Placid Point Power Guide

Placid Point Power Options

- **60W Power Supply w/ Control Hub**
  - (1) 60W Power Supply
  - (1) Control Hub
  - (1) 9’ Long Intermediate Connector
  - (1) 2-Way Wire Splitter
  - (1) Screw Pack
- **120W Power System (w/ Control Hub)**
  - (1) Expandable Power Splitter
  - (2) 60W Power Supply
  - (1) Control Hub
  - (2) 5’ Wire Extensions
  - (1) Screw Pack
- **60W Power System Expansion Pack**
  - (1) Expandable Power Splitter
  - (1) 60W Power Supply
  - (1) 2-Way Wire Splitter
- **120W Power System Expansion Pack**
  - (1) Expandable Power Splitter
  - (2) 60W Power Supply
  - (1) 2-Way Wire Splitter

Recommended Tools

- Drill with Driver Tips/Drill bits: 7/16"
- Tape Measure
- Electrical Tape
- Wire Staples
- Safety Glasses

- *These directions are only a guide and may not address every situation.*
- *Always wear proper safety equipment while assembling and installing.*
- *The installer should obtain all required building permits and follow all installation procedures in accordance with applicable building code requirements.*
- *Superior Plastic Products, Inc. shall not be held liable for improper or unsafe installations.*
- *Applying paint, other than Key-Link's touch up paint, will void your warranty.*
- *To ensure proper coverage by our warranty please visit our website and complete the warranty form and mail to: Superior Plastic Products, Inc., 260 Jalyn Drive, New Holland, PA 17557*

WARNING: This product can expose you to chemicals including Quartz (crystalline silica), which is known to the State of California to cause cancer, and Hexavalent Chromium, which is known to the State of California to cause birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

PPLIG230315

1 Drawing System Lighting Layout

1.1. First, draw the deck layout including all posts, stairs, doors, and windows.

1.2. Add a letter “L” to every post that includes a **Post Cap Light.**

1.3. Add a letter “D” to every post that includes a **Post Cap Down Light**.

1.4. Add a letter “A” to every location of an **Accent Light**, using the point of the letter “A” to indicate mounting direction.

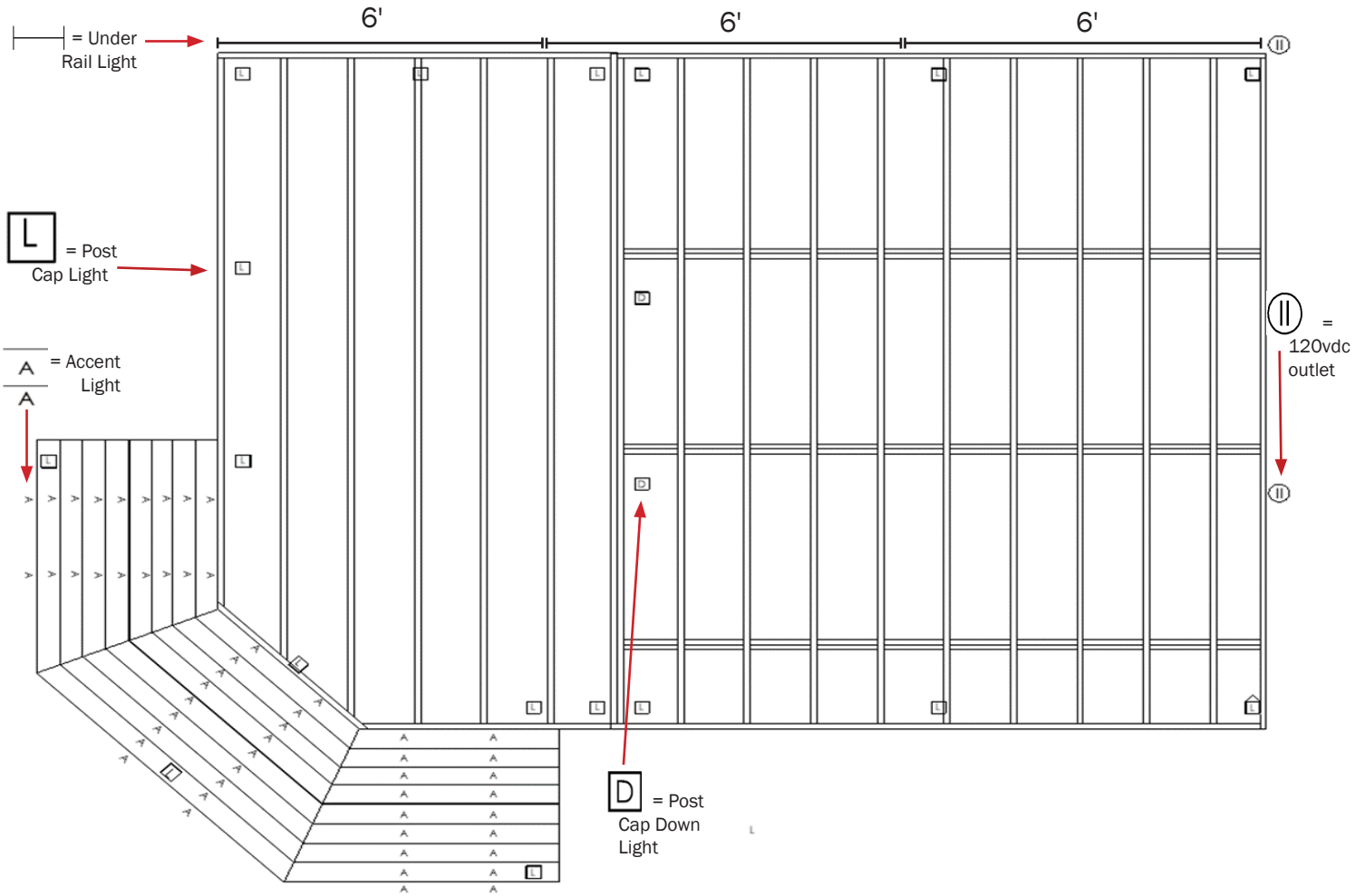
1.5. Add a line with tick marks at each end for any section that includes **Under Rail Light.**

1.6. Once all lights are mapped, map the location of the control hub and use a triangle to indicate the hub’s location.

NOTE: If hub has not yet been installed, utilize the control hub install guide for best locating practices.

1.7. Map any **120 vdc outlets** possible for system power source. Indicate the location of each available receptacle with a circle with 2 lines in it.

Sample Deck:



2 Lighting Calculations

Once the system is mapped, including locations of lights, control hub, and outlets, it is time to determine the required system power.

2.1. Take a tally of total number of each type of lights on the system and calculate system power required (Note: Power requirement value does not equate directly to system wattage values).

Total Number of Lights on the System			
Light Type	Quantity	Power Multiplier	Power Requirement
Accent Lights		x 1	
Post Cap Lights		x 5	
Post Cap Down Lights		x 4	
Under Rail Light		x 2.5 (per foot)	
		Total System Power Requirement =	

Sample Deck Example:

Total Number of Lights on the System			
Light Type	Quantity	Power Multiplier	Power Requirement
Accent Lights	54	x 1	54
Post Cap Lights	15	x 5	75
Post Cap Down Lights	2	x 4	8
Under Rail Light	18	x 2.5 (per foot)	45
		Total System Power Requirement =	182

2.2. After establishing system power requirements, calculate your base system needs using the table on the following page.

Total System power requirement example is 182, based on the table below this example would fall into: "Between 100 & 220, so this would require either **120w PS (Power System**). Or if a **60w Power Supply** is already installed, a **60w PSEP (Power System Expansion Pack**) can be added.

If "Total System Power Requirement" is	Base System Power Supply Recommendation
Less than 100	60w Power Supply**
Between 100 & 220	120w Power System
	60w Power Supply + 60w Power System Expansion Pack

**=Refer to 60w Power Supply Install Guide located at PlacidPointLighting.com

If the Total System Power Requirement is more than either of the base systems, use the table below to calculate which expansion packs should be added to the base system:

Every additional 1-99	60w Power System Expansion Pack
Every additional 100-220	120w Power System Expansion Pack

if "Total System Power Requirement" is	Power Supply Recommendation
220 - 319	120PS + 60PSEP
320 - 439	120PS + 120PSEP
440 - 539	120PS + 120PSEP + 60PSEP
540 - 659	120PS + 120PSEP + 120PSEP
660 – 759	120PS + 120PSEP + 120PSEP + 60PSEP
760 - 879	120PS + 120PSEP + 120PSEP + 120PSEP
880 - 979	120PS + 120PSEP + 120PSEP + 120PSEP + 60PSEP

2.3. Determine Ideal Lighting Leg Size

NOTE: The EPS has (4) legs (wires) that distribute power to our lighting products. Each leg should be loaded as evenly as possible, taking into account the total system size and depending on the number of power supplies selected.

NOTE: If using a 60W Power System Expansion Pack, please note that the Power Supply should be connected to the Primary input and only lighting legs 1 & 2 should be used to power lighting products.

$$\frac{\text{"Total System Power Requirement"}}{2 * \#\ of\ Power\ Supplies} = Ideal\ Lighting\ Leg\ Size$$

Ideal Lighting Leg size =	
Max Lighting Leg size= Ideal Lighting Leg size + 5 =	
Min Lighting Leg size= Ideal Lighting Leg size - 5 =	

Sample Deck Example:

Ideal Lighting Leg size =	45.5
Max Lighting Leg size= Ideal Lighting Leg size + 5 =	45.5 + 5 = 50.5
Min Lighting Leg size= Ideal Lighting Leg size - 5 =	45.5 - 5 = 40.5

3 Creating Lighting Legs

After calculating the ideal leg size & determining the power system and expansion pack needs, split the diagramed system into four legs based on the instructions below. Choose between Steps **3.1.** or **3.2.** based on the system's ideal leg size calculated in the previous step.

NOTE: Add the Power Multiplier value for each light on a leg to calculate the leg size.

3.1. Systems with Ideal Leg Size of less than 55

3.1.1. Split the lighting into four groups adding up the power multipliers of each light in a group making sure no leg exceeds total leg size of 55.

	Power Multiplier
Each Post Cap Lens Light	5
Each Post Cap Down Light	4
Each Accent Light	1
Under Rail Light (per foot)	2.5

3.1.2. Skip to Step 4

3.2. Systems with Ideal Leg Size of 55 or more

3.2.1. Start at the light nearest to outlet and add lights to its group until the Power Multiplier for the group is between the Ideal Lighting Leg size and the Max Lighting Leg size.

3.2.2. Repeat the process beginning with the ungrouped light closest to the last light from the first group.

3.2.3. Split the remaining lights into 2 groups as evenly split as possible.

NOTE: It is okay for these 2 groups to not be equal.

3.2.4. Calculate the power requirements of each leg using the tables below.

Total Number of Lights on Leg 1			
Light Type	Quantity	Power Mulitiplier	Power Multiplier
Accent Lights		x 1	
Post Cap Lights		x 5	
Post Cap Down Lights		x 4	
Under Rail Light		x 2.5 (per foot)	
		Leg 1 Power Requirement:	

Total Number of Lights on Leg 2			
Light Type	Quantity	Power Mulitiplier	Power Multiplier
Accent Lights		x 1	
Post Cap Lights		x 5	
Post Cap Down Lights		x 4	
Under Rail Light		x 2.5 (per foot)	
		Leg 2 Power Requirement:	

Total Number of Lights on Leg 3			
Light Type	Quantity	Power Mulitiplier	Power Multiplier
Accent Lights		x 1	
Post Cap Lights		x 5	
Post Cap Down Lights		x 4	
Under Rail Light		x 2.5 (per foot)	
		Leg 3 Power Requirement:	

Total Number of Lights on Leg 4			
Light Type	Quantity	Power Mulitiplier	Power Multiplier
Accent Lights		x 1	
Post Cap Lights		x 5	
Post Cap Down Lights		x 4	
Under Rail Light		x 2.5 (per foot)	
		Leg 4 Power Requirement:	

4 Installing and wiring the Expandable Power Splitter

Once the system has been mapped and lighting legs have been appropriately sized, it is time to begin the installation of the EPS.

4.1. Mount the EPS at the planned location using 2 of the 4 mounting screws (save the other 2 screws until finishing the install).

4.2. Mount the 60W power supplies next to the EPS and route the power cables to the intended 120vdc outlet. Verify ability to plug in and unplug EPS at the desired location.

4.3. Unplug EPS from the 120vdc outlet, then use wire staples to anchor cable length neatly out of sight along the deck framing, being careful to leave enough length to re-plug in the 120vdc cords.

4.4. Connect wire leads labeled “C+” and “Csig” to the Control Hub using enough 9ft extensions to make the connection.

4.5. Connect the wire leads labeled “1” through “4” to the appropriate light legs according to the plan laid out in step 3.

4.6. Once all the legs have been connected to the EPS & wires are still hanging free, plug the power supplies into the 120vdc receptacle. Turn the lighting system on at the control hub and then inspect all the lights and control hub to verify everything functions as intended.

4.7. After verifying proper functionality, take note on any location where wire leads cross a joist. Drill 7/16” diameter hole through the joist at least 2” up from the bottom of joist. Disconnect 1 wire connection and route the extensions through the appropriate 7/16” holes and reconnect wire lead. Repeat this process for all 4 legs and both control hub leads.

4.8. Use cable staples to neatly route the wires out of sight by stapling the wire to deck framing.

4.9. Make sure all connections have been re-established, then turn the system on at the control hub. Walk around to every light and visually verify all lights are working as intended. If no issues appear, then install the final (2) screws on the EPS, completing the installation.

4.10. If any lights are not working correctly, verify all wire connections are completely seated. If no bad connections are identified and issues persist, call the Placid Point Warranty line for assistance.

PLACID POINT LIGHTING

260 Jalyn Drive ● New Holland, PA 17557

PlacidPointLighting.com