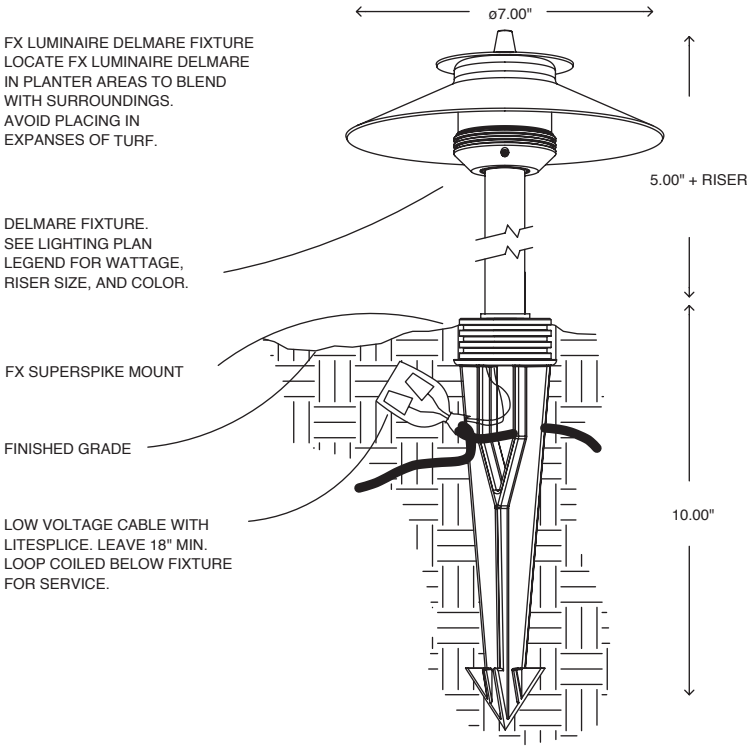
Install Notes

We have developed this series of field installation guidelines to assist you in correctly installing fixtures and transformers insuring customer satisfaction and trouble free service. If you have any questions please call your local distributor or the FX TechLine at 800-688-1269 before proceeding. Follow all NEC guidelines and local electrical codes. **For further info see our website: www.FXL.com**

DelMare

SAVE THESE INSTRUCTIONS!

SuperSpike Mount



Installation Guidelines:

DO NOT EXCEED 20 WATTS IN THIS FIXTURE

Always try to locate DelMare fixtures in planter areas to keep them away from maintenance machinery, fertilizer, foot traffic and kids. For best beam spread and service life place fixture 12" inside edge of hardscape or mow strip. Coil 18" of low voltage cable beneath fixture for future relocation. Seal cable splices with LiteSplice kits to prevent voltage loss caused from corroded connections. To relamp loosen set screw, remove lamp and carefully insert new one. Do not touch the actual lamp bud with fingers as this will shorten lamp life. If you do touch lamp bud clean off with cloth and alcohol.

The shiny copper finish can be preserved with a marine grade polyurethane if the fixture is painted before being installed. Fingerprints will show up immediately as discoloration — to get glossy finish back, use Brasso brand polish. A Verde effect can be created by applying commercial solutions usually available at paint stores or by using our formula on the web site at: www.fxl.com/patina.htm. Test effect on throwaway part (copper pipe or fitting) first for client approval.

For high performance and predictable lamp life, supply fixture with between 11-11.5 volts with all lamps installed and operating. Use FX LUMINAIRE Transformers only — FX WILL NOT WARRANTY OR REPLACE ANY COMPONENTS DAMAGED BY OTHER MANUFACTURER'S EQUIPMENT. The FX transformer is specifically designed for the high tech lamps used in our fixtures — the use of inferior power supplies can cause premature lamp failure and other problems including the risk of fire.

RISK OF FIRE WARNING: DO NOT USE FX FIXTURES WITH ANY STYLE OF TRANSFORMER THAT EXCEEDS 14 VOLTS ON THE SECONDARY.

Why Use the LiteSplice?

Without a waterproof splice connection any system will develop voltage loss and low grade shorts making your lighting professional life hell. Below is our proven method of insuring you and your client years of trouble free high performance from the FX System.

FX Does NOT recommend the use of Quick Clip style connectors or Pre-filled wirenuts because they are not waterproof and can rot out creating resistance and shorts. A little more time spent during installation is repaid handsomely in reduced service calls.

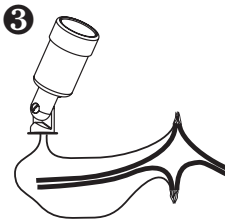
❶

Begin with a 12,10 or 8 gauge direct burial low voltage cable mainline. (Use stranded 12 gauge THHN (120v style) wire for conduit runs such as wall lights or trellis lights).

❷

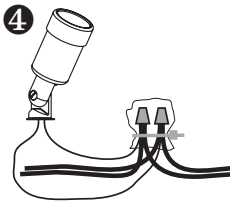
Cut the mainline cable in half and strip back 3/4" of the insulation from each side to expose the multi-strand copper conductor.

❸



Join one of the fixture's conductors to each side of the mainline as shown in the diagram. Since there is no polarity in low voltage it doesn't matter which side is which when joining the conductors together. Install a wirenut on each side. Now is the time to test the individual circuits (cables) for voltage drop. If you were a good boy and followed the Circuiting Guidelines included with the FX MultiTap Transformer you should be able to provide each fixture with between 10.5 - 11.5 volts with all lamps installed and operating. Test now before you install the SpliceGel because it's easier to stick the VoltMeter's probes inside the wirenuts to get a reading.

❹



Pump about two squeezes of SpliceGel into the baggie and insert both wirenut connections into it. Push out the air and work the Gel into the bottom of the wirenut assuring a waterproof connection. Install the cable tie as shown and cinch down to complete the most cost effective permanent waterproof low voltage connection known to man. The Gel will set-up rock hard in about 3 days. It's best to leave 12-18" of slack at each fixture to allow for relocation or if you need to splice in additional cables in the future. Since this is a permanent splice solution — you will need to cut it off and start from scratch to add cables to the splice.

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System Layout

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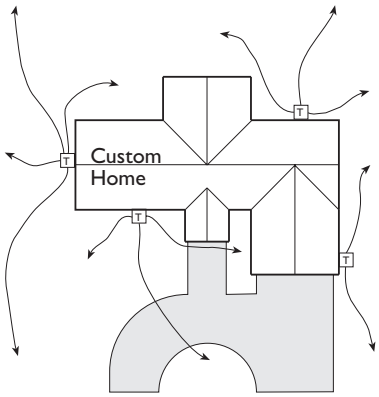

Single Transformer

When using only one transformer, it is very important to center the transformer on the wattage load. If the project calls for 135 watts in both front and back yard, the PX-300 or PX-600 should be centered on the side of the house that will receive the most lighting. A common mistake is to locate the single transformer on the service side of the house or in the garage, which might result in excessively long cable runs to reach lighted areas. The primary goal in laying out low voltage systems is to minimize cable runs because of the negative effect voltage drop has on lamp output performance.

Multiple Transformers

A common mistake in laying out multiple transformer circuits is to group several transformers in one location because of utility or visual considerations only. As with any low voltage layout, the prime directive should be to locate the transformers as close to the fixtures as possible in order to minimize cable runs and resulting voltage drop. The other multi-transformer layout consideration is "use zoning". Having several transformers allows the client to selectively control light in separate areas. This approach is similar to irrigation design in that the goal is to individually control areas that have similar needs. In lighting, a recreation area has different lighting needs than does a front entry. Therefore, the lights that serve these different lighting use areas need to be on separate transformers and switch controls.

Circuiting Guidelines

Loads PER CABLE

Add cable runs as necessary

Close-Zone 0-40'

12 Gauge 160 watts maximum **10** Gauge 180 watts maximum **8** Gauge 220 watts maximum

Mid-Zone 40-80'

12 Gauge 120 watts maximum **10** Gauge 140 watts maximum **8** Gauge 200 watts maximum

Far-Zone 80-120'

12 Gauge 100 watts maximum **10** Gauge 120 watts maximum **8** Gauge 180 watts maximum

Out There Zone 120-160'

12 Gauge 60 watts maximum **10** Gauge 100 watts maximum **8** Gauge 160 watts maximum

Lamp Life

Volts at Lamp	Lamp Life of Rate	Lumen Output of Rated
13.0*	50%	350%
12.5*	75%	175%
12.0	**100%**	**100%**
11.5	200%	80%
11.0	300%	75%
10.5	500%	65%
10.0	900%	50%

- Lamp life is rated in hours of operation. If lamps are rated for 4000 hours at 12 volts it means that at 4000 hours, 50% of the lamps are still working and 50% are not.
- For maximum light output, tune lighting circuits to provide between 11.5 and 12.0 volts as measured at lamp terminals when all of the lamps on the circuit are operating.
- For longer lamp life, adjust voltage down so lamps receive between 10.5 and 11.5 volts at the lamp terminals.
- Voltage can be regulated by adjusting circuit load/run by using FX PotenxaX Transformers.
- To determine circuit voltage, use FX Digital Voltmeter.

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