

MOON BOX

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Determine the size of the circle (or crescent or whatever shape) for your moon. Lay it out on a piece of $\frac{1}{4}$ ply, masonite, lauan, etc. Make sure your cutout is at least 6" away from any side. Next cut the outside of the lid, in a square or rectangular shape, so that it is about 6" larger than your opening on each side. Get your lamps and sockets. Standard household, Edison medium screw base lamps – 100w to 150w – are what you should be looking for. The sockets can be purchase at most hardware stores, Home Depot, Lowes, etc. The small brown bakelite ones are better than the large porcelain ones as the terminals can be accessed from the front and their size is better for close mounting.

What width do you want? At least 2" more than your lamp and socket height. Now assemble the frame out of the lumber on edge so you have a box about 8-12" deep and the size of your lid. Make a back for the box out of $\frac{3}{4}$ " ply or similar, and attach it to the frame. Paint the inside of the box and lid a bright, flat white. The inside of the frame sides may be lined with crinkled aluminum foil. Paint the outside of all parts a flat black. This is the best time to flame treat the box by using a flame retardant designed to be missed with the paint such as FR-1 or P-50. Most paint stores sell a product like this and it can be obtained from Rose Brand Theatrical supplier, among many others.

Now draw a circle centered on the inside of the back to match your cutout size (and shape if need be). Draw a line about half way between that line and the frame of your box. Mount the sockets along this line about 3-4" apart.

Wire the sockets in parallel, black wire to the brass screws and the white wire to the nickel plated screw. Use #12 stranded wire from the hardware store and wire to make plugs to fit your system. Do not use zip cord or lamp cord. If you intend to use 100w to 150w lamps, do not wire more than 16 sockets together. At 150w that adds up to 2400 watts or about 20 amps which is the capacity of the #12 wire. This means that you may have several plugs coming out of the back of the box, depending on the size of your moon. For example, a 3' diameter moon can have as many as 30-35 lamps in the circle. If you do not have any large dimmer such as 6K, take the capacity of the dimmer you are going to use and divide that by the wattage of your lamps and that will tell you how many lamps you can use. In this case, simply spread your lamps evenly around the circle. After the lamps are installed and tested, attach the lid.

Finally, attach top hanging irons to the upper sides of the box, using at least on through bolt. You may have to experiment to find the right location front to back, so that the box hangs vertical without tilting.