

# THE COMPLETE SHOP ORDER

By John McKernon

Creating a correct professional shop order is easy, but many folks don't know how, so here are my thoughts:

A Shop Order is simply a list of everything you need to implement your lighting design. It tells your electrician and general manager what they need to get for you, by renting, buying, or building. If the equipment is to be rented, the Shop Order is submitted to a rental shop for a bid.

The first principle to remember is that a Shop Order is a legally binding contract. If you want something, put it on the list. If not, it probably won't be provided, and it can be mighty hard to prove that you wanted it if you didn't say so.

It's also important to remember that the Shop Order the designer submits is far from the last word on the equipment. A smart designer knows which items he (or she) needs to be very specific about requiring and which items are best left for the show's electrician to specify.

Over the years, a standard format for Shop Orders has been preferred by most shops, electricians, and designers. As we talk through the various aspects of writing a Shop Order, you'll see why this format is so important.

## 1. TITLE PAGE

The first page of a standard Shop Order is always the Title Page, which includes:

- The name of the show
- The date the Shop Order was written (in case there have been revisions or multiple productions of the show)
- The Designer's name, phone number, and (optionally) address (so that everyone can call you with questions to clarify what you want or to ask about possible substitutions.)
- The General Manager's name, address, and phone number (the shop needs to know who to send the bid to, and who will be writing the checks that pay for everything)
- The Electrician's name and phone number
- The date the equipment needs to load out of the rental shop and/or the date the equipment must arrive at the theatre (If the shop is providing trucking, they need to know when you need to it to arrive. Otherwise, they need to know when the trucking company will be picking it up.)
- If the equipment is for a show with a limited run, the closing date. The rental bid may take the length of the run into account. Generally, the first three weeks of a rental go for a sizable flat rate which then drops to a lower weekly rate starting with the fourth week, but a short run may affect the rates.
- Notes that give general conditions

The "general conditions notes" are extremely important. Some cover safety issues, others lay out your standards for quality. Particularly important are things like "all units to come with lamp, c-clamp, and safety cable". If you don't specify lamps or c-clamps for the lights, the shop will not automatically supply them. Why? Because in the shop, the lights are stored without lamps (because the wattage is often variable), and since many times lights are hung from side arms or other devices, the yokes are left bare. By including "lamps, clamps, and color frames" in the general conditions, you won't have to include them every time you list a light in the rest of the Shop Order.

These notes also frequently "cover your butt". Including phrases like "Entire package is to be made ready by the supplier and is to include all connectors, cables, controls, frames, etc. so as to comprise a complete working system" really are necessary. By including these words, you put the responsibility on the shop for including everything that really is needed to make it work. Good shops know this and do it as a matter of course, but others will blame you for not specifying the funny box that makes their dimmers work with the console you've chosen.

Other golden phrases include "Absolutely no substitutions without written permission of Designer" and "any revisions or substitutions must be fully disclosed at time of bid". Your idea of a suitable replacement might well be light years away from what a hard-pressed rental salesman considers acceptable.

## **2. EQUIPMENT SUMMARY**

The second section of the Shop Order is a short list summarizing the major elements of your order. This section is used by the rental shop to get a quick idea of how big your show is and to help them put a bid together quickly.

The number of lights and their types, the console, the number and sizes of dimmers, and any other expensive items (such as radio dimmers or multi-cable) are included, because they influence the cost of the rental significantly. Accessories, hardware, and standard cable are not included, and things such as lamp wattages and perishables are also left off this part of the order.

Because this section is used only as a general guide for bidding, it is not definitive. It's provided by you purely as a help to the shop, and you can omit it if you're pressed for time.

## **3. EQUIPMENT BREAKDOWN BY POSITION**

This is the real heart of the Shop Order. This section lists everything you want for the show, broken down by where it will be needed. The list follows the same order your instrument schedule would follow: Front-of-house, then overhead onstage electrics, to sidelights, to floor units, and then practicals and other set-mounts. By breaking the list down this way, the shop and your electrician can pack the lights into appropriate crates,

they can better understand what you're doing (and can spot possible errors you've made), and they might be able to help you by suggesting better ways of doing things.

Here's an example:

## **NO. 2 ELECTRIC**

- 2 19 degree Source Fours, 575w
- 6 PAR 64 MFL, 1kw
- 3 Wybron ColorRams for PAR 64s
- 2 Mini-Ten 500w (used as worklight), with switch at stage manager's desk
- 1 21' pipe with hardware to clamp to existing grid pipes

Stiffeners

Scroller control cable and power supplies as needed

Jumpers

Showing the equipment broken down this way makes it crystal clear that the electrician will need to order enough control cable to get to the scrollers, that this position will need to be rigged before lights can be hung on it, and that you don't want the pipe to rotate during focus (hence the stiffeners).

If this same equipment was merely included in a summary list, the electrician and the shop would have to study your drafted light plot to discover most of this information, and some things (like jumpers, control cable, and stiffeners) would never be connected with where they're needed.

You can also see from this breakdown that two worklights are needed. The electrician will then provide the appropriate cable and switches for the stage manager to turn them on and off without involving the dimmer racks or the console.

Some things to watch out for:

### **Lights**

Do you need top hats? Half hats? Color extenders? Barndoors? Donuts? Template holders? Side arms or c-clamps? Tees for side arms? Effects wheels? Safety cables? Color frames? Color scrollers? What wattages? If PAR cans, what beamspead (VNSP/NSP/MFL/WFL)? Lights are usually supplied with standard 3-pin stage plugs; if

you need twist-locks, be sure to ask for the necessary adapters (including nib-in or nib-out).

### **Striplights**

Make sure you are very specific about your striplights. Do you want them hung from a pipe or do you want them to sit on the deck? If you want them to hang from a pipe, you'll need "hanger irons with c-clamps". If they're sitting on the deck, you may want them to be stationary, in which case you'll want "with trunnions" or if you plan to move them during the show you'll need "with castered trunnions".

Striplights also come in a bewildering variety of sizes and configurations. Be absolutely clear. Just saying you want an 8'-12 light R-40 striplight won't do it, because it could be either 3 or 4 circuits. And what kind of R-40's? Spot? Flood? 75w? 150w? 300w? Do you want flippers for them? Single or double? If single, which side do you want them on--upstage or downstage?

### **Booms**

Be sure you say how tall you want each boom and whether or not you want the pipe cut to exactly the length you say or whether the length is simply a minimum. If you don't say you'll probably receive whatever pipe the shop has on hand. If your carpenter will be securing safeties to the top of the boom (and he should), be sure to ask for a "ring tie top". If you don't want the booms to twist on their threads, specify "locking hardware". Specify whether you want a "50lb. base" or a "flange base" (or whatever).

### **Electrics Pipes**

If you're going into a hemp house (or any other space without pipes), you will need to specify the actual pipe that makes up the electric, so be sure to order it (and say what diameter you want). It can also be smart to say "Schedule 40 black steel pipe" if you're at all in doubt as to what the shop might provide. If the system pipes in a counterweight house aren't long enough, put the pipe needed to extend them on the Shop Order. Do you need bumpers? Is the pipe really going to be a truss? If so, what kind of truss? Triangle? Square? 12"? 24"? Be specific. How is the truss going to hang? If nothing else, say "Rigging hardware as needed" if you don't have a firm opinion; at least you've told the shop to be ready to supply something.

You may also need "Zetex borders", the modern replacement for asbestos. If so, be sure to specify what length and height. Zetex doesn't come in black, so if you absolutely need it black, say so.

### **Set-Mounts**

If you plan to mount lights on pieces of scenery, be pretty specific about how you want it done. If you don't have any idea at all, say something like "hardware to mount to scenery

per electrician", which at least tells your electrician to think of something. Also be sure to include cable for these lights, even though the actual length of the cable is up to your electrician.

## **Cable**

Generally, you can leave specific quantities and lengths of cable up to your electrician. However, if you want anything other than plain old stage cable, say so. If you need multicable, say exactly how many circuits for each (6 or 12) and what length. It's also wise to specify "Pyle National connectors" for multicable so that the shop knows you want the kind that connects directly into the dimmer racks. Some shops will tape regular cable together into bundles and call it "multicable". If you specify the Pyle National connector you're much more assured of getting what you want. Because multicable is expensive, you will almost certainly get no more than what you specify on the Shop Order, even if the electrician discovers you need longer runs later. That doesn't mean the shop won't get you the longer runs, but it does mean they'll want more money for them.

## **3. DIMMERS AND CONTROL**

After you've listed the equipment in each position, there is a section for dimmers and control. This is where you say how many dimmers of each capacity you want as well as what kind of console you want to use.

Here is a fairly typical entry:

- 2 Racks of 48x2.4kw (Racks of 96 are not acceptable)
- 4 Racks of 24x1.2kw
- 1 ETC Obsession 600 with appropriate monitors for electrician
- 2 Obsession monitors for production table(through entire preview period) with cables and interfaces as needed
- 1 Power regulator/spike protector
- 1 High-speed (300 cps minimum) printer for console (to be returned after opening)

Control cable for scrollers

DMX-512 opto repeaters, protocol converters, and other power supplies and interfaces as needed for scrollers, dimmers, etc.

You can see from this that the designer wants small racks, perhaps so that they can be more easily hoisted up into the dimmer room. He also plans to use the console monitors through previews, either during performances and/or daytime rehearsals.

A power regulator is essential, and a printer is a (relatively) quick way to record cues onto paper for backup or posterity. Having the show on floppy disks isn't any good if you have to replace the console suddenly one night with a different model that doesn't take your disks!

#### **4. MISCELLANY**

This section is for all the other things that you might need that don't fit anywhere else. Things like ladders, Genie lifts, a particular size and shape of production table, or lights for it, or a computer to run Lightwright. And of course, better to say it now than cry later.

#### **5. SPARE EQUIPMENT**

Unless you're doing a show that you've done before, you will probably want to have a few spare lights on hand for the inevitable changes. Some designers simply ask for "Spare units, all types", some will want "10% spares", and many will provide a detailed list; it depends on what they want to be sure of having. If the Production Electrician has worked with the designer a lot, he will know what kinds of spares the designer will want.

#### **6. PERISHABLES and PURCHASES**

Perishables include things like duct tape, color media, floppy disks, printer paper, tie line, and all the other things that electricians need. Best to simply say "perishables as per electrician" as one of your general conditions on the title page.

If you need something that isn't normally available as a rental, it will need to be bought for the show. If something needs to be built but not rented, include it on the list here. If you don't want the electric's shop to provide it, include it on the Shop Order but say who's building it and that you don't want it included in the bid. That way you've told everybody you need it and where you plan to get it.

So that's really all there is to doing a proper complete "Broadway style" shop order!

Just be very clear and aware of what you're saying:

- BE PREPARED
- KNOW WHAT YOU WANT
- KNOW WHAT YOU DON'T KNOW

Of course, if you're the electrician, you'll need to know **everything**, right down to the tiniest nut and bolt!