

# Custom Lighting Package

Specifically engineered for current Evolution Models Pro, Pro-Plus and Forester



Photograph from Evolution Golf Carts 2022

# Product Description

- Lighting Manufacturer: Pontoon Expressions LLC located in Brooklyn Michigan has provided LED Lighting solutions to the Pontoon Boat Industry for over 9 years. The owner has two Evolution Pro-Plus models one in Michigan, one in Florida. We have used our expertise and our over seas suppliers to create a unique Lighting solution specifically engineered for the current Evolution Golf Carts.
- This kit is designed to be installed by the Evolution dealer or by the end user in about 2 hours.
- The kit utilizes Pixel (Dream) LED technology mounted in ten locations on the cart.
- A Power wiring harness provides the Power connection, Relay, Fuse and an on/off switch mounted in the dash.
- A second harness is used to tap into the Brake and turn-signal functions. (Optional use)
- Lighting Control is accomplished using Bluetooth Technology through a phone app, along with a handheld RF remote. The controller provides standard RGB (Red,Green,Blue) static color functions plus style functions (188+) for flowing lighting and rainbow effects. Adjustable speed and brightness. DIY color/chasing modes and a music mode.
- The controller provides the power and control to the Pixel LEDs. There are ten outputs (5 Right side, 5 Left side). If you choose the optional connection to the Brake and turn signals this allows the controller to turn all lighting to RED when braking and Amber to the side turning (Safety feature).
- The Pixel LED components include; Pre-cut glow strips for undercarriage Right & Left. Four Pixel “Rock Lights” with 24 Pixel LEDs each, two front, two rear, right and left, and two 3’ LED Whips mounted between the seats. Also include are two 6.5” speaker Rings with coordinating Pixel LEDs.
- Kit is designed to automotive standards with soldered wiring and waterproof sealed connections. Included is detailed instructions and everything needed to complete the installation.

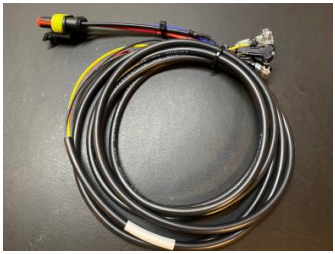


# Evolution Cart Lighting – From Pontoon Expressions

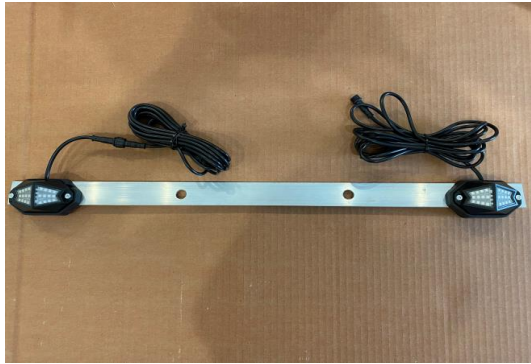




# Cart Lighting Layout



Brake – Turning Signal Wiring Harness (1)



Rock Lights pre-mounted to 2' Aluminum strip for easy installation. (1)



Controller (1)



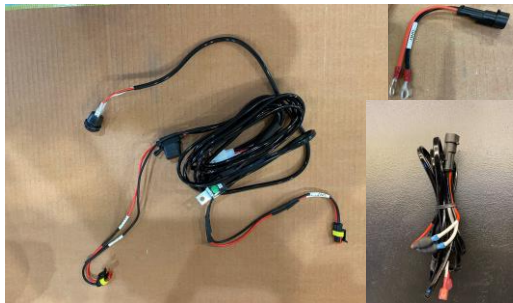
3' LED Whips (2)



Rock Lights up inside front (2)



Power Wiring Harness (1)  
Battery connection, 12v Harness



LED Speaker Rings (2)



LED Strips Right/Left (2)



Whip mountings (2)



Control: via Bluetooth & RF Remote



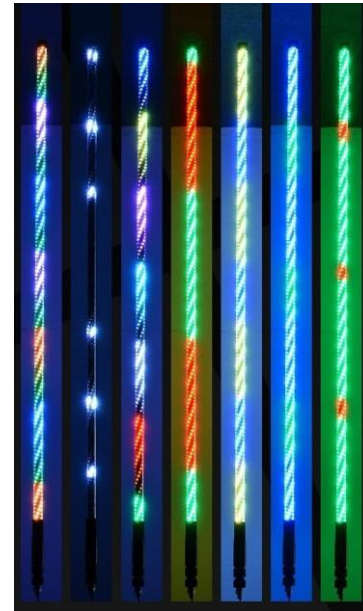
# Rock Lights

- Beam Angle: 210 Degrees
- LED: Super Bright 3528SMD
- Working Power: 16W/4pods
- Life time: Average 50000 hours.
- Material: Aluminum
- LENS: polycarbonate lens
- Cord: Wear-resistance heavy duty cord, 10' length
- Waterproof: IP67



# LED Whips

- 3' Whips (Left/Right)
- Mounting Hardware
- 10' Cables



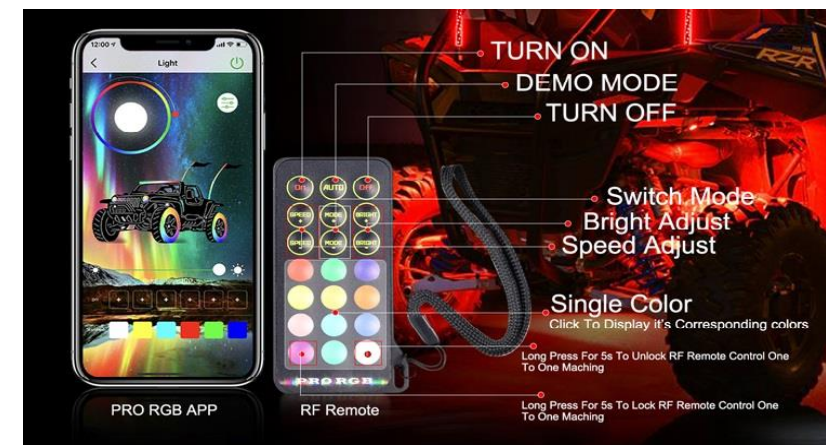
## Whip Mounts



# Controller

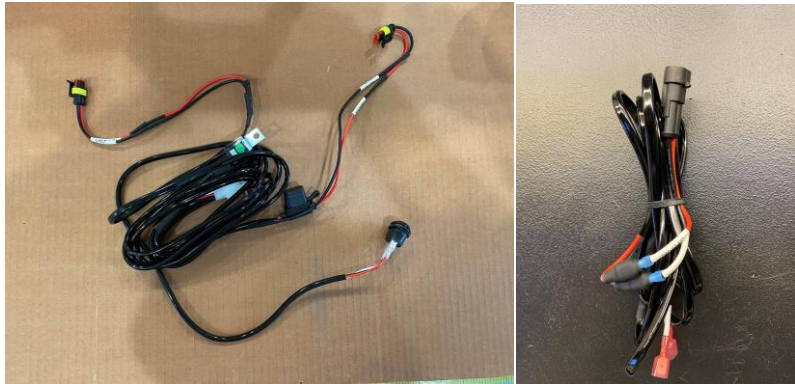


- 10 Outputs (5 Right, 5 Left)
- Bluetooth App Control
- RF remote included
- Optional Brake, Turn signal function.



## Power Harness

- 12 vdc Power in (see options)
- Plug-in 40 amp relay
- ATO style 30 amp Fuse
- Rocker ON/OFF Switch to front console
- Power output to controller
- Spare fuses



## Brake Turn-Signal Harness



## Speaker Rings

- Two 6.5" LED Rings (Left/Right)
- Extended length Stainless screws
- 10' Cables



## Under glow Strips

- Two 34" LED Strips (R/L)
- 3M Adhesive
- 6' Cables
- IP67 Waterproof



## Accessory Pack

- Tie Wraps (100)
- 3M Adhesive Promoter
- Rubber Glove
- Cleaner pads





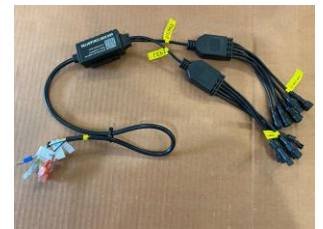
# Installation

- Materials required: Wire cutters (Cut Tie Wraps), Pliers (Crimp connectors), Drill, Drill Bits (Drill access holes (2), and hole for the switch).

There are a total of 10 LED products that need to be installed in any order.

1. Rear LED Rock Lights (2, Right & Left) pre-mounted on aluminum strip, cables to controller area.
2. Front LED Rock Lights (2, Right & Left) mounted in front wheel wells, cables to controller area.
3. 3' length LED Whips (2, Right & Left) mounted with supplied connector to Rear seat Belt bolts, cables to controller area.
4. 34" LED Strips with 3M adhesive. (2, Right & Left) mounted on each side under cart as indicated, cables to controller area.
5. Speaker LED Rings (2, 6.5", Right & Left) Mounted between speaker and mounting hole, drill access hole, cables to controller area.
6. Power Harness. Switch run to dash area, Input power to 12 vdc source, Output power to controller area.
7. Brake/Turn-signal Harness (Optional). Run from controller area to rear light connections.  
Wire Markings: Wire # 67= Left Turn, Wire # 68 = Right Turn, Wire # 65 = Brake, Wire # 13 = Ground
8. Controller, mount Driver side between on-board charger and cart body, connect 5 Right LED connections, connect 5 left LED connections. Connect 2-pin to Power harness. Connect 3-pin to Brake/Turn-single harness (Optional).

When running the 10 cables. Tie wrap where ever possible. You have 100 tie wraps, use them.

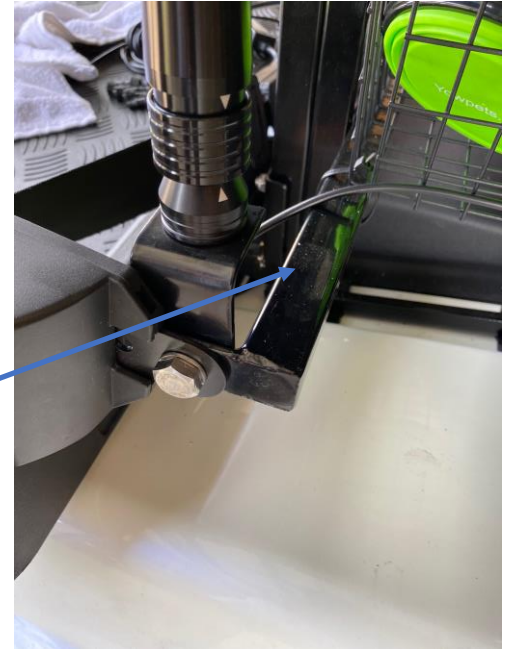


# LED Whips

- The LED Whips mount to the existing rear seat belt bolts on either side of the cart.



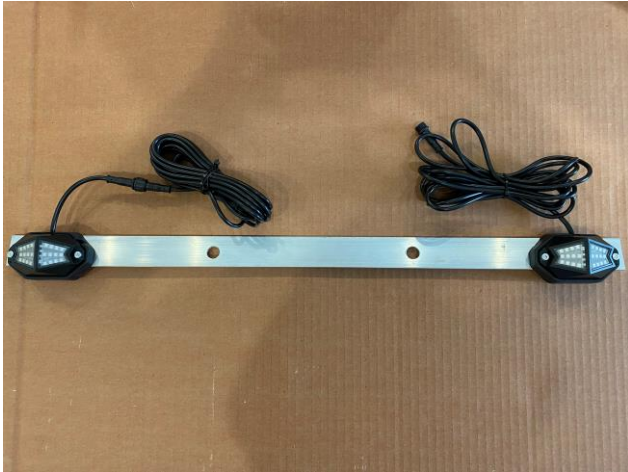
- The “L” Bracket is supplied with WHIP mount pre-installed (M12 bolt).
- Remove the nut and washer from the inside of the seat belt attachment.
- Insert the bracket on the inside location as shown. Can also be mounted on outer location.
- Reattach the bolt and washer and tighten. LED column should run even with the vertical roof post.
- Run right side cable from column across support bar to controller area. Tie wrap in place. Repeat process for the other side
- Mount the Whip into the base, align arrows, lift bottom of whip upward (spring mount) , push down and click column in place. Repeat other side.
- Secure top of whip with a tie wrap to the vertical roof support.





# Rear Rock Lights

- Rear LED Rock Lights (Right & Left) are pre-mounted on an aluminum strip.

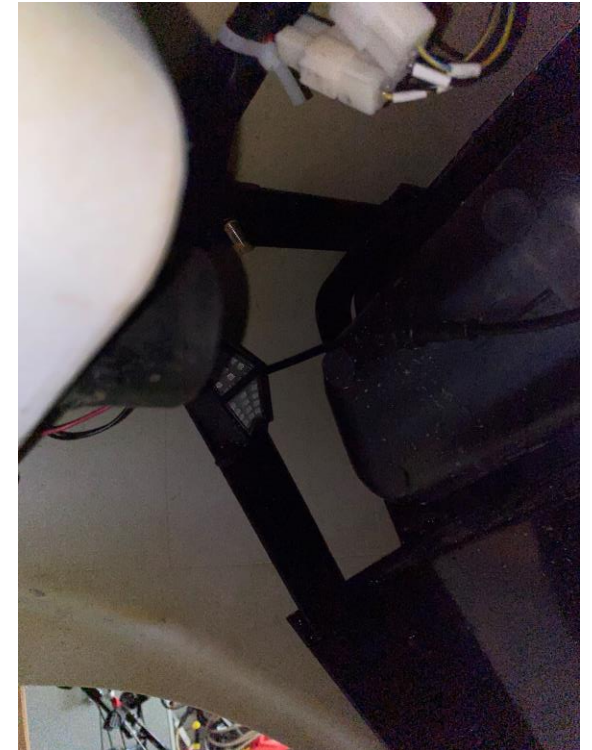


- 24" by 2.5" Flat Aluminum strip with (2) LED Pucks pre-mounted angled to the rear of cart.
- Use Cable ties to secure aluminum strip to the existing two ½" holes in the cart frame. Aluminum strip sits on top of black frame area. Cable ties, two per hole works.
- Mark the cable ends with tape, Right/Left, if using brake/turn-single option.
- Run the two cables from the pucks up the left side of the cart, to the controller area behind the on-board charger. Cable tie where ever possible.

# Front Rock Lights



- The Front LED Pucks (2) can be mounted in locations of your choice in the front. One on right side one on left. Tie wrap through holes in each end of LED Puck.
- Choose a location you can reach where the pucks will face downward.
- Use the slimmer tie-wraps to secure them to the cart frame. They fit through the Puck mounting holes.
- Mark the connectors with a piece of tape to indicate Right side or left side, if using brake turn-signal option.
- Combine the cables and run them down the driver side and into the controller area.
- Tie Wrap the cables wherever needed





# Under glow strips

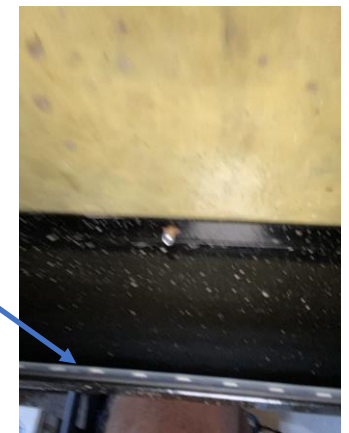
Two (2) LED Strips with 3M VHB Tape are included with the kit. They are cut to precisely fit on the right and left sides on the inside of the aluminum strips running down the sides of the cart.



- Thoroughly clean the areas on each side where the strips will be mounted on bottom inside lip of trim. Wipe with damp rag first, then use the alcohol cleaning wipes included with the kit.
- Once both sides are clean and dry, apply the Adhesion promoter.
  - Wear plastic glove supplied to protect your hand.
  - Open packet and apply the liquid to the mounting area on each side of cart. Apply quickly before the pad dries up.
  - Let dry for 5 minutes before proceeding.
- Mount the LED Strips with the connectors to the rear of cart.
- **Be careful because the backing tape will stick very quickly and is difficult to reposition.**
- Start in cart front, remove several inches of the backing tape and apply the strip to mounting area facing inward. Press in place as you work your way to the rear slowly pulling the backing tape off as you go. Area must be thoroughly clean. Reapply pressure to be sure it sticks.
- Connect the cables to the strips ends and run them to the controller area. Again mark with tape Right or left if you want to use the brake/turn-signal option.



Trim piece



# Speaker Rings

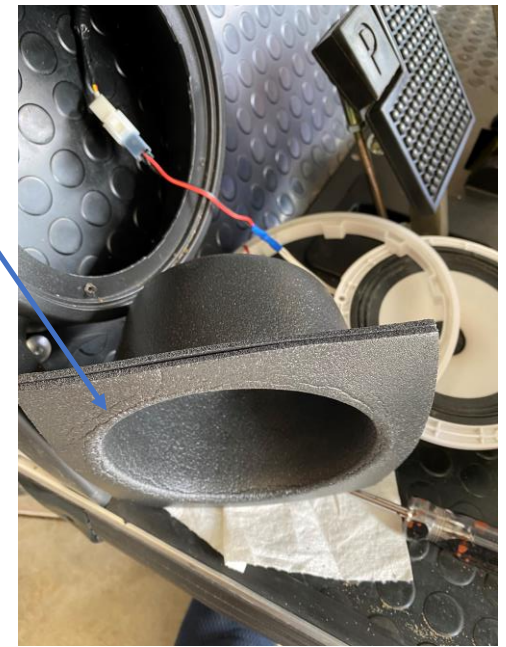
Recommend adding for better sound



Install Bay Acoustic Speaker Baffles 6.5 Inch - Pair  
★★★★☆ ~ 449  
-24% \$9<sup>13</sup> \$12.05  
AMAZON

The two 6.5" Speaker rings mount behind the speaker frame on either side.

Note: If you are looking to upgrade your speakers, now is the time to do it. A mid-priced speaker will greatly increase sound quality over the rather poor factory speakers.



- Remove the dash tray. (3-Phillips screws)
- Take off speaker covers.
- **For PRO Models with out speakers, the speaker cover will need to be removed and holes drilled for screws (min 4).**
- Remove the screws holding the speakers.
- Unplug the speaker wire with the 2-pin connector.
- Drill  $\frac{3}{4}$ " hole in inner enclosure to run LED cable through.
- Work Speaker ring cable with connectors through that hole in speaker enclosure and bring up temporarily in the dash tray area.
- Position speaker ring behind speaker.
- Run speaker wire through Ring and reconnect to speaker.
- Position speaker and LED Ring for even mounting. Note areas in speaker ring where screws will not be hindered. Note: the part of the ring where the cable is located should be at the bottom.
- Use longer length screws provided (8) in kit to reattach speaker. Try to use the existing holes.
- Re-install speaker cover.
- Make cables with tape, Right/Left if needed for Brake option.
- Run Speaker ring cables under cart up into the controller area.

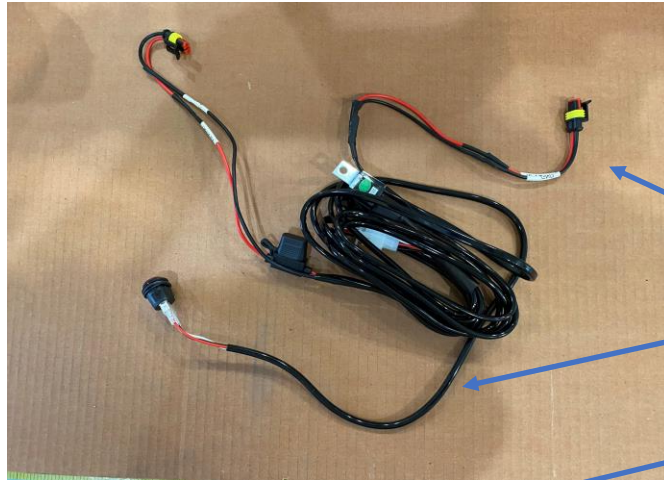




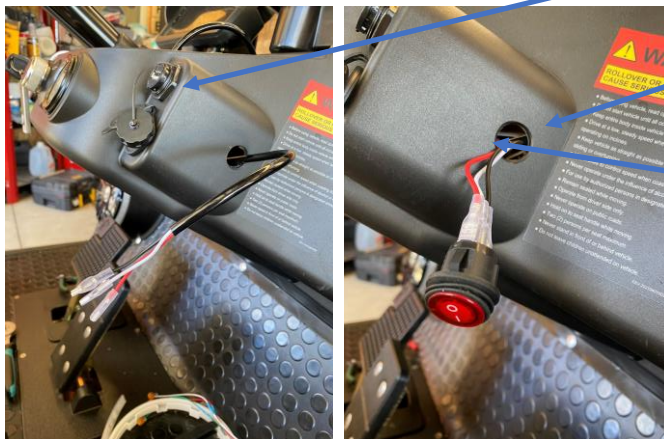
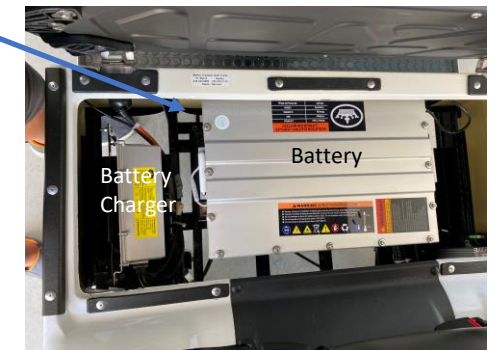
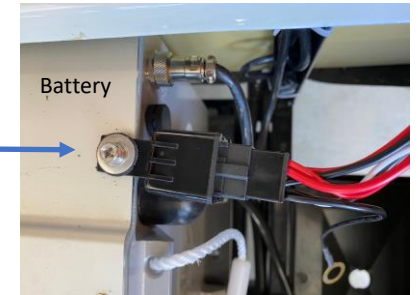
# Power Harness – Switch assembly

The Power harness performs the following: Connects to 12vdc for power, it is Fuse and relay protected, has a Power switch to be mounted in dash area. Provides Power to controller.

Switch mounted in dash.



- Power harness starts on Passenger side of cart.
- Secure the relay to the existing front screw on the top of the battery pack.
- Run the 6' power out cable (2-pin connector) across cart, in front of battery, to battery charger area.
- Run Switch Cable in power harness, under cart on right side and up into the dash tray area.
- With dash tray off, disconnect the USB connection from behind to create room for drilling hole to mount the power switch.
- Drill  $\frac{3}{4}$ " hole in area shown. Do not expand the hole too big. Switch snaps in hole tightly. Go slowly.
- Using an exactor knife, create a small notch at 9 o'clock point of the hole. See notch in switch.
- Disconnect 3-wires going to switch. Pull through hole and reconnect. Black on top, White center, Red bottom.
- Carefully push switch into hole until snug. Note notch location. Align the black gasket around switch.
- Reconnect USB cable to USB feed through connector.



# Power Harness power sources

**Two Power harnesses are provided with this kit; One for direct wire to 12 vdc power on cart, the other for use if you wish to use an isolated battery solution.** This LED kit requires about 130 Watts of power. Be careful to not exceed available cart power from inverter (48 vdc to 12 vdc 18 Amp) with additional added accessories (Audio Amplifiers, lighting, etc). Currently the inverter powers the lights, turn signals, Android display, rear camera, USB ports, etc.

## Direct wire to 12 vdc power on cart

- The 7' harness is used to connect directly to a 12vdc source and connects at the main Power Harness. Remove the cup holder in the dash (3 screws). Run the 2-conductor harness from the main power harness area under the passenger seat, under the cart and up into the Cup holder area. Connect the female connectors #62 & #13 on the harness to the corresponding male 12vdc power connections lying in the cup holder area.
- Power to the light kit will be provided when the key switch is on.



7' Power harness to dash area.





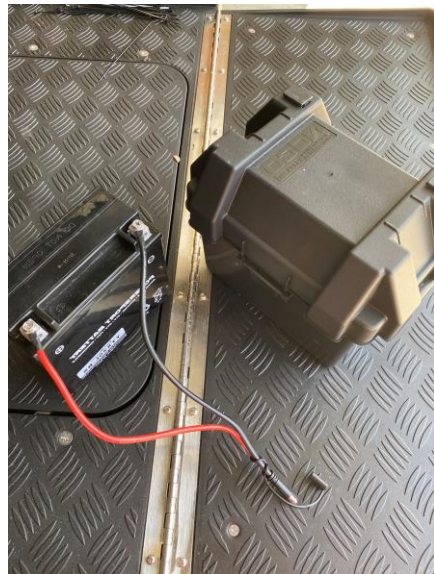
# Power Harness continue

## Add a separate isolated 12 vdc Battery source. [Recommended Option](#)

A second cable is provided with the kit for connecting to a separate 12 vdc battery for power. This option provides totally isolated power source without any connection to, or interference with the existing cart power system. Purchase of a small battery and charger would be required. (see options below).

Note: Optional Brake and turn-signal function will not work when using the separate power source.

[This option prevents any disputes with the dealer or Evolution Battery warranty issues regarding lighting connection to or added power draw on their cart.](#)



ECO-WORTHY 12V Lithium Battery, 20Ah Rechargeable LiFePO4 Lithium Ion Phosphate Deep Cycle Battery with BMS Protection for Trolling...  
★★★★☆ ~ 223  
-6% \$99<sup>87</sup> \$105.99



12V 20Ah Deep Cycle LiFePO4 Battery, 2000 Cycles Miady LFP16AH Rechargeable Battery, Maintenance-Free Battery for Golf Cart, Boat, Sol...  
★★★★☆ ~ 928  
\$81<sup>99</sup>  
prime FREE Delivery



Battery Tender Junior 12V Battery Charger and Maintainer: 800mA 12 Volt Battery Charger for Lead Acid and Lithium Batteries - Switchable...  
★★★★☆ ~ 2,137  
\$40<sup>77</sup>



We recommend this Bluetooth Battery status monitor (Amazon \$40) See charge status on your phone



NOCO HM082BKS Group U1 Snap-Top Battery Box  
★★★★☆ ~ 1,422  
-31% \$10<sup>99</sup> \$15.99  
FREE Delivery



Connector from Power Harness to a battery.

Our example uses an inexpensive 12vdc battery mounted in a Battery Box (Size U1) placed in the existing battery tray on the passenger side next to the lithium pack. This can be a small battery as you would find in a garden tractor or Jet Ski. A Lithium Battery of 18-20ah would be ideal and run under \$100. If using Lithium be sure the charger you get can handle Lithium.

Example Batteries and chargers from Amazon. Many choices, If you choose Lithium be sure the charger is for Lithium.

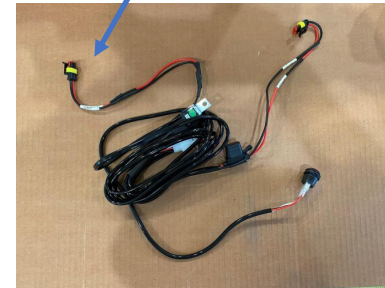
# Controller Mounting



- Tie wrap controller to existing hole above on-board charger.
- Combine all Right & Left cabling in appropriately marked connectors.
- Attach power harness (2-pin) from far side of cart to power connector as indicated.
- If using, attach Brake/turn-signal harness, 3-pin. (Optional).
- Tie wrap wires in a neat method.
- Store all wiring between charger and outside wall of cart.



Connect to Brake  
Turn-signal Harness



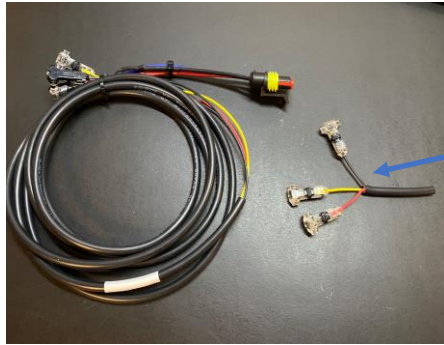
Connect to Power  
Harness



# Brake & Turn Single Connections (Optional)

A harness is provided to make it possible to connect to the carts Brake (All RED) and Turn-signal (Amber Flash) functions.

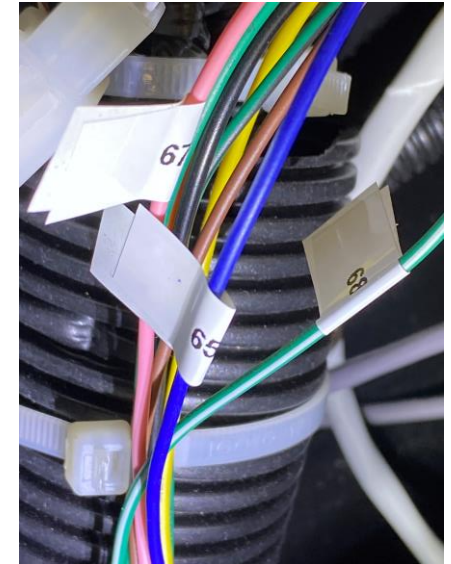
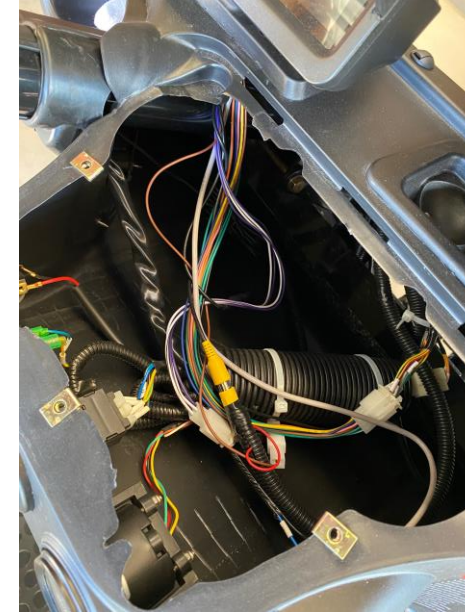
This function only works when tapped into the cart power so all connections use the same ground. Does not work when connected to a separate battery source.



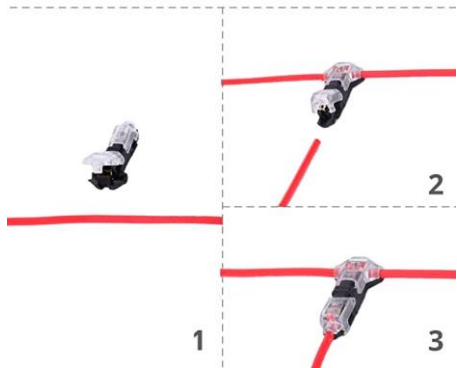
- RED (Brake), Yellow (Right Turn), Green (on controller) becomes BLACK (Left turn) on Cable end. This is a 7.5' long cable.

## Two options for connection.

1. Run Harness under left side of cart and up to front dash Tray area. Most common method.
  - Locate the following labeled wires.
  - Brake connection Wire # 65
  - Left turn connection Wire # 67
  - Right Turn connection Wire # 68
  - Install T-tap connectors on the 3 wires.
2. Run Harness under left side of cart from controller area to the rear of cart.
  - Connect to same marked wires as above.



QUICK & EASY CONNECTION  
No more soldering and splicing little wires

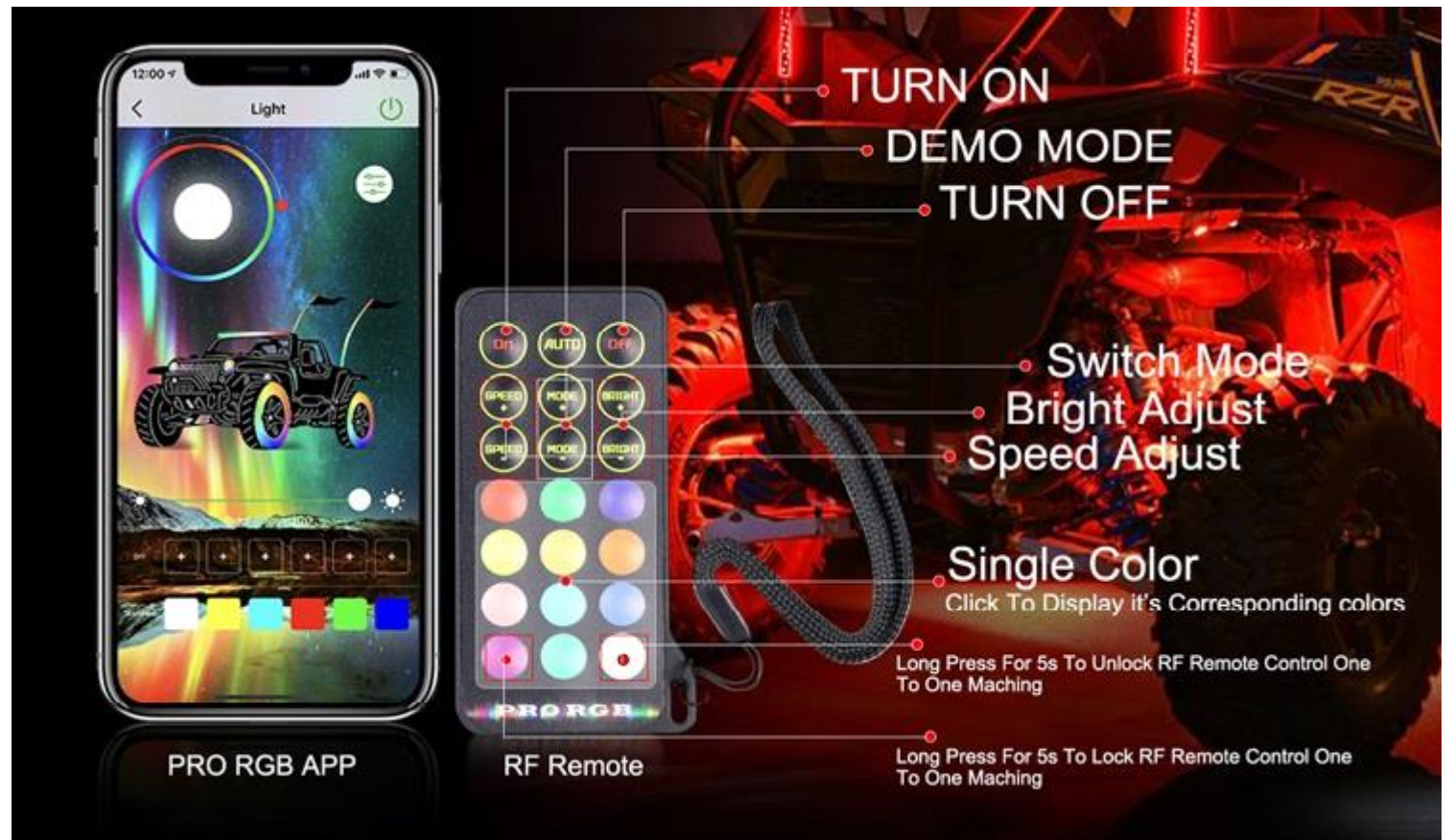


# Lighting Control

Lighting Control is accomplished via a Bluetooth APP on your phone or the supplied RF Handheld remote.

Selectable (DIY) do it yourself Modes, Music Mode, Password selection, Brightness and Speed adjustments.

Instructions for use are in the APP. Scan 3D barcode on controller with Phone to download the app.





# Accessories



Tie Wraps, Extended length screws for speaker rings, Cleaning and Adhesion promoter for LED Strips.

# Required Tools



Drill, 1/2" bit (Access holes), 3/4" bit, Wire cutter for Tie Wraps, Phillips Screwdriver (Remove Dash Tray), Pliers (Crimp T-Tap Connectors)



Pontoon Expressions 2022

This kit is intended for installation on the latest models of Evolution Pro, Pro Plus and Forester. Every effort has been made to develop a kit that is easy to install, safe and completely waterproof. Utilizing the recommended separate power source makes this kit completely isolated and independent from the Evolution wiring and battery.

## Warranty:

We can warranty the components to be free from defects for 90-days. We can not warranty the installation since that is out of our scope of work.

For installation questions please contact:

Pontoon Expressions

Email: [evolutionlighting@comcast.net](mailto:evolutionlighting@comcast.net)

Dealer Inquires: [evolutionlighting@comcast.net](mailto:evolutionlighting@comcast.net)

Ordering WEB Site: [www.pontoonexp.com](http://www.pontoonexp.com)

**Thank you and enjoy the very best customized LED Lighting Kit available for your Evolution Golf cart.**

Pontoon Expressions  
2163 Wampers Heights Dr  
Brooklyn, MI 49230  
[www.pontoonexp.com](http://www.pontoonexp.com)