The vPRO App requires an Apple or Android device that supports Bluetooth Low Energy (also called Bluetooth LE, BLE or Bluetooth 4.0), running iOS 7 or Android 4.0 or newer.

Supported devices:
- Apple: iPad (Air, Mini, 3rd & 4th gen), iPhone (6, 6+, 5s, 5c, 5 & 4s), iPod touch (5th gen).
- Android: You can find a list of supported Android devices here: http://www.bluetooth.com/Pages/Bluetooth-Smart-Devices-List.aspx

Search the App Store (iOS) or Play Store (Android) for "vPro vPRO". Install on mobile device (free).
Cable is measured by gauge. The lower the number, the thicker the cable and the more current it carries. Cable for low voltage lighting is available in three gauges: #12-2, #10-2, and #8-2. As noted, #8-2 gauge is the largest and is capable of carrying the most current.

Refer to the Cable Length Guide below to estimate the maximum allowable cable length that will keep the farthest fixture from the transformer from becoming too dim (below 10.5 volts). In addition, your transformer’s output options, the design of your lighting system and corresponding cable layout can help minimize voltage drop.

(see 12-Volt Cable Layout Options, Output Adjustment Switch, and Multi-Tap Installation sections).

**TIP:** Expect a voltage drop of greater than 1.5 volts when cable length is longer than recommended. Use the formula below to calculate maximum cable length.

\[
V_d = \frac{L \times W \times 2}{K_c}
\]

Where:
- \( V_d \) = Voltage drop in the section of cable, in volts.
- \( L \) = Length of the section of cable (one way distance), in feet.
- \( W \) = Total Watts carried by the section of cable for the lamps it supplies.
- \( K_c \) = ‘Cable Constant’, as follows:

<table>
<thead>
<tr>
<th>Cable Size (AWG)</th>
<th>( K_c )</th>
</tr>
</thead>
<tbody>
<tr>
<td>12</td>
<td>7500</td>
</tr>
<tr>
<td>10</td>
<td>11920</td>
</tr>
<tr>
<td>8</td>
<td>18960</td>
</tr>
</tbody>
</table>

1. Straight run installation: Fixtures run in sequence directly from the transformer.

2. Loop installation: Fixtures are arranged in a looped circuit, reducing the effects of voltage drop.

3. Split load installation or multiple cable run: Fixtures run in two or more directions from the transformer. Locating the transformer in the center of the run reduces the effects of voltage drop.

4. “T” installation (RECOMMENDED): Allows more equal distribution of power to the center of the run, or to a run some distance away. Cable running from the transformer must be of a heavier gauge (#8 or #10).

**LOW VOLTAGE CABLE LAYOUT OPTIONS:**

**TIP:** Connect all lamps in parallel. EXAMPLE: Connect one side of each lamp to ‘COM’ terminal, the other side to ‘12V’ terminal.

**CABLE CONNECTION DETAIL**

**TIP:** For proper connection, strip off 3/4” of cable installation, twist wire strands tightly and use a high quality straight blade screwdriver 3/16” wide tip to tighten all screw terminals firmly.

**ADJUSTABLE CABLE RACEWAY FEEDER (ACRF)**

Vista Exclusive - Easiest in the industry to wire: adjustable cable raceway feeder easily accommodates multiple wire runs. Or use handy 1¾” conduit knockout.

**TROUBLESHOOTING CHECKLIST**

Although low voltage lighting systems operate with a minimum of maintenance, occasionally some problems will occur. Here are solutions to some of the most common problems.

I. Entire system will not operate
   1. Check 120-volt outlet to ensure you have power to outlet.
   2. Check low voltage cable connection at transformer.

II. No output - Red Output LED
   1. Check end of cable to ensure copper strands are not touching.
   2. Check connection of cable at transformer to ensure copper strands are not touching.
   3. Recalculate total wattage to ensure that you have not exceeded rated wattage of transformer.
   4. Check for other shorts at fixture connection points.

**Note:** The timing of events may vary from circuit to circuit when programmed to run simultaneously.

If you have a concern or problem with any Vista product, first contact your local distributor. For continuing or unresolved problems, contact factory technical department at (800) 766-8478 between 8:00am and 5:30pm PST, Monday through Friday.

VISTA PROFESSIONAL OUTDOOR LIGHTING

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For technical information and product updates visit the vPRO Transformer page at VistaPro.com