

# Float Lighting Tips

## WATTS AND AMPS

The formula for determining how much power you will need is watts/volts = amps. When calculating, you should go ahead and use 120 volts as your benchmark. For example, a 330 watt device divided by 120 volts = 2.75 amps of power. Use this formula when determining how much power you will need for your float.

## TOTAL POWER AND WATTAGE REQUIREMENTS

As you design your float to include lights and other electrical components, you must be sure your wiring can handle the amps. Keep in the mind the size generator you will need to power everything. The only way to do this is to add up the amperage.

## LIGHTS AND TYPES OF BULBS

### Types of Lights

- Household incandescent bulbs
- Floods and spot lights
- Fluorescent lights (tube fluorescent lights are sensitive to vibrations in the road and bulb fluorescent lights do not work well if there is moisture of any type, so these lights are not recommended)
- Mini Christmas lights (0.5 watts)
- C-7 Christmas lights (7 watts)
- C-9 Christmas lights (9 watts)
- Rope lights (9 watts)

### Types of Bulbs

- Clear – gives more light
- Frosted – to diffuse light, the frosted bulbs are the better choice
- Color bulbs

## WAYS TO USE LIGHTS

• Direct light on an object or person • For dramatic lighting, shine upward or downward on object or person • Behind an opaque screen • Behind cut outs of shapes or words (foam core or plastic core are good materials to work with) • Outline your float with small Christmas lights, either chasing lights or solid burn lights • Use plastic tablecloths as a color filter, or use a white plastic tablecloth with colored lights behind it.

-- continued --

## TECHNICAL INFORMATION

A set of 50 mini Christmas lights pulls about 0.2 amps (24 watts), so on a 20 amp/2400 watt generator, you can use 5,000 lights. A set of 25 C-7 Christmas lights pulls about 1 amp (120 watts), so on a 20 amp/2400 watt generator, you can use about 250 lights.

\*\* Lights pull more amperage when they initially light up so, for example, even though one string of C-7 lights is only 120W, or 1 amp, they will require more power when they are initially turned on. Therefore, ALWAYS get a generator that puts out more amperage than you really need.

## GENERATORS

Some generators are rated by wattage output and others by voltage, so pay careful attention when renting or purchasing a generator. If you are using a lot of amps, consider using two generators. Most generators have two outlets; so if you are using an 8,000 volt generator, each outlet would carry 4,000 volts, or 33.3 amps. You can then use a plug-in splitter on each outlet, to give you four outlets carrying 2,000 volts, or 16.6 amps each. This will allow using 14 to 12 gauge extension cords to get the power where you need it, giving you four circuits.

## POWER INVERTERS

You may also be able to use an inverter pack to power regular lights from a car battery. Power inverters are 140 watts and carry 300 mini Christmas lights.

## PUT IT TOGETHER

When planning for lighting, be sure to first diagram your float showing where all the lights and electrical components (sound systems) will be. Label the lights and sound equipment with the amount of wattage each requires. Label each generator by each circuit and by the total capacity. Next, group the lighting. For example, group all lighting for the perimeter of the float. When grouping lights, be aware of the total wattage for each group. Be sure no group goes over 15 amps, to ensure each group will use its own circuit on the generator.

## BE SAFE

Do not overload circuits. Always have a fire extinguisher on the float, within easy reach of the tow vehicle driver. In the rain or snow, be careful to avoid electrocution. Ensure all wiring is taped down or out of the way of float riders so people do not trip or hurt themselves