

# 7mm Station Lamp Kit

Instructions for Construction

By

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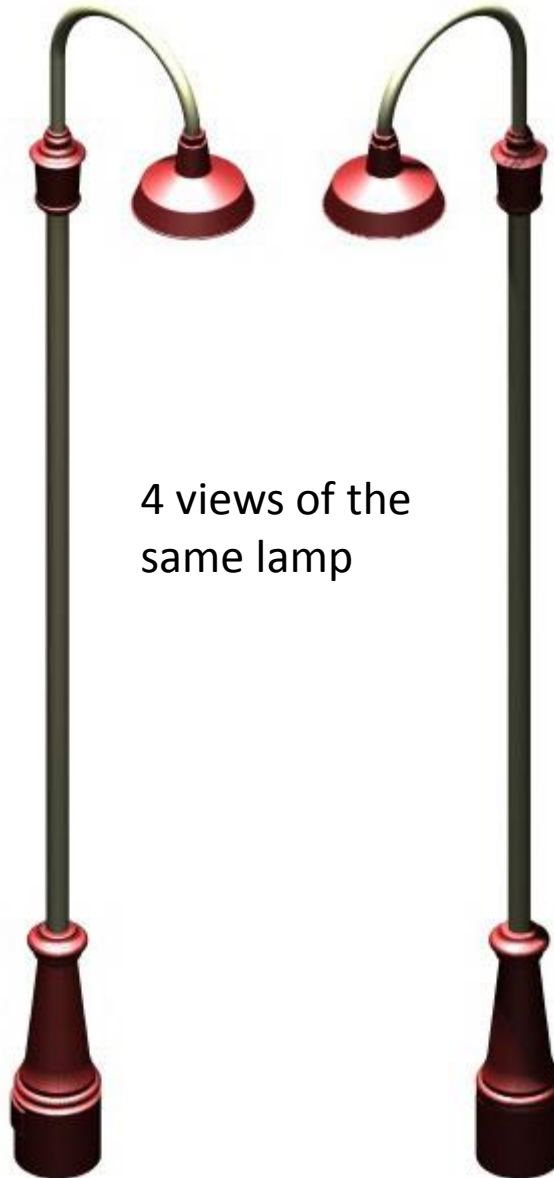
# Introduction

- This kit of a Standard NSWGR Station Lamp, is a multi-parts kit with the option for making the lamps illuminated.
- The kit can be lit by means of a miniature LED in the lamp shade, or by the use of a fibre optic going to all station lamps, joined with a high output bright LED as the light source.
- The kit is a combination of 3D prototyped plastic parts and brass tube.
- Very few tools are required: Metric drills - 1mm and 1.5mm, needle files, razor saw, some sort of small open flame (lighter , match or gas torch).
- The parts can be glued together with CCA ( Supaglu).

# What is Included in the Kit

- Base – 3D Printed Part.
- Joint Socket – 3D Printed Part.
- Lamp Shade – 3D Printed Part.
- Brass Post ( 1.5mm Tube x 90mm).
- Brass Top Section (To Be Curved) ( 1 x 1mm Tube x 40mm).
- Etched Brass Scroll.

# Outcome



4 views of the  
same lamp



# Base

The base has been prototyped with the hole in the centre smaller than required. Using a 1.5mm drill, slowly drill out the hole the full length of the base.

Check the hole so that the length of 1.5mm brass tube is a neat but not tight fit. If it is tight, just keep running the drill through, to open up the hole ever so slightly.

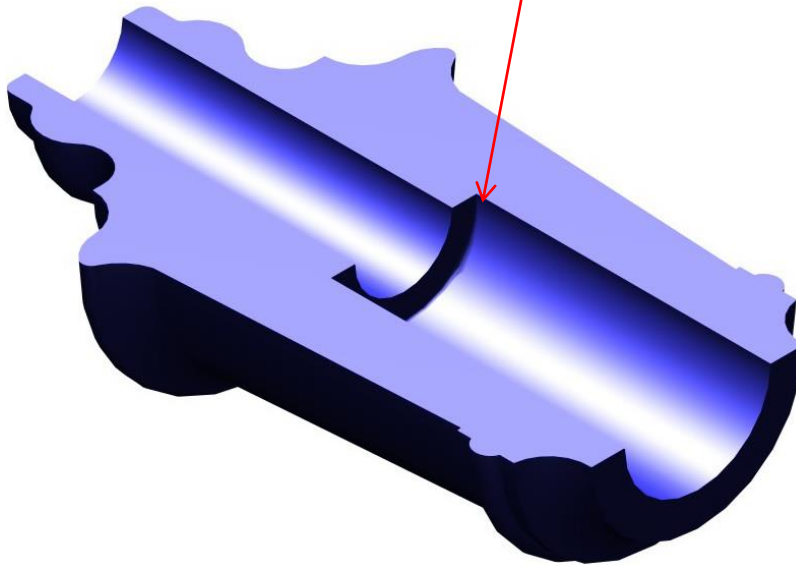
When drilling the base, drill from both top and bottom so that the hole is centred to the base. Sand the base smooth and square, as there could be some support dimples showing.



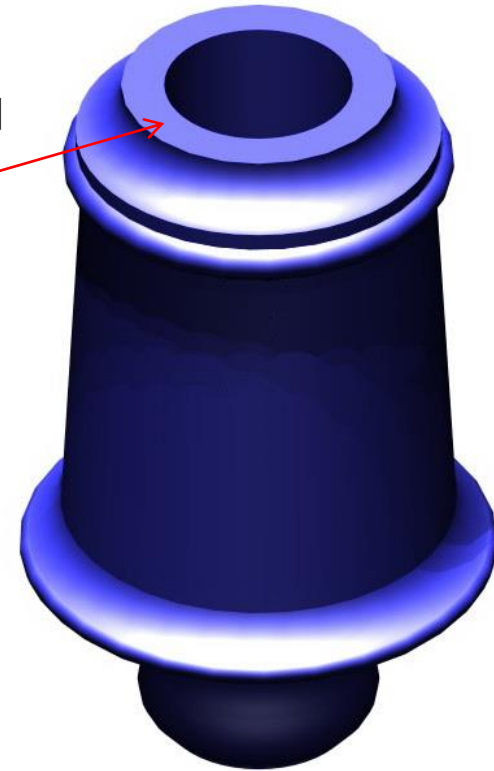
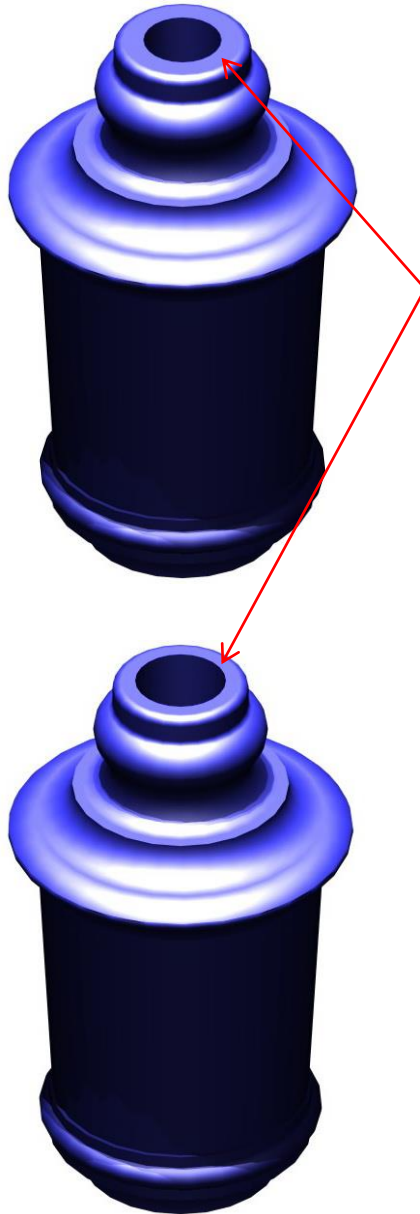


# Joint Socket

This socket also needs to be drilled out as it is supplied with undersized holes.  
Firstly drill from the top down with a 1mm drill to accept the 1mm tube.  
Then drill using a 1.5mm drill from the bottom – **(ONLY DRILL 3MM INTO THE BOTTOM OF THE SOCKET)**



This allows the large brass tube to fit neatly into the base of the socket. Whilst also allowing the top curved tube to fit into the top of the socket

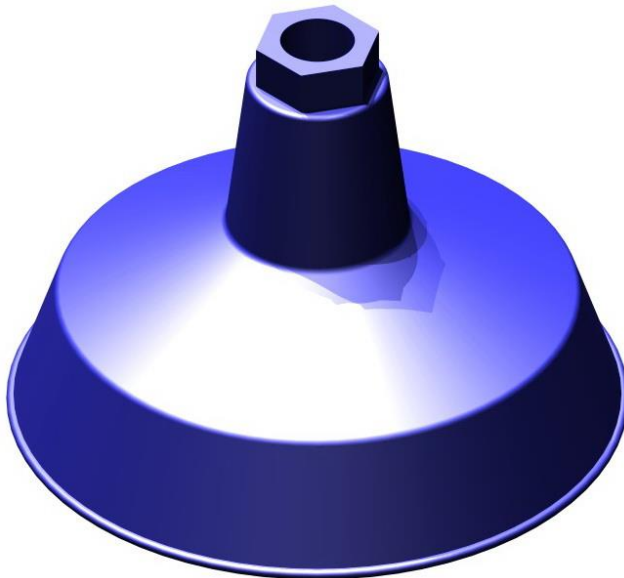


# Lamp Shade

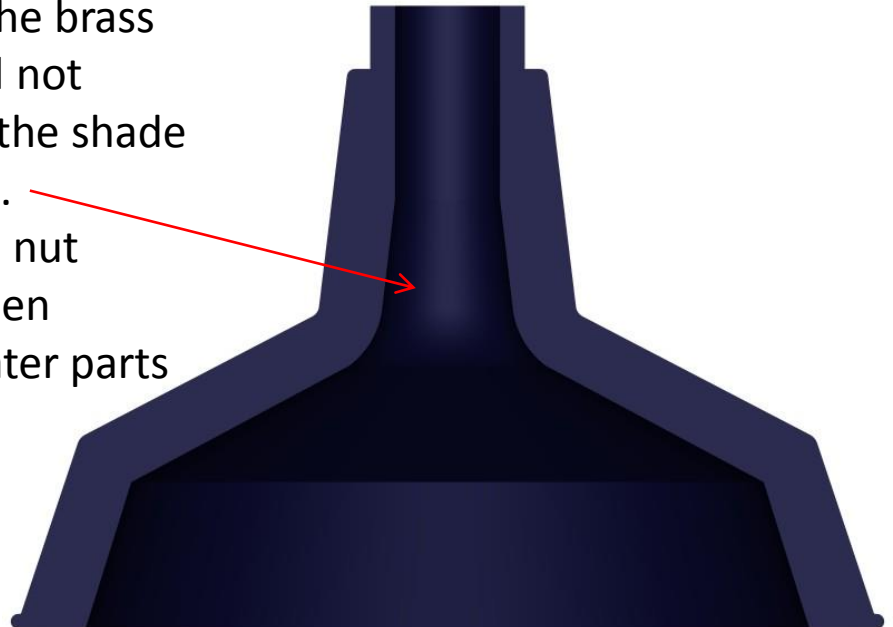


The base has been prototyped with the hole in the centre of the shade, smaller than required. Using a 1mm drill, slowly drill out the hole. Be very careful as the nut detail at the top is very fragile.

Drill from the top firstly then finish by drilling from inside the shade. Please ensure that the brass tube is a light fit (not tight).



When fitting the brass tube, it should not protrude into the shade past this point. Please note the nut section has been removed on later parts



# Fitting the 1.5mm Brass Tube

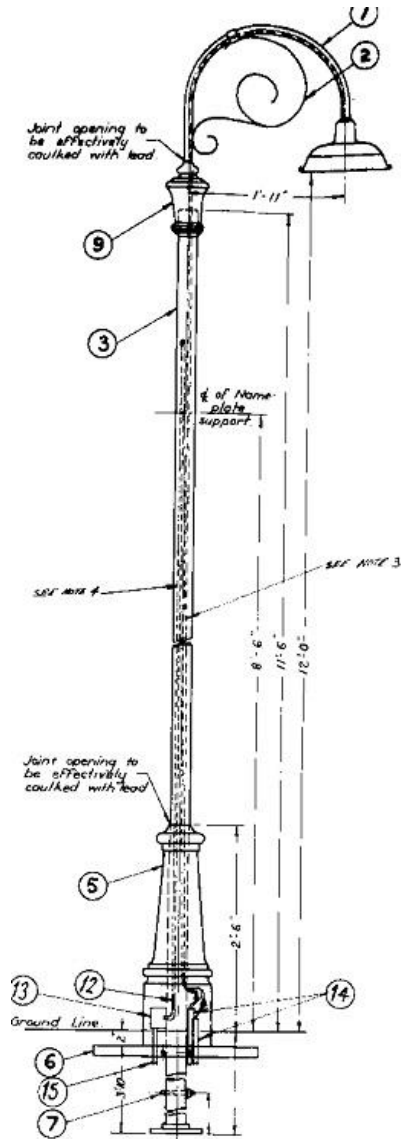
The 1.5mm Brass tube is approximately 85mm.

The cut size of the tube needs to be 80.5mm. So you have to make a choice, to trim the tube to the exact length or let the tube protrude through the base to act as a 4mm long locating pin.

Ensure that the hole in the tube is not blocked as diode wires or fibre optic have to pass through the tube to the lamp shade.

Clean up the ends of the tube with a fine needle file, then glue into the base.

The diagram to the left shows all the dimensions



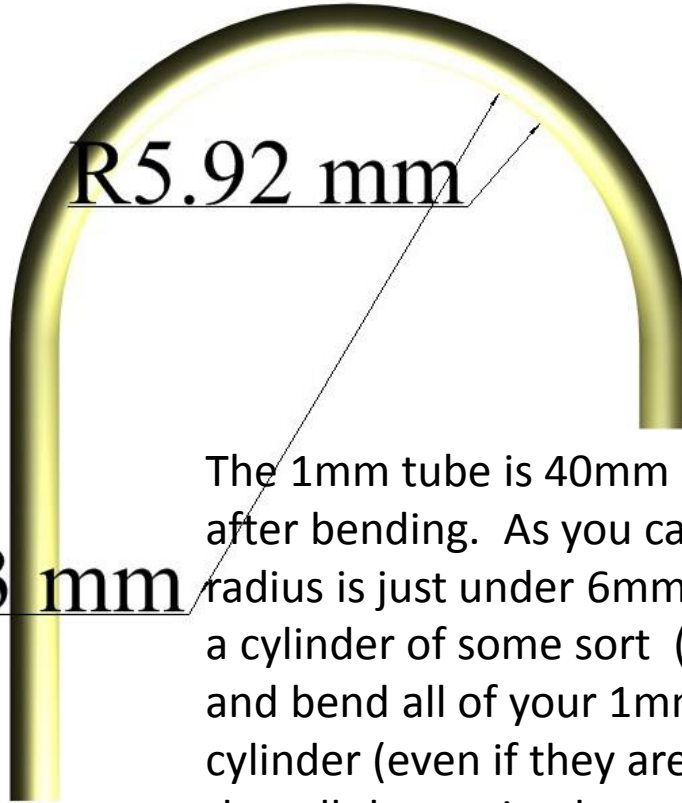


# Now for the Joint Socket

As previously stated the joint socket has to be drilled out top and bottom to a set depth. The bottom drilling is only 3mm deep into the socket. To make this a more consistent drilling. You can place a small amount of masking tape on the drill and drill a group of sockets at one time. Do not glue the socket to the post at this stage, as you will need to test fit the curved top which will be discussed in the next slide.



# The Curved 1mm Tube



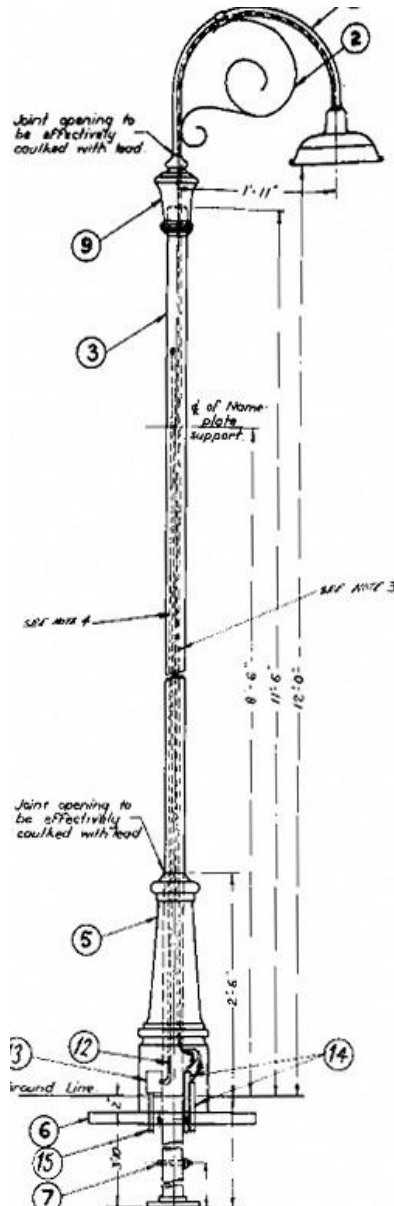
Ø11.83 mm

R5.92 mm

The 1mm tube is 40mm long and needs to be 35mm after bending. As you can see from the drawing the radius is just under 6mm. My suggestion would be to find a cylinder of some sort (around the 12mm diameter size) and bend all of your 1mm tubes using the same diameter cylinder (even if they are slightly larger or smaller), so that all the station lamps that are together end up similar to each other. Avoid flattening the tube, and if you want to try annealing the tube this may assist in bending. You can also try bending the tube with a 0.5mm fibre optic inserted in the tube, as this will assist in minimising tube flattening.



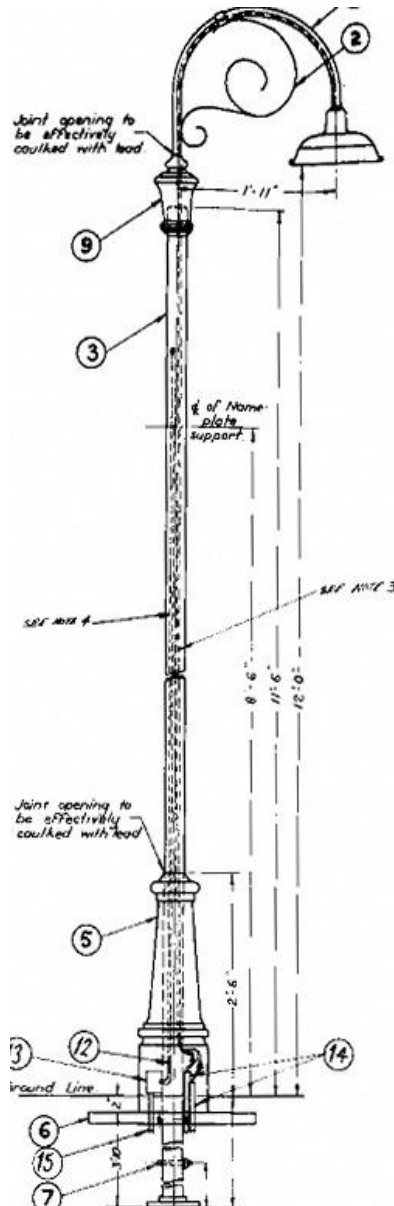
## A tall, slender, black street lamp with a curved arm and a black conical lampshade. The lamp is positioned on the right side of the page.



A tall, slender, blue lamp with a curved arm and a conical base. The lamp has a long, thin vertical stem. At the bottom is a blue, conical base with a flared top. The stem extends upwards to a blue, cylindrical joint. From this joint, a curved arm extends upwards and then downwards to a blue, conical lamp head. The lamp is set against a white background.

Note that there is a wrought iron scroll in the kit. This scroll should be treated very lightly as it is easily bent, twisted or damaged. If you have a look at the picture of the lamps at Mudgee station, on front page of instructions you will also see another smaller scroll on top of the curve which you can a guesstimate. Hint: as long as all of the scrolls are the same , they will look great.

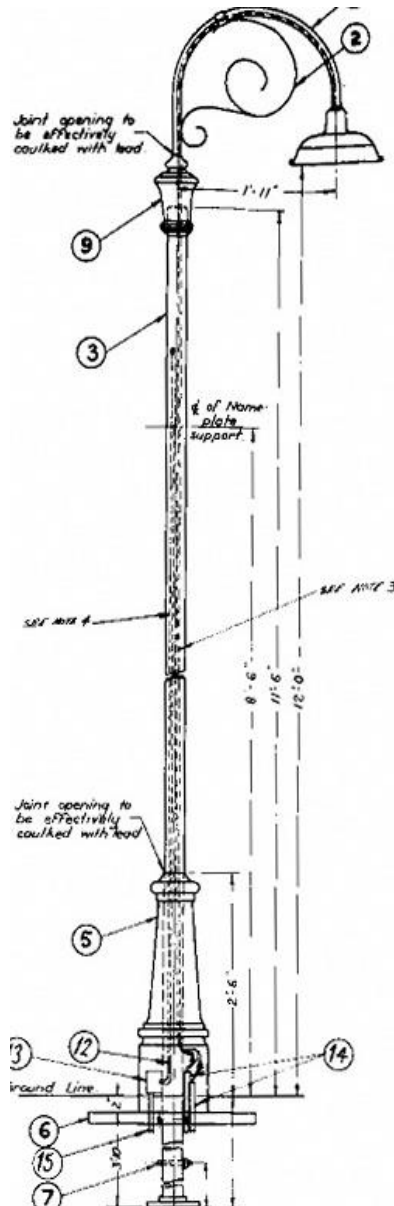
# The Lamp Electrics



The lighting of the lamp is a personal thing, and we all have our own ideas. You can use 0.5 mm fibre optic , which will fit inside the top tube and can be heated up to shape a globe under the lamp hood, and then the fibre pulled back and attached to a hi intensity light source, such as a 10mm bright white LED. Or you can use a long lead miniature LED in what every style you like, and the thin leads can run through the tubes to the power supply.



# The Lamp Paint Job.



Painting the lamp is a very objecting thing, and I would suggest that you use photographic evidence of whatever colour scheme you require. The photo at the start of these instructions does give one colour scheme that you can use, but I do not doubt that there are others. Let photos be your best tool.





# Conclusion.

This kit will end up with a very nice 7 mm model if treated with care, the result you achieve, will be based on the level of care that you give, and the time and patience that you show.

Enjoy the time building this kit and please provide feedback, (good or bad) as it helps to improve this and other kits that KRM produces.

Regards and Happy Modelling, Keiran Ryan

All feedback can be give to:  
[krmodels@gmail.com](mailto:krmodels@gmail.com)