

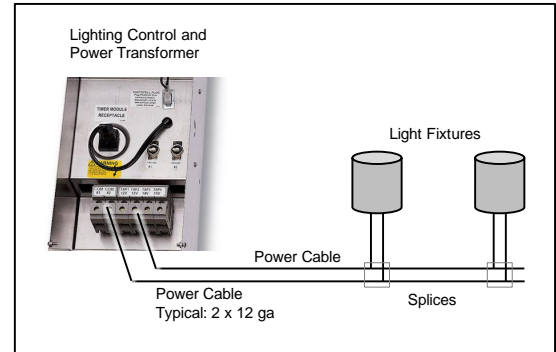


# APPLICATION NOTE

## TRACKING WIRES IN A LOW VOLTAGE LIGHTING SYSTEM

*Cable locators can be great for tracking lighting system wiring. Here are some best practices for doing it quickly and safely.*

Low voltage lighting systems consist of light fixtures extended from a central power unit (transformer) on a pair of heavy wires (14-10 gauge). See the illustration to the right. When repairing or extending a system it is important to know where these power (12-20 Vac) wires go. The wires are usually buried, so a wire locator like one from the Pro series from Armada is an important tool.



Typical Lighting System Components

When tracking the wires there are several important things to keep in mind:

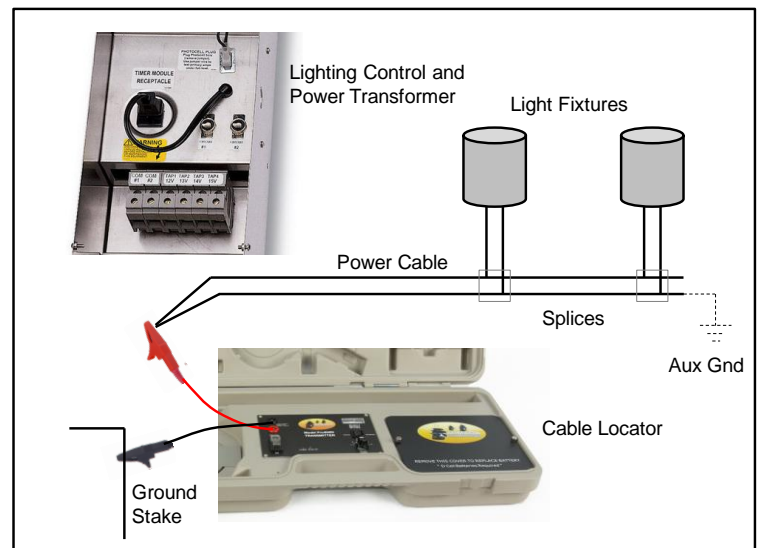
- Before connecting the locator transmitter, remove the two lighting power wires from the transformer. See below. The high power of the transmitter could damage the transformer.
- Tie the two lighting power wires together and connect the Red transmitter lead to them. This insures a good tracing path and avoids damage to the lighting fixtures from transmitter power.
- Connect the Black transmitter lead to ground using the ground stake. Turn on the transmitter and adjust the output for at least half-scale on the meter (Pro700 and 800) or an 'OK' (900). This shows that tracing current is flowing and can be detected by the receiver.

Turn on the receiver wand and begin following the tracing tone down the wire path.

*TIP: If the wire is not buried in the earth, or the earth is dry, or the wire is very short it may be necessary to attach an auxiliary ground at the far end of the wire to accurately track the path.*

Locators are safe to use around incandescent and LED low voltage systems when connected this way.

**Shock hazard** - Avoid touching the transmitter wires and traced cable when the transmitter is on.



Connect the Locator Transmitter Leads to Both Wires at the Same Time