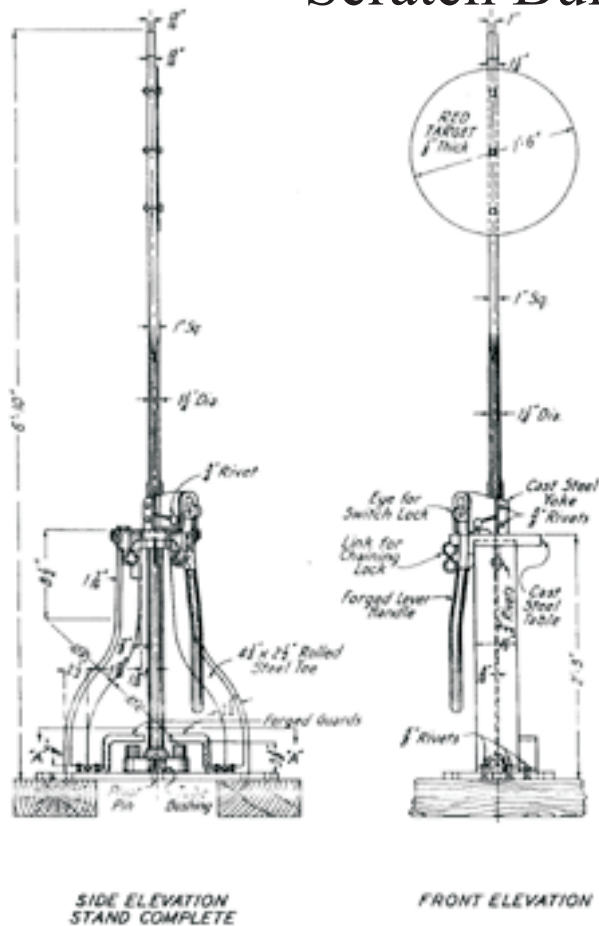


# Scratch Building Switch Stands



Plastruct part numbers and sizes:

90724 - .020" X .080"

90745 - .040" X .100"

90882 - .080" Half Round

Brass wire sized to your liking. Around .020 or .025

- 1) First, I cut the round target. I used a hole punch on some .016" sheet styrene.
- 2) Cut two pieces of half round at 3 foot lengths. You can bend the arch with your fingers. Put the crimps in 1 foot from each edge. This will make up the legs of the stand.
- 3) Cut a piece of the .020" X .080" @ 9 scale inches. This becomes the top plate for the stand (or use a small circle if you have a punch the right size). Drill a hole in the center of the plate with a bit big enough to get the brass rod through it. MEK the two pieces cut in step above to the plate. Be sure to keep the edges flush.
- 4) Glue the wide end of the base down to a 5 foot piece of .040" X .100". This should be more than enough to span the ties on the turnout. Whatever is overhanging can be cut off and used to space the stand up if you need clearance for the throw bar.
- 5) Measure the throw of the points of the turnout. This is the distance the points move to open and close to the stock rail. Always measure the turnout you are building the stand for since all turnouts are a little different. It will be a really small number so you will just have to get as close as you can. Take this measurement and divide it by 2.
- 6) Cut the 2 pieces of rod. 1 at 8.5 feet and 1 at 3 feet. 1.5 feet in on the 8.5 foot piece put a 90 degree bend in the wire. The 7 foot end will be the staff. Drill a hole in the top plate large enough for the wire to go through. Hold the staff straight up and down and mark where wire needs to go through the bottom plate. (While not prototypical, the bottom plate helps tie the unit together and offers stability for the staff). Once you have the holes drilled you are ready to bend the bottom of the staff so it will turn when the turnout is thrown.

7) From the first bend, measure out the number you got from dividing the throw of the points by 2. This is going to be the distance to second bend. Put a second 90 degree bend into the wire (bend it down and away from the top of the staff). The left over wire is what will go into a hole drilled into the throwbar. Clip off anything that might be too long and cause the throwbar to hang up. Slip the rod back through the stand assembly. The hole in the throwbar is marked when the turnout is thrown and the target is pointing in the direction you wish it to face. If the gap between the stock rail and the point is on the far side from the stand the hole should be marked on the throwbar on the opposite side of the stand and the stock rail. This will allow the throwbar to move and take the rod with it and turn the target away. If the gap is on the stand side then you would mark the hole between the stand and stock rail.

\*\* For a dummy stand just cut the wire 7 foot long and CA the bottom of the wire to the bottom of the stand.

8) Cut a small piece of the .040" X .100" approximately 3 scale inches wide. This will represent the lock mechanism. MEK this to the top plate next to the staff. This will stick out past the side edge of the plate. This is OK since the mechanism did the same.

9) Crimp a bend in the 3 foot piece of rod. Just 4 or 5 scale inches from one end. This is the handle for the stand. CA the crimped end next to the block you just MEK'd in place and against the staff. While on the prototype the handle would have come out of this the block and the staff would have gone through the block, in HO this is close enough that without close study the eye doesn't know the difference. If you want the handle to move with the target just CA the block and handle to the staff. If you want to spend the extra time you can file a small notch into one end of the block and CA that to the staff. You can then drill a small hole into the bottom of the blocks overhang for the handle.

10) CA one of the punched circles to the top of the staff.

11) Paint and mount it. I painted mine with Floquil weathered black and the targets are red for the mainline and yellow for sidings. I mount mine to the ties with CA. For moving stands you may want to spike it down as well. You may need to shim the stand to allow room for the rod to turn the staff.

