

Nightscaping® Newsletter



Troubleshooting Steps

It's troubling news. You just received a call from a recent client. Their Nightscaping® outdoor lighting system is not working. It didn't come on last night at sunset. "Can you come over today to fix it?" Or worse, it's the end of the project and you just finished a new installation of a Nightscaping® system. It will not come on.

When an irrigation system operates, it's usually easy to tell whether or not it is working properly. One can see water emitting from the sprinklers. But using electricity to operate a lighting system is a bit more complex, and right now nothing is working. "What Do I Do Next?"

First, a brief review of electricity. **We work with three basic components: wattage, voltage, and amperage.** Low-voltage lamps are rated at watts consumed. According to Ohm's Law, watts equals volts times amps. Thus, a 12watt LO93 lamp running at 12volts from a Nightscaping® transformer would generate 1 amp of current.

Low-voltage outdoor lighting systems can be installed and examined with the use of common hand tools, **but an essential tool that is a must for any outdoor lighting professional is a multi-function digital voltmeter.** Something that shows digital voltage, digital amperage, and can check for continuity. Another useful tool in troubleshooting Nightscaping® lighting systems is our Fustat Tester. This is a resettable fuse that can be inserted in place of a burned out fuse during testing.

Let's examine a system that is apparently not working. Is your voltmeter handy?

- Check for +/- 120volts at the socket where the transformer plugs in.
- With the transformer plugged in, turn it on by either using the by-pass toggle in the lower right corner or activating the timer/controller. With the unit on, check the low-voltage terminal blocks for approx 12-14 volts. Also check to see the black dim-bright slide switch is not in the OFF position.
- If no voltage, is the Fustat burned out? This is a necessary protection point for the lighting layout! Check to see that the link and spring are intact.
- With confirmed low-voltage electricity available at the terminal blocks, check to see that the low-voltage cable is properly connected. Remember that one-half of each cable must be connected to the WHITE terminal and the other half to the COLOR terminal.
- Having done all of this, go to a nearby lighting fixture and check for voltage in the lamp socket. If voltage is present, the lamps are possibly burned out and need replacing. If no voltage, there is a break in the cable that is preventing a complete electrical circuit.
- If the fustat is burned out, install our Fustat tester and again test for voltage. With good voltage, test sockets in the fixtures and replace lamps as needed. Remember that the maximum wattage load for each Nightscaping® transformer can be determined by examining the labeling on the case. And in no case can a low-voltage outdoor lighting circuit exceed 25amps of current (see NEC 411).

If the lighting system has 120volts available power, good Fustats, good lamps, and still will not operate, there may be a short in the lighting cable, a short-to-ground in the fixture connections, or a short in the transformer itself. **If the above steps do not resolve the situation, it is best to directly contact your local Nightscaping® field representative for FREE on-site assistance.**

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Last Chance For A Free Peek!

You have until Halloween to request the section of your choice for free

Nightscaping's® eBook, *A Guide to Starting Your Own 12-Volt Outdoor Lighting Business*, was developed and created by **William J Locklin** as a teaching manual for those entering the landscape lighting field, or for those that want to refresh their business practices. **The teachings include technical, design, fundamentals, advanced concepts, business, customer service, and more.**

An e-book is one that is sold on-line in a computerized format rather than printed and binded in hard copy. Our Nightscaping® E-book is supplied in a Pdf format and can be saved on your computer and/or printed. If you don't already have Adobe Acrobat on your computer, it can be downloaded at this [Adobe Products](#) link.

You may receive any one of the following sessions free if you are interested in developing your lighting knowledge. Thereafter, you may purchase the entire book for one flat rate.

Session 1

- **Is 12-Volt lighting the Business for You?**
- **Why Light?**
- **What is Light?**

Session 2

- Introduction to 12-Volt Lighting
- Basic Design

Session 3

- The Six Components of 12-Volt Lighting
- Developing A Lighting Design
- Major Concepts

Session 4

- Installing the System
- Maintaining the System
- Troubleshooting

Session 5

- Advanced Lighting Concepts
- Building Your Lighting Business
- Incorporating Lighting into Landscape Construction

Session 6

- Maintaining A Lighting Business
- Course Review

Find out if *A Guide to Starting Your Own 12-Volt Outdoor Lighting Business* is for you by requesting the free session of your choice. Email Rebekah@nightscaping.com the following required information to receive your first session via email.

- Name
- Mailing address
- Phone number
- Company name
- Current profession
- Professional license(s) held and license number(s)
- Number of previously installed lighting jobs (estimate)
- Preferred brand of lighting
- Session # requesting

You will receive an email in response with an attachment of the Nightscaping® E-book session of your choice.



Why Is It Best To Replace All Your Lamps At The Same Time?

We've always suggested it with regular maintenance, but let us explain.

When installing a lighting system, each run is calculated to account for appropriate voltage drop, with a voltage output not to exceed 12 volts. **If one or two fixtures on the same run blows a lamp, the voltage at the remaining fixtures will slightly increase, thus reducing their lamp life.** The effect will depend on how long multiple lamps have been burnt out, and what the resulting voltage output is.

When servicing a lighting system, if you only replace the lamps that have burnt out, then you are leaving lamps that have been strained and are most likely close to the end of their lives. You'll finish your work, leave the job site, and feel like your customer should be more than satisfied. But, those lamps that weren't changed will burn out shortly, and your customer will be calling you asking for your time, which always equates to money, wondering why your service job didn't last longer than it did.

The previous explanation also says a lot about a popular way to wire a system that Nightscaping® does NOT endorse, its called the Hub System. The way it works is you supply an excessive amount of voltage, often as high as 15 volts, to a long run with numerous lamps on it. The intention is to only supply 12 volts to your lamps once voltage drop is calculated. **The system may work well at first, but as soon as you blow one or two lamps, the voltage to the remaining lamps will be radically excessive.** This will cause all your lamps to blow out in a short amount of time. **Theoretically, the last surviving lamp on a run could be receiving as much as 14 volts. Yikes!**

Below is an Early Lamp Burnout chart which can help you troubleshoot what might be wrong with a lamp and socket that isn't properly functioning. **As an installing contractor, it is often difficult to troubleshoot a system that you can't monitor on a regular basis.** Asking homeowners for details will often discourage you more than help you.

You may also use the System Check-up guide below to take you through the steps of troubleshooting a Nightscaping® system on site.

Support Material:

[System Check-up](#)

[Early Lamp Burnout](#)

[The Hub System](#)

[Newsletter Pdf](#)

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