

# Church Production



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# LIGHTING TOOLS:

## Gadgets that Make Your Job Easier

By Greg Persinger

**When I was first asked to write an article about lighting tools I got excited.** Here was my chance to write about some of the tools, gadgets, and gizmos that I use in my job as a lighting professional.

This list is a sampling of items that I find useful in my work and that I hope you will find useful as well. It is not comprehensive, and the products are not listed in any particular order, but they are items you would find in use by the production staff at a theater, arena, or on your favorite concert tour. Also, this article isn't meant to provide in-depth detailed information about the product, so be sure to take advantage of the included Web addresses to read more about the products that interest you.

### The Personal Computer

One of the best lighting tools that I can think of is my laptop computer. Whether you are a PC user or a Mac person like me, I find my laptop to be one of those tools that is indispensable.

One of the things that I find invaluable about having a laptop is the fact that your lighting manuals can easily travel with you. It hasn't been that many years ago that it was commonplace to photocopy equipment manuals and carry them with you. Today, downloadable manuals in PDF format are commonplace. I personally have more than 40 Gigs worth of PDF manuals and cut sheets for various pieces of lighting gear in my computer. I highly recommend that you download all of the equipment manuals you use so you have them on hand when needed.

In addition to manuals, a laptop can be very handy for taking notes and documenting your programming. I personally like to use MacJournal by Mariner Software (\$34.95), as it not only allows me to take text notes, but it has the ability to include pictures, audio, and video media in my documents as well. This makes it a handy production tool. With a digital camera it is quick and easy to make visual as well as written

notes about what is happening on stage, making your computer a powerful production tool. If you are a PC user,

they make a Windows version of the software called WinJournal.

Other software that I find helps make production programming easier is

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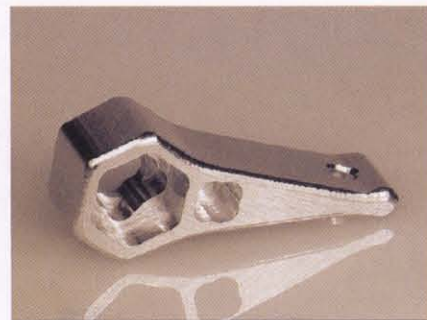
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iTunes (free) which runs on a PC or Mac. I find it very easy to "scrub" or shuttle the music back and forth in the timeline while programming. It sure beats the days of fast-forwarding and rewinding a cassette tape or even trying to shuttle a CD player. The same holds true for a computer-based video player, such as Windows Media Player by Microsoft (free) or Quicktime (free). These can make it much easier to watch video while programming than using a video tape deck or standalone DVD player.

My next tool is an iPod (\$50 - \$500) MP3 player. When it isn't practical to use a computer for audio playback, an MP3 player fits the bill. Always be sure to carry your charger and sync cable with you, as you never know when you might need to add a few late additions to the program.

The last piece of software that I find handy is for doing lighting plots or

My next tool is an iPod (\$50 - \$500) MP3 player. When it isn't practical to use a computer for audio playback, an MP3 player fits the bill.



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a visual drawing of all the lighting fixtures, their placement, and all pertinent information such as the fixture type, color, dimmer number, and the like. I use Vectorworks Spotlight from Nemetschek Software (\$1,595) which is a full-featured CAD program for PC or Mac. Vectorworks is probably a bit complicated and pricey for a casual user, but might be perfect for those doing annual Easter and Christmas productions, as it allows for coordination of the stage, set, and lighting design.

A more basic lighting design program is LXFree from Claude Heintz Design (free) which is an open-source program; currently there is only a Mac version available, but a PC version is in the works.

Another basic PC-based lighting design program is Microlux Light by LuxArt (\$70), which is a stripped-down version of their Microlux Professional design



STAGE JUNK | ULTIMATE FOCUS TOOL

**To keep from having data problems it is good to use a DMX opto-isolated data splitter when sending data long distances or to many different devices.**

software. While it doesn't have all of the bells and whistles, it does all of the basic plotting and paperwork.

### A Wrench by another Name

When working on a lighting hang and focus, there is no better tool to have than a good wrench.

Over the years, your basic Crescent brand C-wrench or other adjustable wrench has become the standard, but just as there are those that have worked to make a better mousetrap, there are those that have worked to make a better lighting wrench. One of those wrenches is the Mega-Combo Wrench by The Light Source (\$8). This small machined-aluminum wrench fits all of the standard bolts on a lighting clamp, and it fits on a lanyard or a key chain, making it easy to carry with you at all times. Its low price and high versatility make the Mega-Combo Wrench a favorite.

The Ultimate Focus Tool by Stage Junk was recently introduced to the industry. At \$90, this tool is over 10 times more



**GAM** | CHEK LINE OF CIRCUIT TESTERS

expensive than a Mega Wrench, but is feature-rich. The Ultimate Focus Tool fits all standard lighting clamp bolts. In addition, it fits most standard fixture handles, most wing nuts, most case

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handles, some moving light thumb nuts, and some small shackles. It also features a continuity tester that tests lamps, plugs, fuses, and the like, as well as having a built-in pin splitter for stage pin connectors. Truly, this is one of the most comprehensive all-in-one lighting tools on the market. If you decide that \$90 is too much to pay, there is the \$40 Standard Focus Tool that has most of the functionality of its big brother but lacks the circuit testing capabilities.

### Circuit and Data Testers

In lighting we typically deal with three different kinds of problems: mechanical problems, electrical problems, and data problems. I have already talked a bit about the wrenches that can help with the mechanical issues, but how about electrical problems?

A multimeter is an inexpensive tester that is readily available at your local hardware store. With the ability to test AC voltage, DC voltage, and continuity, you can use the multimeter for a variety of things. With the AC voltage test, a multimeter can check that a dimmer is working or that a circuit has power on it. With the continuity check, it can test that a cable or lamp is good and that power will flow through it. The DC voltage check is great for testing batteries.

If you are looking for something that is a bit more specialized, GAM Products makes several lighting-specific circuit and continuity testers. The GAM Chek line (\$39-\$179) of products tests for good lamps and fixture continuity, good cables and cable continuity, power availability, circuit polarity, and

correct wiring. The testers come in several configurations including an Edison, a stagepin, and a twist lock connector version, as well as a version with bare cables that allows you to add your own connectors.

Of course, if we aren't dealing with electricity, we are dealing with DMX data, and with moving lights and multiple runs of DMX prevalent in a lighting rig, it is more important than ever to have a few DMX test tools.

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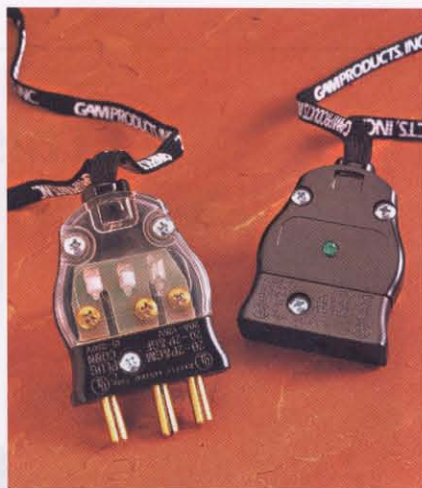
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Another basic PC-based lighting design program is **Microlux Light by LuxArt (\$70)**, which is a stripped-down version of their **Microlux Professional** design software. While it doesn't have all of the bells and whistles, it does all of the basic plotting and paperwork.



GAM | CHEK JR. CIRCUIT TESTERS

A couple of favorites are the DMX 512 Line Tester by Doug Fleenor Designs (\$32), which is a five-pin XLR with multicolored LEDs in it. If DMX data is present, the LEDs will flash to let you know that you have data. If the LEDs light up in an incorrect manner you know pretty quickly that something is wrong with your data stream. This tester won't verify that the data is valid, but it will tell you that something is happening on the data line, quickly and at a fairly low cost.

To tell if you have valid DMX data, you can use a DMX tester such as Goddard Designs Lil'DMXter (\$935) or Doug Fleenor Designs Gizmo (\$950). Both of these are powerful test tools that can send data as well as receive and



## QUICK-LINKS

### APPLE COMPUTER

iTunes, Quicktime, iPod  
(800) 275-2273 • [www.apple.com](http://www.apple.com)

### CLAUDE HEINTZ DESIGN

LXFree  
[www.claudeheintzdesign.com](http://www.claudeheintzdesign.com)

### DOUG FLEENOR DESIGNS

EDMX 512 Line Tester, Gizmo, Opto-Splitters,  
DMX terminator  
(805) 481-9599 • [www.dfd.com](http://www.dfd.com)

### GAM PRODUCTS

GAM Chek line  
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### GODDARD DESIGNS

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ew3001EMG2 personal monitor system  
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### LEX PRODUCTS

Plug-In DMX 512 Isolator Splitter / Repeater,  
DMX terminator  
(800) 643-4460 • [www.lexproducts.com](http://www.lexproducts.com)

### THE LIGHT SOURCE

Mega-Combo Wrench  
(704) 504-8399 • [www.thelightsource.com](http://www.thelightsource.com)

### LUXART

Microlux Light • [www.luxart.com](http://www.luxart.com)

### MARINER SOFTWARE

MacJournal  
(612) 529-3770 • [www.marinersoftware.com](http://www.marinersoftware.com)

### MICROSOFT

Windows Media Player  
(800) 642-7676 • [www.microsoft.com](http://www.microsoft.com)

### NEMETSCHek SOFTWARE

Vectorworks spotlight  
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### PATHWAY CONNECTIVITY

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### SETWEAR

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### STAGE JUNK

Ultimate Focus Tool, Standard Focus Tool  
[www.stagejunk.com](http://www.stagejunk.com)

### SWISSON

X-MT-120 DMX Measurement Tool  
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Over the years, your basic Crescent brand C-wrench or other adjustable wrench has become the standard, but just as there are those that have worked to make a better mousetrap, there are those that have worked to make a better lighting wrench. One of those wrenches is the Mega-Combo Wrench by The Light Source (\$8).

**SWISSON | X-MT-120 DMX MEASUREMENT TOOL**

verify the DMX data, and are very handy when troubleshooting DMX problems. In addition, a tool such as the Swisson X-MT-120 DMX Measurement Tool (\$350) can be used to send DMX data to dimmers as well as to receive and validate DMX from the console for testing purposes.



To keep from having data problems it is good to use a DMX opto-isolated data splitter when sending data long distances or to many different devices. A data splitter electrically isolates the lights from the console and eliminates ground loops and noise on the line that can interfere with the data signal. It also regenerates the signal, keeping the signal strong to all of your fixtures.

Many different companies make opto-splitters. Lex Products makes the Plug-In DMX 512 Isolator Splitter/Repeater (\$300). It's a simple, neat, and tidy two-way splitter great for small systems. For larger systems, Pathway Connectivity and Doug Flenor Designs are two of many companies that make a product that fit in the large systems category.



The last DMX tool I will mention is a simple DMX terminator. Essentially, this is a five-pin XLR with a resistor soldered across pins two and three. This terminates the end of a DMX line and keeps the data stream stable. Some people decide not to terminate their DMX lines, but with the recent implementation of

**LEX PRODUCTS | PLUG-IN DMX 512 ISOLATOR SPLITTER / REPEATER**



Another handy product is a pair of Hot Hand gloves by Setwear (\$40). These gloves have a special added layer of material that slows the heat transfer from a hot lighting fixture to your hands, allowing you to work with a hot fixture for much longer.

Remote Device Management over the DMX line, termination is more important than ever. Lex Products and Doug

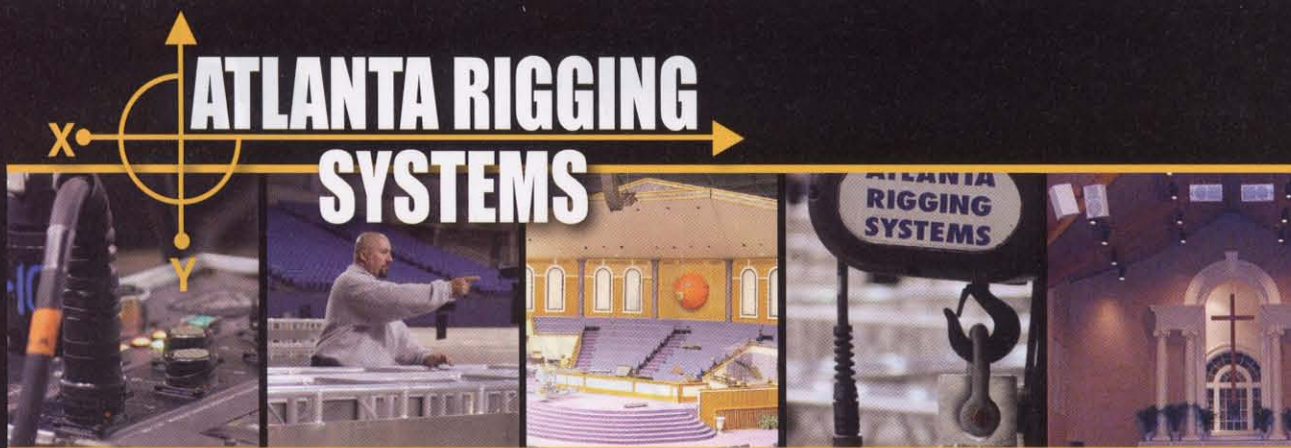
Fleenor Designs are two companies that sell DMX line terminators.

### Other Handy Items

Another handy product is a pair of Hot Hand gloves by Setwear (\$40). These gloves have a special added layer of material that slows the heat transfer from a hot lighting fixture to your hands, allowing you to work with a hot fixture for much longer. Doing a lighting focus without burning your hands is always a wonderful thing. The Hot Hands work great and come in several different sizes. Setwear also makes standard stagehand gloves, such as the Pro Leather gloves as well as tool bags, pouches, and other production-related items.

While this list is certainly not definitive, these are some useful tools that not only increase your productivity, but also make your life easier when working on a lighting rig. Again, be sure to check the product websites for more information on the products and, if you find something that you believe is really useful, drop me an email and let me know. Happy lighting!

*Greg Persinger is the owner of Vivid Illumination and likes lighting gadgets. Share your favorites with him at [greg@vividillumination.com](mailto:greg@vividillumination.com).*



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