Generic Double Slip Assembly Instructions

Thank you for purchasing this Easy Build Finescale Double Slip kit. Prior to beginning assembly, please read through these instructions thoroughly, ensuring that all components of the kit are present and that, prior to assembly, you have the appropriate tools required.

If in the event that any parts are missing please contact British Finescale directly at sales@britishfinescale.com

Parts Included

- Double Slip Base
- 8 Crossing 'V's (frog) Point and Splice Rails
- 8 Pre Machined Switch Blades
- Bullhead Rail for Stock Rails, Check, Closure and Wing Rails

Tools and Materials Required

Although the components are largely preformed and gauges are not required, a few simple tools and facilities will be required to facilitate construction including:

- Super Glue
- Track Cutters, Fine Razor Saw or Hobby Drill with disc cutter
- Flat Nose Pliers
- File
- Tweezers
- A suitably sized flat surface.
- A soldering iron with a small tip and suitable solder and flux to attach additional wires to switch rails, etc.
- Electrical Feed Wires (decoder wire is recommended)

Anatomy of a Turnout

To aid assembly, please familiarise yourself with the names of the key parts that make up a standard turnout (a Double Slip shares many components with a standard turnout) by watching this YouTube video below:

Please use this link:

https://youtu.be/e-lkBl7QmfQ

Or

Scan the QR code:

Rail Orientation

The bullhead rail used in this kit has a top and a bottom which differs in thickness/width (the top is wider).

It is VERY important to insert the rail into the chairs in the correct orientation. Otherwise difficulty will be experienced in sliding the stock, check and crossing V rails into the chairs and doing so may cause damage to the chairs of the track base. Please familiarise yourself with the rail orientation and, if necessary, mark the top of the rail with a felt tip pen to aid correct assembly. The switch blades have a lug on the bottom which is located into the tie bar so incorrect orientation should be obvious.

Double Slip Templates

To aid layout construction, full size PDF templates for all FinetraX Double Slip kits are available on the web site.

Assembly

Having familiarised yourself with these instructions, let assembly begin..!

Filing and Cleaning Rail Ends

Once the rails are cut to the required length, it is VERY important that the rail ends are cleaned up with a small file (a needle file is ideal for this). To allow free and easy insertion of the rail into the chairs, both the foot and web of the rail must be slightly 'chamfered'. Failure to properly clean and chamfer the rail may result in difficulty threading the rail into the chairs, causing breakage of the chairs.

Cutting and Bending Check Rails

Check Rails must be cut to length and a small bend (flare) put on each end. The bends can be easily put onto each Check Rail using a pair of small pliers. The appropriate full size template for your kit should be downloaded, printed and used to ensure correct length and bends for the Check Rails. Downloadable templates for each kit are available at www.britishfinescale.com.

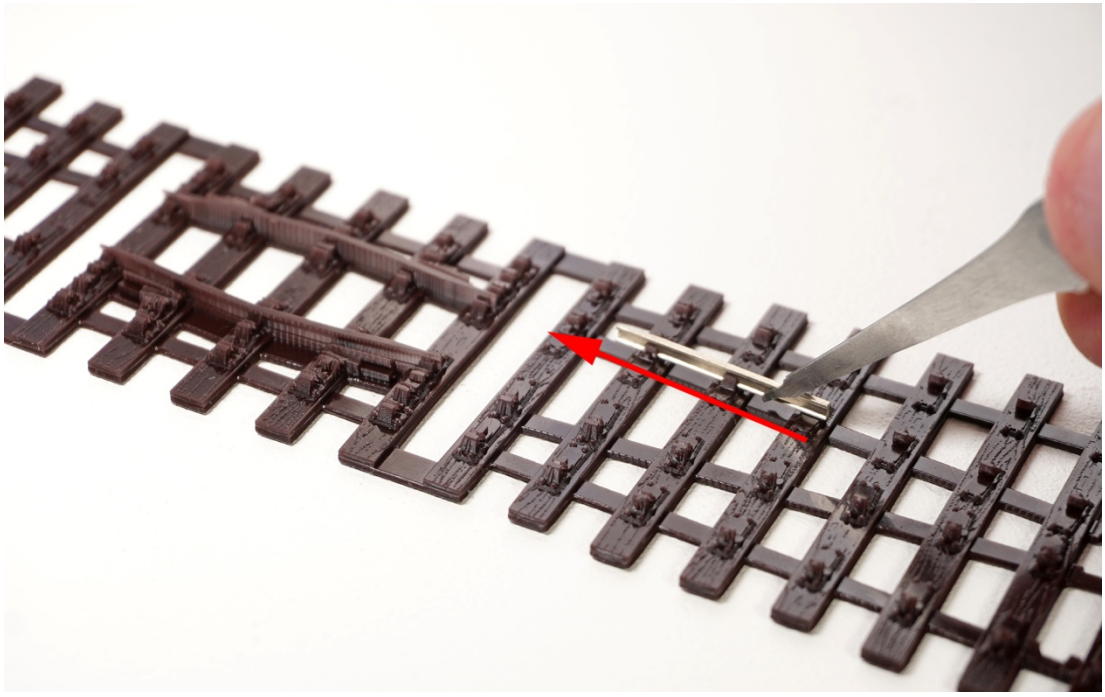
Cutting and Bending Wing Rails

Wing Rails must be cut to length and a small bend (flare) made to in each. The bends can be easily made to each Wing Rail using a pair of small pliers. The appropriate full size template for your kit should be downloaded, printed and used to ensure correct length and bend for each Wing Rail. Downloadable templates for each kit are available at www.britishfinescale.com.

Cutting and Fitting the Central V Rails

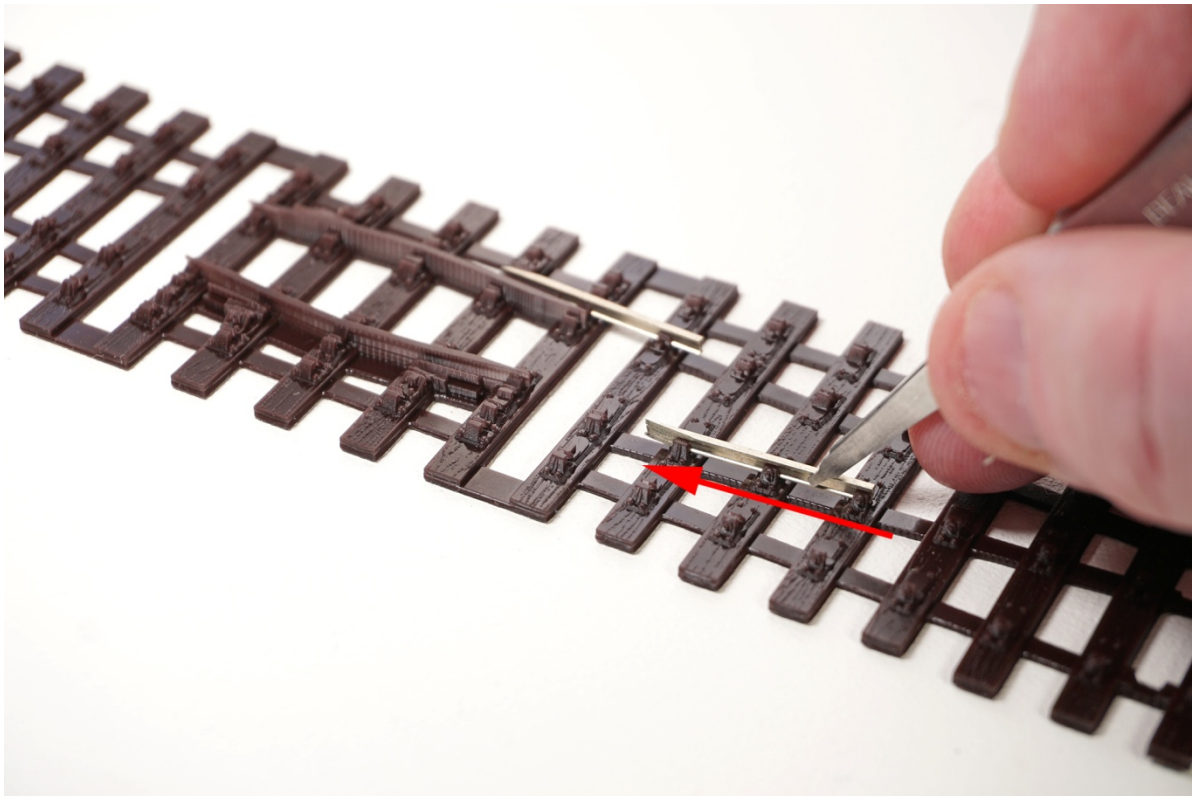
Central ‘V’ Rails must be cut to length using the appropriate full size Downloadable Template for your kit. There are eight ‘V’ rails in the kit and they have the ends of the rail pre machined to a point at the correct angle. Four of the ‘V’ rails are for the centre of the slip, the other four are for the crossing ‘V’ (frogs) at either end of the slip. These are ‘handed’ one left and one right; please ensure you instead them in the correct orientation (see ‘Rail Orientation’).

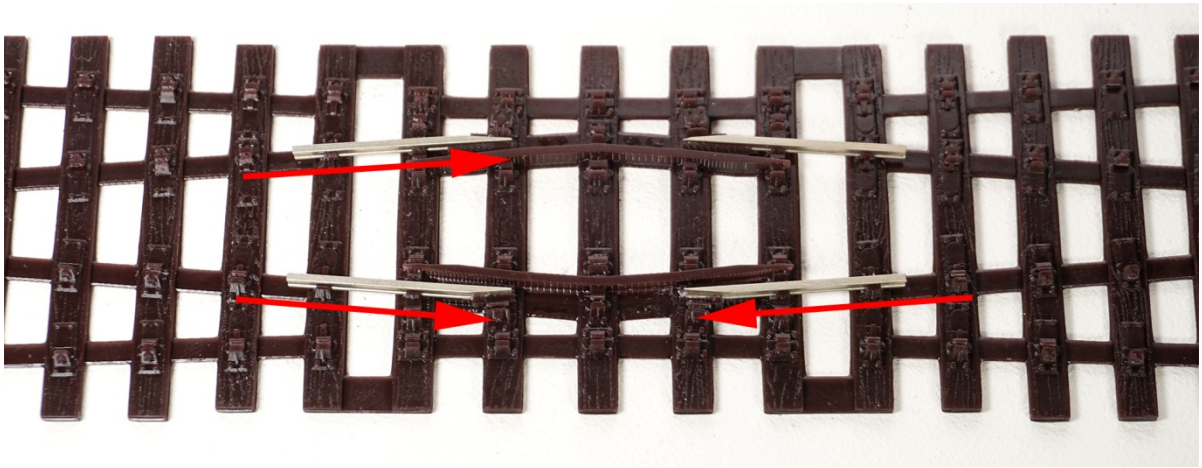
Thread the V Rails in from the Slide Chairs and towards the middle of the diamond.



Push the V rails in until the V wedges in and cannot be pushed any further. The other end of the rail must end where shown on the downloadable template.

The same can be repeated for the other 3 ‘V’ Rails.

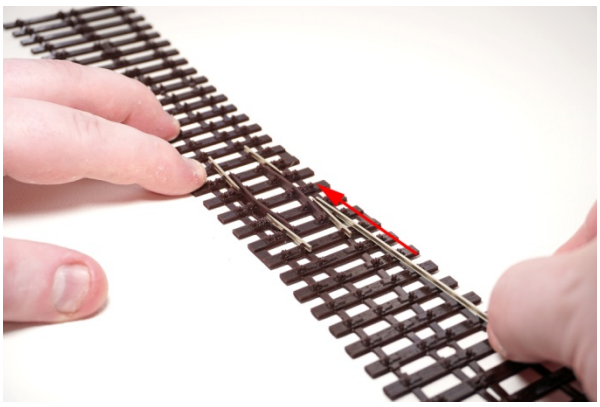


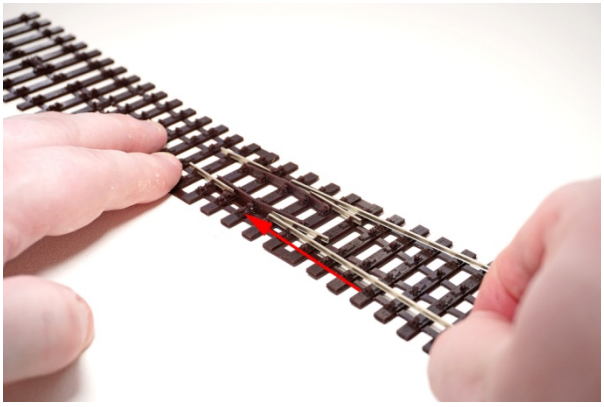


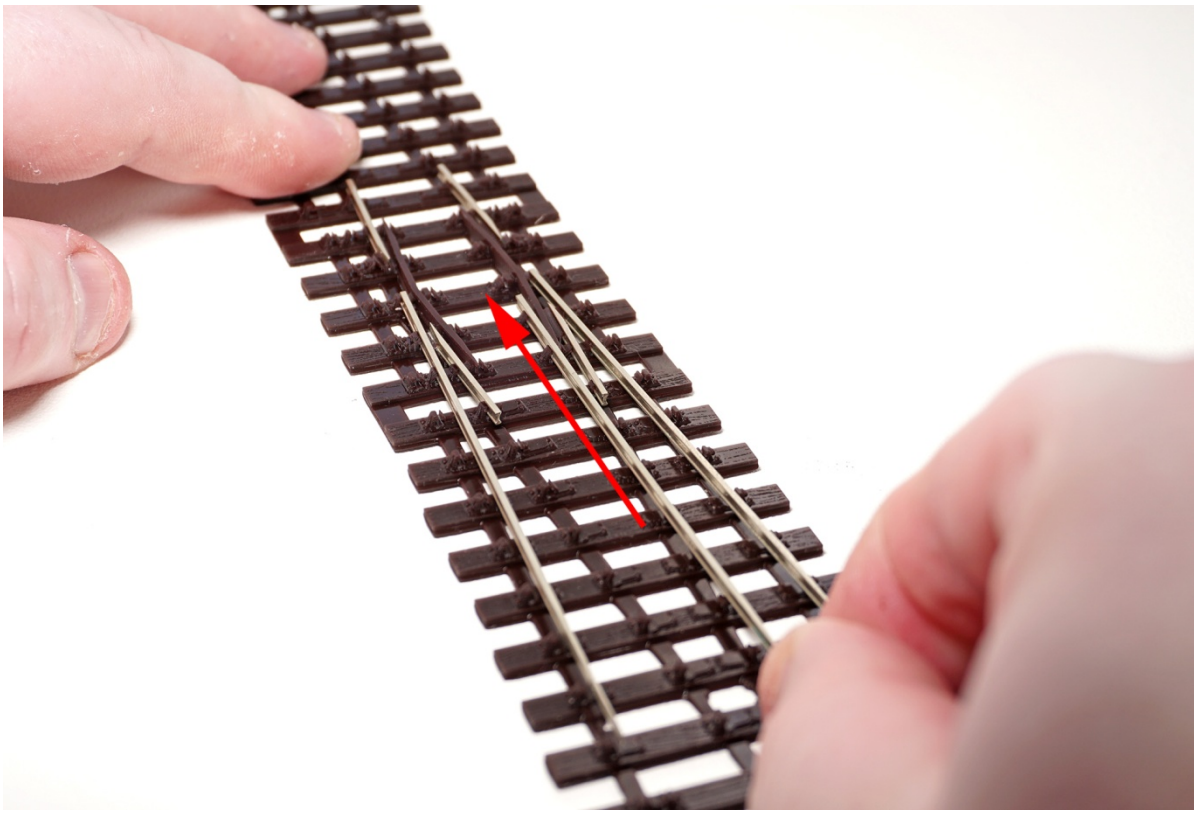
Fitting Switch Blades

The 8 Switch Blades are packaged with a plastic protector fitted to the end to prevent damage to the fine edges at each tip. Carefully slide each Switch Blade out of the protective clip. Each side of the Slip has 4 Switch Blades: - 2 Innermost and 2 Outermost Switch Blades.

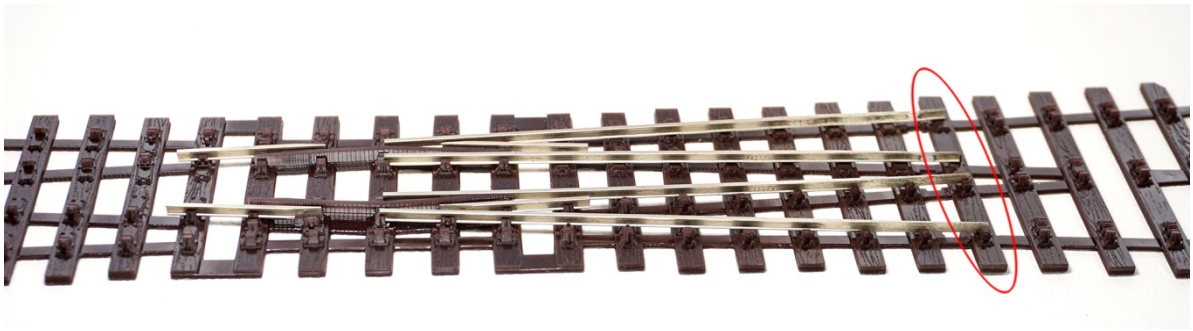
Each Switch Blade can be offered-up to the base and cut to length following the Downloadable Template. They can then be threaded into the base.





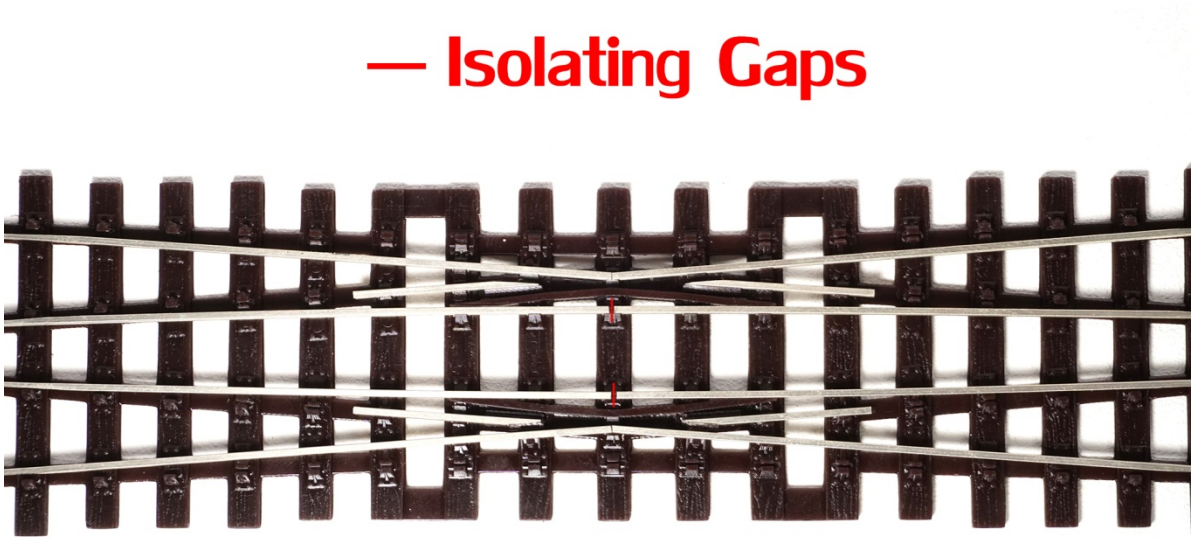


The tips of the Switch Blades should line up over the last Slide Chair as shown below:



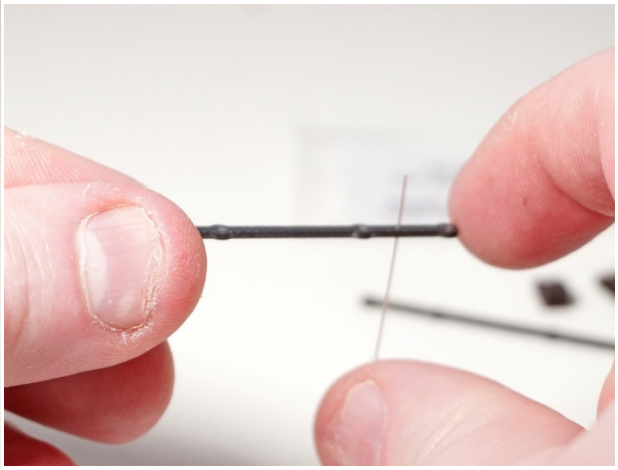
Repeat for the other side. The 4 **outermost** Switch Blades should make contact with its opposing Switch Blade right at the knuckle of the 'Diamond' (the very centre of the formation).

However, there needs to be an 'isolating gap' between the 4 **innermost** Switch Blades and its opposing Switch Blade, as shown below:

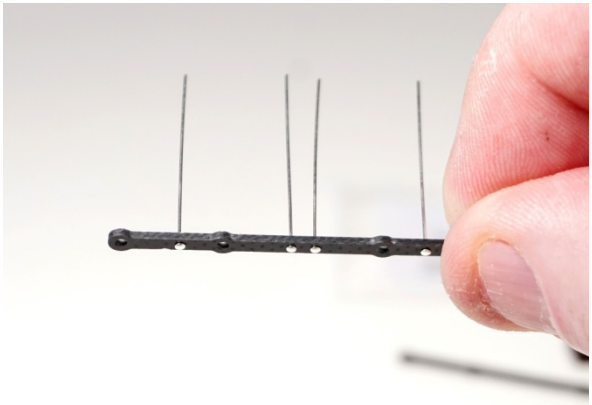
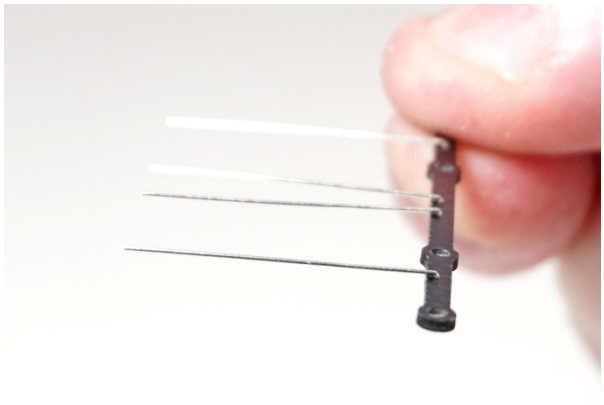


Tie Bar Assembly

The kit contains a small bag that includes the 2 main Tie Bars, 8 metal ‘headed’ pins and 2 Switch Blade ‘Spacers’. The ‘Spacers’ are used to maintain the correct gap between Switch Blades and Stock Rails when soldering the Switch Blades to the pins.



For each Tie Bar, 4 metal pins are inserted through the pre drilled 0.4mm holes in the tie base.

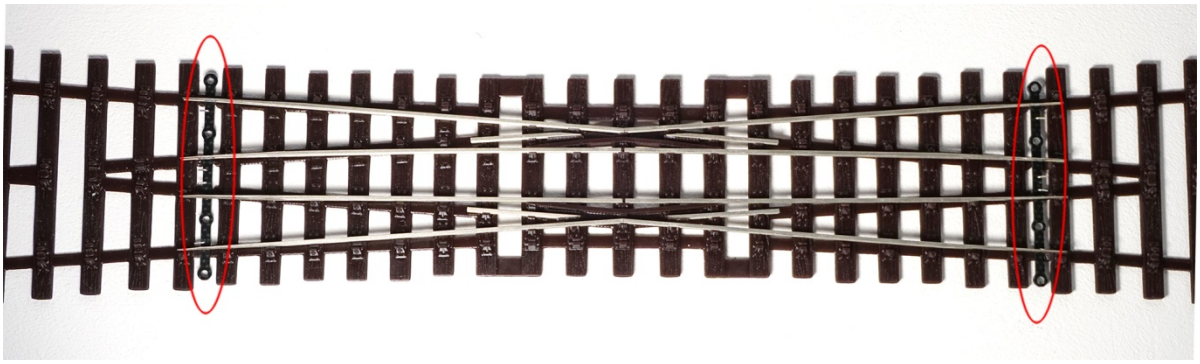



Make sure that the 4 headed pins are pushed all the way through until the heads of the pins are flush with the bottom of the tie bar. Then bend both pins by 90 degrees so that they face forward as shown above.


The pins can then be cut short leaving about 2 – 3mm of length as shown above.

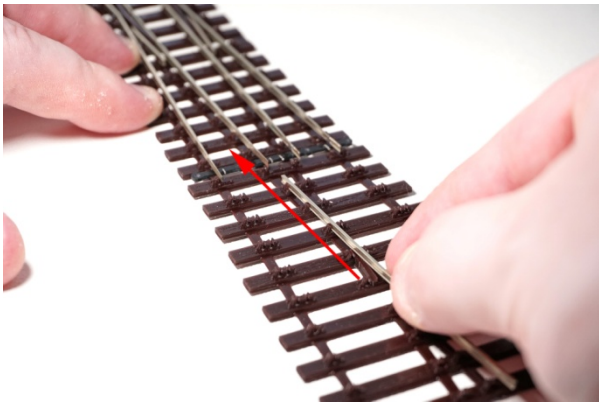
Positioning Tie Bars

The assembled Tie Bars can now be placed on the Double Slip Base between the last 2 Slide Chairs each side of the Slip. They will locate into the slots as shown in the picture below:

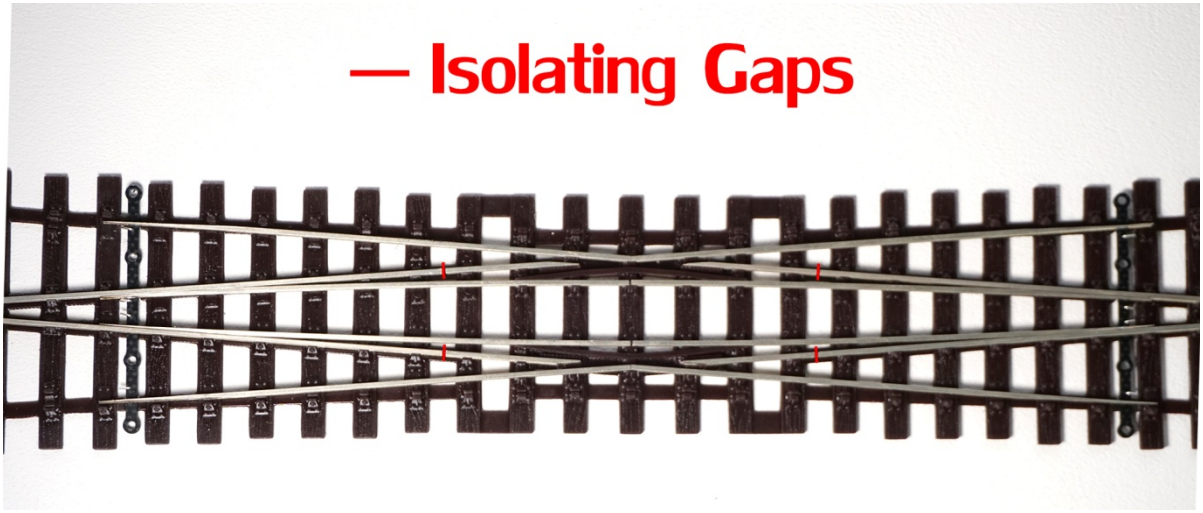


Cutting and Fitting Closure Rails

Closure Rails must be cut to length using the appropriate full size template for your kit. There are 2 Closure Rails each side of the Slip. Thread the Closure Rails in from the 'knuckle' of the crossing frog (see Anatomy of a turnout and downloadable template) and towards the middle of the Slip. You will need to bend the plastic turnout base **slightly** and **carefully** in order to make clearance for the rail, otherwise the chairs around the Crossing 'V' (frog) will be in the way of the rail. This is easily done on the edge of the desk/work-top you are assembling on. WARNING – DO NOT over-bend the plastic turnout base, otherwise there is a risk of snapping the base! Only bend just enough to allow the rail to slide in. Repeat for the opposite side of the Slip.

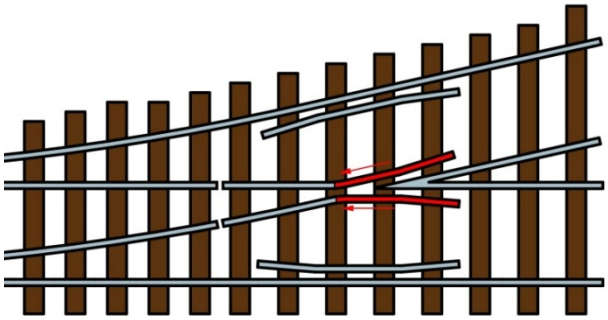


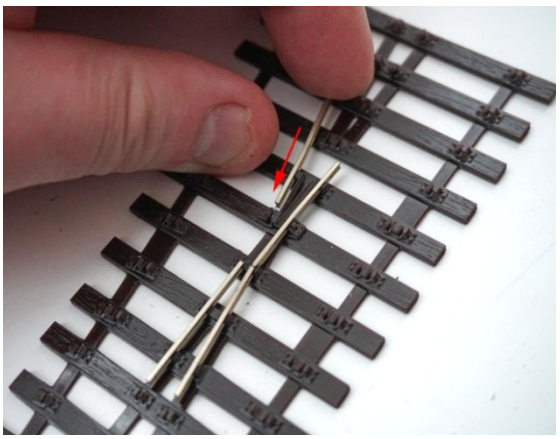
Note: There should be an isolating gap between the closure rails and the central 'V' rails that were previously inserted.



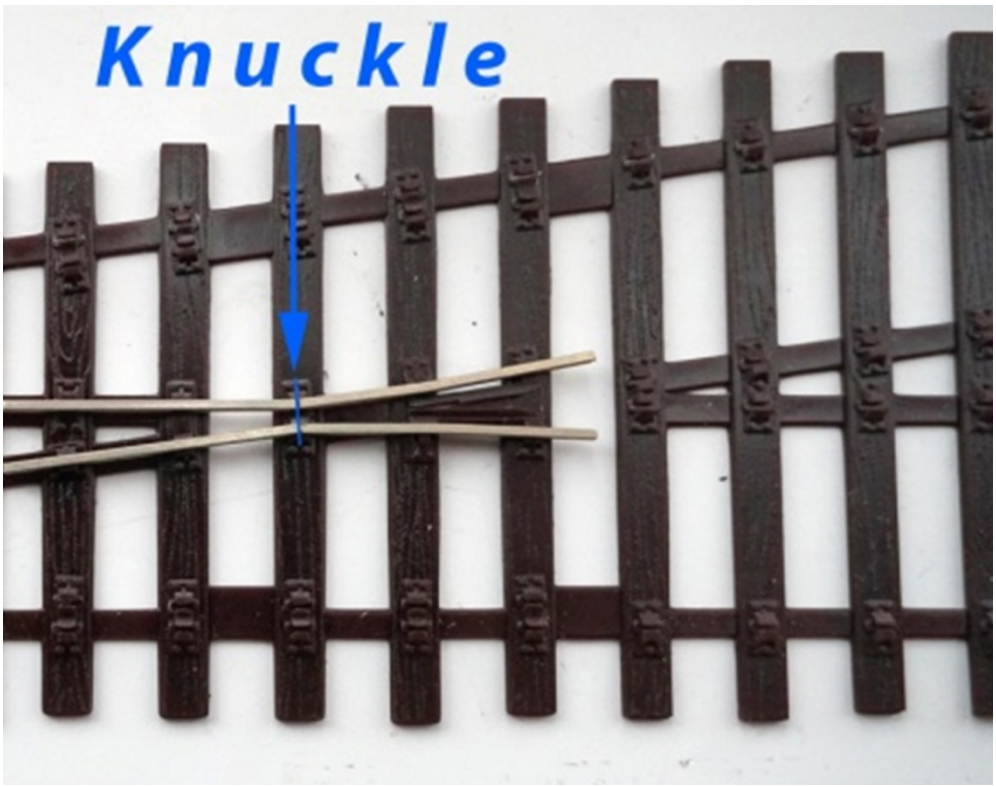
Fitting Wing Rails

Wing Rails can be threaded in towards the Closure Rails as shown below.





IMPORTANT! The join between the Wing Rails and the Closure Rails MUST be located exactly at the 'Knuckle' position. This position will be different for each kit, so you MUST refer to your kits downloadable template which will show the exact position of the knuckle. There is also a small indentation on the plastic base indicating the precise position of the 'Knuckle' join. Repeat for the opposite side of the Slip.



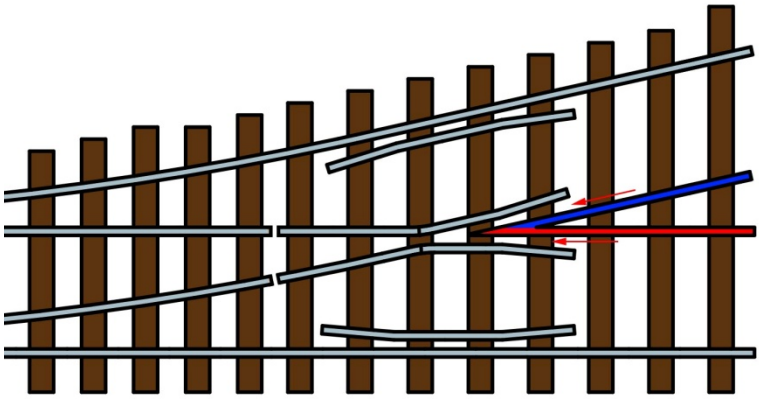
Fitting Crossing 'V' (Frog) Point and Splice Rails

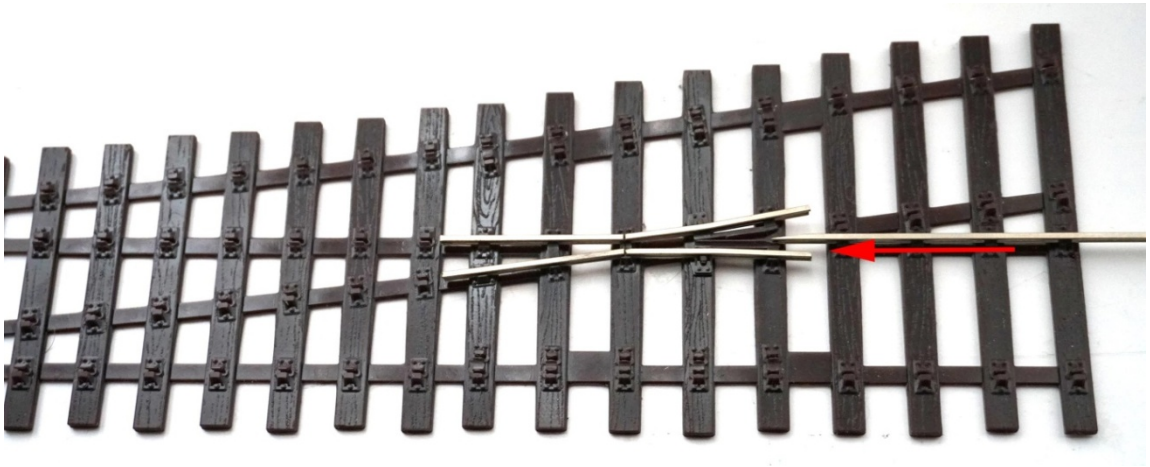
The crossing 'V' (Frog) is made of two pieces of rail called the **Point** and **Splice** rails. These have the ends of the rail machined to a point at the correct angle, and come pre machined in the kit. These are 'handed' one left and one right; please ensure you instead them in the correct orientation (see 'Rail Orientation').

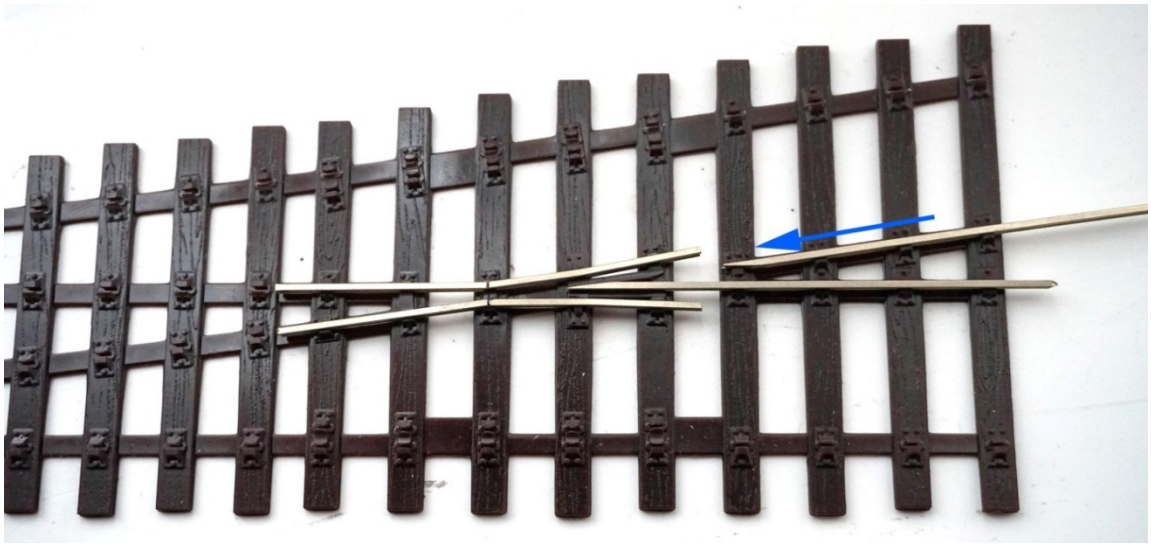
The Point Rail location is shown on the downloadable template and is inserted first and pushed all the way until it stops (it will wedge in). You should find the point of the V on 2 thirds over that sleeper/timber.

The Splice Rail is then inserted and pushed-in until it butts up to the first Point Rail.

Repeat for the opposite side of the Slip.

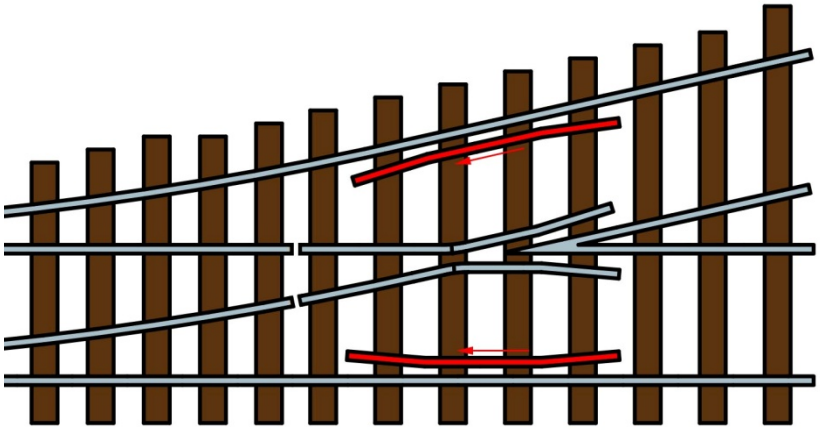


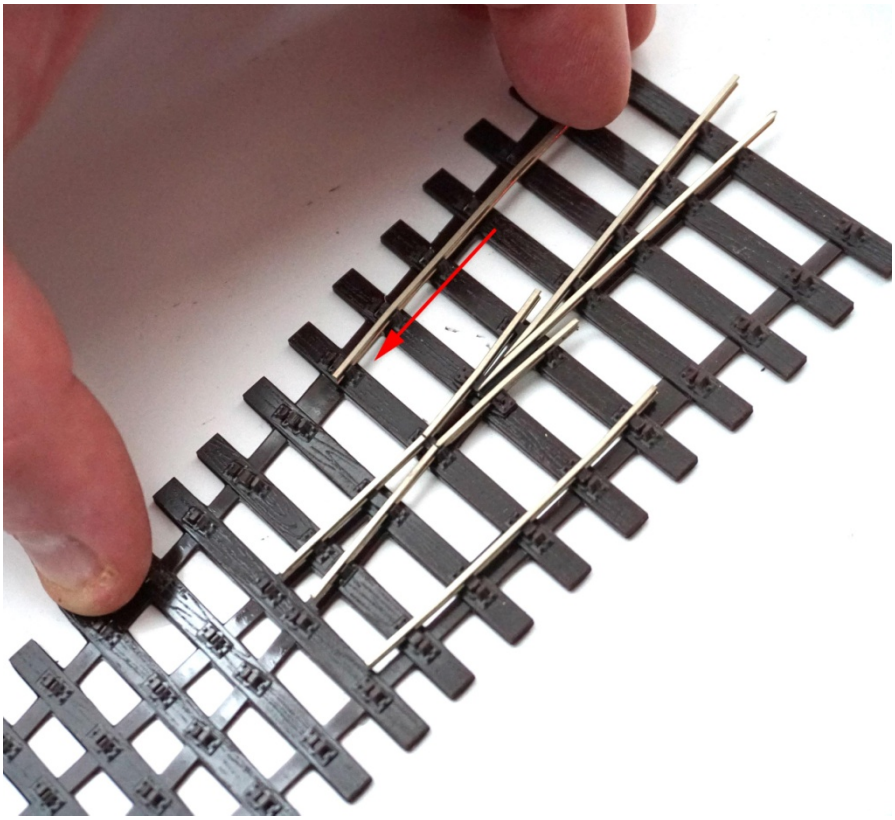




Fitting Check Rails

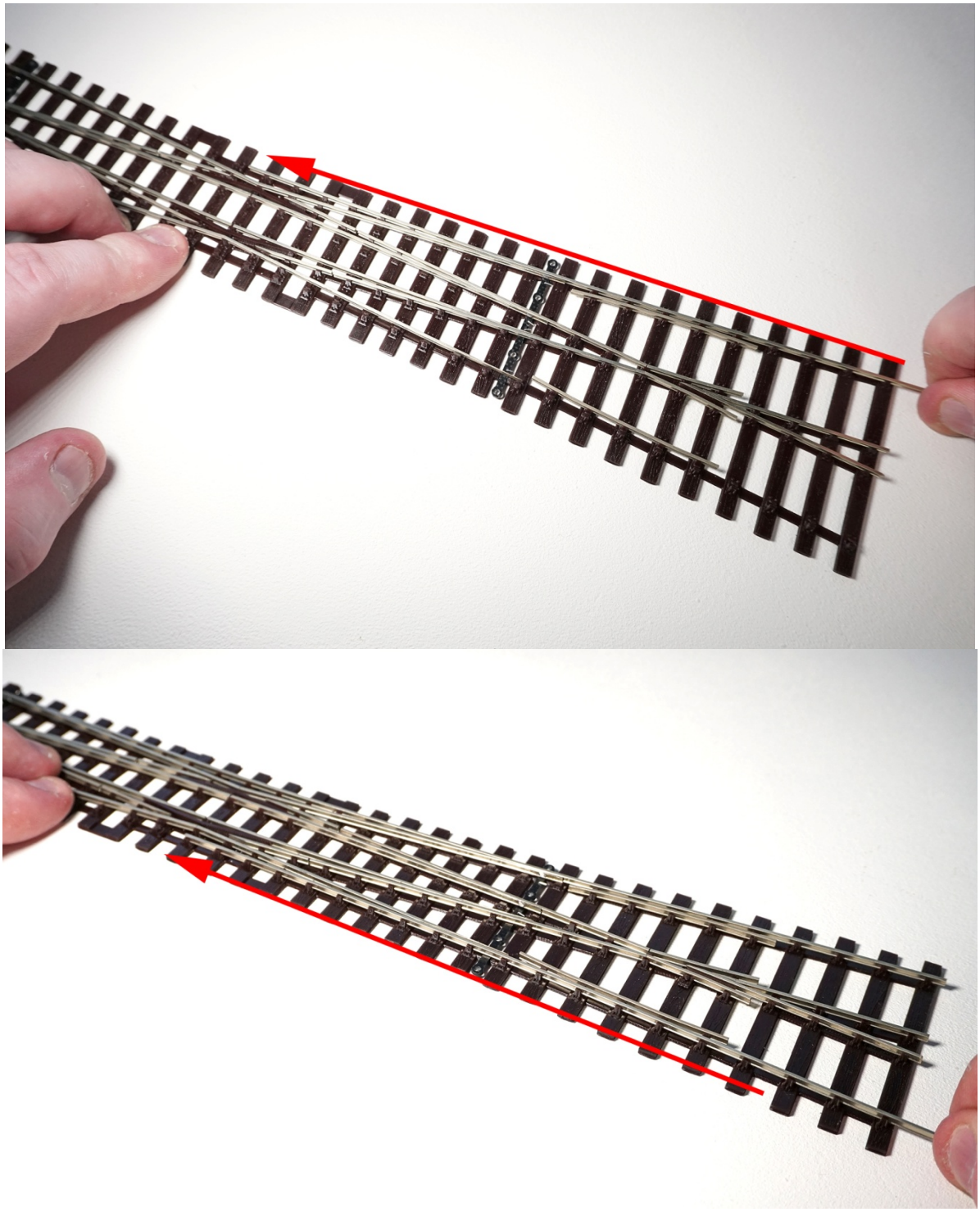
The Check Rails can be threaded-in one at a time, taking care to guide the end of the Check Rails through the slots in the chairs. Check against the downloadable template for correct alignment. Repeat for the other side of the Slip.





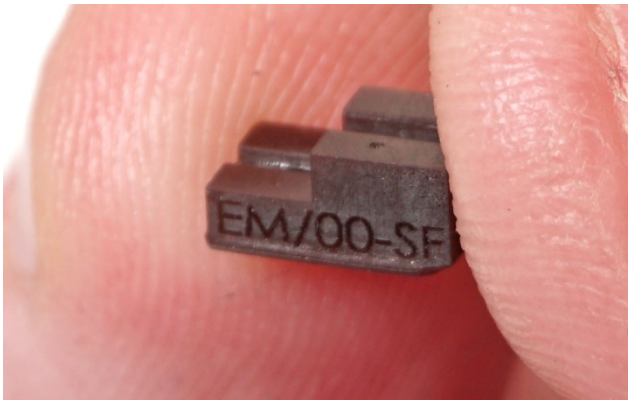
Fitting Stock Rails

The 2 outer Stock Rails can now be slid into the chairs from either end of the base, as shown below. Care must be taken so each Stock Rail slides over the Tie Bars. Each Tie Bar must be free to slide under the Stock Rails when operating the Switch Blades.

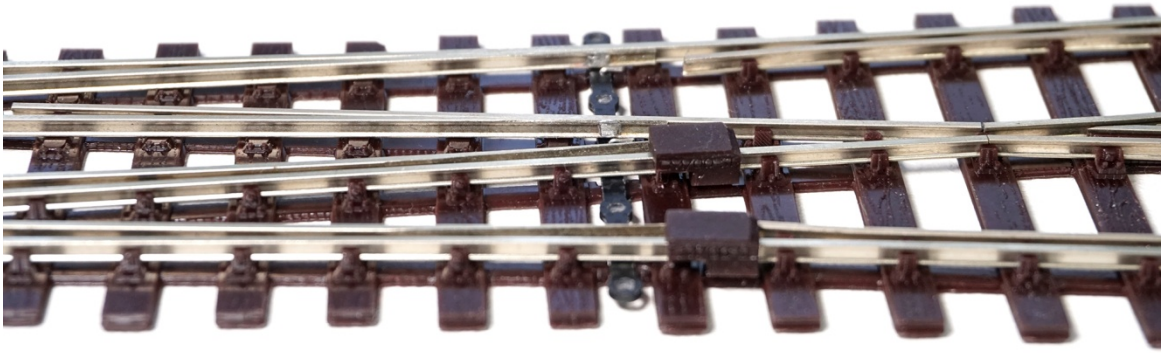


Soldering Switch Blades to Tie Bar Pins

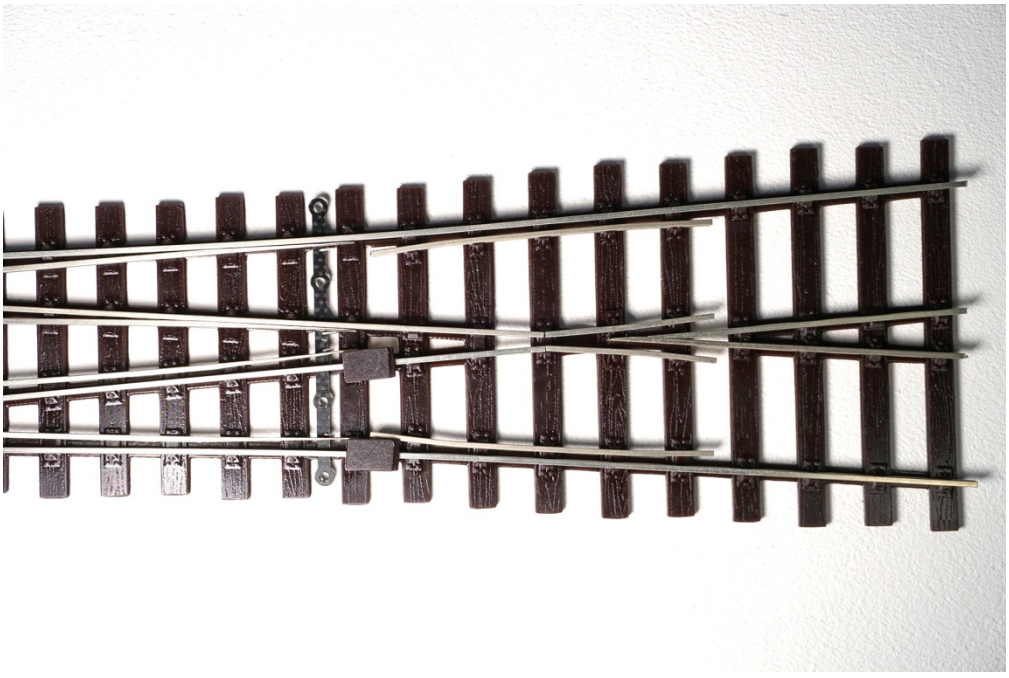
Two small Switch Blade ‘Spacer’ are provided. These ‘Spacers’ are used to maintain the correct gap between Switch Blades and Stock Rails when soldering the Switch Blades to the pins. It has a slot in the middle which clips onto the Stock Rail. One end is raised to give clearance for the Slide Chair (the ‘Spacer’ pictured is for EM/00-SF).



The Spacers can be clipped onto the two lower Stock Rails while the two lower Switch Blades are held open.

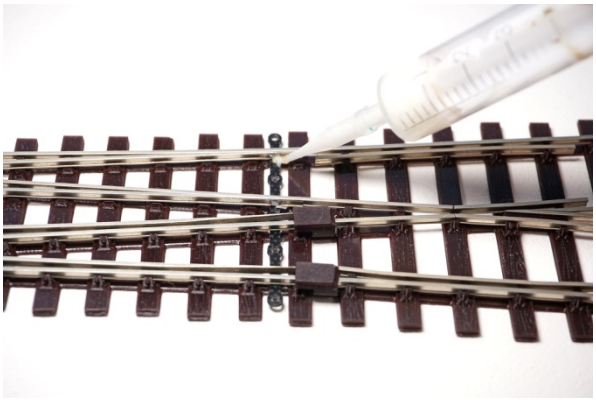


Once in position, the Spacers hold the two lower Switch Blades open at the correct gap. The upper two Switch Blades remain against its Stock Rail.



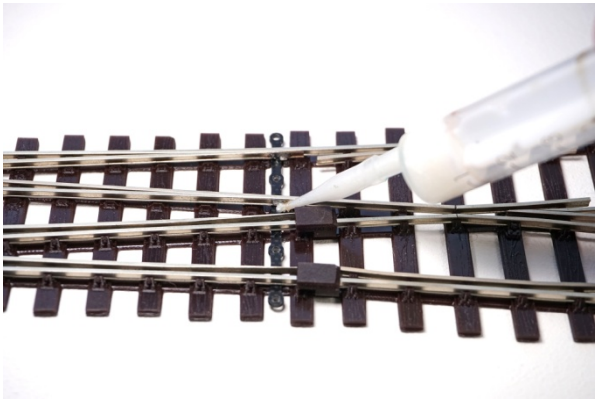
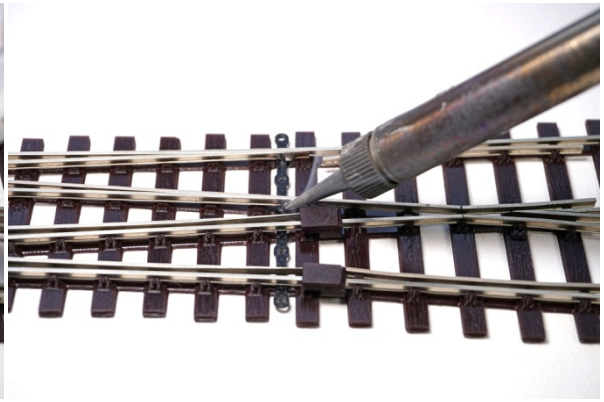
Soldering is done while the Switch Blades sits flush against the Stock Rails as this ensures best alignment. If you notice a gap between Switch Blades and Stock Rails, this can be taken up by squeezing them together at the top of the rail head with a small pair of tweezers, whilst soldering.

A small amount of Soldering Flux can then be applied to the very top Pin and Switch Blade. With a small amount of solder applied to the tip of the soldering iron, touch the pin with the tip of the iron and then up against the Switch Blade. The solder will flow with the help of the flux and a soldered joint with be created.

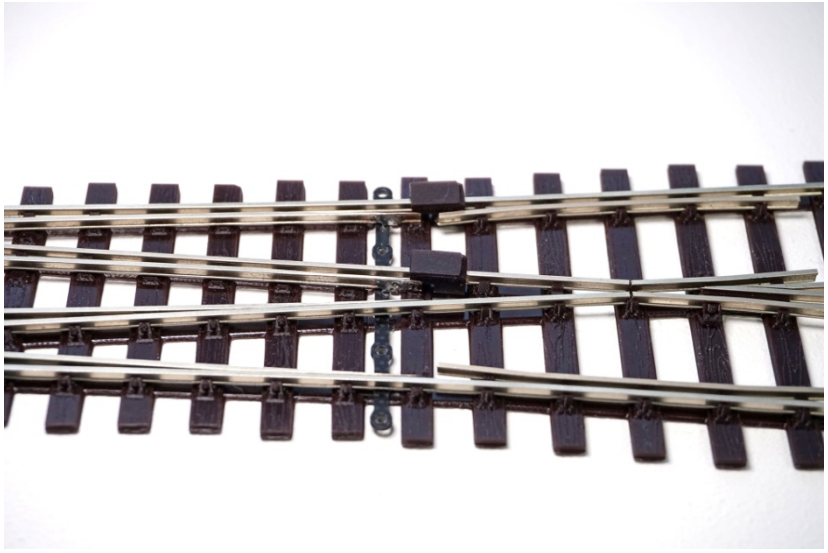


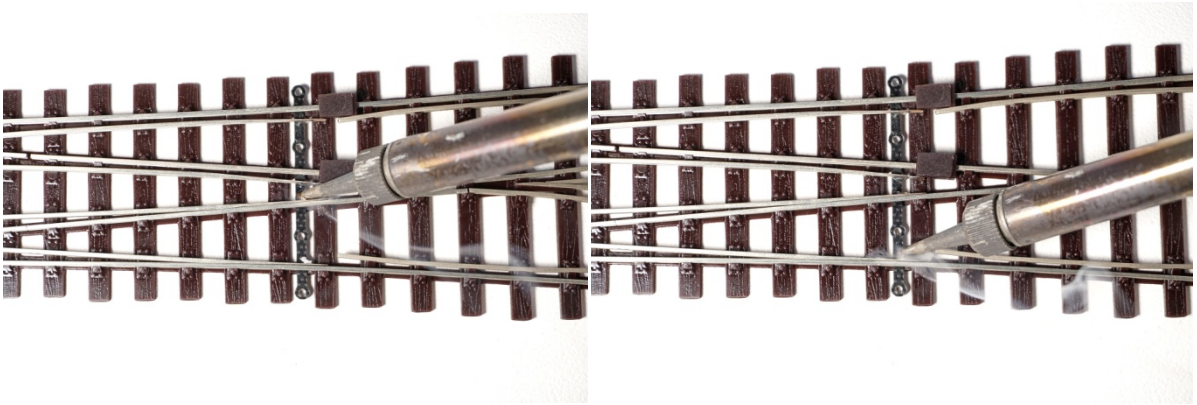

NOTE: Please only use a small amount of solder, otherwise there is a risk of solder flowing under the Switch Blade and bonding the Switch Blade to the Stock Rail.

Now do the same for the other Switch Blade

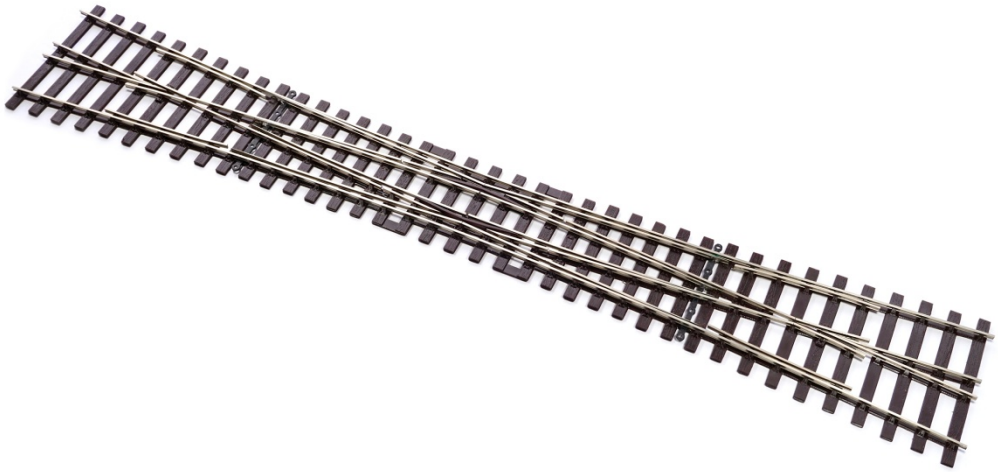



The same can then be repeated for the other two Switch Blades. Move the 'Spacers' to the other Stock Rails, which will hold the two Switch Blades that you just soldered, open at the correct gap.





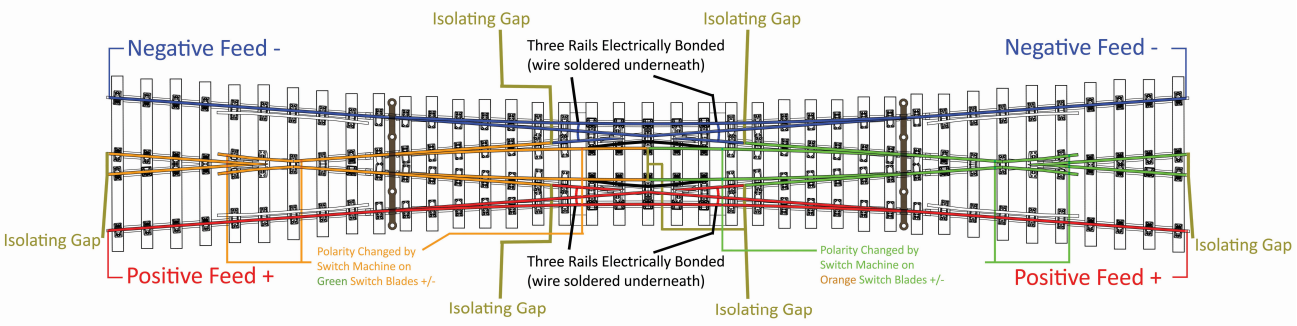
With the 4 Switch Blades now soldered, the same can be repeated for the 4 Switch Blades on the opposite side of the Slip.



Electrical Wiring

Please refer to the diagram for suggested electrical connection. A positive feed wire should be soldered to the bottom Stock Rail and negative feed wire to the top Stock Rail.

A gap must exist (about 0.3mm) between rails of different colour codes. Otherwise a short circuit will occur (Green Must not contact Red, for example).



Each of the 4 ‘V’ Rails in the middle of the Slip should be electrically bonded to its adjacent Switch Blade and Stock Rail by soldering a small piece of wire between them under the rails at the point shown in the diagram.

One wire should also be soldered to the bottom of the Crossing V ‘Frog' Rails and Wing Rails and another wire soldered to the bottom of the Closure Rails, as indicated below in green and orange in the diagram above.

Fixing the Rails in Place

Once happy with all of the rail positions (checking especially the 'knuckle' location), the rails can be permanently fixed in-place using a small amount of super-glue on one or 2 chairs for each piece of rail.

Laying the completed Double Slip

The completed Double Slip can be installed into the layout and fixed into place using PVA glue or Copydex. Please ensure that no glue gets into the Switch Blade or Tie Bar area, otherwise this will restrict movement or create unnecessary friction.

Ensuring the Plastic Base is Flat

Depending on environmental temperature, slight curving of the plastic base may be experienced. To guarantee smooth running of trains, it is important to ensure that the completed turnout lay absolutely flat on the baseboard surface. This can be accomplished by use of weights or temporary 'pins' to ensure flatness while the turnout is being glued in position.