LOW-VOLTAGE

RAILING LIGHT INSTALLATION

! IMPORTANT SAFTEY PRECAUTIONS

WARNING: To reduce the risk of fire or injury to persons:

- Turn off/unplug power supply before installing or servicing fixtures; contact only switch/plug when turning on
- Keep Light lamp/bulb away from materials that may burn

Tools & Components

Skill/Table Saw	**16/2 AWG Outdoor Waterproof Wire**
Cordless Drill	**12/2 Wire Nuts**
3/8" Drill Bit	**12V 50 W Genovations® Transformer**
Wire Stripper	**Genovations® LED Post Cap**
Electrical Tape	

Before You Start...

Please consider that building codes vary by location. Consult and follow all application codes for all your projects. Modificaitons to your Genovations® deck and rialing are required to install lighting. Read these instructions completely before starting deck and railing installation.

STEP 1 - Power Supply

1.1 System Design

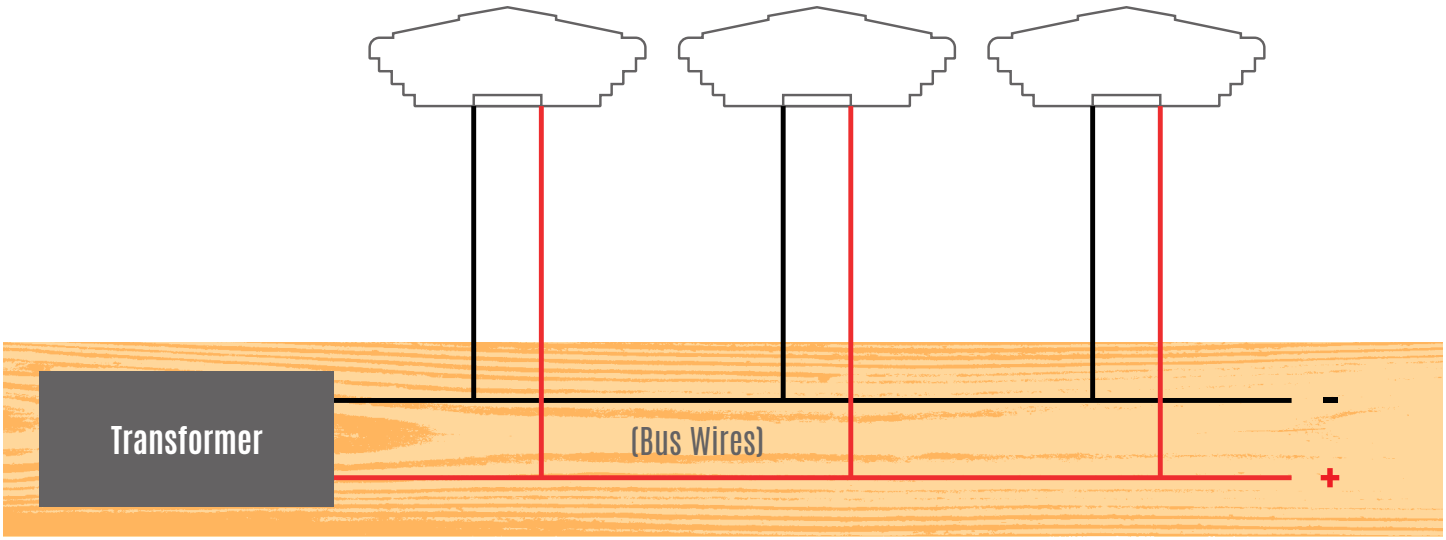
Use a Power Bus Series approach to wiring Genovations® lighted post caps. With this approach, string a main low-voltage wire or “bus” on the underside of the deck surface, beneath the railing structure, on the inside of the 2" x 10" rim joist. Supply power to each lighted post cap through a single set of wires from the bus to the lighted cap.

1.2 Transformer Location

Locate your #LVT1250 transformer a minimum of 12" above ground and within 5' of a 120V AC GFCI outlet. You can locate the transformer below the deck, but the control panel should be accessible in order to change settings. Use (4) zinc-plated screws to mount the transformer in place. Locate the photocell in an area that can sense dusk and dawn. Use (2) zinc-plated or stainless steel screws to mount the photocell.

1.3 Bus Wire Installation

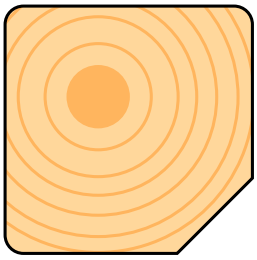
Using 16/2 AWG waterpoof outdoor wire, string a main bus wire on the underside of your deck from the transformer around the entire perimeter of the deck underneath where the railing is lit. Secure the wire to the inside of the joist. For stairwells, continue the string down one side (under stair treads secured to the inside of the stringer), across the bottom and back up the other side.



1.4 Power Consumption

Each LED light uses .4 watts of power. Caps are available in either 2 (.8 watts) or 4 (1.6 watts) LED light configurations. One 12V 50 Watt transformer is capable of running up to 50 2-light caps or 30 4-light caps.

STEP 2 - Post & Deck Preparation



2.1

Chamfer 2" off one of the inside corners (preferred) of each 4x4 wood railing and stair railing post. This allows space between the wood rail post and the post cover for the power wire.

2.2

Using a ⅜" drill bit, drill a hole down through the deck board immediatedly next to the chamfered edge of the wood post. This allows you to run the post wire down through the deck to the bus wire.

2.3

Cut the top of wood posts 2" shorter than the top of the post sleeve. This provides additional room for storage of the power wire.

STEP 3 - Installing Post Wires

Note This low-voltage LED lighting system requires a positive and negative wire sequence. If your outdoor waterpoof 16/2 AWG wire is not colored to denote positive and negative, we recommend you designate the wire with printing on the top portion of its sleeve.

3.1

Measure the distance from the bus wire to the top of the post. Add 6" to this measurement to allow for convenient installation of the lighted post cap. Cut a section of wire to this length.

3.2

Strip off ¼" of insulation from both ends of both wires.

3.3

Insert one end of the post wire through the ⅜" hole previously drilled through the deck surface.

3.4

Install the post cover over the wood post and post wire, leaving 6" of wire at the top of the post cover.

3.5

Repeat this process for each fo the railing posts.

STEP 4 - Connecting Post Wire to the Bus

! Turn off the power before installing or removing connectors. Use products in accordance with local and national codes.

4.1

Cut the main bus wire where the post wire extends beneath the deck.

4.2

Connect the positive wires to one another using a wire nut.

4.3

Connect the negative wires together using a wire nut.

4.4

Wrap both wire nuts in electrical tape to avoid exposing the connection to moisture.

4.5

Repeat this process for each of the post wires.

4.6

Locate the plug lead provided with the transformer. Connect the positive (red) wire to the postiive wire of the bus wire using a wire nut. Connect the negative (black) wire with the negative wire of the bus wire using a wire nut. Wrap both wire nuts with electrical tape to avoid exposing the connection to moisture.

4.7

At the opposite end of the wire bus from the transformer, separating the positive and negative wries, cap each and wrap with with electrical tape to avoid exposing the ends to moisture.

STEP 5 - Connecting Lighted Post Caps

5.1

Align the end of each of the positive light cap wires (indicated in red) with the positive end of the post wire. Do not twist the wires together. Twist a wire nut onto the wires. Hand tighten. Do not over-tighten.

5.2

Repeat step 2 with the negative wires of each.

5.3

Tuck the excess wires into the top inside of the post cover sleeve.

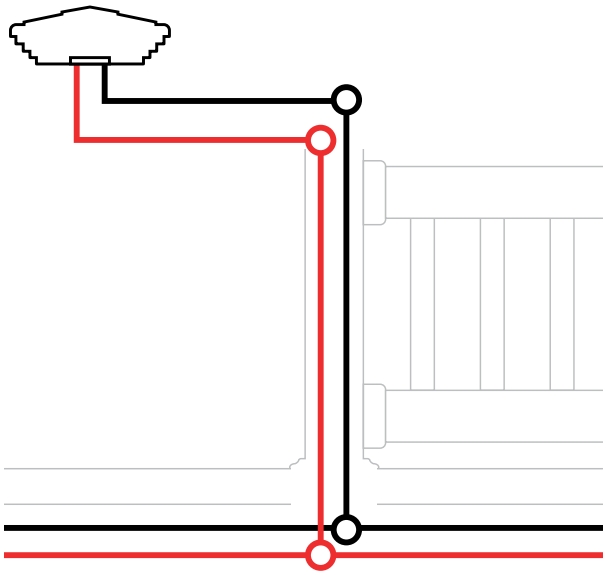
5.4

Install the lighted post cap onto the top of the post cover sleeve.

5.5

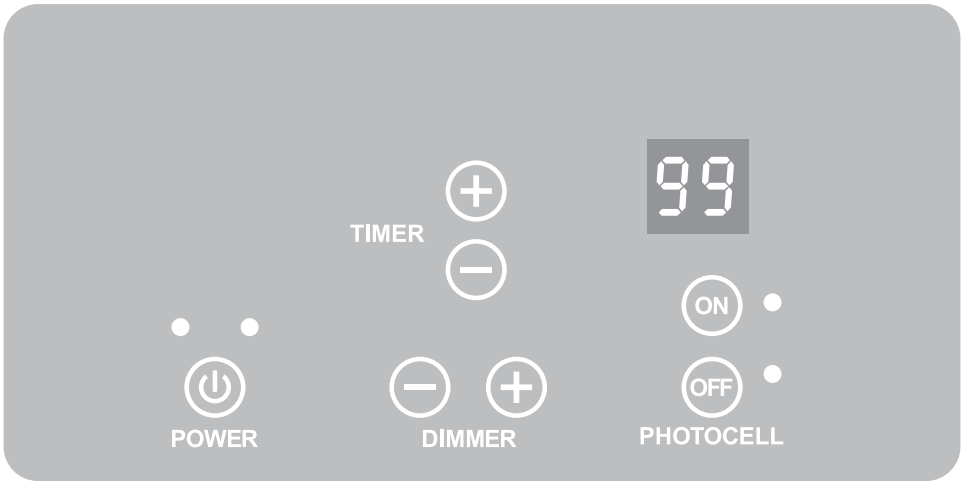
Repeat this process for each of the deck post lights.

2-light caps will have 2 positives and 2 negatives wire-nutted to the post wire. 4-light caps will have 4 positives and 4 negatives wire-nutted to the post wire.

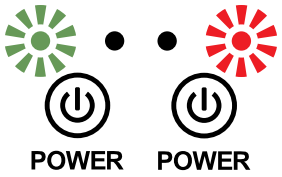


12V 50W

TRANSFORMER CONTROL INSTRUCTIONS



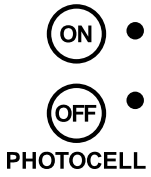
ON/OFF SWITCH



When green light is illuminated, the transformer is “powered on”. The LED lights may or may not be on, depedning on the timer or photocell settings.

When red light is illuminated, the transformer is powered off and no other controls will function.

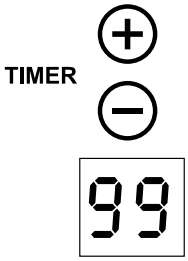
PHOTOCELL CONTROL



note The Photocell has a 2 minute delay.

To turn on the Photocell, press the “ON” button. The green light by the “ON” button will be illuminated. The transformer will now operate according to the timer and photocell. To turn off the Photocell, press the “OFF” button, the red light by the “OFF” button will be illuminated. The LED lights will now be on continuously.

TIMER CONTROL & LCD DISPLAY

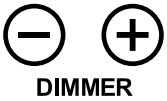


When the Photocell is off, the LCD Display will show “99”. The LED lights will be on continuously, unaffected by the photocell.

For dusk to dawn operation of the LED lights (controlled by the Photocell): Ensure the Photocell is on. Press the Timer control “+” button until the LCD Display shows “99”.

For Timer operation (LED lights turn on at dusk and turn off from 1 to 9 hour increments): Ensure the Photocell is on. Press the Timer conrol “-” or “+” buttons until LCD Display shows the desired “ON” time in 1 hour increments from 1 to 9 hours.

DIMMER CONTROL



Ensure the LED lights are on. The “-” button dims LED Lights. The “+” button brightens the LED Lights.

For incremental changes: Press the “-” or “+” Dimmer buttons with short pulses. This will dim the LED lights by about 10% per press of the button.

For fine adjustments: Hold in the “-” or “+” Dimmer buttons until the desired brightness level is reached and then release the button.

REMOTE CONTROL 15 yard range

For incremental changes: Press the “-” or “+” Dimmer buttons with short pulses. This will dim the LED lights by about 10% per press of the button.

For fine adjustments: Hold in the “-” or “+” Dimmer buttons until the desired brightness level is reached and then release the button.