

POPULATING YOUR LAYOUT Flexible Figures

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The purpose of any railroad is to move passengers and/or material for use by people from one point to another. If you don't have people on your layout, there isn't any reason for the trains to run. People are one detail item most lacking on layouts due to the expense and the small variety of poses available in either painted or unpainted figures. Using the methods described in this clinic you can make your own figures for just a few cents each in scale from O to N.

Using this method you can make the one figure in a special pose to fit your scene:

Or you can build an entire army of figures to fill your layout:

The four basics of building your own figures can be seen in this photo, from armature to coating, to putty coating to painting.

TOOLS & MATERIALS:

Gloss Gel or Matt Gel: You'll find this in the fine arts sections of Hobby Lobby, Michaels, JoAnne's or similar craft stores. There are many brand names like Liquitex, Golden, etc., but they are all basically the same so brand doesn't matter. Matt Gel is easier to paint but you can use Gloss gel to create water surfaces as well as figures. Don't use Light Molding Paste as it contains fibers that will give you figure a fuzzy texture.



Glue: Crafter's Pick The Ultimate glue (I happen to like this brand best) or Aleen's Fast Grab Tack Glue NOTE: Aleene's makes a variety of glues but Fast Grab is the only one that works well for this process. I use this for hat crowns, long hair or facial hair features.



Wire: For N scale or smaller use 32 gauge galvanized wire from a hardware store. For HO 30 gauge floral from Michael's or Hobby Lobby works fine and is cheaper. For S, O and G use 20 gauge floral wire. I don't like brass wire or copper wire for this, one is too stiff and one too soft.



Needle Nose Pliers: No matter what scale, the smaller the better. If you don't have a good pair check out the jewelry section of Hobby Lobby, they have good low priced needle nose and tweezers nose pliers from \$8 to \$14 dollars. They won't work for piano wire but work well for floral wire

Wire Cutters: You need a pair of flush cutting wire cutters. Again, if you don't have a good pair check out the jewelry section of Hobby Lobby or Michaels. For about \$10 you can get what you need.

Toothpicks: Flat, round, whatever you prefer for applicator. For O scale use wooden coffee stirring sticks

Glue container. You want something you can put a little gel on to dab your toothpick in. Wax paper will work but I prefer a lid from a nut can, or Pringles can or a margarine tube as they don't scoot around my work surface like wax paper.

Foam: You need a scrape of foam that you can stick the base of the figure in while it dries. Any old foam, including packing foam will work.

Scale Ruler: You need something to give you the basic height for your figure. I usually just mark the 3', 5' and 6' dimensions of the scale I am working in on an old wood popsicle or stirring stick. A scale ruler works fine, but I started using the marked-up stick for portability and have stuck with it.

Primer: You can paint right over the gels, especially the matt with acrylic paint, but I still prefer to prime them with a gray primer. Rust oleum gray auto primer works.

Glue Applicator for facial hair and hat crowns: If you really want to be fancy, you can use a bottle to apply the glue. There are a variety of bottles in the paint and model paint sections at Hobby Lobby You don't need one of these but I find when making a lot of figures it works a lot faster than applying glue with a toothpick. The bottle range in price from \$4 for a set of 4 to \$5 for a single needle nose bottle. The yellow one in the photo is a needle applicator bottle and comes with a wire in the cap to keep it from clogging when not in use. There is also a purple colored bottle but the needle is too small for this glue. I like these and use them all the time for making figures. They are found in the model kits section of Hobby Lobby by the model paint.

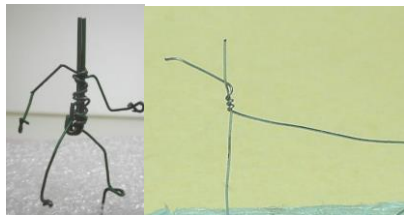
HO and N Applicator



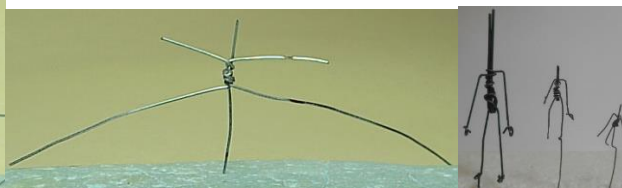
O Applicator



An O scale armature



O, HO and N



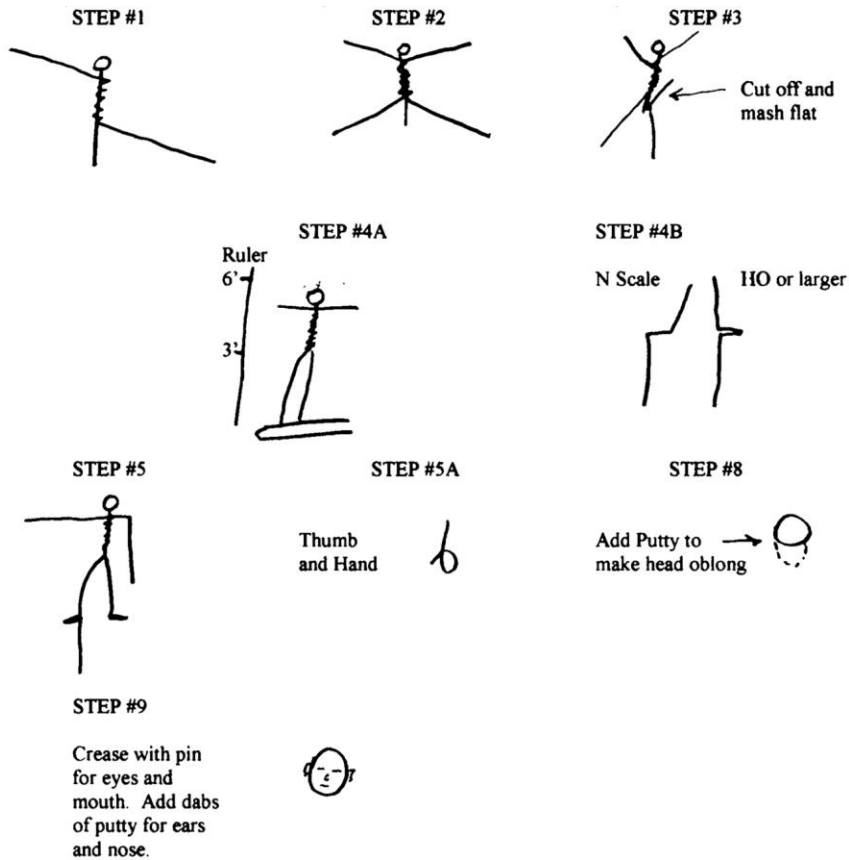
MAKING AN HO FIGURE (for other figures use more or less wire according to scale) I've added a "head" to the drawings below to indicate the "top" of the figure when making the armature. You will actually make the head with gel. Armature stages are shown above.

1. Cut two pieces of wire 3" long and one piece 1" long. Place the 1" piece on top of 3" piece of wire with the 3" piece wire extending 1" beyond the 1" piece of wire. Hold the 1" and 3" pieces of wire together and twist the longer part of wire down and around the pin shaft 4 to 5 turns so the bottom of the wire is sticking out on the opposite side of the pin. Step #1
2. Place the second 3" wire under the 1" wire with 1" extending out on the top on the opposite side from the first wire. Wrap the second wire 4 to 5 turns down and around the 1" piece shaft so that it ends on the opposite side from the first wire. Push the wrapped wires up close to the head and pull the bottom ends of the wires out straight down and to the sides of the 1" shaft piece. Step #2
3. Grasp 1" shaft piece just below the wire twists and bend up and back 180 degrees. 1" shaft piece should be bent back so that it is on the same side of the pin as the end of the 3" wires. Cut off point end of shaft just above the bend leaving a small hook shape. Squeeze wire hook flat against pin shaft with pliers. Step #3
4. Hold bottom wires of armature across the bottom with pliers. Measure against scale ruler and move armature so that it is approximately 5 scale feet between pliers and top of the "shoulders". Bend bottom of wires up 90 degrees. Step #4A. At 6 to 12 scale inches out from the figure bend wires down and back toward armature, then bend remaining length of wire straight down at 90-degree angle. Mash this protruding "foot" with pliers to flatten in HO. For N scale do not double the wire. Step #4B
5. Pull top two ends of wire out perpendicular to wire shaft near head. Approximately "shoulder" width from shaft bend each wire straight down at a 90-degree angle. Step # 5. Grasp each wire in turn with pliers just below the bent hook in the pin shaft. Loop wire up and over the pliers on the outside of the figure. Pull the loop tight against pliers and pull end of wire over and down toward feet. Leave a small stub of wire for thumb and cut off excess. For N scale skip this step as hands will be made with the glue. Step # 5A. Also cut off **one** of the wires extending below the feet. Leave the other wire attached for use as a handle.
6. Bend the figure armature to desired position. Deciding how I want to position the figure usually takes me longer than making the armature.
7. Dip your toothpick in the gel and start applying it to the armature. Use flat toothpick to remove excess mix and smooth. Make sure to remove excess mix from between thumb and hand. It sticks readily to itself even after drying so that is not a problem. You will need to add additional mix around the rear, shoulders and chest. Also add a small amount to the bottom of the head to make an oblong rather than round shape. Be aware if your glue is too thin to check the elbow and knee joints where the glue can sag and fill them in. If this happens just use your toothpick to pull the glue up and reshape. Also, keep your toothpick clear of gel residue. Wipe it off frequently on a paper towel, otherwise the gel on the toothpick will start to dry and become sticky making it difficult to transfer glue to the armature. Step # 8. Stick in Styrofoam to dry for a few minutes. When making multiple figures, repeat this step for 5-6 figures before going on with the next step. N and HO figures usually only need one coat S and O may take a second coat due to size.
8. Use a straight pin in a hobby knife handle to crease the mix on the head to form eyes and mouth. Dip up gel on pin and add small dabs to form nose and ears. I do this even in N scale. Step # 9. Hair can also be formed and shaped this way including beards and mustaches. Set aside to dry. It will "cure" in a few minutes.
9. You can add hats, jackets, and skirts etc. built up from the gel or vellum paper. Add tools and other equipment after painting the figure. Western hat brims are made from a paper punch or leather punch with the crown made of glue. Long coats are cut from vellum paper. When the figure is dry, cut the vellum as shown, crease in the lapels, check to make sure the V cuts fit up to the armpits and glue at the shoulders. When set fill any gaps and hit any seams at the shoulders with more gel. Build up collars with either glue or gel. Vellum coat shape:



- 10.
11. You can paint the figure with any modeling paint, but I prefer 2oz craft bottle acrylics. They cover well and the price is cheaper than hobby paints.
- 12.

NOTE: When dry the gel and glue can't stick to itself until primed for painting. The figure will not stick to most things EXCEPT to another unprimed figure and then they are very difficult to separate. Once primed the figures will no longer stick to each other.



Assuming you already have needle nose pliers and wire cutters the material cost per figure including the finish paint is less than a few cents each. For more information (and better drawings) see the November 1991 issue of *Model Railroader*

Like anything in modeling (and life), the more you practice the better you will get. With practice you will be moving your "background" figures to a prominent place in the foreground. Next time, bring some of the figures you have made and show the rest of us!

N Scale Cowboy



If you have any questions for need more information feel free to contact me.