ColorLogic® 4.0 Installation Guide

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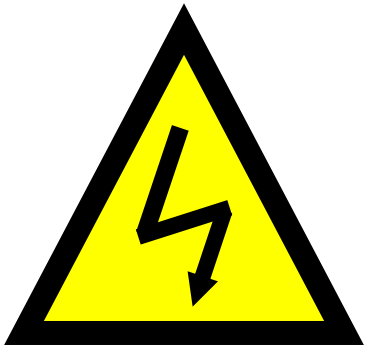
Safety Precautions



Warning

Hazardous voltage can shock, burn, cause serious injury and or death. To reduce the risk of electrocution and or electric shock hazards:

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

Overview

Compatibility

- The AQL-COLOR-MODHV is compatible with all Goldline Controls Pro Logic PS controls operating with software version 4.00 or greater and whose enclosures provide a cutout for installation.
- The ColorLogic Network Module will only operate with Generation 4 or later Hayward ColorLogic 120VAC pool/spa light(s).

Description

- The ColorLogic Network Module is used with the Pro Logic to fully control the color, speed, motion and brightness of pre-set light shows in a compatible Hayward ColorLogic pool/spa light(s). 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; five fixed colors and eleven color-changing shows. All fixed colors and shows can be modified or changed. The factory set colors and shows are listed in the Program Table on the next page and can also be found on the color laminated card included with the light. A color chart can be found on the same card and will help when programming colors for the ColorLogic lights.

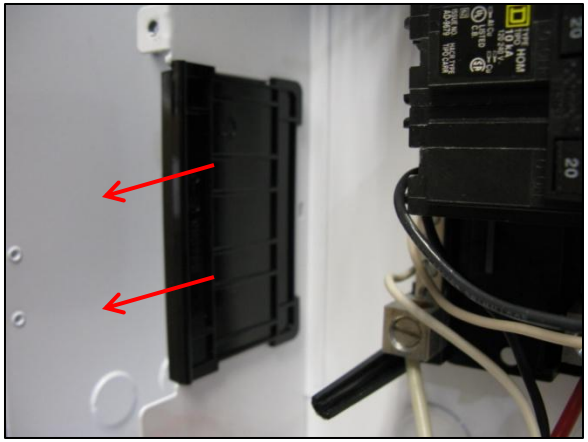
Program Table

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

NOTE: The Custom Fade and the Custom Chase light shows will display the 5 fixed colors in the following order: 2, 3, 4, 6, 5

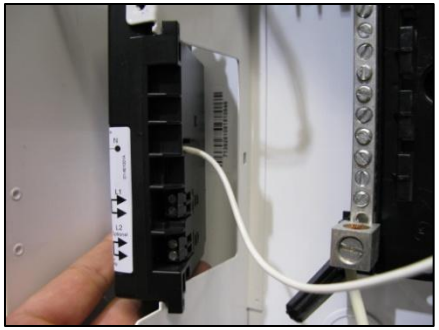
Network Module Installation

Step A Remove the plastic plate by sliding it towards the front of the enclosure.



Step B Holding the modem at an angle, insert the top of the modem into the cutout.

Step C Insert the bottom of the modem in place and rotate the modem until it seats into the cutout.



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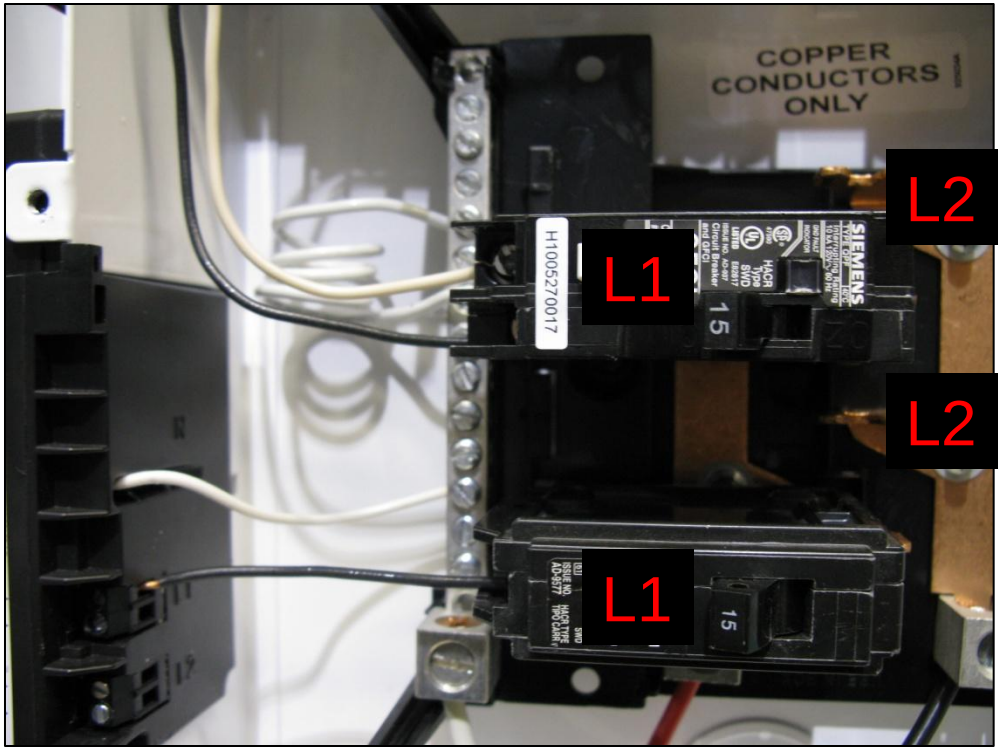
Network Module Wiring

The ColorLogic Network Module uses 120VAC power line communications to individually control each networked light. The same bus must be used to power both the Network Module and any networked light(s).

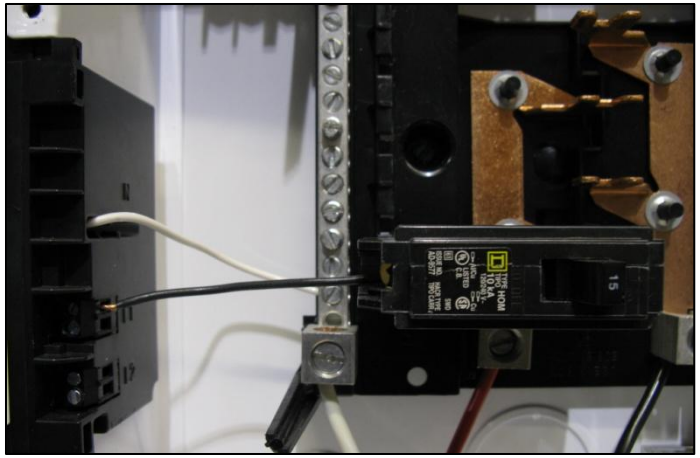


NOTE: When using more than one circuit breaker to power Generation 4 ColorLogic Lights, be sure that the breakers AND the Network Module feed are on the same phase of power.

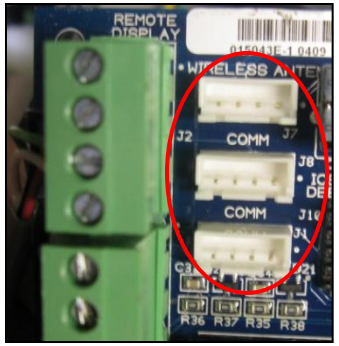
Network Module Wiring

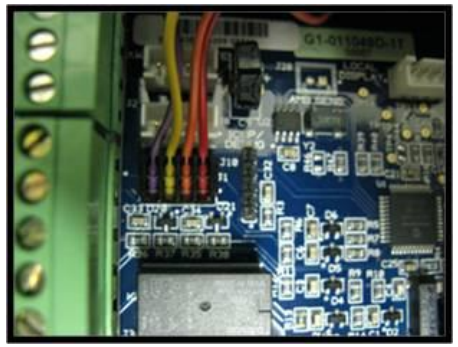
Step D Connect neutral wire (white) from module to neutral bus bar of controller.

Step E Connect load power wire (black) from breaker to module.



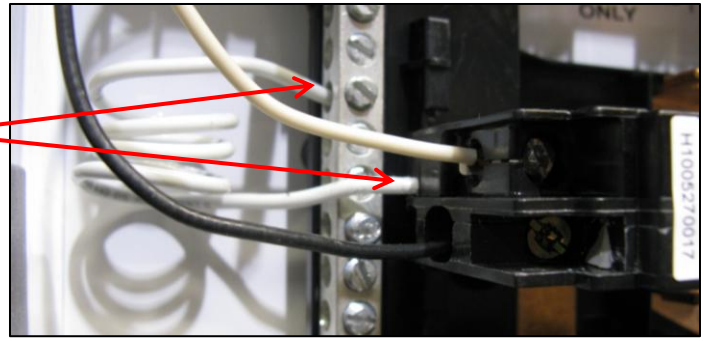
Step F Connect data cable from module to any open Comm connector on PCB.





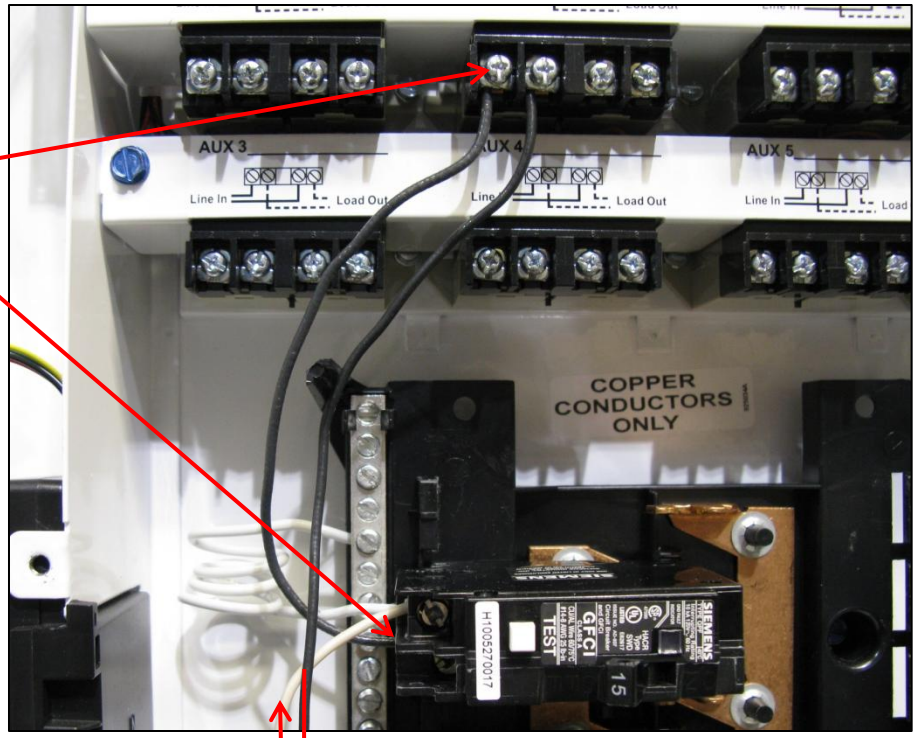
ColorLogic Lights Wiring

Step G Connect the pig-tail wire of the GFCI breaker to the neutral bus bar.



Step H Connect the line power wire (from breaker) and load power wire (to lights) to the Lights Relay.

Step I Connect the load neutral wire (from light) to the GFCI breaker.

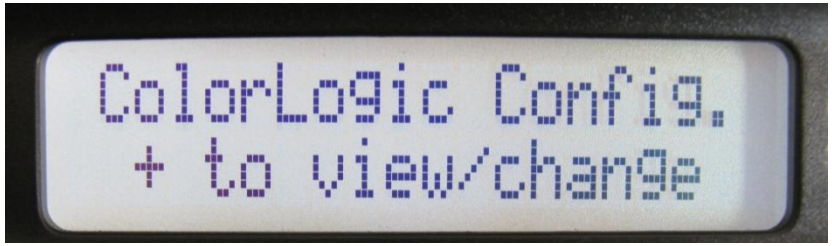


From light(s) **To light(s)**

Configuring Lights

During ColorLogic configuration, the Pro Logic will find all networked lights in the system and assign an identification number to each using the prefix "LT".

Step J Press the + button to activate ColorLogic options



Step K Press the + button to find ColorLogic lights

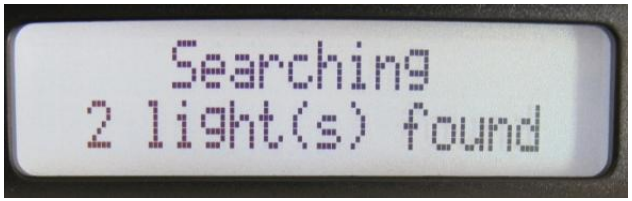
Note: Once the ColorLogic configuration process begins, there is no way to exit and the process must be completed.

Configuring Lights

Step L

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

The system is now searching for installed lights. The lights may blink several times during this process.



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

Step M

Push the right arrow button to advance.

If all installed lights are not found, check wiring and configure/find lights again. If problem persists, call Tech Support at: (908) 355-7995.

Configuring Lights

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.

Step N

The light being assigned will blink to help identify the specific light.

To change the light #, press the + or – button. Then press the right arrow button to assign the next light.

Step O

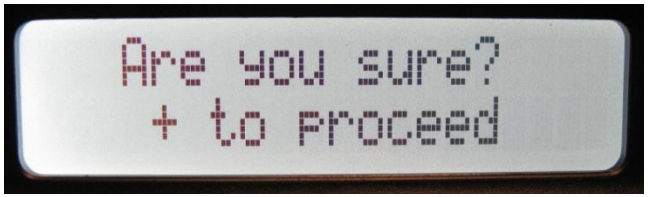
The message below will be displayed if key presses are made prior to the module storing the previous information. Simply wait a moment and try again.

Resetting Lights to Default

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
-re-assigning a LT number to an existing light

Step P In the configuration menu, Initiate reset of all ColorLogic configuration parameters by pressing the + key

Step Q Reset all ColorLogic configuration parameters by pressing the + key.



ColorLogic lights are been reset.
Move to the next menu item by pressing the right arrow key.

Auxiliary Configuration

Any Aux output can be configured to control a ColorLogic fixed color or light show, (Aux 4 is used for example in this guide). 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

Step Q Select the desired Aux and press +.

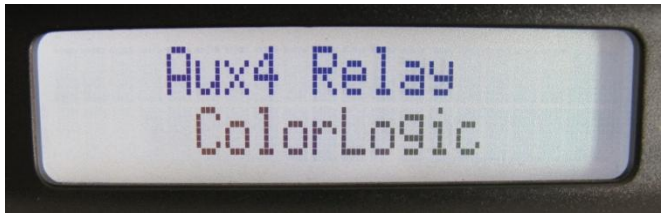
Step R Scroll thru the list of available names using the + and – buttons. Select the name you want displayed and press the right arrow button.

Step S Select the function for how the Aux will operate (Manual, Timeclock, or Countdown). Press the right arrow button to move to the next step.

Auxiliary Programming

Step R

Press the + or – button until ColorLogic is display as relay type. Then press the right arrow key.



Step S

The system will now ask individually if each light found should be assigned to the Aux. The default answer is no. Press + or – to change to yes. Then press the right arrow button.

Step T

For each light assigned, Press the + or – button to determine the display sequence it will have with others in the Aux being programmed. Press the right arrow key to move to the next light.

Note: Multiple lights can have the same sequence.

Light Show Programming

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 described on the following pages.

Step U

Select the desired Aux and press +.

Step V

Press + or – buttons to toggle between all available light shows and fixed color options. Press the right arrow to move to the next step.

Step W

Press + or – buttons to toggle between all available speeds. Press the right arrow to move to the next step.

Light Show Programming

Step X

Press + or – buttons to toggle between all available motion options. Press the right arrow to move to the next step.

Note: When motion is 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. If a negative motion value is selected (-1.2 to -0.2), the illumination sequence will be the opposite (highest LT to lowest).

Step Y

Press + or – buttons to toggle between all available brightness options. Press the right arrow to move to the next step.

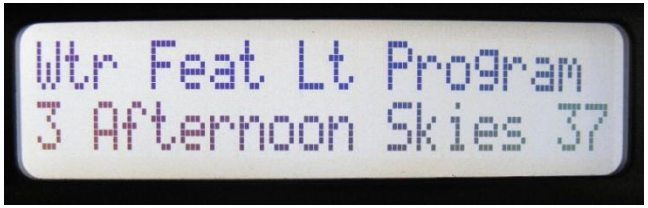
Fixed Color Programming

Step Z

Select the desired Aux and press +.

Step AA

Press + or – buttons to toggle between all available light shows and fixed color options. Press the right arrow to move to the next step.



Step BB

Press + or – buttons to toggle between all available colors of fixed light..

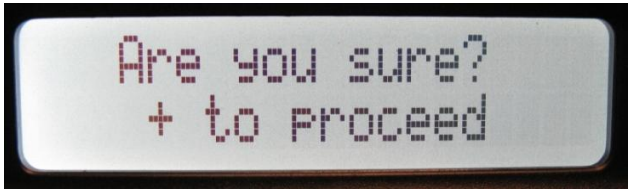
Step CC

Press the right arrow button twice to move to the next step, FF. Press the + button to reset factory settings (Step DD).

Fixed Color Programming

Step DD

Press the + button to reset to fixed color default.



Step EE

Press the right arrow button to move to next step.

Step FF

Press the + or - button to move to adjust the brightness setting. Press the right arrow button to the next menu item.

This completes the setting of the colors. To exit, press the menu button.

Troubleshooting

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

Verify that the Lights indicator light 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.

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.

Troubleshooting

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.

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 before turning off after fifteen seconds of white has been displayed.

Note: For larger systems, this cycle of red, green and blue 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.

Troubleshooting

Lights occasionally dim and brighten

Generation 4 ColorLogic lights have internal thermal protection and will automatically dim the LEDs if the light temperature rises to 70ºC or greater. The light will go back to normal brightness as soon as the condition is corrected.

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 diagrams on pages 24-26 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 diagrams on pages 24-26 for more details. Use the “Left Arrow” to return to the previous light and then continue to identify the lights using the right arrow.

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 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 ColorLogic Lights Generation 4.0 (CLLG4) system?

No. The Pro Logic automatically assigns the Lights relay to the CLLG4 system 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.

FAQs

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.

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.

FAQs

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.

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.

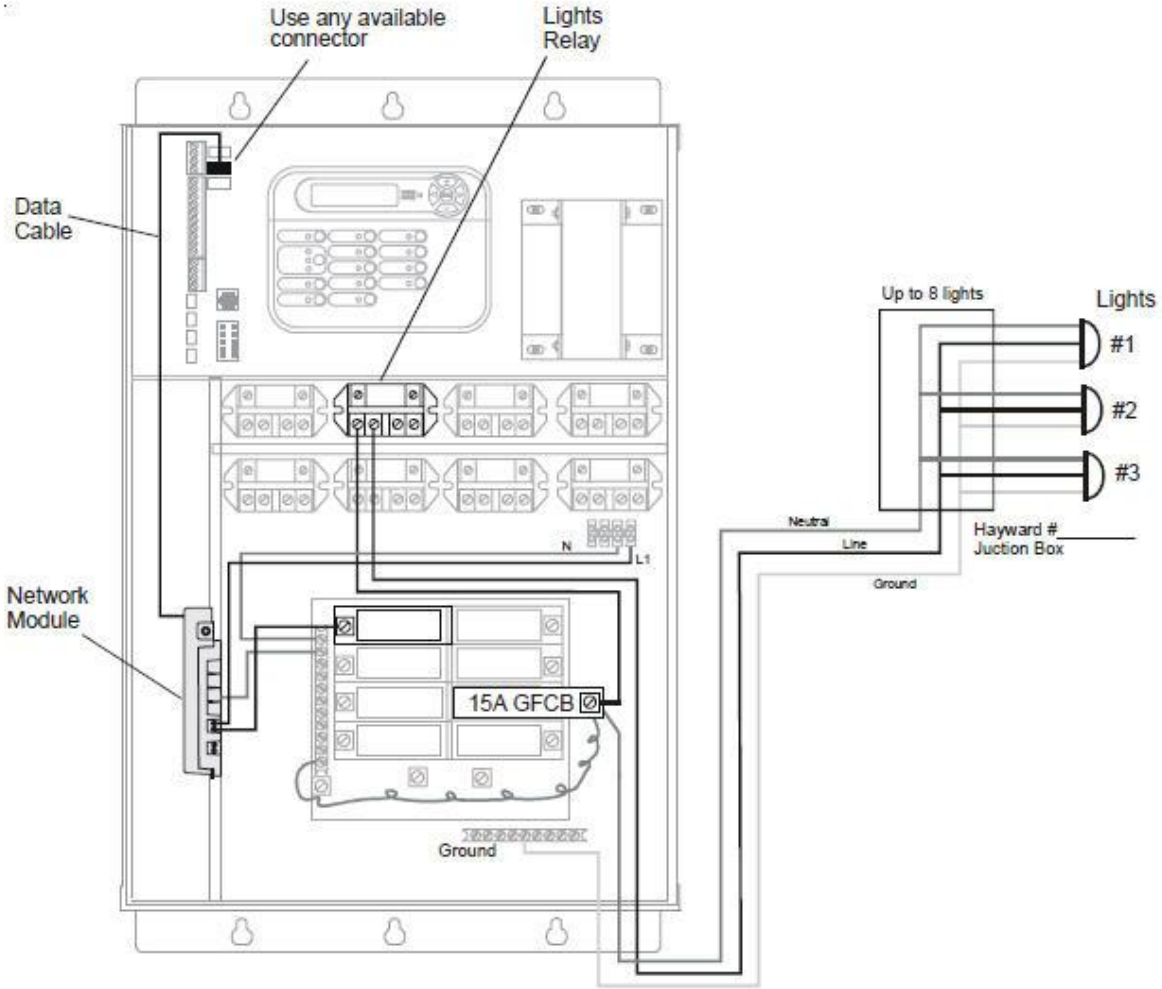
How do lights go from program control mode to stand alone mode?

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. You also will need to remove the network module and move the lights input and output power to another relay.

Can I mix ColorLogic 4.0 lights with ColorLogic 2.5 lights in stand alone mode?

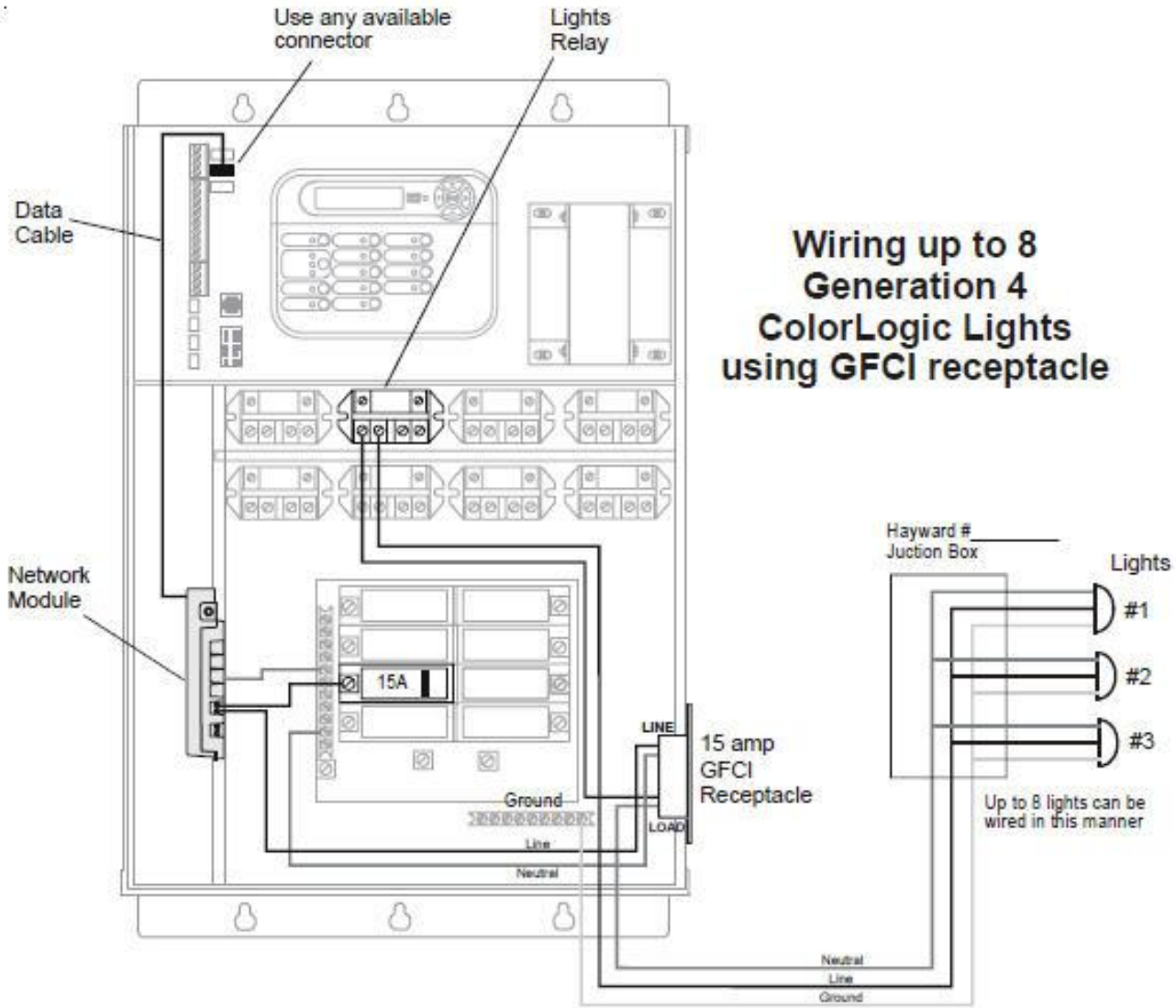
No. The timing of light shows in version 4.0 lights is not the same as version 2.5 lights. The lights will not perform at the same speed or intensity.

Wiring Diagram (up to 8 lights using GFCB)



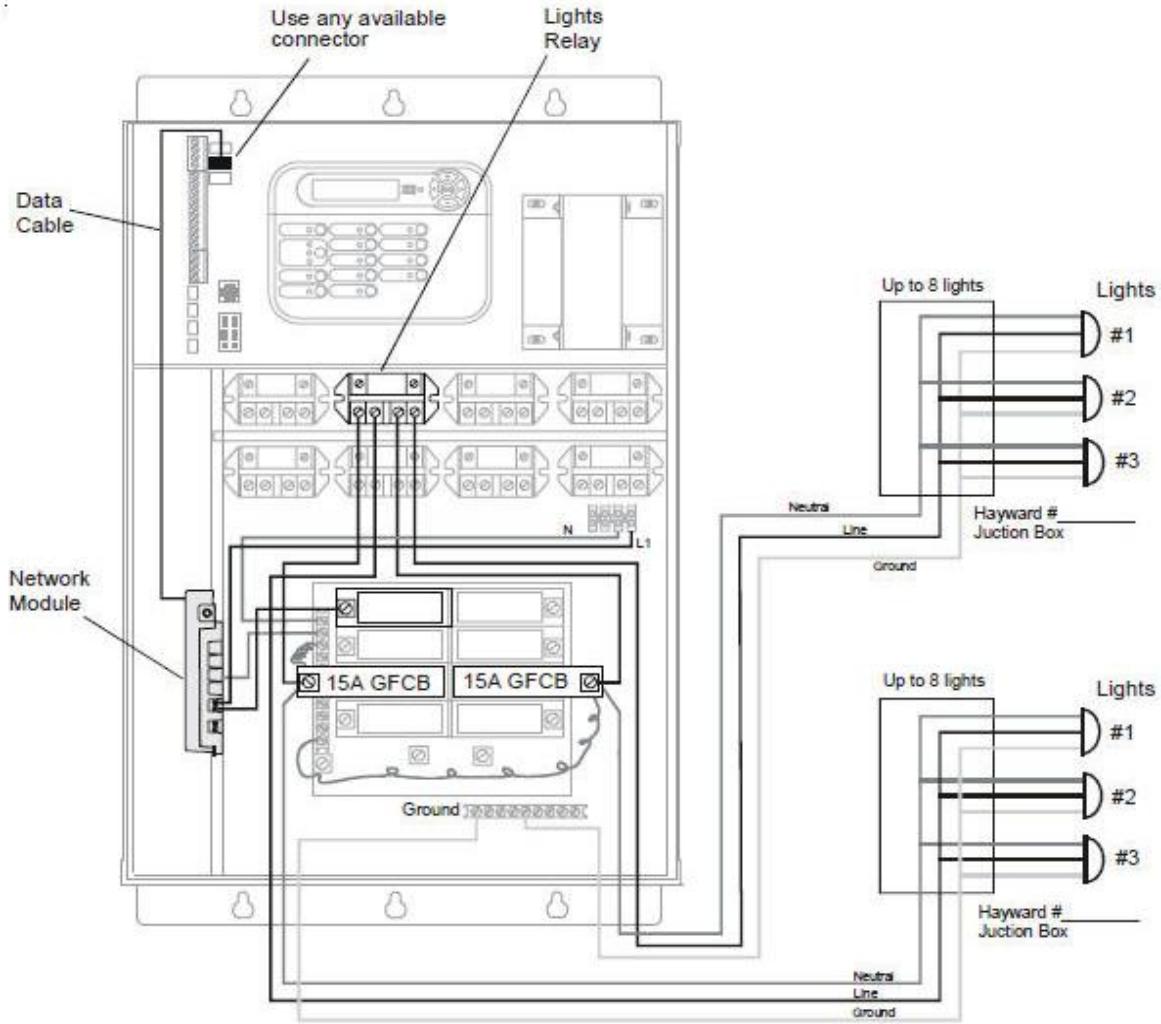
Wiring up to 8 Generation 4 ColorLogic Lights using GFCB

Wiring Diagram (up to 8 lights using GFCI receptacle)



Wiring up to 8 Generation 4 ColorLogic Lights using GFCI receptacle

Wiring Diagram (up to 16 lights using GFCB)



Wiring up to 16 Generation 4 ColorLogic Lights using two GFCB's