



DENIS HOIBERG

Scratchbuild some working street lamps

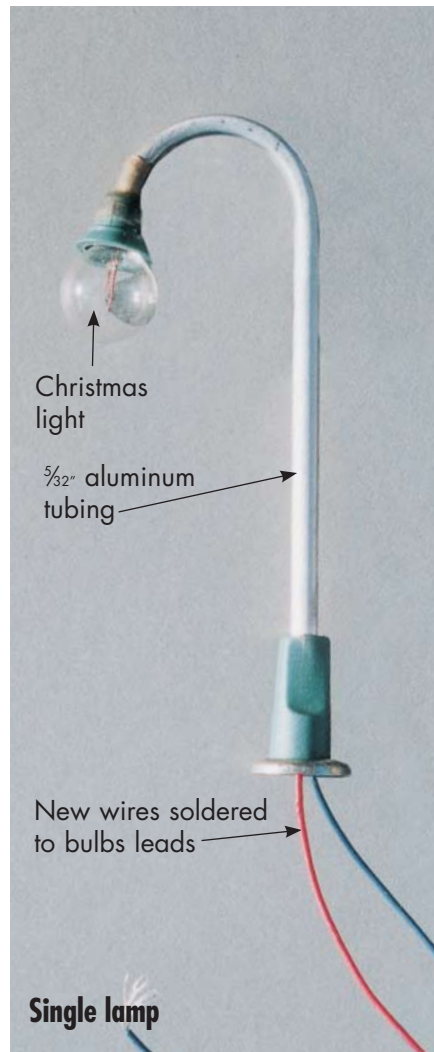
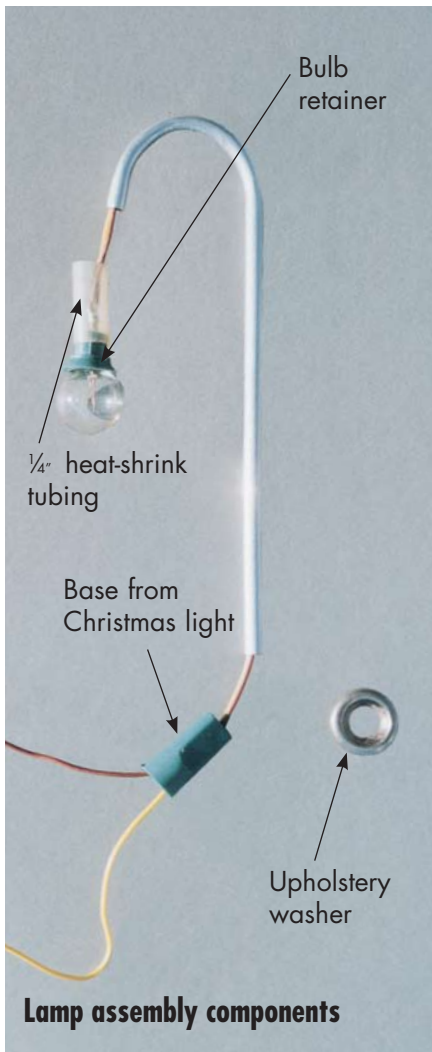
A simple, low-cost project

by Denis E. Hoiberg | San Diego, California

Many modelers, including me, have more time than money. If you fall into this category, you'll like this project—working street lights for about 50¢ each and only 20 minutes labor.

Start with a string of Christmas lights (the kind with small, clear, round globes). These are sold 50 to the box for about five dollars at your local discount store. (After Christmas, you can probably get them for half that.) Individually, these bulbs operate

ABOVE: A double lamp adorns the corner next to the author's Royale Deluxe Hotel. A double lamp can be made with little more effort than a single.



PHOTOS THIS PAGE: MARC HOROVITZ

on 2.5V. I power them with 1.5V-2V to give them a softer glow and prolong their lives. If you are operating on 16V-18V, run eight to ten lamps in series. I have a radio-controlled pike so I use an appropriate combination of rechargeable battery sources to provide power.

For the masts you'll need some $\frac{5}{32}$ " diameter aluminum tubing (30¢ per foot) and mini-hookup wire from your local hobby emporium.

Bend the tubing around a form. I used a piece of PVC pipe. If the tubing tends to collapse when you bend it, you can use a spring-type tubing bender to slip over the tube or a piece of 10-gauge insulated electrical wire, greased and inserted into the tubing. Slowly, but firmly, bend the tube a little past the desired shape. Then go back and cut the bent tube to the exact curve desired. Finally, trim to the desired height.

Clip off one of the bulbs and remove it from its socket. Strip the contacts out of

the socket and set them aside for later use as part of the base. Bend the bulb's contact wires out and remove the bulb from its retainer. Solder a length of hookup wire to each of the bulb's leads and slip a $\frac{1}{2}$ " length of $\frac{3}{32}$ " heat-shrink tubing over one lead and heat. This eliminates the possibility of shorting in tight quarters.

Next, cut the tip off the bulb retainer. Slip the retainer back over the leads, followed by a $\frac{3}{4}$ "-long piece of $\frac{1}{4}$ " heat-shrink tubing. Thread the wires through the aluminum tube and pull everything snugly together. Putting just a little tension on the wires to hold the assembly together, heat the shrink tubing and hold it in position until it is cool. This will make a good, solid assembly.

Retrieve the gutted lamp base and, while squeezing it with a pair of pliers, insert the end of the aluminum tube into it. I filled the base with some epoxy and topped (or bottomed, if you wish) it with an upholstery washer. The epoxy

Materials list for street lamps

- Aluminum tubing, $\frac{5}{32}$ " diameter
- Christmas lights
- Heat-shrink tubing, $\frac{3}{32}$ " and $\frac{1}{4}$ " diameters
- Hookup wire
- Upholstery washers

secures the tubing, base, and wiring.

An easy variation is a double-arm lamp. This can be done with a little creative grinding, drilling, and some epoxy. Just be careful to make both halves the same.

That's all there is to it. All that remains is for you to install the finished lamps on your railway. It is true that you can't change the bulbs in a finished lamp, but you can build a whole new fixture for the price of a bulb at the local dollhouse store. **II**