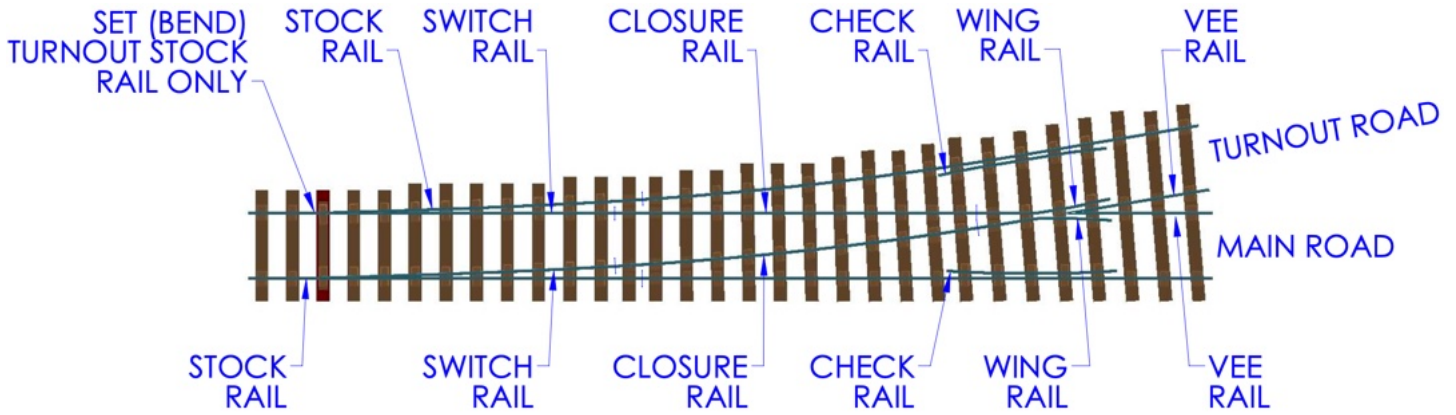


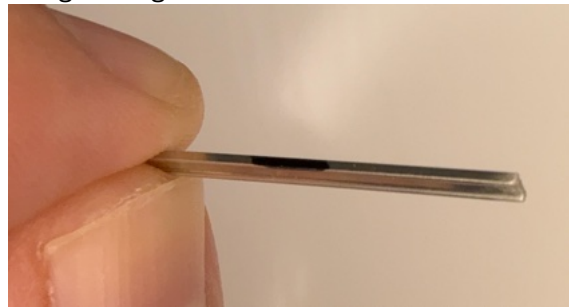
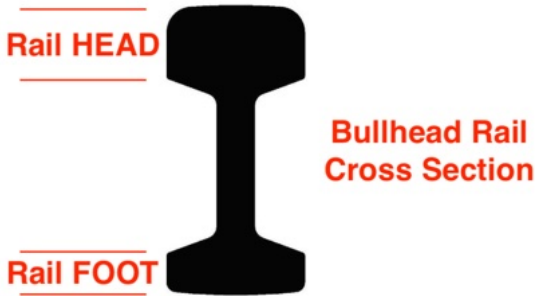
Example of a 4mm kit build, please feedback any suggestions to improve these instructions to terry@kosmik.co.uk

Turnout / Switch Terminology:



Prepare Rail Sections for assembly:

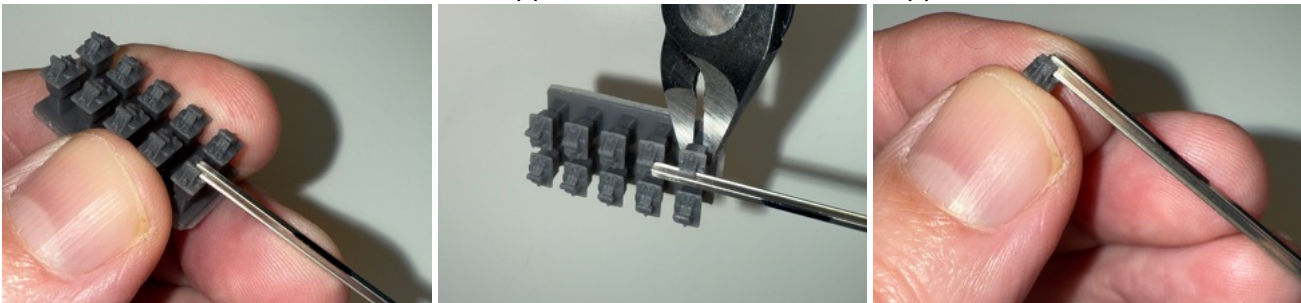
- Utilise 1:1 printed template to cut to length and bend/form all rail sections. Note: printed template does not show SPLIT chairs but does detail complete 1 part chairs.
- Ensure all rail ends are deburred
- Note: Bullhead Rail Head is thicker/higher than Rail Foot so, it's a good idea to mark the tops of rails with a marker pen to aid correct rail orientation when threading/sliding rail into chairs



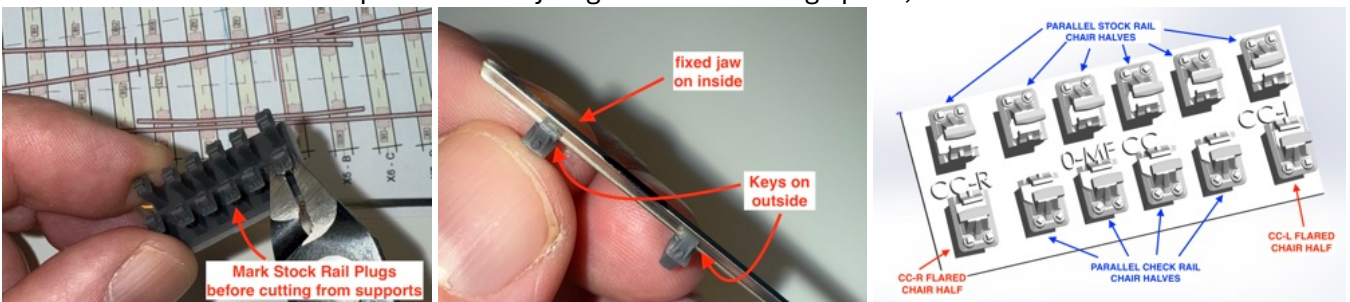
- Ensure all rail ends are deburred. It's a good idea to file a tiny lead in chamfer to both ends of rail to enable chairs to be easily threaded onto rail.

Stock Rail Assembly:

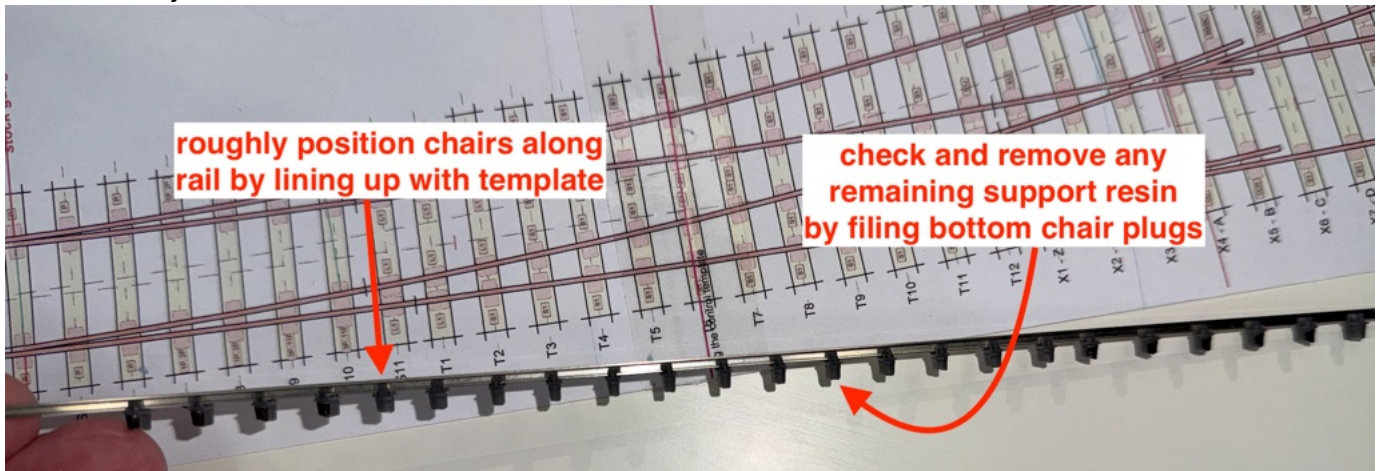
- Thread chairs onto Stock rail in order as per the printed template.
- Chairs can be threaded either on their supports or after removal from support.



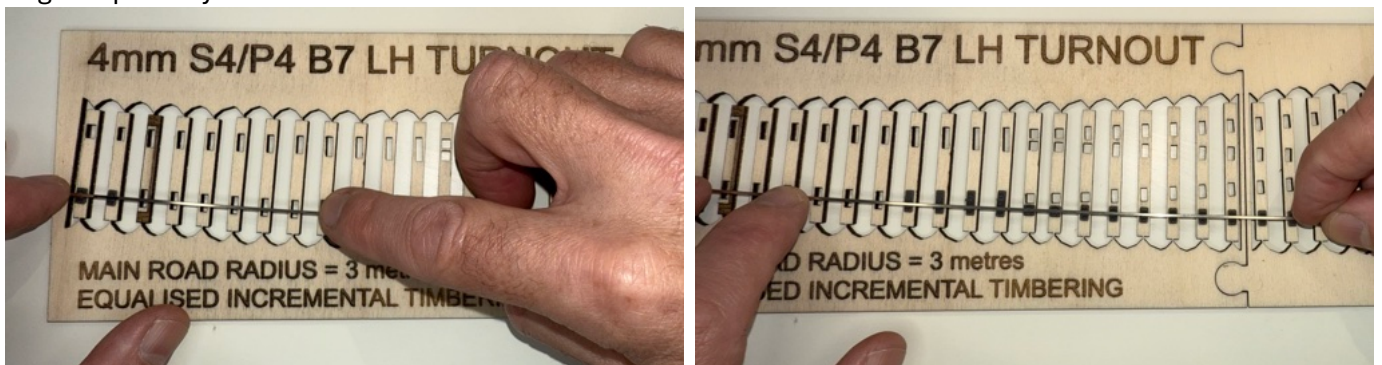
- Before removing CC check rail chairs from supports it's a good idea to mark the stock rail chair plugs. Remove and fit individual check rail split chairs 'as you go' to avoid mixing up CC, CC-L and CC-R chairs.



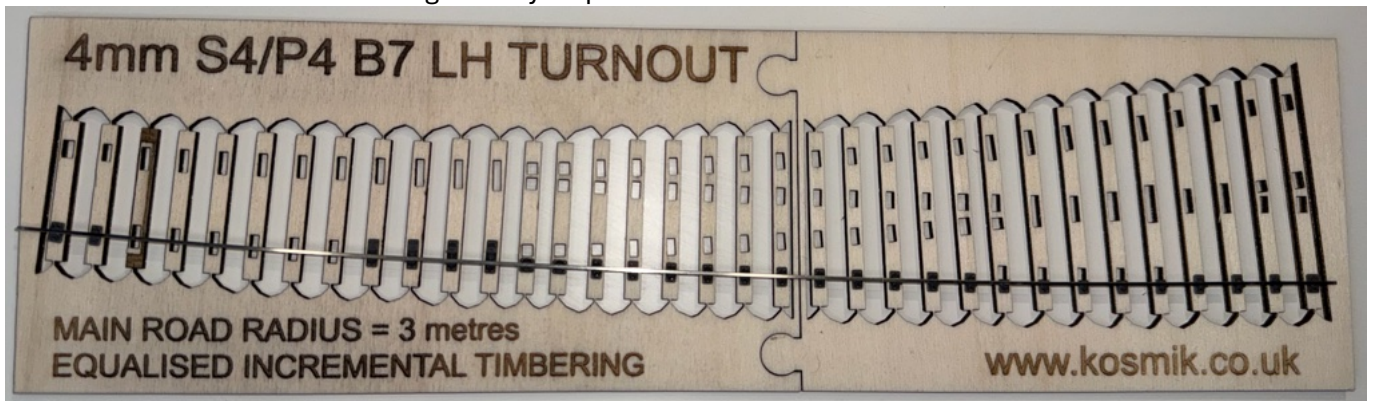
- As chairs are threaded onto rail ensure all keys are fitted on the outside of the rail. Key direction along the rail should be random apart from chairs adjacent to a gap/fishplate/joint where keys would prototypically be fitted facing away from rail joint. *(I need to check / confirm this?)*
- Before removing HEEL chairs from supports it's a good idea to mark the stock rail chair plugs to ensure they are fitted correctly onto rail. Remove and fit HEEL chairs 'as you go' to avoid mixing up the correct order etc.
- Note: P slide chairs are NOT fitted to rails but, are inserted into timber sockets later in the build.
- When the rail has a full compliment of chairs fitted. Check all are fitted the same way around e.g. all keys on non-running rail face / outside. Also check that no extra resin material is present below the chair plugs as this will prevent the chairs from sitting down flush on the ply timbers. Run a file along the bottom edge of the plugs to remove any excess or burrs.



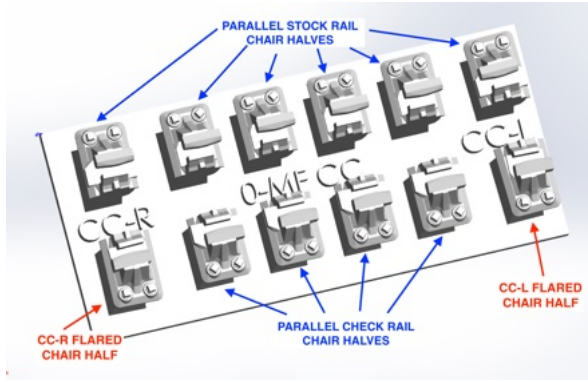
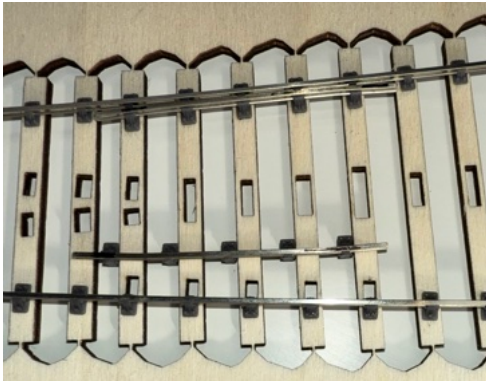
- Starting at one end, align and partially insert first chair into respective timber socket. Hold rail in place at partially inserted first chair and slide next chair into place and with a gentle wiggle, slide and twist of the chair begin to partially insert next chair.



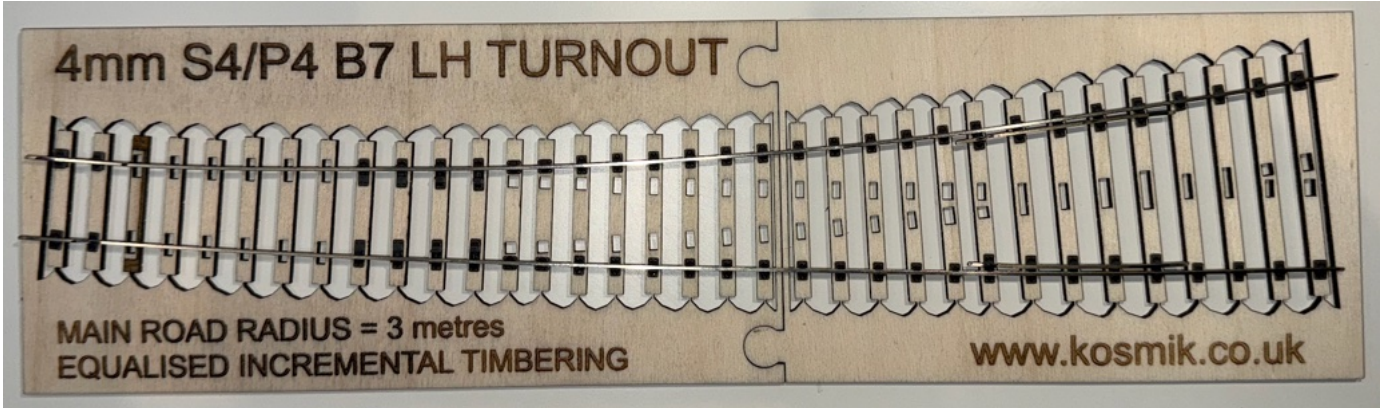
- Whilst holding down rail and first inserted chair repeat the slide/wiggle/twist routine to partially insert remaining chairs. The fit of the chairs is almost size for size so minimal force is required. As more chairs begin to be inserted the first chairs can gradually be pressed home.



- Note: P Slide chairs are NOT fitted at this time. This is to aid insertion of Switch / closure rails. Rail chair assemblies can be easily removed at any time using a small screwdriver as a lever beneath the rail and gently lifting and moving along from one end to the other.
- Thread SPLIT Check Rail Chairs onto check rail taking care to thread the flared chair halves at correct ends as shown below.

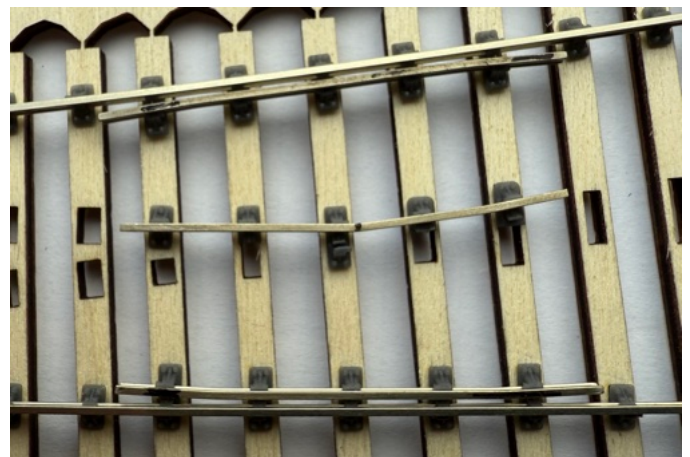
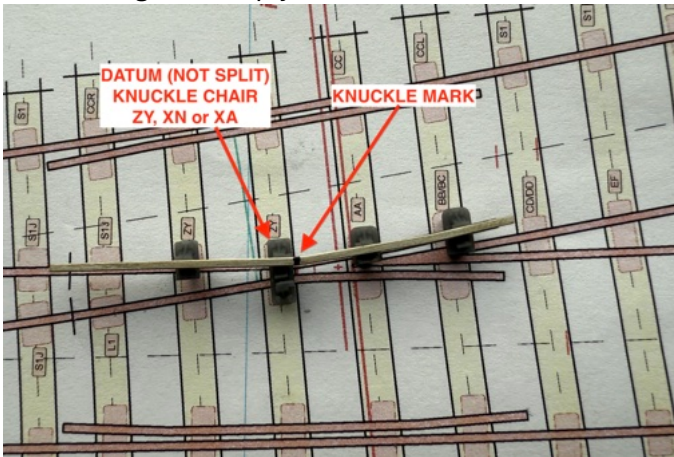


- Insert check rails into shared sockets to complete both stock rail assemblies.

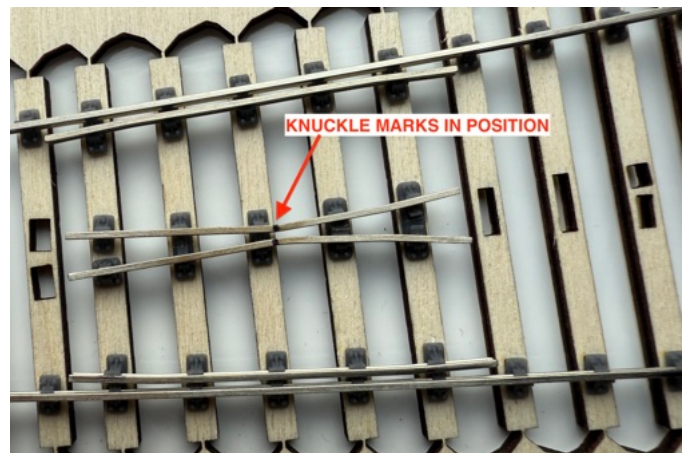
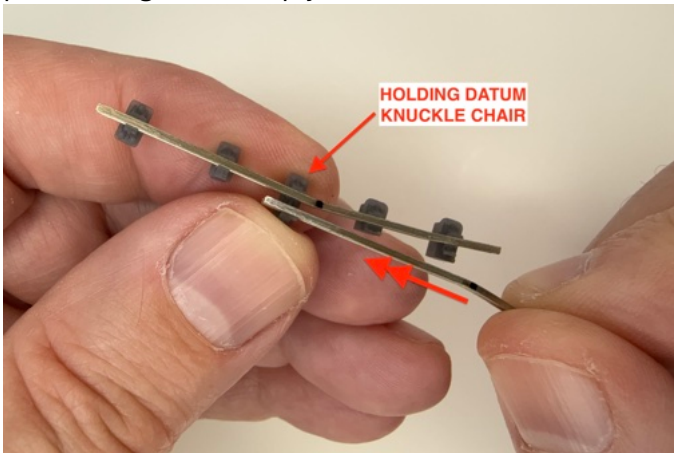


Wing Rail Assembly:

- Thread wing rail chairs onto pre-prepared rail. Ensure 'knuckle' (bend location) is marked on the top of rail and slide datum chair (chair closest to knuckle) along rail as per the template. Thread half chairs on to rail and position whilst ensuring correct orientation e.g. all keys on outside and angles diverging as per template. Test fit first wing rail into ply timbers.



- Thread 2<sup>nd</sup> Wing Rail through datum knuckle chair. Thread remaining split wing chairs onto 2<sup>nd</sup> wing rail. Test fit pair of Wing Rails into ply timbers.

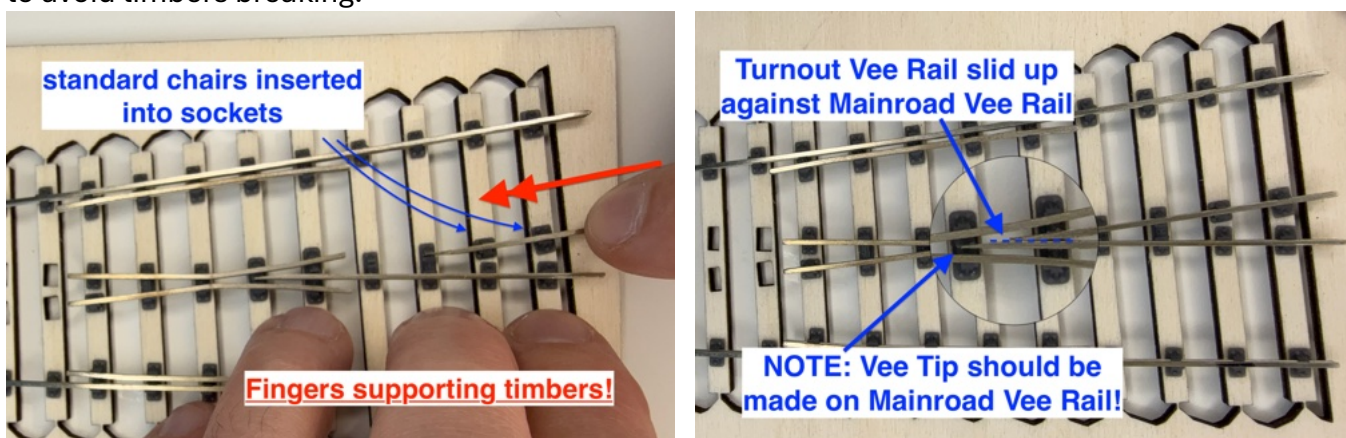


**Vee Rail Assembly:**

- Thread crossing Vee Chairs onto Main Road Vee Rail.
- Position chairs close to Vee point and fit into ply timbers as shown below.
- Carefully slide/push main road Vee Rail into Wing Rail Chair ensuring rail tip is 'inside' vee guide jaws.
- Slide Rail until Tip reaches its final position as indicated on the printed template.

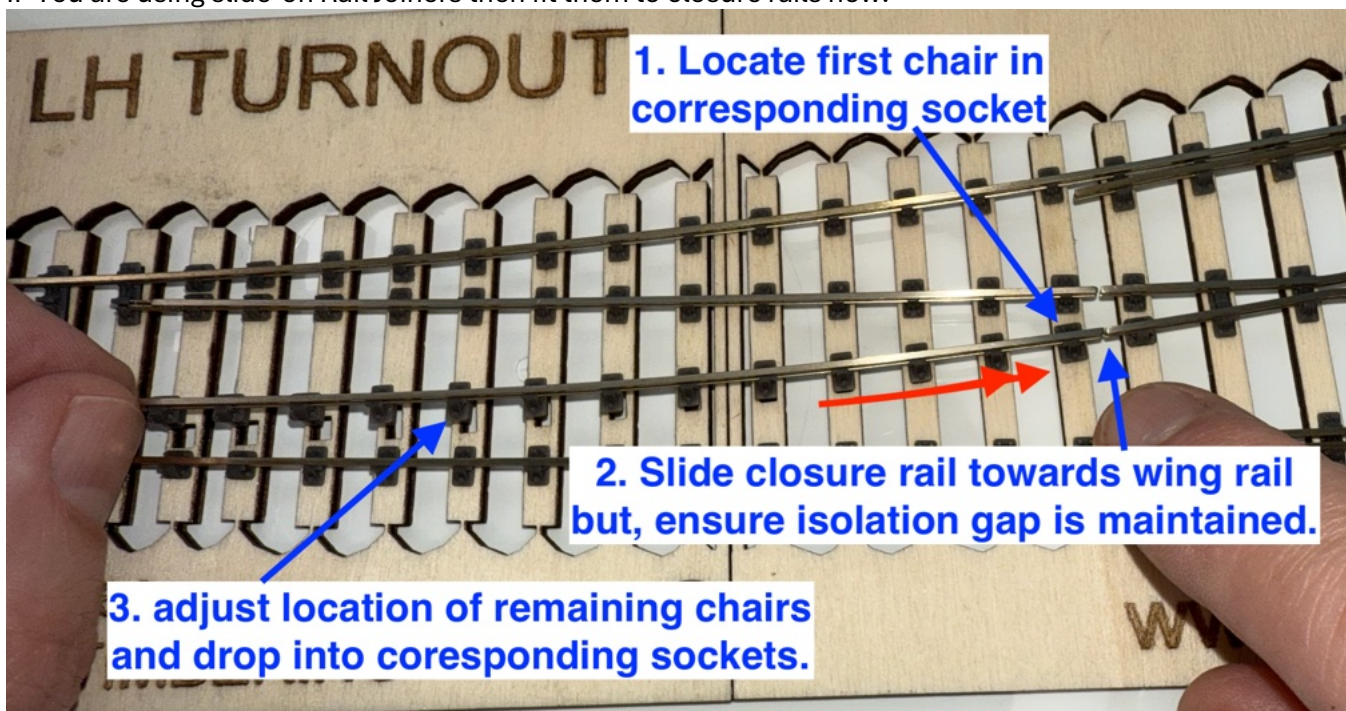


- Thread standard chairs onto Turnout Vee Rail and fit into respective timber sockets.
- Carefully slide / push Turnout Vee Rail through installed Wing/Vee Chairs whilst supporting timbers to avoid timbers breaking.



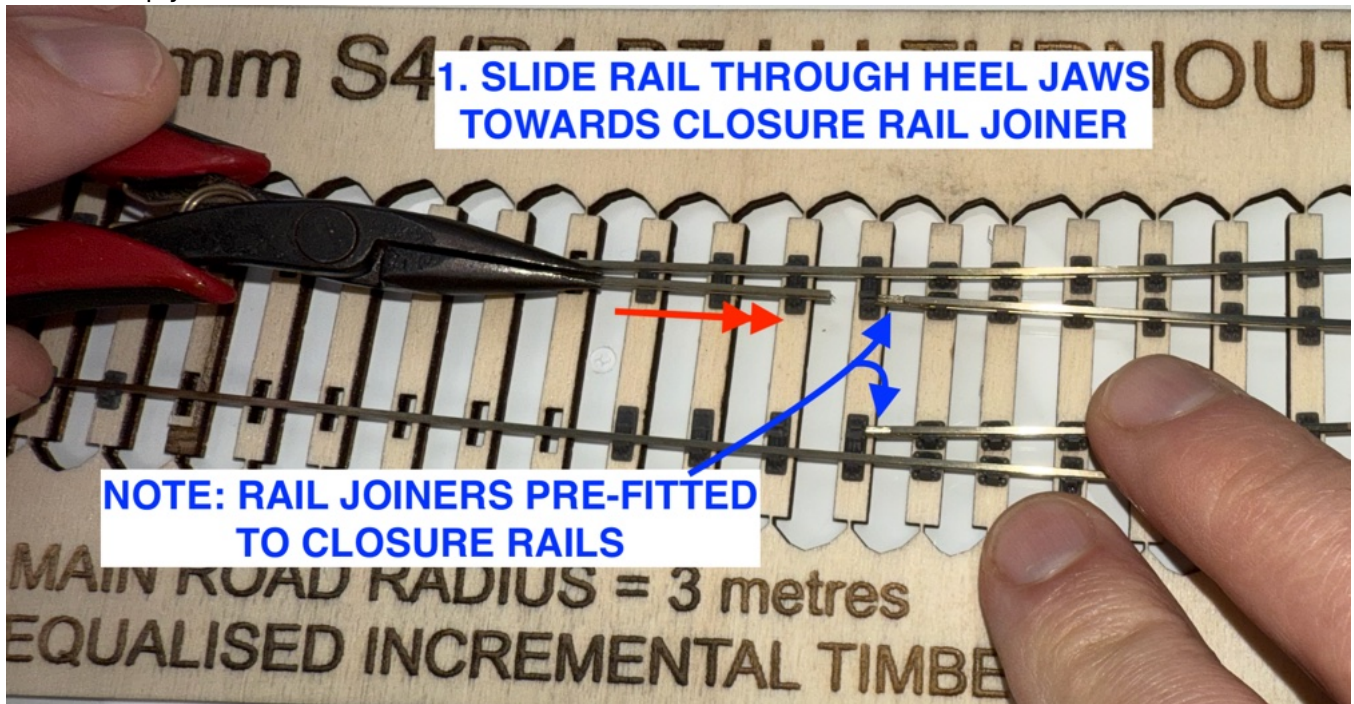
**Closure Rail Assembly:**

- Thread Closure Rail Chairs onto pre-prepared rail as per the template whilst ensuring correct orientation e.g. all keys on outside. Fit first Chair adjacent to Wing Rail into socket and slide closure rail towards Wing Rail. Ensure a sufficient isolation gap is maintained between closure rail and wing rail.
- IF You are using slide-on Rail Joiners then fit them to closure rails now.

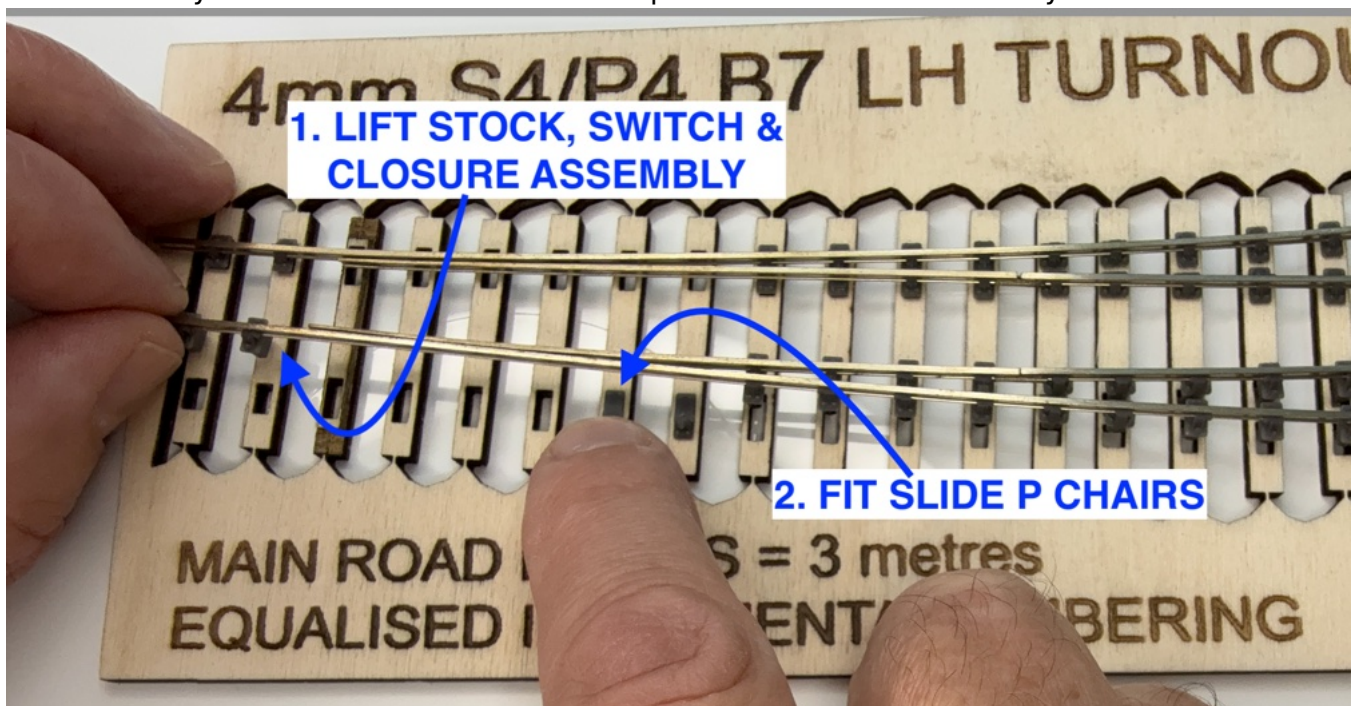


Switch Rail Assembly:

- Thread the Switch Rail through the solid jaws of the last two Heel Chairs towards the installed Closure Rail.
- IF slide-on Rail Joiners are pre-fitted then it's sometimes difficult to align or slide the switch rail into the Rail Joiner. This can be made easier by gently lifting and removing the closure rail from the ply base. Then, gently lift the assembled stock & switch rail chair assemblies and fit the rail joiner of the closure rail prior to refitting all chairs into ply sockets.



- Carefully lift Stock Chair Assembly and fit all P Slide Chairs into respective sockets. Ensure all P Slide chairs are fully home and refit stock rail to complete Rail and Chair assembly.

Stretcher / Tie Bar Assembly:

Not supplied with Kit but, currently under development and I hope to offer option later.

Electrical Wiring:Fixing to Baseboard:Painting and Scenic Suggestions: