, all assigned lights will be illuminated at the same time.

Programming
After configuring the Pro Logic, the Aux output must be programmed to operate the assigned ColorLogic lights. Light shows and fixed colors are programmed differently and will require different input from the user. Programming the ColorLogic lights takes place within the Settings Menu of the Pro Logic control. To enter the Settings Menu, push the “Menu” button until “Settings” is displayed. Push the “<” or “>” buttons until the desired Aux is displayed then follow the sequence below.

Light Shows

- **Aux1 Settings**: Push to access the Aux Settings
- **Aux1 Program**: Move to previous/next setting menu
- **Aux1 Speed**: Rotates between all available light shows and fixed lights
- **Aux1 Motion**: Move to next menu item
- **Aux1 Brightness**: Rotates between all available speed selections
- **Aux1 Program**: Move to previous/next menu item
- **Aux1 Motion**: Rotates between all available motion selections
- **Aux1 Brightness**: Move to previous/next menu item
- **Aux1 Brightness**: Adjusts brightness setting
- **Aux1 Brightness**: Move to previous/next settings menu

**Aux1 Program**
Select the desired ColorLogic program using the “+” or “-” buttons. If a fixed color is desired, skip to page 9 for programming information. The Pro Logic will rotate between all factory default selections. Description of the ColorLogic programs can be found on the color laminated card included with the ColorLogic Network Module as well as page 1 in this manual. NOTE: For ColorLogic 4.0, the Custom Fade and the Custom Chase light shows will display the 5 fixed colors in the following order: 2, 4, 6, 7, and 11. For ColorLogic 4.0, the Custom Fades and the Custom Chase light shows will display the 5 fixed colors in the following order: 2, 4, 6, 7, and 11.

**Aux1 Speed**
After a program has been selected, the Pro Logic will prompt the user for the desired speed. This is the speed at which the entire sequence will run. Use the “+” and “-” buttons to increase or decrease this speed. The selectable range is 1/16 to x16 (default is x1). The maximum speed for the Harmony and Rainbow light shows is x1, regardless of setting. Note that a programmed light show will restart when a change is made to the speed.

**Aux1 Motion**
The motion selection affects two aspects of a light show; the order in which the lights are illuminated and the fixed delay between each light in the sequence. The overall effect is to change the amount of motion or flow across the lights.

**Aux1 Brightness**
When set to OFF, there is no delay and all lights will illuminate at the same time. When motion is set to a positive value (+0.2 to +1.2), the order of illumination will start from the lowest LT number and advance to the highest. As the value is increased, the delay between each light is increased. If a negative motion value is selected (-1.2 to -0.2), the illumination sequence will be the opposite (highest LT to lowest). As the value is decreased, the delay between each light is decreased. Note that a programmed light show will restart when a change is made to brightness.

**Fixed Colors**

- **Aux1 Settings + to view/change**: Push to access the Aux Settings
- **Aux1 Program**: Move to previous/next settings menu
- **2 Deep Blue Sea**: Rotates between all available light shows and fixed lights
- **2 Custom Color**: Changes color of fixed light
- **2 Deep Blue Sea**: Changes color of fixed light
- **2 Custom Color**: Move to previous/next menu item
- **2 Custom Color**: Move to previous/next menu item
- **Press + to reset**: Push to reset color to the factory setting
- **Are you sure? + to proceed**: Move to previous/next menu item
- **Are you sure? + to proceed**: Move to menu item
- **2 Deep Blue Sea**: Move to next menu item
- **2 Custom Color**: Move to next menu item
- **2 Custom Color**: Adjusts brightness setting
- **2 Custom Color**: Move to previous/next settings menu

**Aux1 Program**
Select the desired fixed color using the “+” or “-” buttons. A description of these selections can be found on the color laminated card included with the ColorLogic Network Module and page 1 of this manual. For Universal Color Logic lights, the fixed colors will be displayed in the following order: 2, 4, 6, 7, and 11. For ColorLogic 4.0, the fixed colors will be displayed in the following order: 2, 4, 6, and 5. The number on the right of the fixed color name is the color location in the color chart diagram located on the color laminated card.

**Changing Colors**
Select the desired fixed color and press “+” or “-” to change the color. The name will change to “Custom Color” and the number to the right will change to a new value. Refer to this number and the color chart to determine the desired color. Press “+” to save the new color.

**Reset Color**
After a custom color is saved, the option to reset back to the factory set color is displayed. Use this option to “undo” changes and return back to the original default color in the Program Table on page 1. Push “+” to reset the color back to the factory default and progress through the displays to confirm.

**Aux1 Brightness**
Use the “+” or “-” buttons to adjust the brightness of the fixed color from 20% to 100% (default is 100%).
**Operation**

**AUX Button**
After aux is turned on for the first time, the aux will remain on until the AUX button is pressed again.

**Countdown Timer** — the ColorLogic program will start when the AUX button is pressed and will turn off automatically if a programmed time (see Timers Menu in the Pro Logic Operation manual).

The AUX button can also be used to override the timer function. If a ColorLogic program has been turned on manually with the AUX button, the show will remain on until the AUX button is pushed again or the timeclock function shuts it off. For example, if the Aux output has been programmed to run a light show from 8:00pm - 10:00pm, pushing the AUX button will advance the timer function and start the show immediately. The show will remain on until the AUX button is pushed again or the timer function shuts it off at 10:00pm.

**Lights Button**
When the LIGHTS button is pushed, all networked lights will turn on using only white light. The display will confirm by showing the following message:

![ColorLogic Lights All White On]

This is a fast easy way to provide maximum illumination to the pool area. If a light show or fixed color(s) is running when the LIGHTS button is pressed, the LED indicator for associated AUX button will remain on and any other functions assigned to that aux will continue to run until the aux output turns off either manually or automatically.

When the LIGHTS button is pushed again, all lights will turn off and the display will show the following:

![ColorLogic Lights All White Off]

To reset the original light show or fixed color(s), toggle the associated AUX button off and back on.

**Lights LED**
The LIGHTS LED will normally be on at ALL times, indicating that the lights relay is on and the Universal ColorLogic or Generation 4 ColorLogic lights are receiving power. Unlike conventional lights, networked lights require power at all times and rely on communications from the Network Module to determine whether to turn on or off. Therefore, the lights relay and LIGHTS LED will always be on unless the Pro Logic is in Service mode or System Off mode. NOTE: The LIGHTS button has no effect on the LIGHTS LED indicator.

**System Off Mode**
When the Pro Logic is in the System Off mode, all of its outputs are kept in the off state. The lights relay is off and no power is supplied to the networked ColorLogic lights. When the System Off mode is exited, the Pro Logic returns to normal operation and the Lights relay will automatically be turned on, restoring power to the lights. The lights, however, will not be able to accept any commands from the Pro Logic, including on/off, until they finish their power-up cycle. This can take up to 3 minutes while the lights cycle through white, red, green and blue. (red and green for Universal Color Logic).

**Service Mode**
When the Pro Logic enters the Service mode, it shuts off all of its outputs. This means that the lights relay is off and no power is supplied to the networked ColorLogic lights. In this mode, all of its outputs are under manual control, and one can individually be turned on/off by pressing the appropriate button on the local display. The remote displays can only turn outputs on/off, not on, in the Service model. If a light show or fixed color(s) is desired, the LIGHTS button must be pressed and the lights must have time to finish their power-up cycle (up to 3 minutes) before attempting to press AUX button. After the power-up cycle is complete, lights and fixed colors can be started and stopped using the associated AUX buttons. When the Service mode is exited, the Lights relay will automatically be turned off then on, restoring power to the networked. The lights, however, will not be able to accept any commands from the Pro Logic, including on/off, until they finish their power-up cycle.

**Resetting ColorLogic Lights Configuration**
To reset the ColorLogic lights configuration:
- Press repeatedly until “Configuration Menu” is displayed
- Press BOTH buttons SIMULTANEOUSLY for 5 seconds to unlock
- Initiate reset of all ColorLogic configuration parameters
- Move to next menu item

NOTE: When resetting ColorLogic, be sure not to confuse the Default Configuration reset with the ColorLogic Configuration reset. If the Default Configuration is reset, all pool control functions of the Pro Logic will require reprogramming.

**Aux Configuration**
Any Aux output can be configured to control a ColorLogic fixed color or light show (Aux is used as the example below). A virtual Aux output can also be used on Pro Logic Virtual models (see the Pro Logic manual for more information). A ColorLogic light can be assigned to more than one Aux and if more than one show is desired, additional Aux outputs can be configured.

<table>
<thead>
<tr>
<th>Aux1 Config.</th>
<th>+ to view/change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aux1 Name 2</td>
<td>Rotates between all available names</td>
</tr>
<tr>
<td>Aux1 Function</td>
<td>Rotates between Manual On/Off (default), Countdown Timer or Timeclock</td>
</tr>
</tbody>
</table>

for manual on/off, countdown timer and backlight functions only

| Aux1 Relay | Toggle to ColorLogic |
| Aux1 ColorLogic | Move to next menu item |
| Aux1 Assign | Toggle between No (default) and Yes |
| LT1: NO | Move to next menu item |
| LT1: 1st | Allows selection of sequence number |

After all lights are found, each light will need to be assigned an identification number. These numbers will be shown as LT1, LT2, LT3, ... depending on how many lights are found. The number will identify the light for all future programming of shows, colors, etc. The Pro Logic will assign default LT numbers to the lights that are found. During this process, the ColorLogic light will blink and the default number will be displayed. If the default number is not desired, use the "+" or "-" buttons to choose an alternative unique LT number up to the actual number of lights that were found. When the number is acceptable, push the "+" button to advance to the next light and select another LT number. Continue until all lights have been assigned an LT number then push the "+" to exit the ColorLogic configuration menu. All lights should now be off.
Configuration

After the Network Module has been installed and wired, the Pro Logic must be configured and programmed to operate the ColorLogic networked lights. Note that if Universal ColorLogic lights are mixed with Gen 4.0 ColorLogic Lights, the Pro Logic will set the lights to operate in Gen 4.0 mode (i.e., to use the Color Logic 4.0 Program Table). Otherwise if only Universal ColorLogic lights are used, the Pro Logic will configure the lights to use the Universal ColorLogic Program Table.

ColorLogic Configuration

During ColorLogic configuration, the Pro Logic will find all networked lights (Generation 4 ColorLogic and/or Universal ColorLogic) in the system and assign an identification number to each one that is different. For installations using multiple lights, it may be helpful for the user to use a diagram of the pool/spa and label each light with its corresponding LT number. Use pages 15-17 for this purpose. Refer to this diagram when programming light shows and fixed colors.

Configuration of the ColorLogic networked lights takes place within the Pro Logic’s Configuration Menu. In this menu, screens and button functions are shown below and follow the same convention as the Pro Logic manuals. For more detailed information about using the Pro Logic menu system, refer to the Pro Logic Operation Manual.

To access the Configuration Menu

- Press repeatedly until “Configuration Menu” is displayed
- Press BOTH buttons SIMULTANEOUSLY for 5 seconds to unlock

Configuration Menu-Locked

- Move to configuration menu items
- Advance to the ColorLogic Configuration Menu. NOTE: The configuration menu automatically “locks” after 2 minutes if no buttons are pressed.

Stop any running light shows before entering the ColorLogic Configuration Menu. Do not attempt to send any commands from a remote control or from the Pro Logic local display keypad while configuring ColorLogic lights. Once the ColorLogic configuration process begins, there is no way to exit and the process must be completed.

ColorLogic Config. + to view/change

- Push to activate ColorLogic options
- Move to previous/next configuration menu

Find ColorLogic + to Start

- Search for ColorLogic lights connected to Network Module
- Skip to “Identify ColorLogic”, if lights have previously been found
- If not, move to previous/next menu item

Cycling Power to CL Lights... Please wait

- Power cycles the ColorLogic light(s), may take 1 minute or more
- (do not press any buttons while waiting)

Searching 3 lights(s) found

- Search for ColorLogic light(s), may take up to 5 minutes
- If multiple lights are found, the Pro Logic will flash red, green and blue (red and green for Universal ColorLogic), and the number of lights found will be displayed. If the number of lights found is not correct, check the wiring and refer to the Troubleshooting section of this manual. After all lights are found, push the “<” or “>” to advance to the Identify screen.

Find ColorLogic LT1

- Assigns numbers to the ColorLogic lights found
- Move to next ColorLogic light found

Identify ColorLogic

NOTE: For applications that involve multiple lights, it may be helpful to draw a simple diagram of your pool/spa and record the LT number for each light location.

Light Shows

The ColorLogic Lights system provides a higher level of control over pool/spa light shows than previous products. You can modify the operation of existing light shows by adjusting the brightness, speed, and by adding motion effects to the show. In addition, you can create custom light shows by changing the colors displayed for shows two through six. Moreover, the light shows and customization is specific to each Aux button that is assigned to the ColorLogic Lights system.

Once the ColorLogic Lights have been installed and configured with the Pro Logic pool controller, control of the lights is a two step process. In the first step, specific lights must be assigned to an Aux button using the “Configuration” menu. The assignment to the Aux button includes a Sequence number which will be used for shows that use motion. In the second step, the specific details of the light show can be set up using the “Configuration” and “Settings” menu.

Examples

Note the terms below when reviewing the following examples.

Num - this is the light number which is assigned to the light when it is installed. This number identifies each light and is unique from 1 to the number of lights in the pool. Ex. LT1, LT2,... etc.

Seq - this is the sequence number assigned to the light when it was assigned to an Aux using the configuration menu. This tells what position it has in shows that move. Several lights can have the same sequence number, depending on the motion effects that are desired. A typical setup is to choose the sequence number to be the same as the light number. If you will not be using shows that move, the sequence numbers are not important.

Aux – this is the Aux button to which the light is assigned. Note that several lights can be assigned to each Aux button. Also, a single light can be assigned to several Aux buttons. You can set up your pool so that each Aux button can run a different light show or a separate group of lights.

In Example 1, Light 1 is assigned to Aux 1 (using the configuration menu) and set up to show the Deep Blue Sea fixed color using the settings menu. Light 2 is assigned to Aux 2 and set up to show the Sangria color. Deep Blue Sea and Sangria are both non-moving shows and will produce fixed colors. If Aux 1 and Aux 2 are turned on, the side of the pool with the Light 1 (Deep Blue Sea) will be blue and the side of the pool with Light 2 will be red (Sangria).

| Num: 1 |
| Seq: 1 |
| Aux: 1 |

- Deep Blue Sea

| Num: 2 |
| Seq: 2 |
| Aux: 2 |

- Sangria
In Example 2, the pool has eight lights which are identified as 1-8 using a clockwise rotation around the pool starting from the left. The light numbers are specified when the lights are installed using the ColorLogic configuration process (refer to the "Identify ColorLogic" section on page 6). All lights are assigned to Aux 1 and use their light number as their sequence number. The lights are set up to run USA light show with motion using the settings menu. When Aux 1 is turned on, the USA light show will start with Light 1 and move around the pool to Light 8. Each light will cycle through red, white, and blue. In addition, the show will appear to move around the pool as the lights show will start at different times based on the sequence number and speed of the show.

In this example, the sequences assigned to lights configured with Aux 2 are paired on both side of the pool. Lights 1 and 5 are not assigned to Aux 2. The settings menu will be used to select the custom chase light show for Aux 2 with motion set to 1.0 and the speed will be set to x2 for more rapid change. The custom chase will use the fixed colors set for light shows 2 through 6. The actual color desired for each of these shows (i.e., 2 through 6) can be changed and the color selected for show 6 will be off. When the show begins, the colors will move from the left end of the pool to the right. Adjust the motion and speed settings as desired.
FAQs

Even when the lights are off, why does the Lights indicator on the Pro Logic control panel always turn on whenever the Pro Logic is turned on?

The Lights indicator reflects the state of power to the lights and power is always applied to the lights when the pool controller is on. The Lights indicator is on to indicate that power is applied to the lights. The lights run a light show, turn on, or turn off under program control which is initiated from the Pro Logic. In general, lights will have power applied even if the lights are not displaying visible light.

Can the Lights relay be configured when used with a Universal ColorLogic or Generation 4 Lights system?

No. The Pro Logic automatically assigns the Lights relay to the networked ColorLogic lights and enables power to the light. Lights are always powered when the pool controller is powered on. To force this relay off, use Service Mode or System Off mode.

How does the Lights button work?

The Lights button is used for emergency white lighting of the pool. The Lights button sends a command to toggle the light state. The lights will either turn on (full white) or off. If you press the button and the lights remain off, press the button again to turn the lights on full white. If you press the button and the lights stay on, press the button again to make the lights turn off. Normal color operation of the lights is done through Aux buttons.

Can lights be assigned to multiple Aux buttons?

Yes. Moreover, different light shows can be set up for each Aux button. For instance, a light can be assigned to Aux 1 and Aux 2. Aux 1 can be set to Voodoo Lounge while Aux 2 can be set to Deep Blue Sea.

What happens when lights are assigned to multiple Aux buttons?

Lights process the command associated with the last button which was turned on. For example, assign lights to Aux 1 and Aux 2 and then Aux 1 set up to run Deep Blue Sea, and Aux 2 set to run Emerald. Press Aux 1 and the light will run Deep Blue Sea, and then press Aux 2 and the light will run Emerald. Both Aux 1 and Aux 2 indications (LEDs) will be illuminated. If you then press Aux 1, its LED will turn off but the light will still be running the Aux 2 show (i.e., Emerald). If you press Aux 2, the light show will be turned off and the Aux 2 LED will also be turned off.

If aux 1 and Aux 2 are both off and you press Aux 1 (to start Deep Blue Sea) and then Aux 2 (to start Emerald), the lights will remain in the Emerald show. If you then press Aux 2 to stop Emerald, the light will turn off along with the Aux 2 LED. The Aux 1 LED will still be illuminated when this happens. The Aux 1 LED can be turned off by pressing the Aux 1 button again.

Do all lights have to be assigned to the same Aux button?

No. A subset of lights can be assigned to any Aux button. For instance, if you are using a Pro Logic with eight Aux buttons, pool lights can be assigned to Aux 4 and spa lights can be assigned to Aux 5. If Aux 4 and Aux 5 are set up this way, different light shows can be assigned to Aux 4 and Aux 5. Moreover, if lights are separated between pool and spa, both the pool and spa lights can run different light shows at the same time. Another Aux can run all the lights at once.

Can light show settings be changed while a show is running?

Yes. The settings for a show can be changed while a show is running. If you pause a few seconds between key presses, you will be able to see the effect of the changes while the show is running. For instance, if you are adjusting the speed parameter (using the settings menu) while a show is running, you can see the effect of speeding or slowing down the show.

How do lights go from stand alone mode to program control mode?

Lights are originally shipped in stand alone mode. This mode allows the light shows to be controlled using power line interrupts (toggling power to the light) and is similar to the previous generation lights. The lights automatically go into program control mode when they are configured with a Pro Logic pool controller and AQL-COLOR-MODHV.

How do lights go from program control mode to stand alone mode?

Lights which have been installed and configured with a pool controller can be returned to stand alone mode by using the “Reset ColorLogic” option in the Pro Logic configuration menu.

Can I mix Universal ColorLogic and/or ColorLogic Generation 4 lights with ColorLogic 2.5 lights in stand alone mode?

Universal ColorLogic lights can be configured to run with ColorLogic Gen 4.0 lights. They can also be configured to run with Gen 2.5 lights. The procedure for configuring the lights is in the Universal ColorLogic light installation manual.
Troubleshooting

**ColorLogic Lights system is not recognized by the Pro Logic and no ColorLogic menu options are shown.**

Verify that the green lights indicator automatically turns on upon applying power to the Pro Logic. If the indicator does not turn on, the Pro Logic is not communicating with the Network Module which means you should check the FS-48S connection (i.e., the four wire connection) between the Pro Logic main board and the Network Module.

**Lights occasionally dim and brighten?**

ColorLogic lights have internal thermal protection and will automatically dim the LEDs if the light temperature rises to 90°C or greater. The light will go back to normal brightness as soon as the condition is corrected.

**How can I tell if the lights are operating correctly?**

Power off the lights for at least one minute. Once power is applied to the light, it should immediately turn on all white light for approximately fifteen seconds. If the light is installed with a pool controller and has been configured with a working Network Module, the light will flash red, green and blue (red and green for Universal ColorLogic) before turning off after fifteen seconds of white has been displayed. For larger systems, this cycle of red and green can last up to 3 minutes. If the light is set up to run in a stand alone mode, it will start the light show after the fifteen seconds of white light.

**Lights are not found during the "Find ColorLogic Lights" operation.**

This occurs if the lights are not wired correctly. The lights and Network Module must be on the same power phase. Refer to the wiring diagram for more details.

**Lights that are found do not blink during the identification process.**

One common source of this problem is improper wiring. Verify that the lights and Network Module are on the same phase. Refer to the wiring diagram for more details. Use the "Left Arrow" to return to the previous light and then continue to identify the lights using the right arrow.

**Multiple lights blink at the same time during the identification process.**

During the identification process only a single light should be blinking at any given time. Each time the right arrow is pressed, a command is sent to turn off the current light and to start the next light blinking. If two lights are blinking, previous light did not process the command to turn off. Use the "Left Arrow" to return to the previous light and then continue to identify the lights using the right arrow.

**Lights are running different shows when they should all be running the same show.**

Each light maintains a local set of information which identifies the AUX buttons it is assigned to. Each light also maintains a local copy of the actions (e.g., which light show to run when an AUX button is pressed) it takes in response to the AUX button. If the settings menu is adjusted when a light is powered off or not connected to the network, information can get out of sync with the other lights. When this happens, the corrective action is to adjust the settings for the AUX while the light is powered on.

**Can I mix UCL and Gen 4.0 lights on the same system?**

Yes, but the lights will be set up to run in the Gen 4.0 light shows. The operating mode of the lights can be seen using the "Diagnostic Menu -> CLL Light Software-> + keys. When the lights are running in UCL mode, the firmware version for the light will be displayed as "UCL," otherwise the firmware version will be displayed as "CL xxx."
Installation

Installation of the ColorLogic Network Module requires that it be mounted and wired inside of the Pro Logic enclosure. The module is designed to mount into a cutout in the wall of the enclosure. If your enclosure does not provide this cutout, the Pro Logic is not compatible with the ColorLogic Network Module. The following information offers detailed instructions on how to mount and wire the ColorLogic Network Module to the Pro Logic pool control. Before performing any installation steps, remove power completely to the Pro Logic’s subpanel. Remove the front panel and follow the instructions below.

Mounting

1. Remove the plastic plate at the cutout where the Network Module will be mounted. If there is no cutout, your Pro Logic enclosure will not support the installation of the Network Module. Contact Hayward Technical Support at 908-355-7995 for more information. Holding the Network Module at an angle, insert the top front of the module into the designated area shown in step 1 above.

2. Keeping the front of the Network Module in its place, move the top rear of the module into the cutout as shown in step 2.

3. With the top of the Network Module in contact with the cutout, swivel the bottom of the module so it inserts into the cutout completely. Refer to step 3.

4. The Network Module can now be “snapped” into place by pushing down as shown in step 4. Before pushing down, you may have to raise the module slightly to get the bottom channel of the module to fit securely into the cutout.

Wiring

Follow the local code, NEC (CEC) codes and the circuit breaker manufacturer’s rating requirements regarding the size and temperature rating for wiring.

The ColorLogic Network Module uses power line communications to individually control each networked light. For successful communications, the same bus must be used to power both the Network Module and any networked light(s). This is not a concern when using just one circuit breaker (see diagram on page 3 and 4) but must be considered if the installation requires two or more. The diagram on page 5 show an installation using two circuit breakers. The communications signal is passed from the Network Module, through the bus, and on to the lights. If these two specific circuit breaker positions are not available in your installation, be sure to locate the two circuit breakers on the same bus. Refer to the diagram on page 4 for installations up to 8 ColorLogic lights and page 5 for installations up to 16 lights. Contact Hayward at 908-355-7995 for installations requiring more than 16 lights.

Rectangular Pools

If the diagram below resembles your pool, shade in the appropriate lights and fill out the corresponding information. Modify the drawing by add additional lights or information, if necessary. It may be easier to hand draw your pool using the blank space on page 17. If so, be sure to add all of your lights and labeling information to your drawing. This diagram will aid in programming and will be a useful reference for any future changes.

LT Number: ___
Sequence: ___
Aux: ___

LT Number: ___
Sequence: ___
Aux: ___

LT Number: ___
Sequence: ___
Aux: ___

LT Number: ___
Sequence: ___
Aux: ___

LT Number: ___
Sequence: ___
Aux: ___

LT Number: ___
Sequence: ___
Aux: ___

LT Number: ___
Sequence: ___
Aux: ___

LT Number: ___
Sequence: ___
Aux: ___
Round Pools

If the diagram below resembles your pool, shade in the appropriate lights and fill out the corresponding information. Modify the drawing by add additional lights or information, if necessary. It may be easier to hand draw your pool using the blank space on page 17. If so, be sure to add all of your lights and labeling information to your drawing. This diagram will aid in programming and will be a useful references for any future changes.

Irregular Shaped Pools

Hand draw your pool below. Label the location of each light and fill out all corresponding information as shown on the previous two pages. This diagram will aid in programming and will be a useful references for any future changes.

Introduction

This manual contains information for the proper installation and operation of the ColorLogic Network Module (AQL-COLOR-MODHV). The instructions in this manual MUST be followed precisely. Failure to install according to defined instructions will void the warranty.

Compatibility

The AQL-COLOR-MODHV is compatible with all Hayward Pro Logic PS controls operating with software version 4.00 or greater and whose enclosures provide a cutout for installation. Refer to the installation section of this manual to verify compatibility with your Pro Logic.

The ColorLogic Network Module can provide power line communications with 12 Volt Hayward Universal ColorLogic pool/spa lights when used with a Hayward LKBUN1000 Coupler. It can also be used to network 120VAC Generation 4 Hayward ColorLogic pool/spa lights.

Description

The ColorLogic Network Module is used with the Pro Logic to fully control the color, speed, motion and brightness of preset light shows in a compatible Hayward ColorLogic pool/spa lights). After installing the ColorLogic Network Module and enabling the function in the Pro Logic, the user can program various parameters to fully customize their pool/spa light(s) operation.

The ColorLogic Network Module can be used to control up to 32 pool or spa lights simultaneously. This method of control features 2 user defined programs; fixed colors and color-changing shows. All fixed colors and shows can be modified or changed. The factory set colors and shows are listed in the adjacent Program Tables and can also be found on the color laminated card included with the ColorLogic light. A color chart can be found on the same card and will help when programming colors for the ColorLogic lights.

ColorLogic 4.0 Program Table

<table>
<thead>
<tr>
<th>Number</th>
<th>Function</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Show</td>
<td>Voodoo Lounge</td>
<td>Fast Color Wash</td>
</tr>
<tr>
<td>2</td>
<td>Fixed Color</td>
<td>Deep Blue Sea</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>3</td>
<td>Fixed Color</td>
<td>Afternoon Skies</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>4</td>
<td>Fixed Color</td>
<td>Emerald</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>5</td>
<td>Fixed Color</td>
<td>Sample</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>6</td>
<td>Fixed Color</td>
<td>Cloud White</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>7</td>
<td>Show</td>
<td>Twilight</td>
<td>Slow Color</td>
</tr>
<tr>
<td>8</td>
<td>Show</td>
<td>Tranquility</td>
<td>Blue/Cyan/White Fades</td>
</tr>
<tr>
<td>9</td>
<td>Show</td>
<td>Gamblin</td>
<td>Blue/Green/Magenta</td>
</tr>
<tr>
<td>10</td>
<td>Show</td>
<td>USA!</td>
<td>Red/White/Blue Switch</td>
</tr>
<tr>
<td>11</td>
<td>Show</td>
<td>Mardi Gras</td>
<td>Fast Random Fades</td>
</tr>
<tr>
<td>12</td>
<td>Show</td>
<td>Cool Cabaret</td>
<td>Slow Random Fades</td>
</tr>
<tr>
<td>13</td>
<td>Show</td>
<td>Rainbow</td>
<td>Rainbow</td>
</tr>
<tr>
<td>14</td>
<td>Show</td>
<td>Harmony</td>
<td>Blue/Green Fade</td>
</tr>
<tr>
<td>15</td>
<td>Show</td>
<td>Custom Fades</td>
<td>Uses the 5 fixed colors from 2-6</td>
</tr>
<tr>
<td>16</td>
<td>Show</td>
<td>Custom Chase</td>
<td>Uses the 5 fixed colors from 2-6</td>
</tr>
</tbody>
</table>

Universal ColorLogic Program Table

<table>
<thead>
<tr>
<th>Number</th>
<th>Function</th>
<th>Name</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Show</td>
<td>Voodoo Lounge</td>
<td>Fast Color Show</td>
</tr>
<tr>
<td>2</td>
<td>Fixed Color</td>
<td>Deep Blue Sea</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>3</td>
<td>Fixed Color</td>
<td>Afternoon Skies</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>4</td>
<td>Fixed Color</td>
<td>Cloud White</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>5</td>
<td>Fixed Color</td>
<td>Sangria</td>
<td>Fixed Color</td>
</tr>
<tr>
<td>6</td>
<td>Fixed Color</td>
<td>Twilight</td>
<td>Slow Color</td>
</tr>
<tr>
<td>7</td>
<td>Show</td>
<td>Tranquility</td>
<td>Blue/Cyan/White Fades</td>
</tr>
<tr>
<td>8</td>
<td>Show</td>
<td>Gamblin</td>
<td>Blue/Green/Magenta</td>
</tr>
<tr>
<td>9</td>
<td>Show</td>
<td>USA!</td>
<td>Red/White/Blue Switch</td>
</tr>
<tr>
<td>10</td>
<td>Show</td>
<td>Mardi Gras</td>
<td>Fast Random Fades</td>
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<td>Show</td>
<td>Cool Cabaret</td>
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<td>Rainbow</td>
<td>Rainbow</td>
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<td>Show</td>
<td>Harmony</td>
<td>Blue/Green Fade</td>
</tr>
<tr>
<td>14</td>
<td>Show</td>
<td>Custom Fades</td>
<td>Uses the 5 fixed colors from 2-6 and 11</td>
</tr>
<tr>
<td>15</td>
<td>Show</td>
<td>Custom Chase</td>
<td>Uses the 5 fixed colors from 2-6 and 11</td>
</tr>
</tbody>
</table>
IMPORTANT SAFETY INSTRUCTIONS

Before installing or servicing this electrical equipment, turn power supply OFF.

WARNING – Read and follow all instructions in this owner’s manual and on the equipment. Failure to follow instructions can cause severe injury and/or death.

WARNING – This product should be installed and serviced only by a qualified professional.

CAUTION – All electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electric Code (NEC).

ATTENTION INSTALLER – THIS MANUAL CONTAINS IMPORTANT INFORMATION ABOUT THE INSTALLATION, OPERATION, AND SAFE USE OF THIS PRODUCT THAT MUST BE FURNISHED TO THE END USER OF THIS PRODUCT. FAILURE TO READ AND FOLLOW ALL INSTRUCTIONS COULD RESULT IN SERIOUS INJURY.

WARNING – Risk of Electric Shock. All electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electric Code (NEC). Hazardous voltage can shock, burn, and cause death or serious property damage. To reduce the risk of electric shock, do NOT use an extension cord to connect unit to electric supply.

WARNING – Ground Fault Circuit protection must be used in the circuit, however, all electrical wiring MUST be in conformance with all applicable local codes, regulations, and the National Electric Code (NEC).

IMPORTANT - Reference NEC codes for all wiring standards including, but not limited to, grounding, bonding and other general wiring procedures.

WARNING – Networked ColorLogic Lights and related electrical connections are receiving electrical power at all times, even when the lights are OFF! Turn off power at the main breaker before servicing ColorLogic lights.

HAYWARD® Pool Products Limited Warranty

To original purchasers of this equipment, Hayward Pool Products, Inc. warrants its Universal ColorLogic and CrystalLogic pool and spa lights, niches, pool light transformers, and couplers to be free from defects in materials and workmanship for a period of ONE (1) year from the date of purchase, when used in single family residential applications.

The limited warranty excludes damage from freezing, negligence, improper installation, improper use or care or any Acts of God. Parts that fail or become defective during the warranty period shall be repaired or replaced, at our option, within 90 days of the receipt of defective product, barring unforeseen delays, without charge.

Proof of purchase is required for warranty service. In the event proof of purchase is not available, the manufacturing date of the product will be the sole determination of the purchase date.

To obtain warranty service, please contact the place of purchase or the nearest Hayward Authorized Service Center. For assistance on your nearest Hayward Authorized Service Center please visit us at www.hayward.com.

Hayward shall not be responsible for cartage, removal, repair or installation labor or any other such costs incurred in obtaining warranty replacements or repair.

The Hayward Pool products warranty does not apply to components manufactured by others. For such products, the warranty established by the respective manufacturer will apply.

The express limited warranty above constitutes the entire warranty of Hayward Pool Products with respect to its pool products and is in lieu of all other warranties expressed or implied, including warranties of merchantability or fitness for a particular purpose. In no event shall Hayward Pool products be responsible for any consequential, special or incidental damages of any nature.

Some states do not allow a limitation on how long an implied warranty lasts, or the exclusion of incidental or consequential damages, so the above limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights, which vary from state to state.
Network Module
for ColorLogic™ Pool/Spa Lights

Owner's Manual

AQL-COLOR-MODHV

FOR FURTHER INFORMATION OR CONSUMER TECHNICAL SUPPORT, VISIT OUR WEBSITE AT www.hayward.com