



# UCL & Color Logic 4.0 LEDs

## Installation Guide

**Universal  
ColorLogic**



**ColorLogic  
4.0 LEDs**



**Universal  
CrystaLogic**

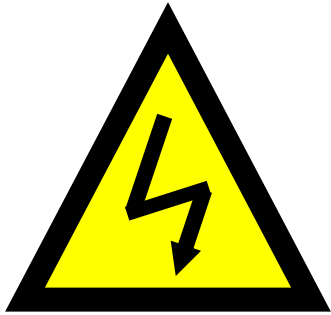


**LxCUSxxxxx,  
SP05xxLEDxxx &  
SP05xxSLEDxxx**

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# UCL and ColorLogic Networked LEDs



## High Voltage Electrocutation Hazard

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

- Only qualified technicians should remove the panel
- Replace damaged wiring immediately
- Insure panel is properly grounded and bonded

# Overview: Network Control

## 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. **Note: To maximize the features available in UCL network lights the Pro Logic main board should be a revision 4.40 or higher.**
- The ColorLogic Network Module will only operate with Generation 4 or later Hayward ColorLogic 120VAC pool/spa light(s) or UCL 14VAC pool/spa lights.

## 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/UCL 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. (Note: an additional relay will be necessary to control the advanced network features offered by the ColorLogic Module.

# Product Offerings: Color Logic 4.0

## Network Mode

SP0527LEDxx or  
SP0527SLEDxx



+

AQL-COLOR-MODHV  
(Color Logic Module)



+

ProLogic PS Series  
Controller (Rev. 4.00+)



**'xx' in lights part number should be replaced with 30, 50 or 100. This denotes the cord length.**

---

## Standard Switch Mode

SP0527LEDxx or  
SP0527SLEDxx



+

Switch mode is compatible with any high voltage relay based Automation System.



**'xx' in lights part number should be replaced with 30, 50 or 100. This denotes the cord length.**



# Product Offerings: UCL

## Network Mode

LPCUN11xxx (Pool)  
OR LSCUN11xxx (Spa)



+

AQL-COLOR-MODHV  
(Color Logic Module)



+

AQL-COLOR-MODHV  
70Watt J Box Transformer

OR

LTBUY11300



300W  
transformer

OR



AQL-COLOR-MODHV  
70Watt J Box Transformer

LKBUN1000



Lights coupler  
(1 per transformer)

ProLogic PS Series  
Controller (Rev. 4.00+)



'xx' in lights part number should be replaced with  
030, 050 or 100. This denotes the cord length.

## Standard Switch Mode

LPCUS11xxx (Pool)  
OR LSCUS11xxx (Spa)



OR

LPLUS11xxx (Pool)  
OR LSLUS11xxx (Spa)



+

'xx' in lights part number should be replaced with  
030, 050 or 100. This denotes the cord length.

Switch mode is compatible with any  
high voltage relay based  
Automation System.



# Light Program Cards

UCL

LITUCLCARD11

**PROGRAM ORDER:**

	Voodoo Lounge		Cloud White		Tranquility
	Deep Sea Blue		Warm Red		Gemstone
	Royal Blue		Flamingo		USA
	Afternoon Skies		Vivid Violet		Mardi Gras
	Aqua Green		Sangria		Cool Cabaret
	Emerald		Twilight		

**ADDITIONAL LIGHT SHOWS**

Rainbow	Harmony	Custom Fade	Custom Chase

Choose the color of your choice to create the ambiance you desire. 101 colors can be adjusted using any of the fixed colors when integrated with Pro Logic® controls.

1 Blue      2 Deep Blue Sea      37 Afternoon Skies      54 Emerald      60 Cloud White      60 Flamingo      96 Sangria      101 Black - Off

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CL 4.0

LITCOLCARD09

**PROGRAM ORDER:**

	<b>1</b>	Voodoo Lounge
	<b>2</b>	Deep Blue Sea
	<b>3</b>	Afternoon Skies
	<b>4</b>	Emerald
	<b>5</b>	Sangria
	<b>6</b>	Cloud White
	<b>7</b>	Twilight
	<b>8</b>	Tranquility
	<b>9</b>	Gemstone
	<b>10</b>	USA!
	<b>11</b>	Mardi Gras
	<b>12</b>	Cool Cabaret

Additional shows and light control available when integrated with ProLogic® from Goldline Controls®

	<b>13</b>	Rainbow
	<b>14</b>	Harmony
	<b>15</b>	Custom Fade
	<b>16</b>	Custom Chase

Choose the color of your choice to create the ambiance you desire. 101 colors can be adjusted using any of the fixed colors when integrated with ProLogic controls.

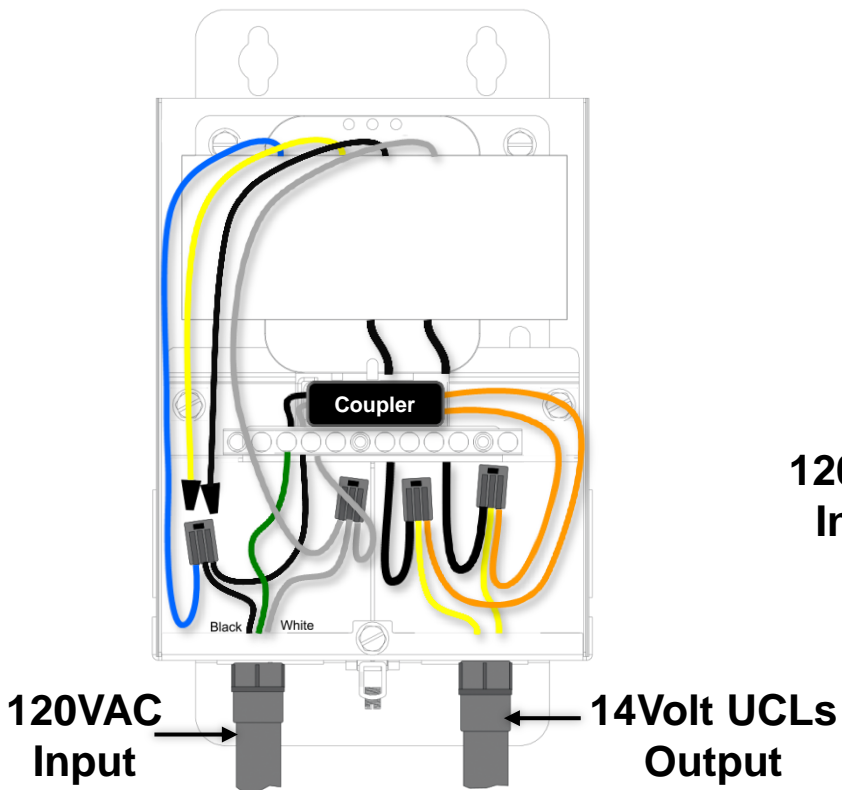
1 Blue      2 Deep Blue Sea      37 Afternoon Skies      54 Emerald      60 Cloud White      96 Sangria      101 Black - Off

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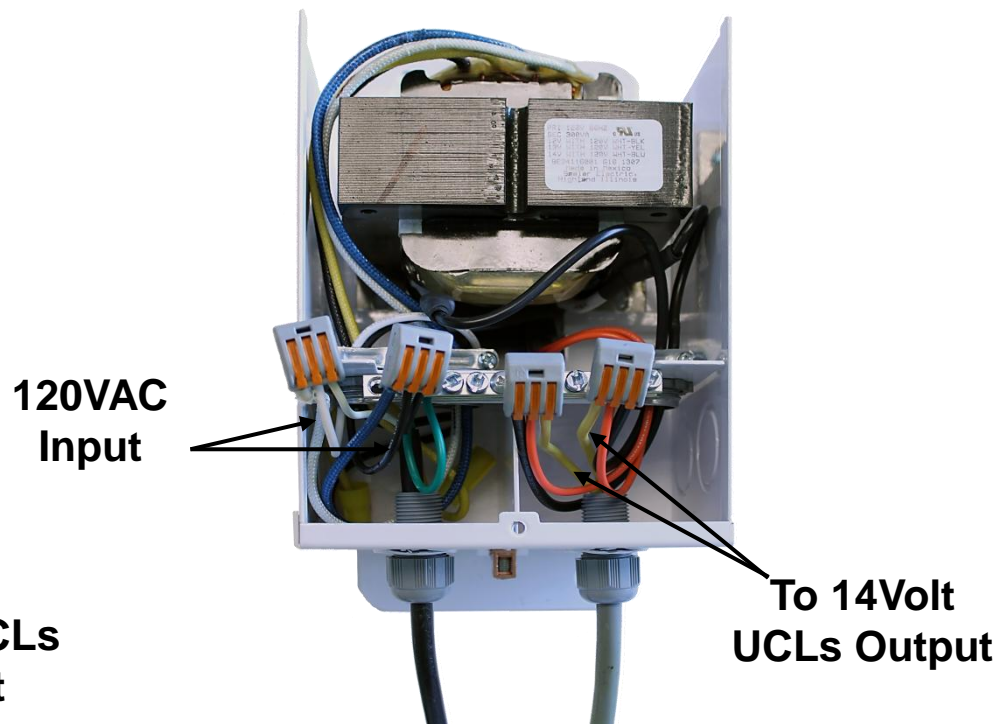
↓ Additional shows available using module mode.

# Overview: UCL 300Watt Transformer Wiring

## Wiring Diagram (Networked)



## Network Lights Application

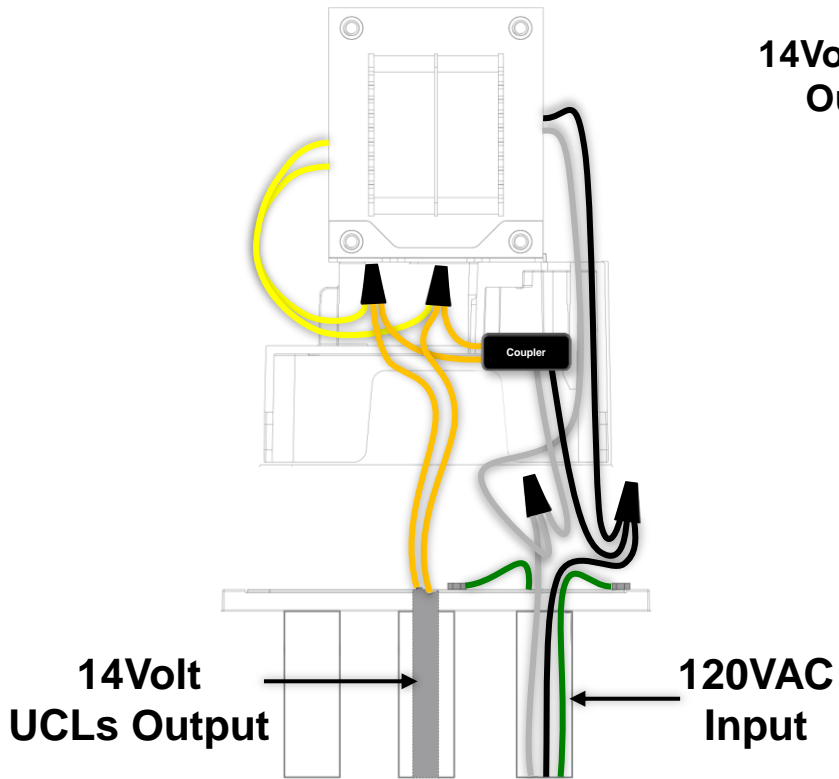


**\*\*Important: For UCL LEDs the low voltage side must be tapped into the 14VAC circuit.\*\***

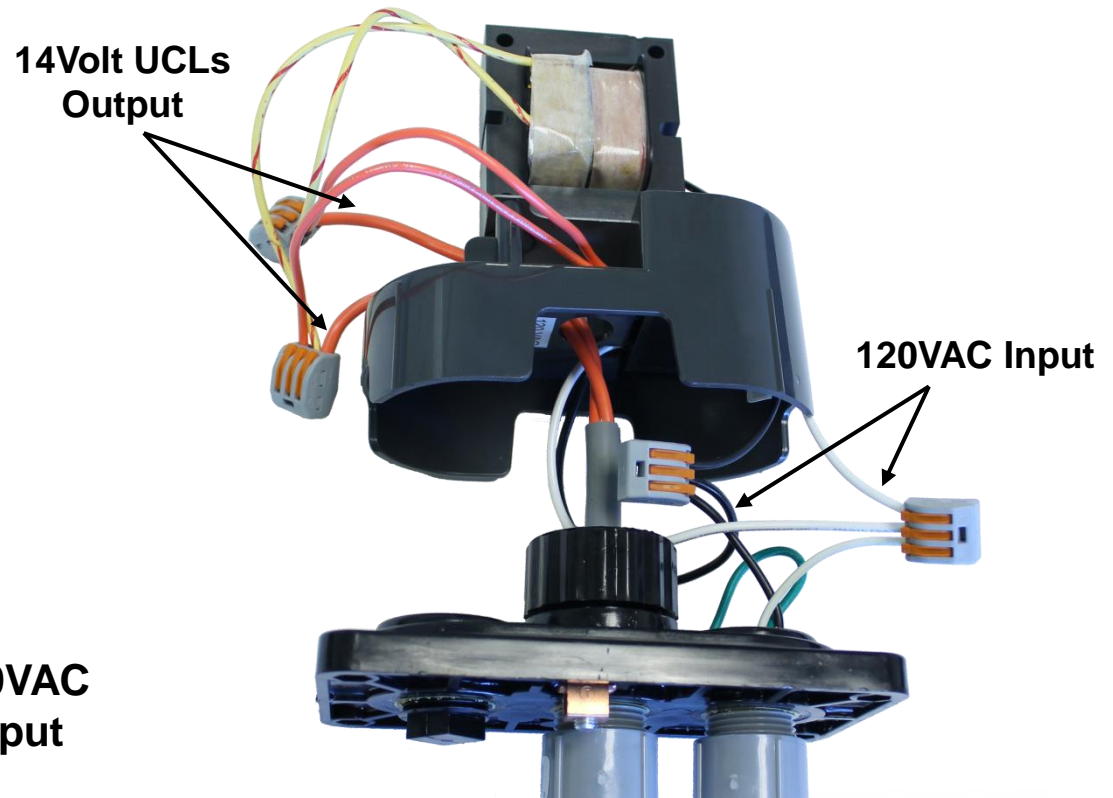


# Overview: UCL 70Watt Transformer Wiring

## Wiring Diagram (Networked)



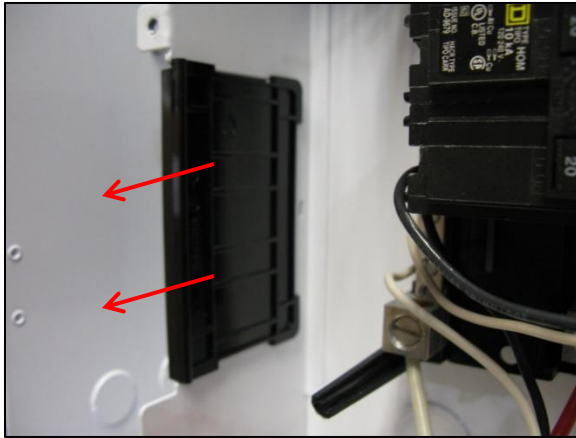
## Network Lights Application



# Network Module Installation

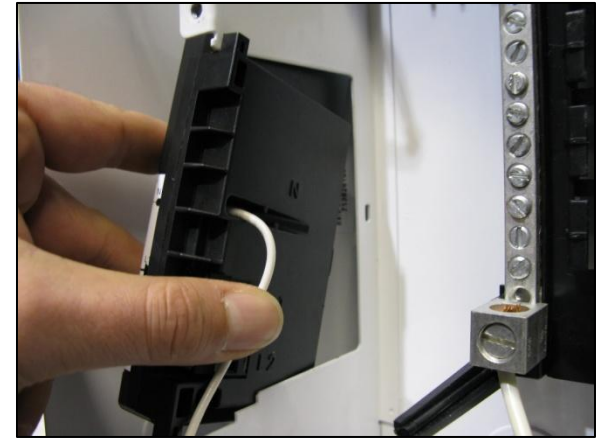
**Step A**

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



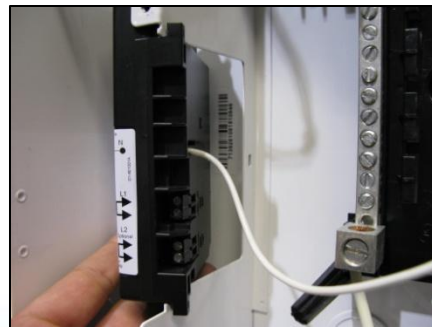
**Step B**

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



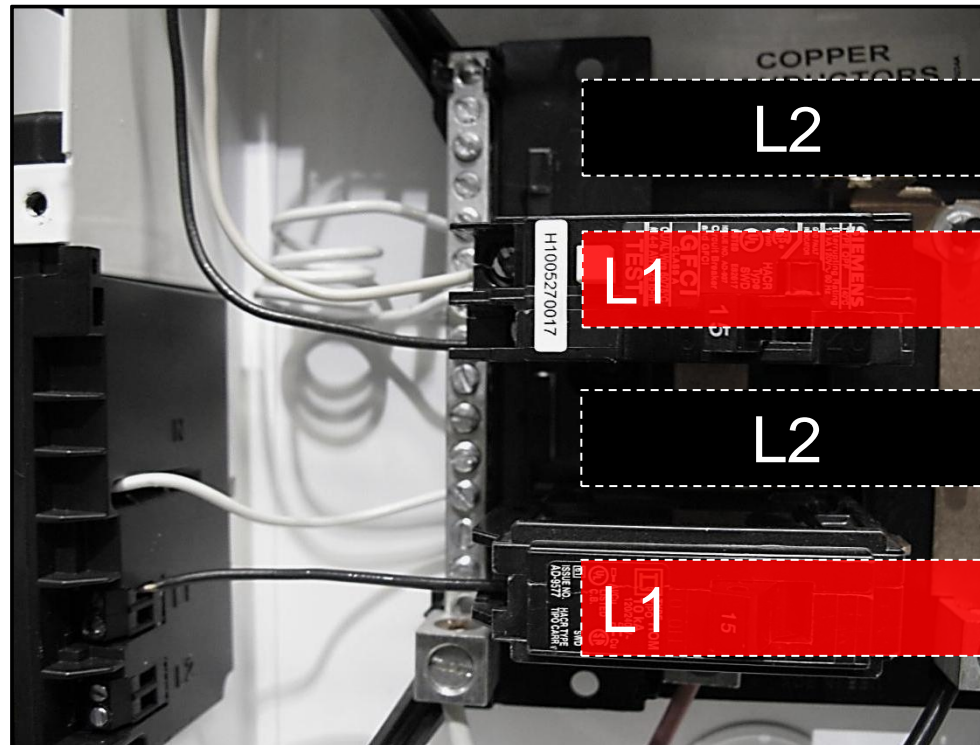
**Step C**

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



# Network Module Wiring

The ColorLogic Network Module uses 120VAC power line communications to individually control each networked light (communicating over the neutral). 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 Lights, be sure that the breakers AND the Network Module feed are on the same power bus.**



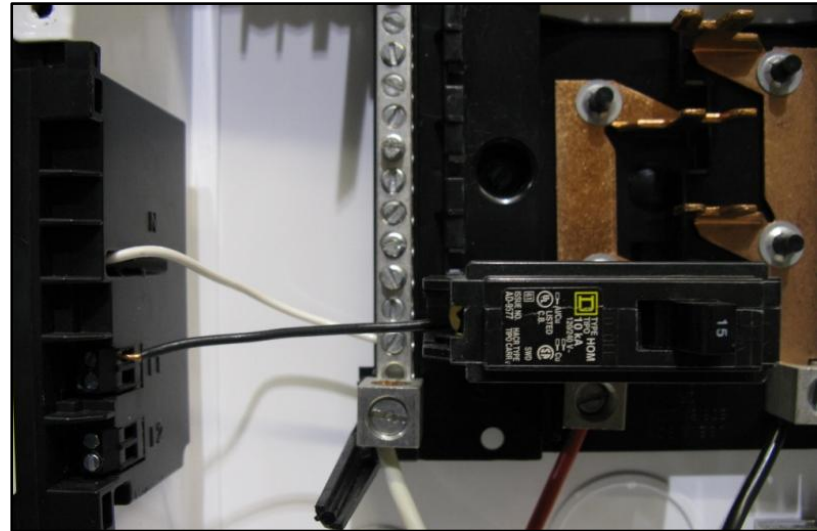
# Network Module Wiring

## Step D

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

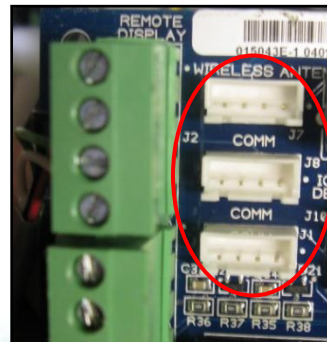
## Step E

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



## Step F

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

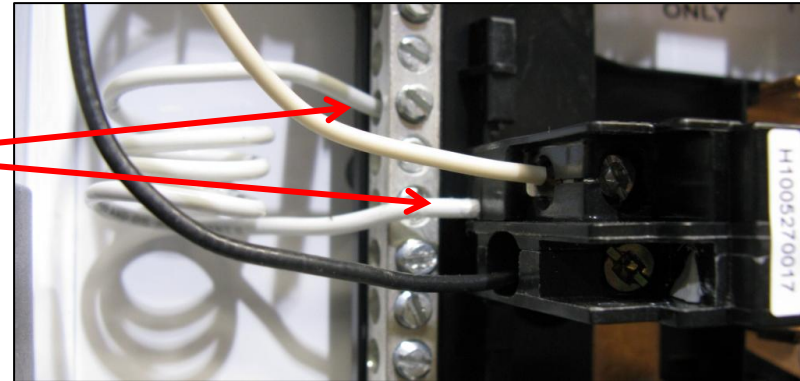




# ColorLogic Lights Wiring

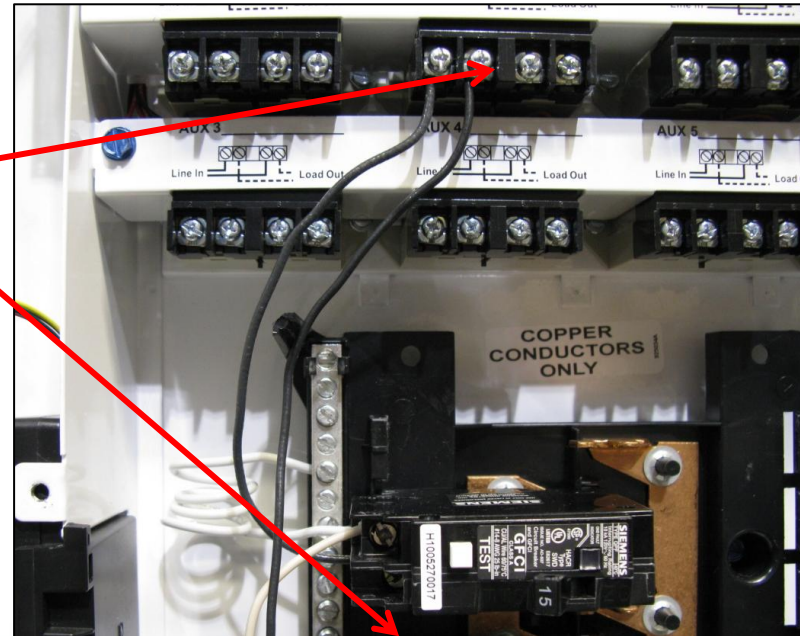
## Step G

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.

# 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, Refer to UCL/ColorLogic 4.0 Troubleshooting Guide.

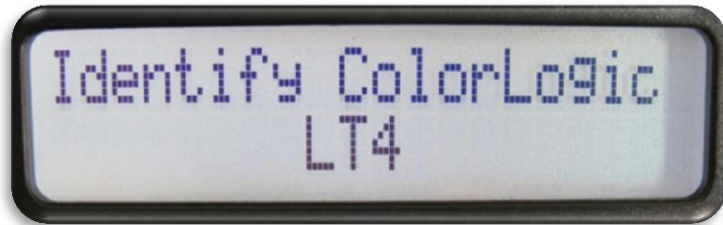


# Configuring Lights

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

Reset ColorLogic to  
Default Press +

## Step Q

Reset all ColorLogic configuration parameters by pressing the + key.

Are you sure?  
+ to proceed

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

ColorLogic reset  
Confirmed

# 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

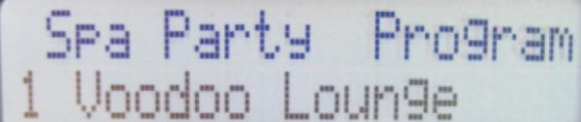
Select the desired Aux and press +.



Aux4 Settings  
+ to view/change

## Step V

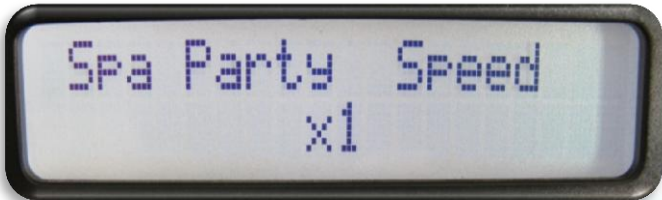
Press + or – buttons to toggle between all available light shows and fixed color options. Press the right arrow to move to the next step.



Spa Party Program  
1 Voodoo Lounge

## Step W

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



Spa Party Speed  
x1



# 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 +.



Utr Feat Lt Settings  
+ to view/change

## Step AA

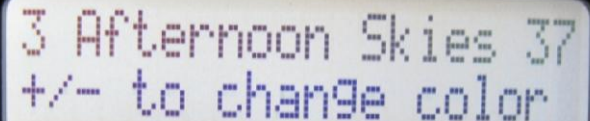
Press + or – buttons to toggle between all available light shows and fixed color options. Press the right arrow to move to the next step.



Utr Feat Lt Program  
3 Afternoon Skies 37

## Step AB

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



3 Afternoon Skies 37  
+/- to change color

## Step AC

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

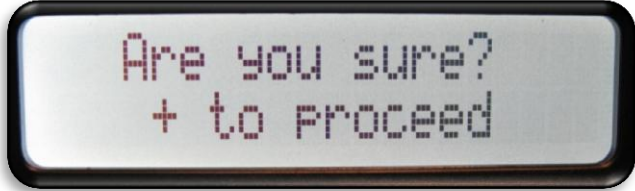


3 Custom Color 39  
Press + to reset

# Fixed Color Programming

## Step AD

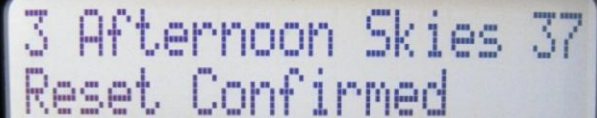
Press the + button to reset to fixed color default.



Are you sure?  
+ to proceed

## Step AE

Press the right arrow button to move to next step.



3 Afternoon Skies 37  
Reset Confirmed

## Step AF

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



Wtr Feat Lt  
Brightness 100%

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

# FAQs

## **Why is my UCL light flashing in white?**

This can be explained by one of the following:

- Normally caused by voltage drop, some reasons
- Wrong voltage from a wall mount transformer (needs to be 14V if longer than 50ft)
- Non pool transformer that does not support 14V
- Cord run from the transformer to the ultimate light too long
- Single low gauge run to multiple lights from the transformer to the JBox
- Low utility input voltage
- Too many lights (more than 3) are installed on the transformer

## **Why is my light flashing in many colors?**

Usually an indication that a junction box transformer that is operating in White or a Color Show in ambient outdoor temps north of 95 degrees at night.

## **Why is my light dimming?**

Light is not installed in the water or pool water is hotter than 100 degrees.



# 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, 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.

## **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.

# FAQs

## **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.

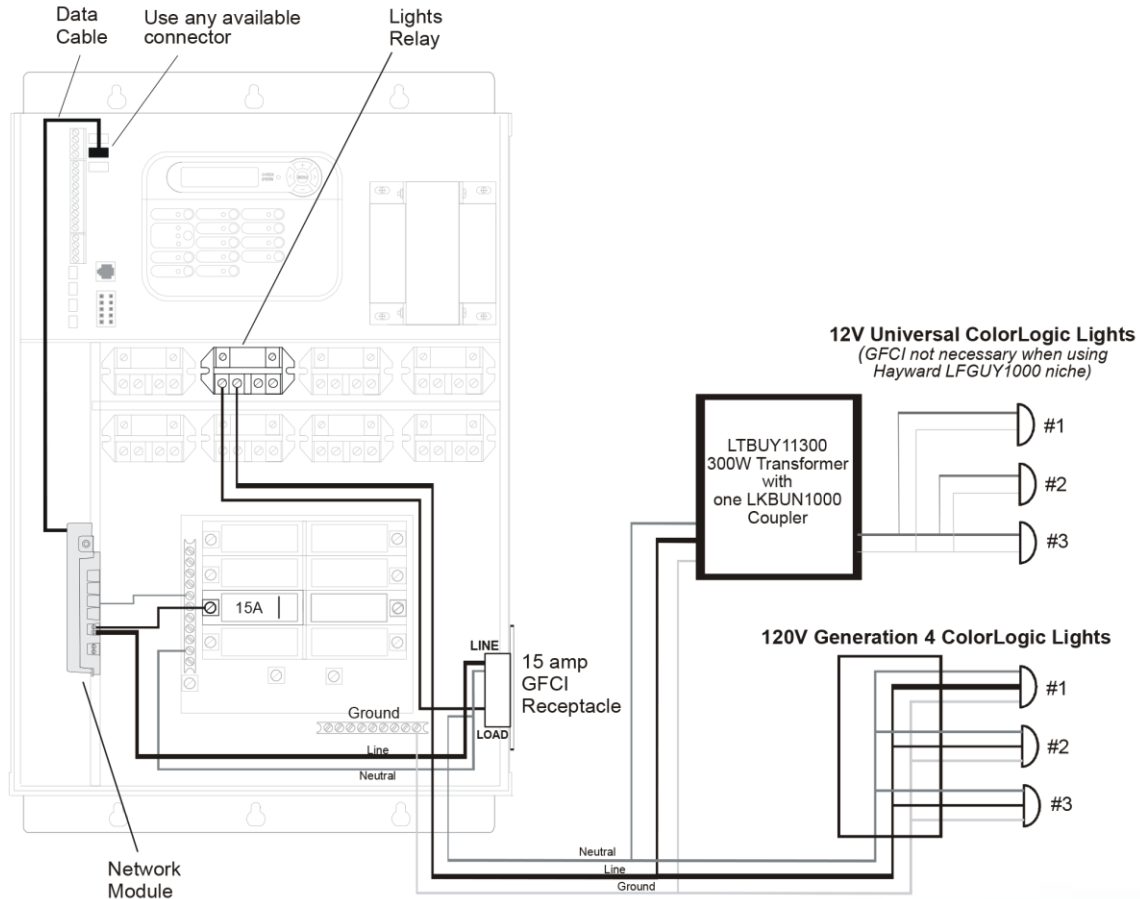
## **Can I mix ColorLogic 4.0 lights with ColorLogic 2.5 lights in stand alone mode?**

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.

## **Can I mix ColorLogic 4.0 lights with UCL in stand alone or Module control?**

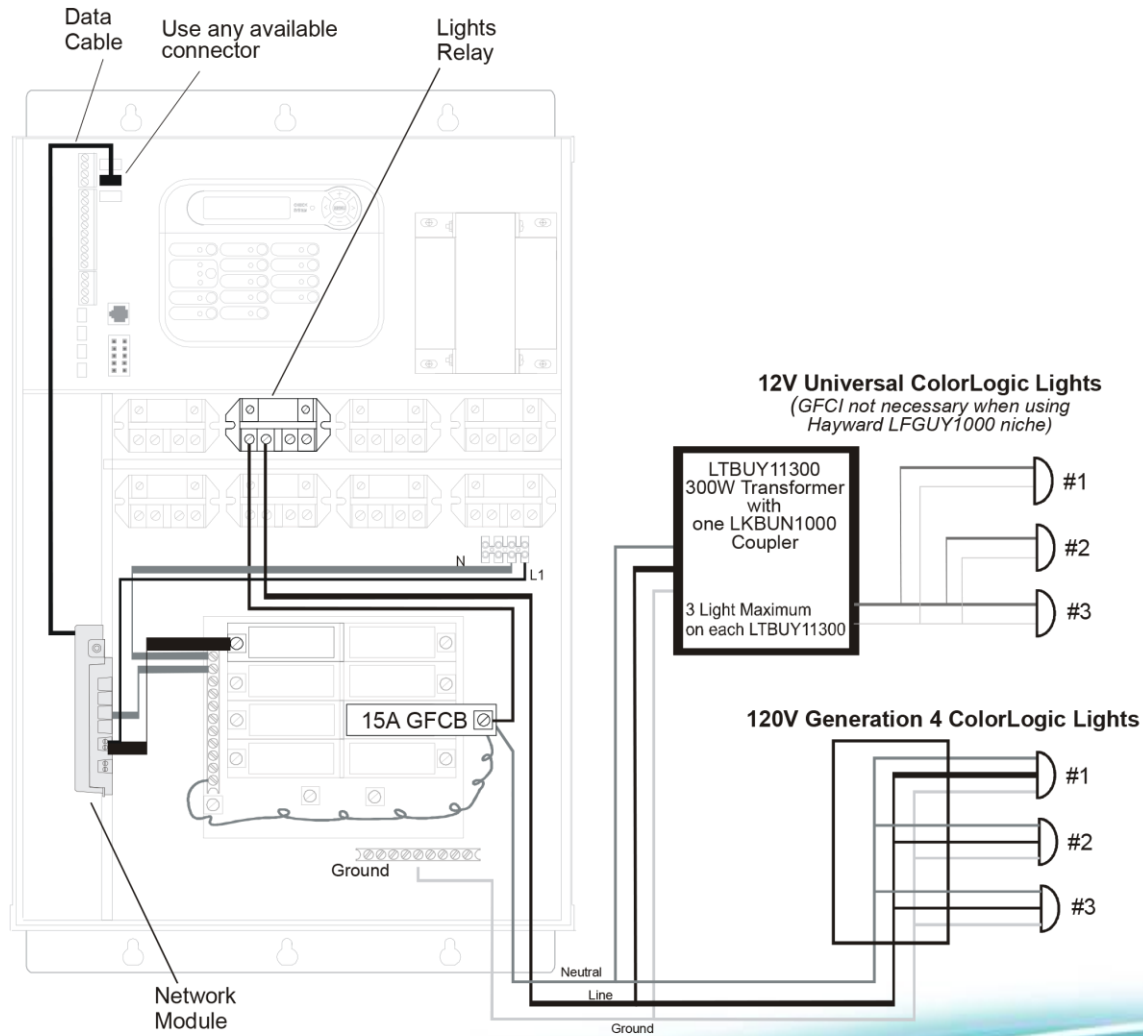
Yes, for stand alone mode the UCL lights will have to be set to 4.0 mode. For module control no additional steps are necessary.

# Wiring Diagram (up to 8 lights using GFCI receptacle)





# Wiring Diagram (up to 8 lights using GFCB)



# Wiring Diagram (up to 8 lights using GFCB)

