

# Assembly Notes:

## Cutting & Filing Rail:

Stock, switch, and check rails can be cut to length with a pair of Xuron cutters, using the diagram as a guide. All rail ends must be cleaned up & filed to aid threading the rail into the chairs. This is a VERY important step, as any burr on the rail ends will damage the plastic chairs. Filing a slight taper on the foot of the rail will make threading into the chairs much easier.

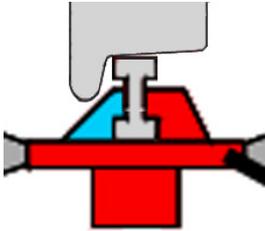
## Cutting Chairs off the Sprue:

A new, sharp modelling knife is essential to cleanly cut out the chairs from the sprue. An Exacto knife with #11 blade is ideal. Chairs can be cut off of the sprue using a sawing action with the blade. Any burrs can be trimmed off once the chairs are installed onto the base.

## Installing Chairs onto the base:

There are 2 methods of installing the chairs.

- The advised method is to install all of the chairs onto the turnout base first, and then slide the rails through (note that the rails must be inserted in a specific order, usually cast frog, switch blades then stock rails). A great tip here is to place each chair on the end tip of the knife blade to hold it, this makes it very easy to insert the chair into the hole on the base. With a #11 Exacto blade, the sharp side of the blade should be facing upwards (as if it were the top of the rail) and the chair slid onto the end of the knife.
- The 2nd method is to slide each chair into each piece of rail first, and then insert the rail and chairs onto the base holes.



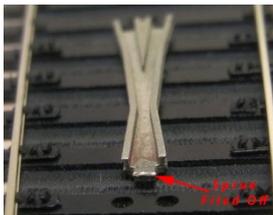
Note that the chairs have an inner and outer lug, the outer lug being bigger. The inside lug is smaller, and must be orientated so the inner lug is on the inside of the rail, where the wheel flange will ride (note that the inside lug is represented in light blue on the assembly diagram, to aid in orientation):

## Soldering Electrical wires to the rails:

An electrical wire must be soldered to the bottom of the Stock Rails and Switch Blades. If using the first method of installing chairs onto the base and sliding in the rails, the wire must be soldered onto one end to allow the rail to slide through the chairs. The '*Suggested Wiring Diagram*' shows the suggested solder locations. It is down to the builders preference as to the type of wire used, small decoder wire or enabled wire on the reel are good choices.

## Installing the Cast Frog/K Crossing:

An electrical wire must be soldered to the bottom of the frog and SLO ZAP Super Glue used to fix it onto the base. It is important to solder the electrical wire so that it sits between the base timbers.



Note that the cast frog/K Crossing arrives with part of the sprue still attached (see photo), this will need to be filled down with a file or dremel cutting disk.

## Threading Rail into Chairs - Which Way is Up?

Bullhead rail has a slightly wider head (top of the rail) than the foot (bottom). This can be difficult to see with code 40 rail. Please try to install the rail with the wider head at the top. If you cannot tell which way around is correct, the rail will still install and the kit be built, you do not have to worry too much about this as it is mainly cosmetic.

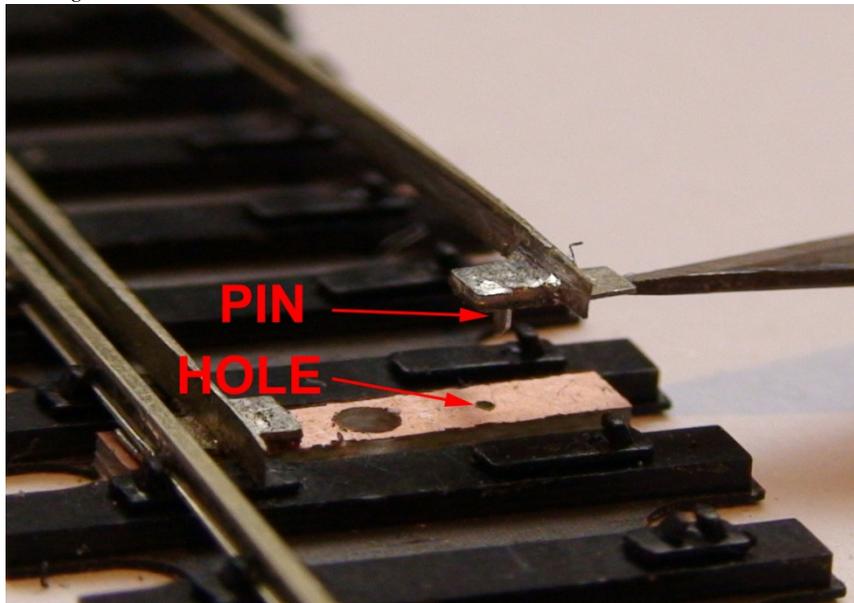
## Bending Check Rails:

The check rails require a small bend to be introduced at each end of the rail, giving a 1.3 - 1.4mm gap between the stock rail and the very end of the checkrail. A small tip here is to install the 5 check rail chairs onto the check rail, and then install onto the turnout base. This must be done before the stock rails are installed.

## Filing and Soldering Switch Blades:

Please follow the instructions that came with the Switch Blade Filing and Assembly Jig, sold separately [www.britishfinescale.com](http://www.britishfinescale.com).

## Installing Switch Blades & Tie Bar:



Because the Tie Bar is milled from copper clad PCB, both sides must be electrically isolated by filing a gap in the center of the tie bar, breaking through the copper clad. This will keep the 2 switch blades from short circuiting. The tie bar should then be placed into position between the timbers on the base where there is a slit for the switch machine wire. Each Switch blade can be offered up to the base and cut to length so that there is a gap between the switch blade rail and the cast frog (about the thickness of 2 sheets of paper). Once cut to size, each switch blade can be slid into the chairs and into place. The pin under the soldered switch blade chair plate is inserted into the small 0.4mm hole in the tie bar.

## Fixing the Chairs with Butanone Solvent:

Once you are happy with the assembly, the chairs can be permanently fixed to the base using Butanone Solvent (available from [www.britishfinescale.com](http://www.britishfinescale.com)). The solvent can be applied using a small brush or 'Pin Flow' applicator. Don't be too sparing with the solvent, plenty needs to be applied to give a good joint.