Lighting Installation for Aluminum Railings

SMARTPOWER 50
50 WATT DC TRANSFORMER

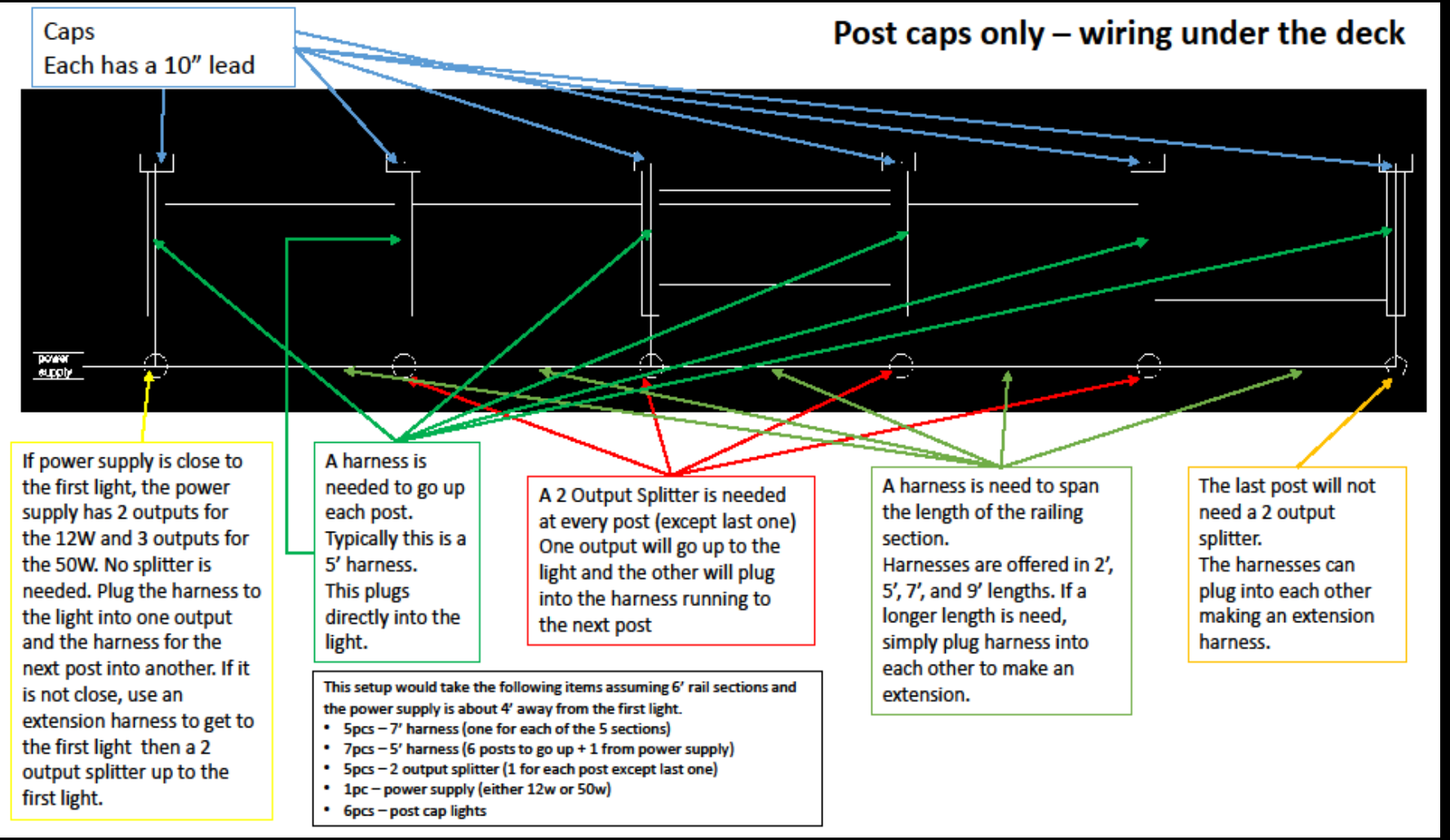
- Bluetooth Control (Android/Apple)
- Photoeye For Automatic ON/OFF
- Built-In Dimming Capabilities
- Weather Tight Design

BLACK or WHITE CONNECTOR INDICATES
5000-KELVIN LIGHT (Left Side on White Posts)

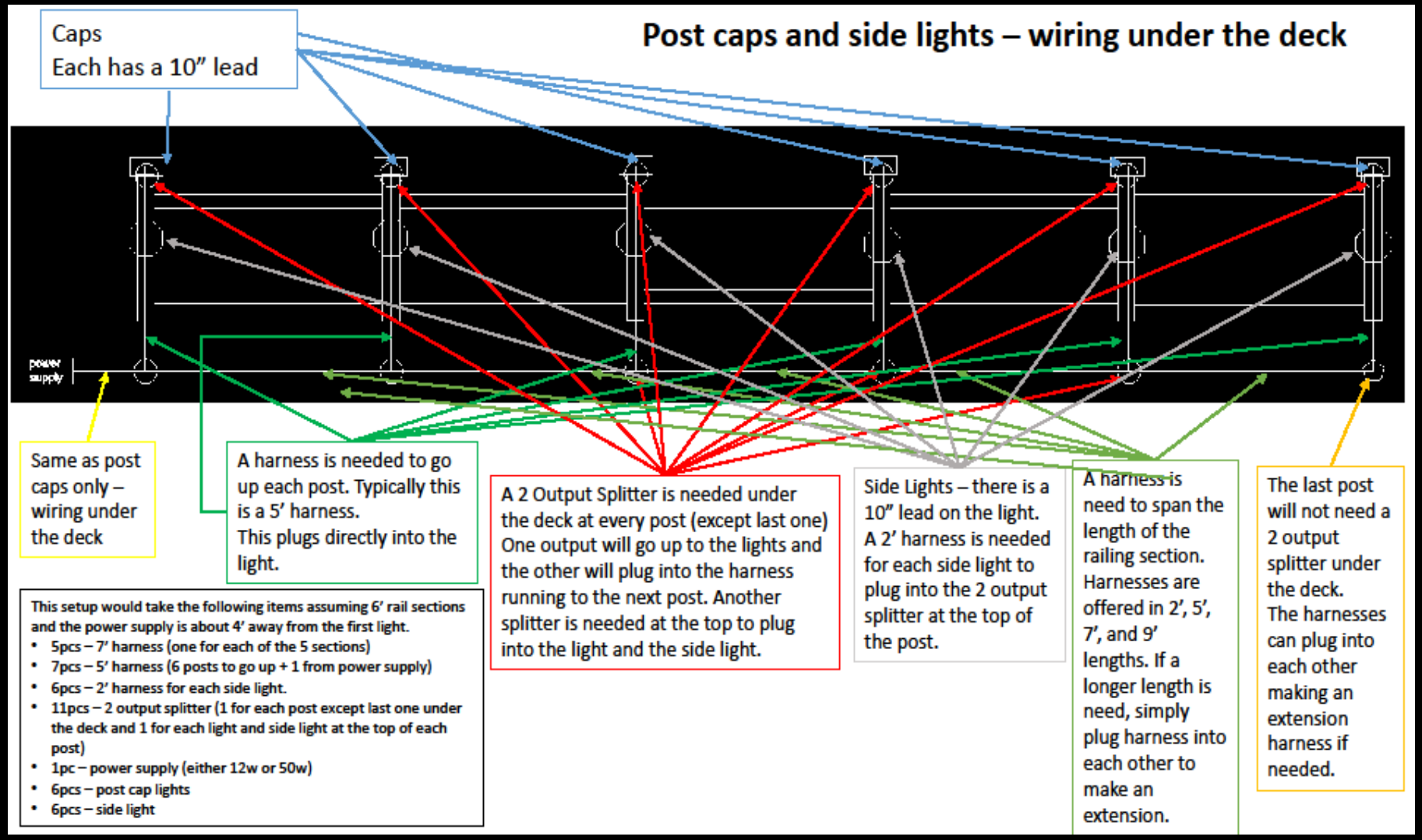
YELLOW CONNECTOR INDICATES
3000 KELVIN LIGHT (Right Side on Black Posts)

Installation Option #1: Installing With Wire Beneath Deck

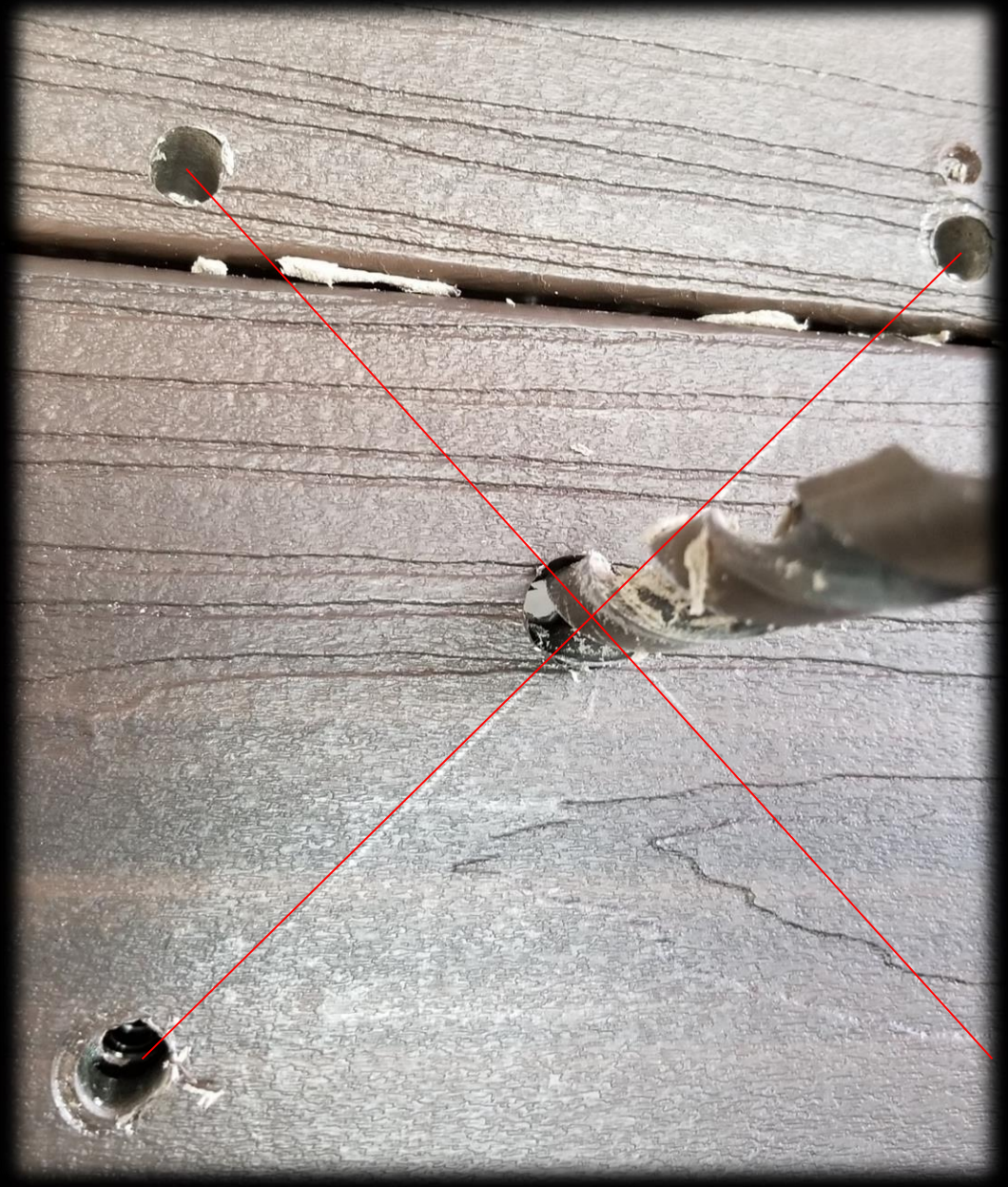
Post Caps Only



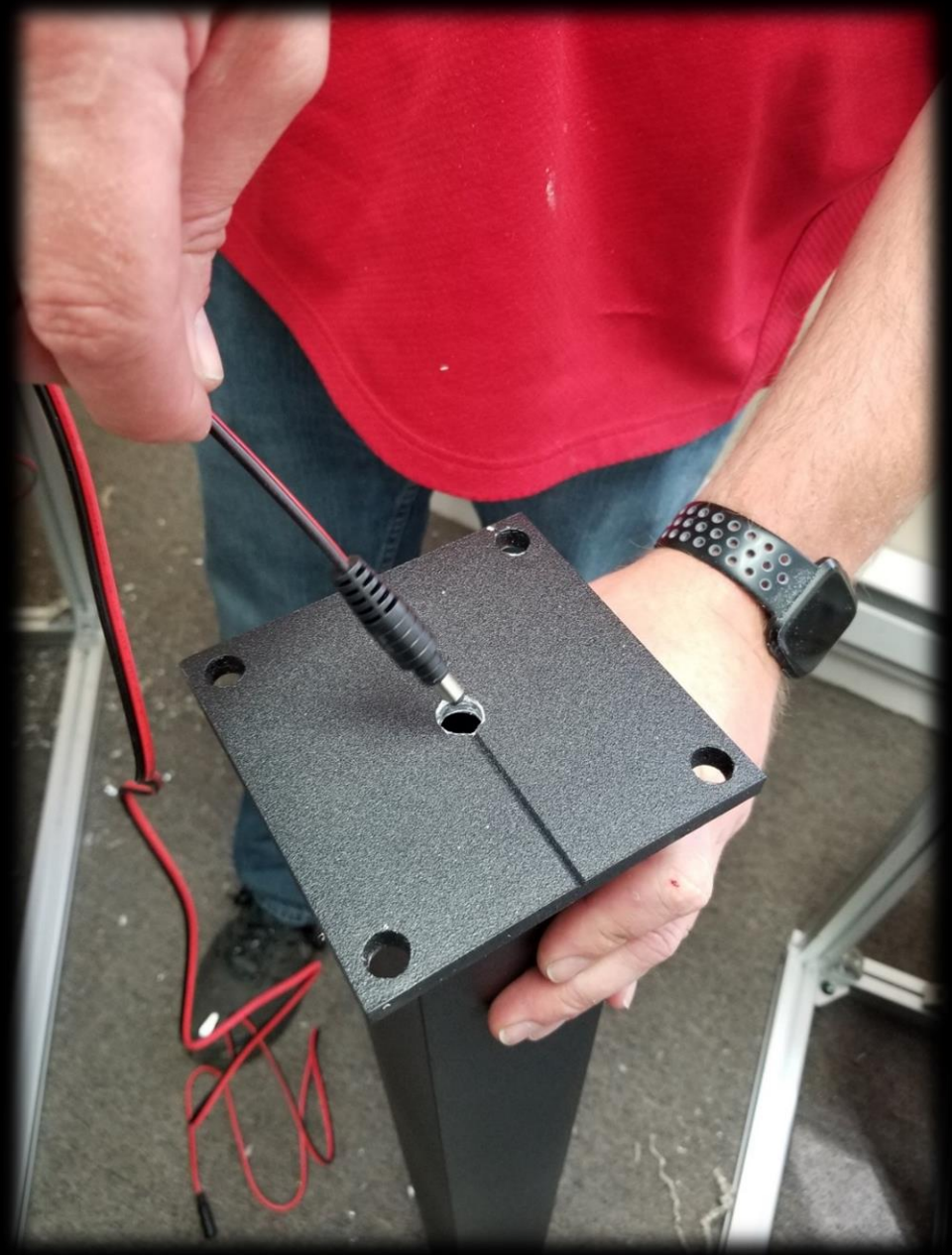
Post Caps And Side Lights



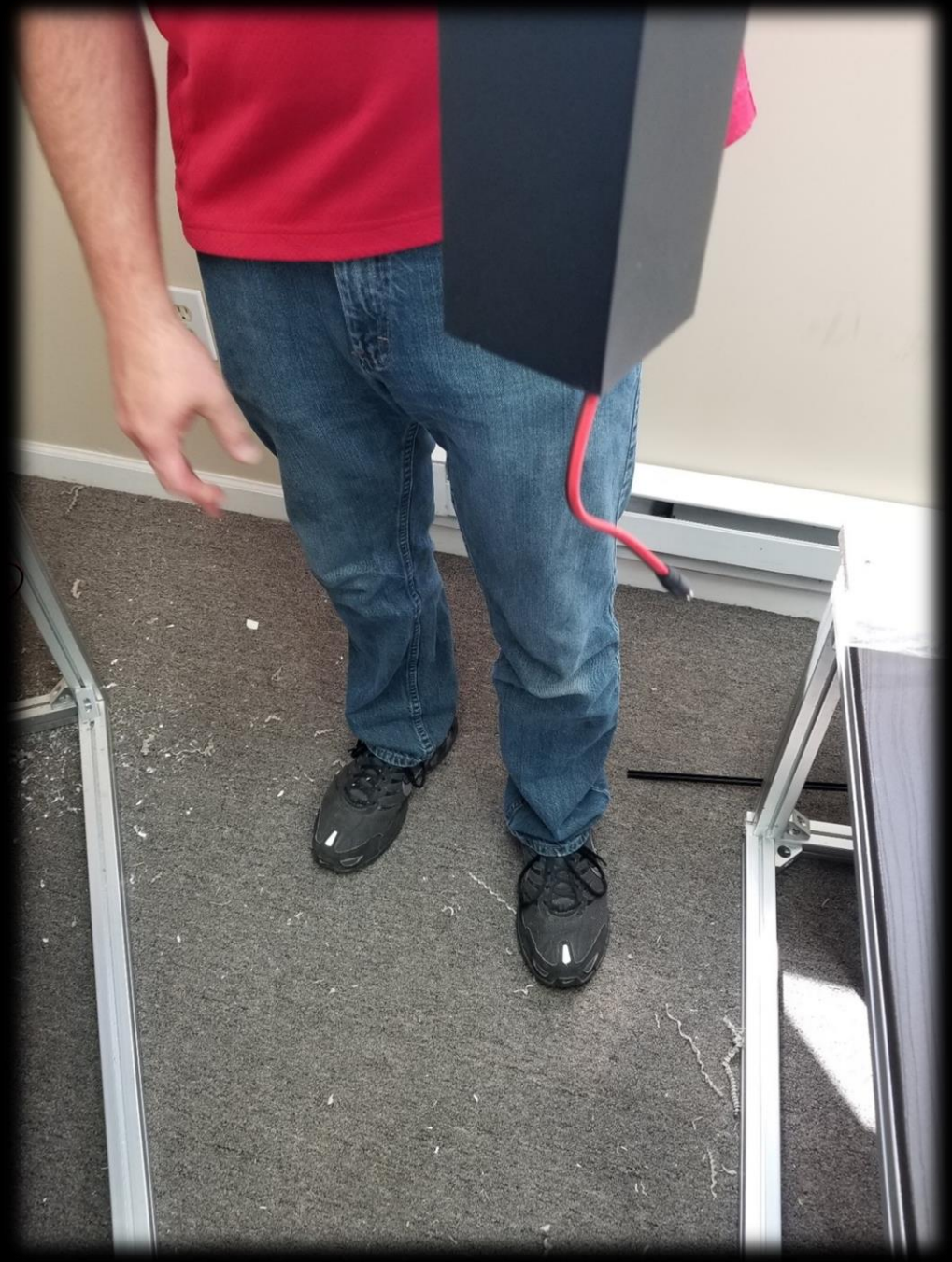
Prepare any post that will receive lighting by drilling the bottom hole to ½”



Mark the center point where the post will mount, and drill a ½” hole in the deck surface.



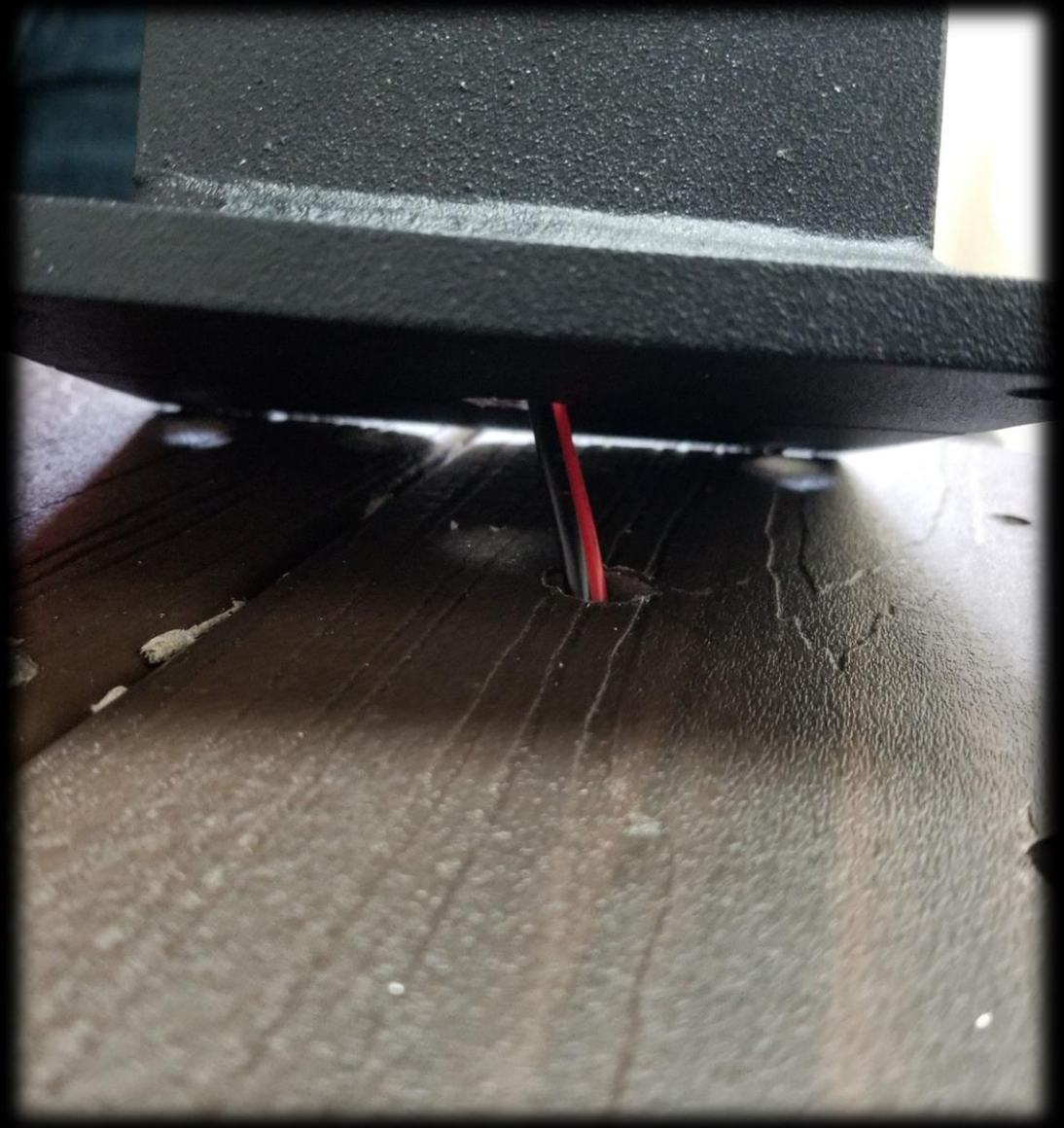
Feed the male end of the harness into the hole at the bottom of the post.



Feed the harness through, until the male end comes out the top of the post several inches.

TIP: Install an adhesive anchor and zip tie to hold the wire at the top of the post.

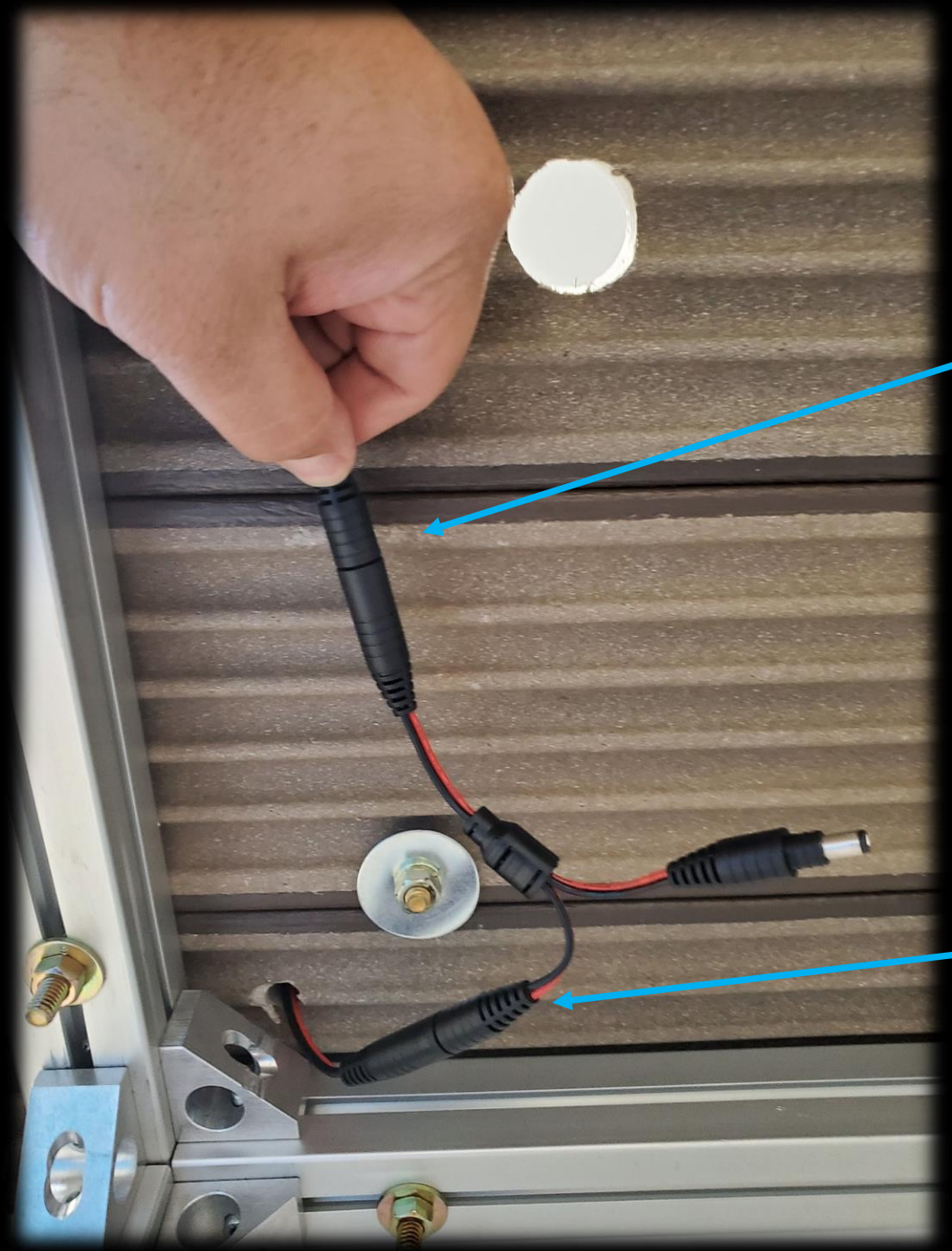
Continue to feed the harness as the post is placed into position on the deck.



Make sure the wire moves freely into the hole and does not get pinched under the post.

PHOTO: Female connector and harness, below deck surface.

Incoming male harness from transformer or previous light location.

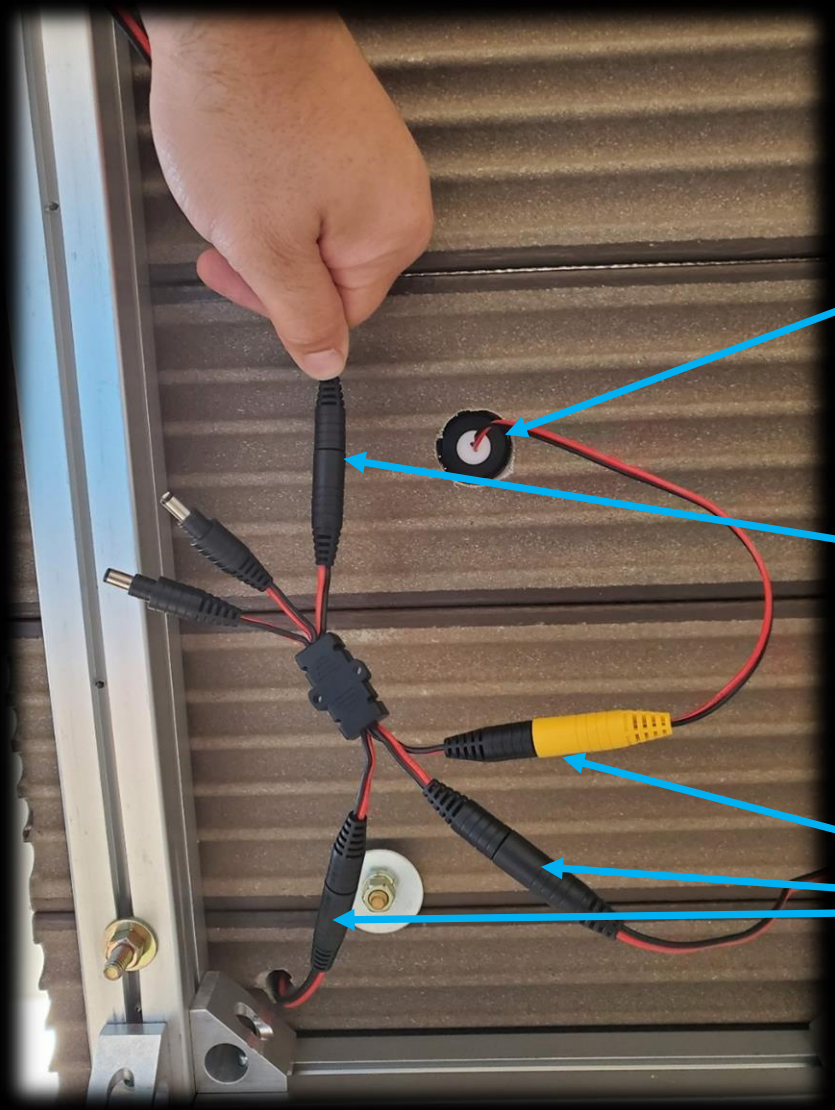


Connect the male end from the main harness to the female connector on the 2 output splitter.

Connect the male end from the splitter into the female connector running up the post to the light.

The remaining output from the splitter is then used to continue the main harness to the rest of the system, running directly to the next post.

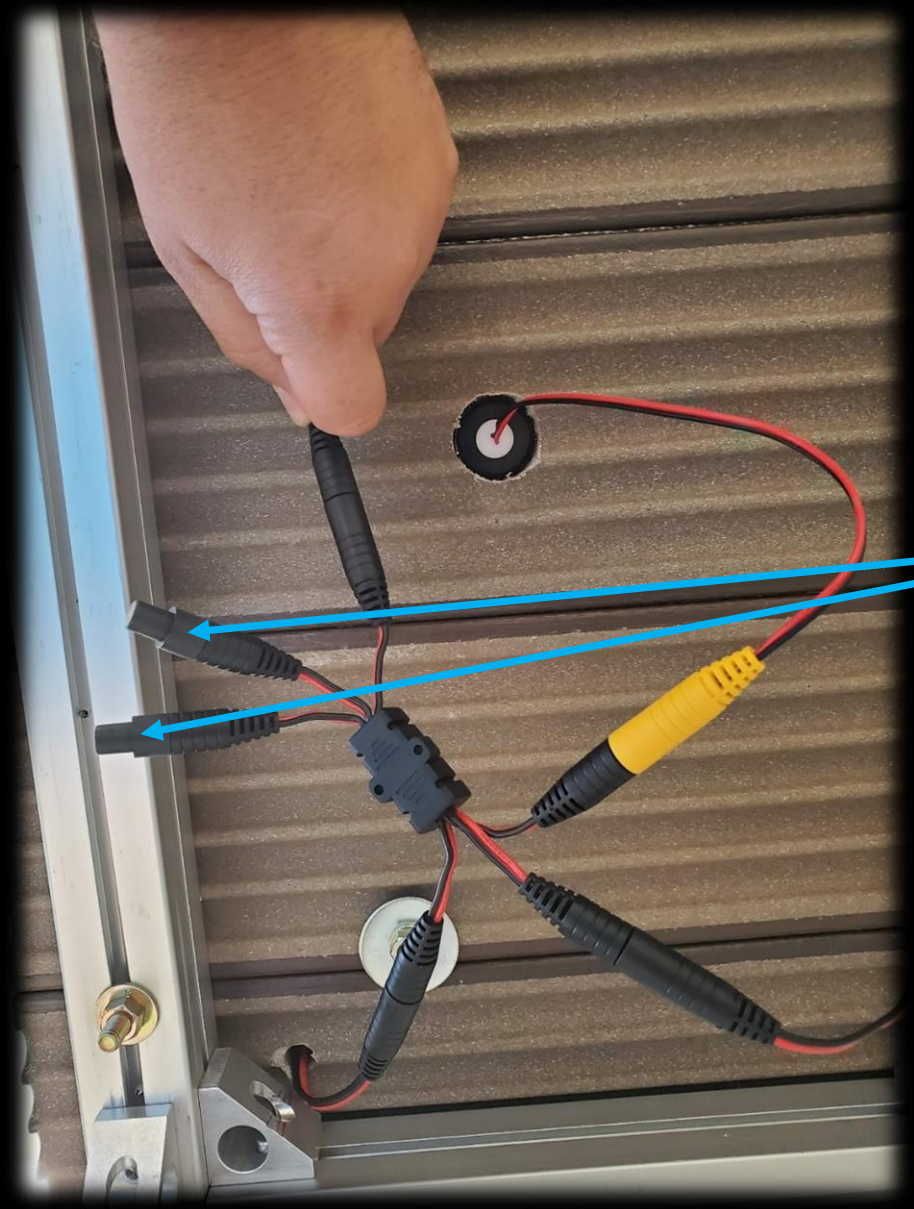
Example: When to Use a 5 Output Splitter



Flush mount light added to deck surface above.

Input from main harness to splitter

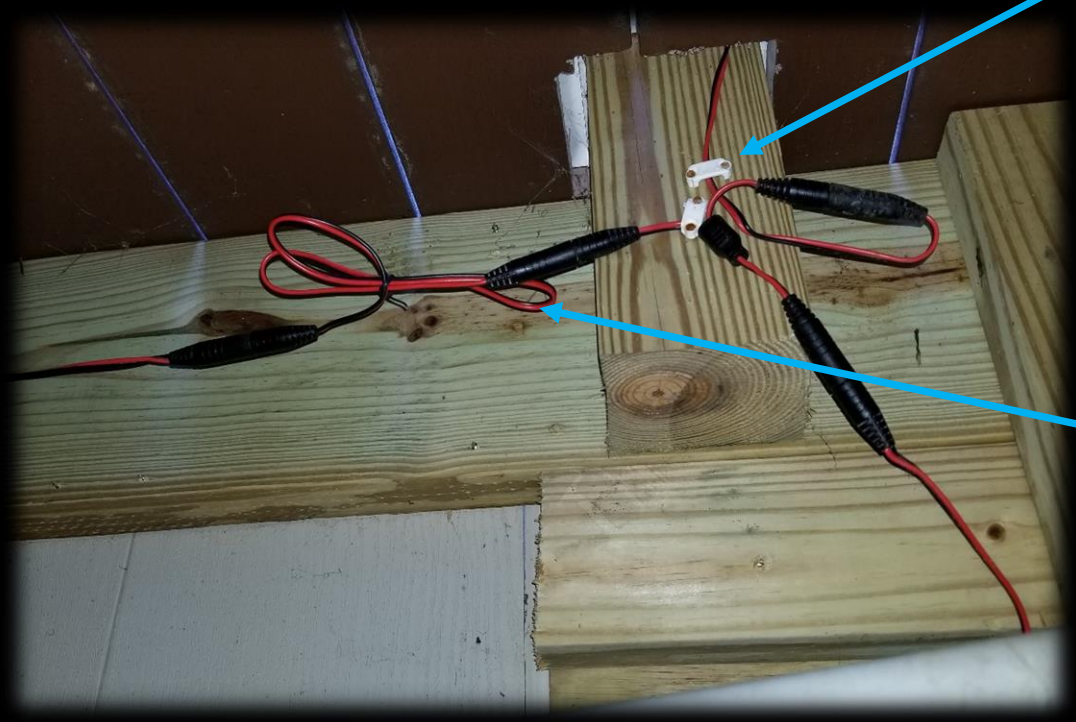
3 of 5 Outputs used (2 lights, 1 main harness continuation)



Place caps (provided with 5 output splitter) on any of the unused outputs to prevent corrosion and shorts.

Plug the cap light into the male connector at the top of the post.

Place the cap onto the post, ensuring no wires get pinched between the cap and post.



Secure the harnesses below the deck with insulated wire staples as shown.

Any excess wire should be coiled up and held with twist ties (each harness comes with one in the bag)

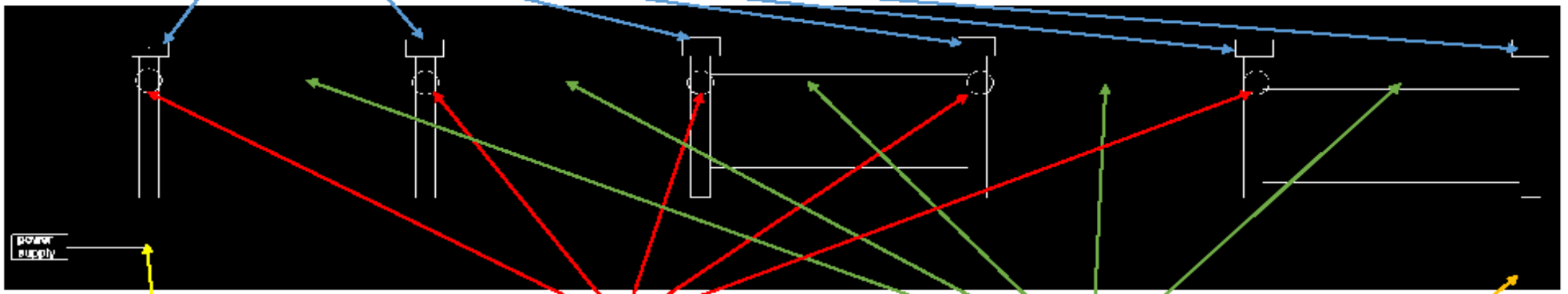
DO NOT use uninsulated wire staples, like pictured. If installed too tight, staples will cause damage to the wire.

Installation Option #2: Installing With Wire Through Top Rail

Mark where the top the of skirt is on the post to ensure the hole for the harness is not visible after the installation.

Post caps only – wiring in top rail

Caps
Each has a 10 inch lead



You will need a harness long enough to reach up to the cap of the first light. Harnesses are offered in 2', 5', 7', and 9' lengths. If a longer length is need, simply plug harness into each other to make an extension.

A 2 Output Splitter is needed at every post (except the last one)
One output will plug directly into the light and the other will plug into the harness running inside the top rail to the next post.

A harness is need to span the length of the railing section.
Harnesses are offered in 2', 5', 7', and 9' lengths. If a longer length is need, simply plug harness into each other to make an extension.

The last post will not need a 2 output splitter. Plug the light directly into the harness from the last post.

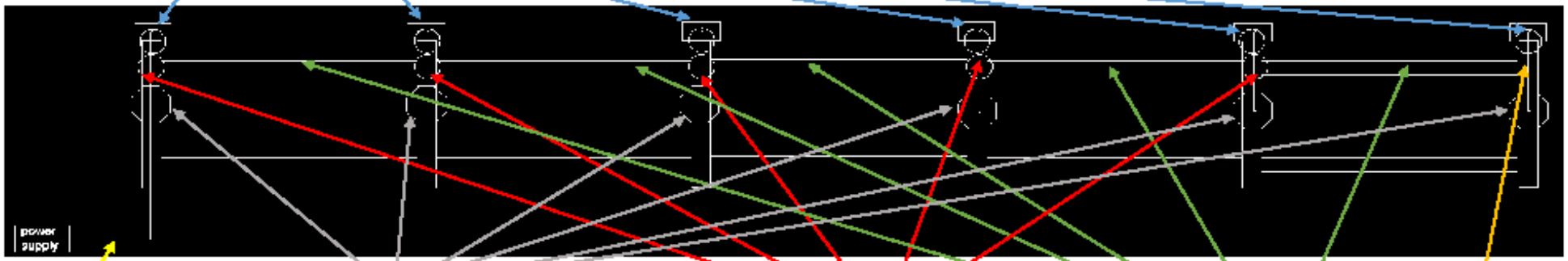
This setup would take the following items assuming 6' rail sections and the power supply is about 4' away from the first light.

- 5pcs – 7' harness (one for each of the 5 sections)
- 1pcs – 9' harness (to go from power supply up the first post to the light)
- 5pcs – 2 output splitter (1 for each light except last one)
- 1pc – power supply (either 12w or 50w)
- 6pcs – post cap lights

Note: Any gates or breaks in the railing will require you to go down the last post and under the break in the railing ad then back up the next post after the break in the railing.

Post caps and side lights – wiring in top rail

Caps
Each has a 10 inch lead



Same as post caps only –wiring in top rail

Side Lights – there is a 10" lead on the light. A 2' harness is needed for each side light to plug into the 2 output splitter at the top of the post.

2 (two) of the 2 Output Splitters are needed at every post (except the last one).
Plug one of the 2 output splitters into the other giving you 3 outputs. One output will plug directly into the post light, the second output will plug into the side light, and the third output will plug into the harness running inside the top rail to the next post.

A harness is need to span the length of the railing section. Harnesses are offered in 2', 5', 7', and 9' lengths. If a longer length is need, simply plug harness into each other to make an extension.

The last post will only need a single 2 output splitter. Plug the light into one output and the 2' harness on the side light into the other output.

This setup would take the following items assuming 6' rail sections and the power supply is about 4' away from the first light.

- 5pcs – 7' harness (one for each of the 5 sections)
- 1pcs – 9' harness (to go from power supply up the first post to the light)
- 6pcs – 2' harness (for each side light)
- 11pcs – 2 output splitter (2 for each post except the last which needs 1)
- 1pc – power supply (either 12w or 50w)
- 6pcs – post cap lights
- 6pcs – side lights

Note: Any gates or breaks in the railing will require you to go down the last post and under the break in the railing ad then back up the next post after the break in the railing.

Drill a ½” hole in the base of the post closest to the transformer, this will be the only post needed drilled as such.

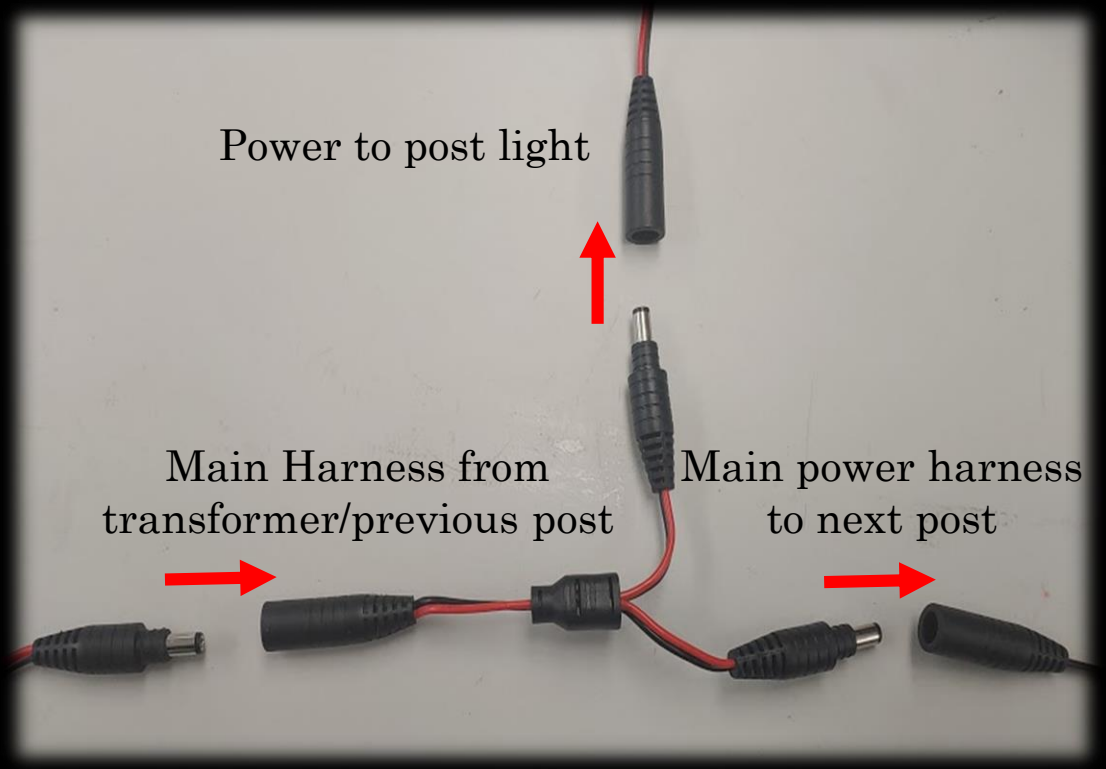
Insert the harness into the drilled hole at the bottom of the post.

Notch the bottom of the skirt to allow the wire to pass through, while staying flush with the deck.

Run the harness up the post and hold it at the top of the post using electrical tape. Screw in the top rail bracket. Mark the post and drill a ½” hole for the connector to go through.

Upon drilling a hole in the post, insert the harness into the rail.

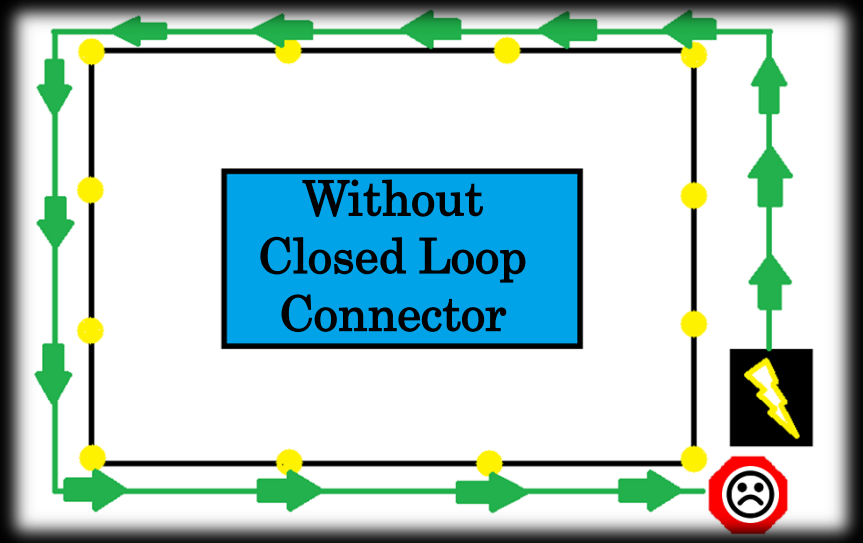
Run the wire through the hole drilled in the post, then through the top rail. Drill a hole in the receiving side of the next post, and repeat the previous process.

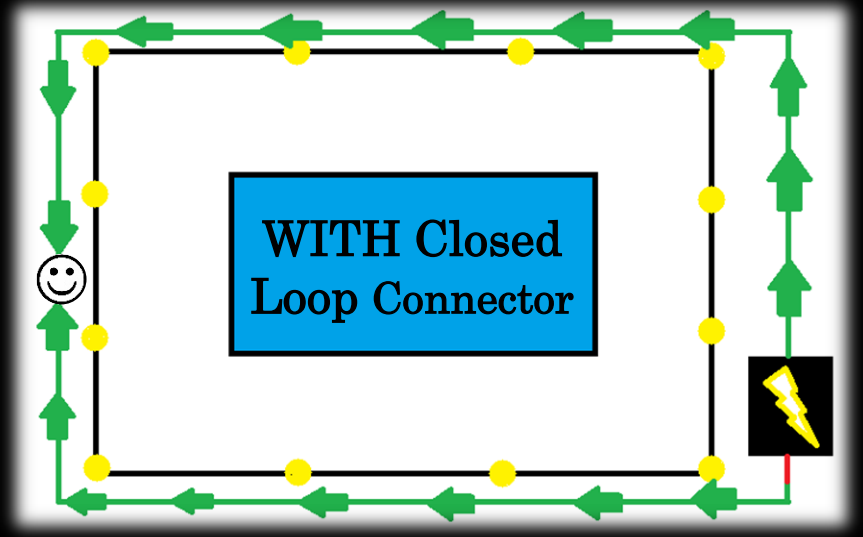


Use a 2 Output Splitter to continue the harness to the next light, and to connect the light placed on the post to the existing harness.

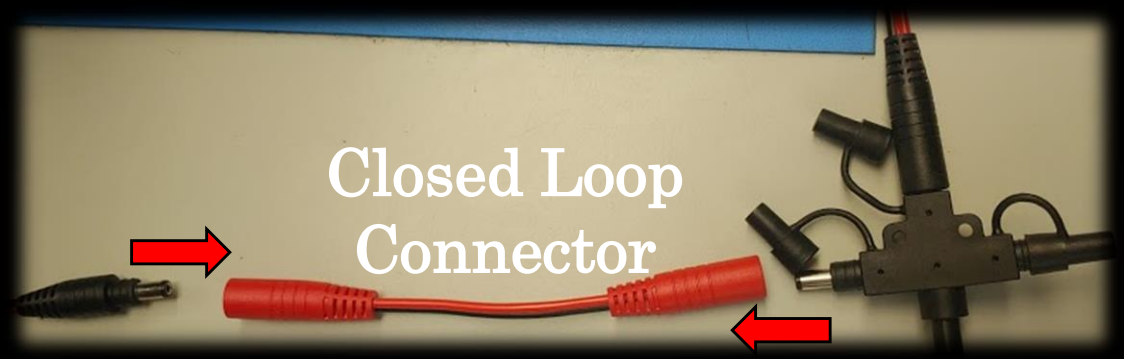
How To Use: Home Run Connector (Closed Loop Connector)

Pictured is a closed loop connector. It is an optional accessory that is included with the SMARTPOWER 50 transformer. It fixes voltage drop issues when a run is too long, or houses too many lights for one main harness to handle.





EXAMPLE: The closed loop connector takes a run of 12 lights around a pool, and breaks it into 2 separate runs of 6 lights each, lightening the load on the single main harness. It essentially acts as an additional ‘main harness’ in the lighting system.



Main
Harness from
last post

Transformer
Tee
Connector

To use the closed loop connector, simply attach a 2-output splitter to the last end of the main harness. Run one end of the splitter to the light on the last post, and attach an additional harness on the other end, running back to the transformer. There will be a male connector on the end of the harness, and a male connector on the transformer's "T". Use the closed loop connector to connect the two male ends.

EXAMPLE: Installs on Existing Fencing/Railing

As all fencing and railing installs are unique, the methods of installation will vary site-to-site