

CONVERTING PECO SETRACK TURNOUTS TO 0-16.5 (On30)

By Dave Balcombe

Narrow gauge railways, both passenger carrying and industrial lines, often have tight curves. I have discovered that the Peco 0-16.5 turnouts have a larger radius than I would wish in some areas on my layout. So what are the alternatives? Locate another make of turnout that is suitable but more expensive, or build your own turnouts. It seems though, that the most common answer is to use the 00 Setrack turnout and bury the sleepers. As none of these ideas appealed to me, I decided to convert the Setrack turnouts to 0-16.5 by replacing the sleepers. I spent a lot of time studying the underside of the turnout, working on ways to achieve better spacing without compromising the built-in wiring. The final result was better than I'd hoped for.

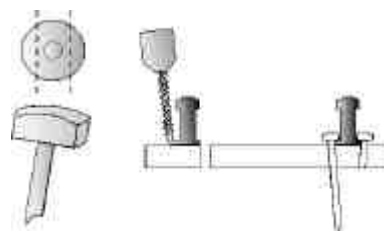
A couple of things worth mentioning at the start are, that with this method you lose the over centre spring and that Setrack turnouts are Insulfrog. The first can be got over by using a latching turnout motor. You can use the Peco extended pin motor (PL10E) with mounting plate (PL12) or there is a Seep motor with latching. All turnouts on the visible part of my layout are being fitted with Tortoise motors. I don't want to wake up the station cat! Tortoise motors hold the moving rails in place under tension. Personally I've had no stalling problems with Insulfrog turnouts. You can also adapt this method if you have any 00 Streamline turnouts that you wish to reuse for 0-16.5.

On writing this up, I found some of the parts hard to explain and I hope that the photographs will make the fiddly bits clear.

Now on to the conversion. The first thing I did was to make my track spikes. I took ordinary dressmaking pins and ground the heads as per the illustration. I held each one in a pin vice and used a slitting disc in my mini drill. They actually come out almost matching the moulded spike on Peco 0-16.5 track.



Grind pin head to shape



Drilling ties and spiking

For the ties, I cut up a slat from an old wooden Venetian blind. Almost any wood will suit except balsa – this won't grip the pins so well. Ready cut ties are available from many sources, if you don't want to cut your own. For the purpose of clarity I have used the wood raw. Normally I would suggest that you stain the ties first. They will still need painting but you won't have to worry about white spots in tight corners. Starting from the 'single' end, the first four ties are approx 33mm long. After that they obviously become longer. I found it easier to measure and cut each one by 'eye'.

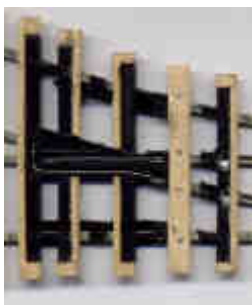
Remove the rail joiner, then remove the first tie. Remember to cut through the web between each tie. This web is a bit tougher than that used on Flexitrack and I found it easier to use a very fine saw to cut it. Slide the second tie right to the end but leave it clipped on to help maintain the gauge. Place the point down over the

new tie and mark for the pilot holes, both inside and outside the track. Use a fine drill so that the pins will be a very tight fit. Tap the pins into place, keeping the heads at right angles to the track. I found it easier to work on a block of 2" x 2" with a hole drilled in it, to allow the pins to pass through. Once the two outside ones are in place, solder them to the rails and cut off the excess with a slitting disc. Then repeat for the two inside pins. Rather than just working my way along the point, I found it better to fit/re-build the important ties first then fill in the others, spacing them out accordingly.



The first few ties in place. The soldered spikes are clearly visible. Make sure that the sliding bar moves freely between the ties

The next ones to do should be the two each side of the slide bar. Remove the little cover and take out the over-centre spring. Cut away the ties one at a time and replace. There are a couple of places where you cannot fit spikes to the inside of the rail, as they will foul the ends of the moving blades. Just fit the outside ones here. After this move on to the tie holding the rail pivots. With this one a shaped piece is used to build up the sleeper to size. Rather than spiking this one (and the other shaped ones), simply glue into place. I suggest Araldite or a Gel-type CAA glue. I hope that the pictures explain this clearly. By comparing the pictures with an actual point, you will see the parts that need removing but only cut away as much as you need to fit each tie. The area that carries the wiring takes a bit of care. The three main ones in this area are made up from two separate pieces and glued either side of the centre web. Note: to help with spacing, they fit on different sides of the original ties.

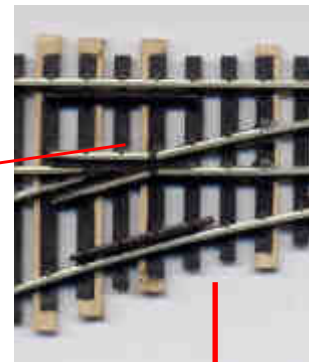


The underside of the turnout, showing the specially shaped ties fitted around the pivot area. This leaves the original ties in place, maintaining the integrity of the pivot and the wiring here.

The same section viewed from above



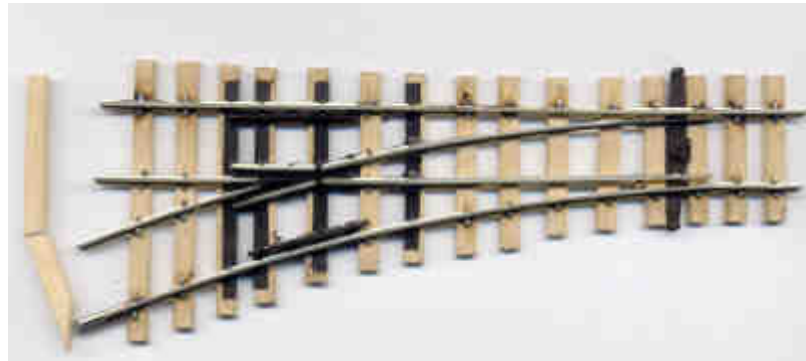
The ends of this tie, plus the the parts between the rails were removed later.



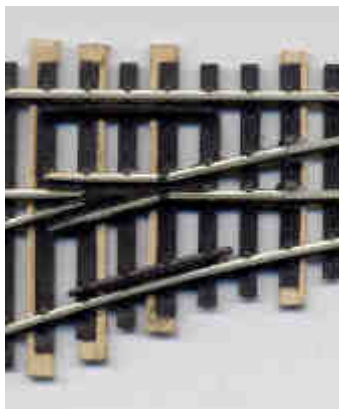
These two ties are replaced with one new one to achieve the correct spacing

At this point (!) cut away the material around the check rails, leaving them intact. You can of course replace these with new ones if you wish. I didn't.

Once these awkward ones are in place, it is fairly plain sailing to space out and fit the other ties. There are slight differences in the gaps but they really are not very noticeable. In my opinion they actually give the track a more rustic look.



The complete turnout. The two ties on the left, slip under the rail joiners when the turnout is laid.



Close-up of the frog section. The shaped ties are in place. Next comes cutting away and replacing the remainder. Generally two are replaced with one new one. Your own judgement though, will determine the spacing.

Two finished turnouts. The upper has Stained ties. Painting and weathering can be completed once track is laid

