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# ELECTRICAL SERVICES

From under carpet wiring to overhead lighting, Freeman has the power to simplify your electrical needs and installation. We've answered your most common questions below to help you place your order or prepare for a detailed discussion. Whether you require basic household/office power or a more technical installation for equipment, audio-visual presentations or truss lights, our electrical specialists and qualified electricians are always available to assist you.

## **How do I know how much power I need?**

First, review a layout of your exhibit, noting all of the items in it that require power. Consider lighting, computer equipment, and your own product. Are you bringing or renting any a/v equipment or ordering catering services that might need power? Will you be using a lead retrieval machine? If it's an item that plugs into a standard wall outlet found in a home or office (in North America), it will require 110/120 volt power. 208 or 480 volt power is generally used for machinery or industrial cooking devices and is ordered by single or 3 phase.

Next, mark the voltage and wattage or amperage (referred to as "load") (100 watts = 1 amp) of each piece of equipment at its location in the booth. This information should be provided on a name plate or stamp usually located on the back or bottom of the equipment. If not indicated, check our accompanying electrical usage guide for estimated wattages for common items used at trade shows or call your rental company/caterer for specifics. For lighting, loads are dictated by the wattage of the bulbs. Arm lights included with Freeman exhibit packages use 200 watt bulbs. Keep in mind that you need to order power for any lighting within your booth unless the lights are ordered directly from the Electrical Department (those listed on the Freeman electrical order form).

Finally, total the wattage for the 120 volt devices in each area and select an outlet that meets or exceeds that total. Separate outlets should be ordered for each piece of equipment and/or each power location to help minimize tripping/power outages. It is always safer to slightly overestimate your power requirements. Wattage or amperages cannot be combined for 208 or 480 volt apparatus. Please order separate outlets for each.

## **Do I need to order labor?**

As the official service contractor, electrical installations must be performed by Freeman union labor. Labor is required for any electrical work over and above the delivery of outlets to the back wall of inline booths. Labor orders will automatically be input upon receipt of an electrical layout for under carpet installation (floor work) or to connect any 208 volt or higher services (hook up). Dismantle labor for electrical services is calculated at 50% of the installation time since much of the work is performed on a mass basis after booths are removed from the exhibit hall. Please see the electrical labor order form for further details, rules and regulations.

## **What is an electrical layout and why do I need one?**

Like your own home, electrical boxes and wiring should not be visible once the exhibit is completed. At show site, they are the first things to be installed so that they can be hidden by drape, walls or counters and under flooring or carpet. Electricians, therefore, work on a blank slate. A good electrical layout or floor plan provides them with a simple overhead view of your booth indicating the locations and load of each electrical outlet and the orientation of your booth within the show itself. The layout should be to scale and provide specific measurements to each outlet along with surrounding aisle or booth numbers to ensure accuracy. For island booths, a main power location must also be indicated as it is the location from which other outlets are fed. Please see the sample layouts and electrical grid for further information.

When a layout and credit card are provided in advance, Freeman makes every effort to ensure that the floor work is completed before you arrive so that there is no delay in assembling your booth. Once carpet is laid, installing or changing electrical services becomes much more difficult and potentially costly.

Please note that layouts, complete with mandatory information, are required prior to the deadline date for electrical orders to be eligible for advance rates. Layouts are not required if all outlets are located at the back wall in inline booths.

## **Is the price for power per day?**

Outlet or connection prices are typically for an entire show.

## **What is 24 hour power?**

Many facilities these days are energy conscious and therefore turn off power overnight during show days. Power is turned off 1/2 hour after the show closes at the earliest and restored no later than 1/2 hour before the show opens the following day. 24 hour power is, as it sounds, power that is continuously on 24 hours per day.

If your booth includes, for example, refrigeration equipment, an aquarium or programmable apparatus that depends on uninterrupted power, you should consider ordering 24 hour service. Power is usually not turned off during move-in or move-out.

## **Where does the power come from?**

Depending on the facility, the power can come from overhead catwalks, floor ports, columns, wall outlets or a combination of these sources. Check with the local Freeman branch office for more information.

## **Where will my power be located?**

In-line and peninsula booths will find their main power source on the floor somewhere along the rear drape line of their booth. Island booths need to submit an electrical layout. Please see the sample layouts and electrical grid for further information.

## **What if I need power at another location besides the rear of my booth? What if I have multiple power locations?**

Exhibitors requiring power at any location other than a back wall must submit an electrical layout. Please see the sample layouts and electrical grid for further information.

## **How many places will I have to plug in? How many things can I plug in?**

For planning purposes, you should always assume that there is only one connection point per outlet ordered. Power strips can provide additional sockets but do not confuse having more places to plug in with additional power. For example – An order is placed for a 500 watt outlet. A track light with 4 – 100 watt bulbs is plugged in to a power strip connected to the outlet, using 400 of the 500 watts. Any lighting or equipment now plugged in to a second socket may not exceed 100 watts.

Also keep in mind that power strips are designed, for safety purposes, to trip at 1500 watts or 15 amps. Using a power strip with a 2000 watt (20 amp) outlet will reduce it to a 1500 watt outlet.

All orders exceeding 120 volt/20 amps provide one connection point only, cannot accommodate power strips and require labor for installation.

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### **Can I bring my own extension cords and power strips? (Also known as plug strips, multi strips, etc.)**

Exhibitors may use their own extension cords and power strips under the following conditions:

- The equipment must be 3 wire, 14 gauge minimum with a ground.
- The extension cords must be flat if they are to be laid under carpet. (Labor is required to lay the cords.)
- All power strips must have circuit protection.

### **Can I run my extension cords under the carpet myself?**

For safety reasons, exhibitors are not allowed to run any electrical wiring under any type of floor covering or where they may be concealed in the booth structure. The show's electrical contractor is liable for electrical installations and therefore must perform all floor or booth work.

### **Will my floor work be completed before I arrive?**

Every attempt is made to have floor work completed prior to carpet installation if you have submitted the following:

- A completed electrical order form.
- A valid and authorized credit card to be kept on file for the company.
- An electrical layout indicating the main power location, dimensions to each power location, the power required at each location, and surrounding aisle or booth numbers to determine orientation of the booth.

Labor and material charges apply.

### **When will my power be turned on?**

Power is only guaranteed to be installed before the show opens. If Freeman is allowed early access to the facility, power is normally ready the first day of move-in for exhibitors but any special requests such as temporary chain motor power, programming machinery or testing equipment should be noted on your order.

### **Do I need lighting?**

Lighting can dramatically change the impact of an exhibit, no matter the size. Used effectively, lighting can emphasize specific areas of a booth or highlight products. Also, an exhibit will appear dark and uninviting if the surrounding booths are lit and yours is not.

### **Can I hang my own lights?**

10 x 10 booths with pop-up displays (a display that can be assembled in less than 30 minutes without tools) can hang their own lights and plug them in without ordering labor. Typically, exhibitors themselves can hang up to 7 lights as long as they require no more than 20 amps in total but it is best to clarify with the local branch. If a decorating company (including Freeman) has been contracted to install a display, electrical labor is required to install the lights. Due to union contracts, no other union is allowed to install electrical equipment.

### **Do I need to order power for my lighting?**

Exhibitors ordering Electrical Services lighting (those listed on the Freeman electrical order form) do not need to order power. It is included in the rental. Exhibitors supplying their own lighting or renting lights need to order power. Labor may be required to hang the lights.

### **Do I need to order labor to plug in my lights or equipment?**

Most 120 volt connections do not require labor. Exhibitors are welcome to plug in their own standard office devices. Labor is required for all 208 or 480 volt connections and if lights or equipment need wiring or if electrical cords are to be run under the carpet or in concealed areas to ensure that all electrical codes and building rules are met.

### **How can I save money and frustration when ordering electrical services?**

Most importantly, be sure to submit your order before the discount price deadline date. If an electrical layout is needed, it also must be received, complete with mandatory information, before the deadline date to be eligible for discount pricing. Late orders can be subject up to a 50% increase in cost because of the behind-the-scenes planning required to distribute power.

Don't underestimate your power requirements and work within the local rules, regulations and union jurisdictions. They have been implemented to avoid problems. While it may seem simple to plug in lights and equipment, it is not uncommon for exhibit or non electrical staff to overload circuits. Trouble calls can become expensive when it takes time to find the source of a problem.

If unsure about labor, call us for direction and if necessary, place a "will call" order before the discount price deadline date. You will only incur a charge if labor is dispatched to your booth but you'll have secured the advance pricing. And, check in with the electrical or service desk as soon as you know you need labor, not at the time you want the electricians in your booth. It will help to avoid delays as we can schedule accordingly.

Lastly, try to resolve any disputes at show site. It is much easier to discuss electrical issues when both parties can physically review the installation.

### **Additional questions?**

Call customer service at the number listed on the Quick Facts and ask for the Electrical Services Department. For fast, easy ordering, tools, and helpful hints go to [www.myfreemanonline.com](http://www.myfreemanonline.com).

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## ELECTRICAL SERVICES USAGE GUIDE

The following wattages are approximate and are provided to help you estimate your power usage. To assist in estimating we recommend that you refer to the name plate or stamp usually located on the back or bottom of any electrical apparatus and order the corresponding outlet for each piece of equipment to avoid tripping/power outages during the event.


The formula for wattage is voltage x amperage (120 volt x 1 amp = 120 watts),  
5 - 100 watt light bulbs = (5x100 = 500 watts)

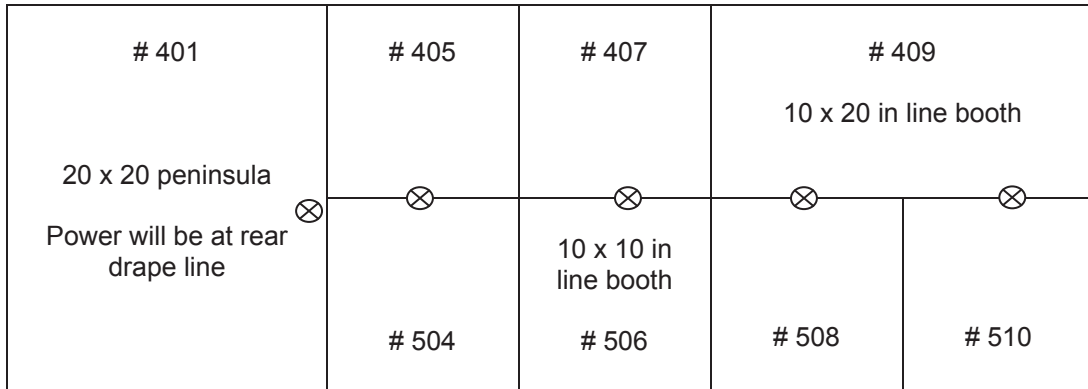
	WATTAGE		WATTAGE
Blender	475-1000	Imprinter for T-Shirts	2000
Can Opener	500	Iron	700-1100
Card Reader (credit) / Lead Retrieval	100	Juicer - Single	500
Cash Register	100-200	Juicer - Double	1000
Coffee Pot - Household Size	600-1200	Laminator	2000
Coffee Pot - Large Brewer	1500-2000	Lights with Freeman Rental Booths	200 each
Computer - Monitor (independent)	120-200	Meat Slicer	500-1000
Computer - Desktop (monitor & CPU)	200-900	Microwave Oven	500-2000
Computer - Laptop	100-300	Mixer	500-1000
Computer Printer - Dot Matrix	100-500	Photocopier	dependent upon size - may require 208 volt
Computer Printer - Laser	400-1000	Pizza Oven (small)	30amp/120 volt Special Connection
Crock Pot	200-1000	Popcorn Maker	2000
DVD Player	50-100	Projector (dependent upon size)	1000
Electric Frying Pan	1200-2000	Refrigerator - Small	400
Fax Machine	1000	Refrigerator - Full Size	750
Flat Screen TV - 32" to 50"	1000	Sewing Machine	1000
Food Processor	500-2000	Steamer	2000
Glue Gun	300	Stereo (amplifier)	100-500
Griddle	1500-2000	Television	100-500
Hair Dryer	1000-2000	Toaster	1000
Heat Lamps (per lamp)	250	Toaster Oven	1500
Heater (portable)	1500-2000	Vacuum Cleaner	1500
Hot Plate Single	1000	VCR	100
Hot Plate Double	1500-2000	Water Cooler - Cold Water	1000
Hot Water Heater	30amp/208 volt/Single Phase	Water Cooler - Hot/Cold Water	2000



# SAMPLE LAYOUTS

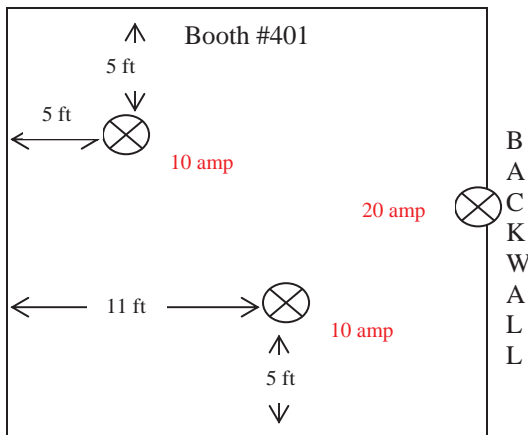
## IN LINE BOOTHS

Power is run or dropped to in line booths along the back walls or drape line of multi booth sections. The “main power locations” therefore are always located at the back of in line and peninsula booths. Outlets may not be in the exact center of the back wall. 120 volt outlets are shared by back to back booths. Example: Outlet = 

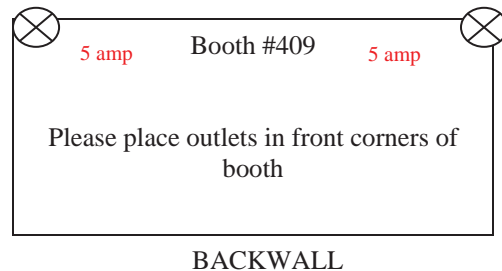


Electrical layouts are required whenever an outlet is needed at any other location within the booth except for the back wall. Exact measurements and/or comments that clearly indicate outlet locations **must be included**. Examples based on above floor plan:

20 x 20 Peninsula – Booth # 401  
Order = 2-10 amp, 1-20 amp outlets



10 x 20 In Line – Booth # 409  
Order = 2 x 5 amp outlets



## ISLAND BOOTHS

Electrical layouts are always required for island booths and **must include** the following information:

### 1. Main Drop.

Since there is no back wall in an island, the exhibitor supplies the location of the main drop, whether one or multiple outlets are ordered. When it will be the point from which power will be distributed to other outlets in the booth, a panel or other piece of electrical equipment (no larger than 8" x 14" x 18") will be installed at the main drop. For this reason, it is recommended that main drops be located in a closet, under a table/desk or in another area that keeps it out of sight. Measurements must be provided to the main drop.

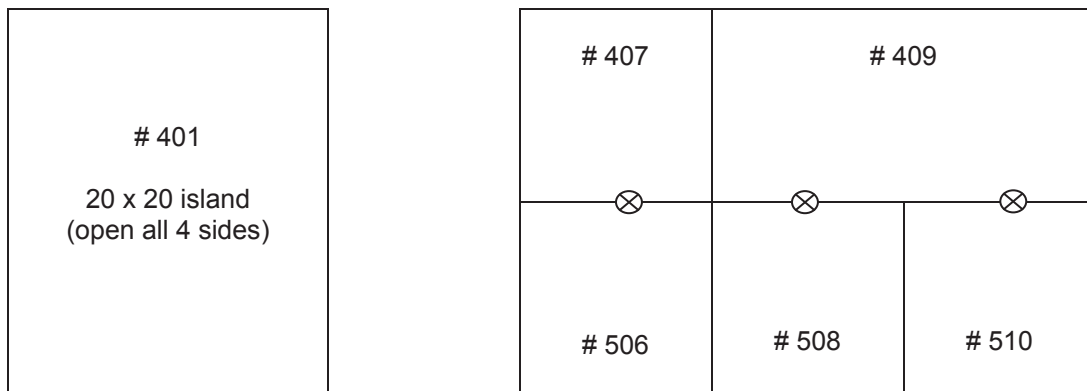
### 2. Location and load of all outlets.

Again, dimensions must be provided to all satellite outlets along with the load of each outlet. It is best to indicate voltage, phase and amperage for all outlets once an order exceeds 120 volt service.

### 3. Booth orientation.

Providing reference points such as surrounding aisle and/or booth numbers defines how an island booth is oriented to the overall show floor plan. In other words, which side is which? It is best to draw your layout relative to the show floor plan so that both are facing the same direction. Examples:

Section of show floor plan



20 x 20 Island – Booth # 401

Order = 1 x 208 volt, 3 phase, 10 amp + 120 volt, 2 x 20 amp + 2 x 5 amp outlets

