

Sixteen point what??!! WHY???

For a number of years I have been demonstrating at exhibitions locally in the south of England as well as presenting programmes on <http://www.modelrailway.tv>. Mostly I construct plasticard buildings or show weathering and wagon distressing techniques but more recently I have been persuaded to move my track building demo from “Club based tutoring” into my “Public Exhibition” repertoire. What has prompted me to sit down and write this article is the reception this most recent demo received after I advertised on social media that I was intending to demonstrate the heretical gauge of 16.2mm, the so-called 00-SF or 4-SF, at a recent event.

The whole question of using a track gauge of 16.2mm vs. 16.5mm for turnouts and crossings is quite controversial and I think we all know what the problem is here: the lack of a clearly defined “definitive and enforceable standard” for 00, combined with a particularly dogmatic approach in some sectors of the hobby that says “if it isn’t 16.5mm gauge you can’t consider it to be 00”. This is further exacerbated by a seemingly ready willingness on the part of some people to die in ditches for their belief – or worse, try to publicly ridicule anyone who promotes any other world view – and this despite the fact that the Senior Scale seem to have been quite happy to adopt and promote an almost identically heretical idea for 7mm modelling without missing a beat. So, I’ve decided to set down in writing why I think 00-SF is a good idea. However, before setting out to explain my preference for 00-SF as the entry point into finescale modelling, a word that may help you understand my perspective on this problem: I come from an original background of education, but latterly IT Management in the Military where I have had to rely very heavily on coaching and mentoring people (mostly broken rugby players) to deliver the IT service I was charged to provide because my staffing establishment didn’t match the requirements I had to deliver; read as: *I have spent a lot of my life coaching people to achieve beyond what they thought was possible.*

Where do we start out on our railway modelling journey?

We all have to start somewhere and unquestionably the ubiquitous 00 Gauge train set has to be the entry point into this hobby for a significant number of people. The question is: from this start point what course could/should the aspiring finescale modeller take in order to achieve their fullest potential? Let’s explore this problem and its potential solutions from their point of view by looking at some of the things visitors to my demonstration table have said to me to see if we can find a way to guide them from train set to finescale. Top of the list has to be a conversation that goes something like this: “I’ve seen finescale track, I like it but I’m not sure if I have the skill to build it myself. The problem is that I’m reluctant to try because if I do I will have to re-gauge a locomotive to run on it and if it doesn’t work I may well have ruined that locomotive – which I can’t afford to do”.

Firstly, just what is “the problem”?

Put simply, there are no coherent standards for 00. One organisation did set out to bring sense to this situation but they have been hamstrung by the circumstances they inherited and as a result they have had to try to be all things to all people, but as a result they haven’t really been able to offer a

single workable solution that all of the parties involved could sign up to; net result, all that has been achieved is a further muddying of the waters by the introduction of two apparently conflicting standards neither of which actually helps the aspiring but confidence lacking modeller to jump into the world of finescale track.

In its simplest form 00 requires that trains be put on a set track oval on a table top and run at high speed, negotiating the points and curves without derailling; this is the bread and butter of the manufacturers who support our hobby and if you ask the proprietor of the model shop where I shop-keep from time to time what pays the rent for his shop he will point at the basic Hornby train sets on the shelf and mutter “Christmas”, but this doesn’t help our aspirational modeller who looks enviously at EM and P4 layouts with their 1mm (or narrower) flangeways whilst on his own layout he is faced with unrealistically wide flangeways and voids in common crossings deep enough for a set of Lowmac wheels to sink into without trace.

Just what is the accepted wisdom for 00 then?

There are two generally accepted standards in traditional 16.5mm gauge 00; there is:

- a more commercially orientated so called “Intermediate” standard that tries to make sense of the need for the train set radius curves and potential speed abuse by the operator –
 - but this leaves us with over-large flangeways and the uncomfortable gap in the common crossing and:
- a so called “finer” standard which offers the much smaller flangeway our aspiring modeller seeks
 - but using this standard requires a re-gauging of the stock to be run on this track.

If you take this situation at face value you might almost think it was set up in order to keep the average mainstream modeller out of finescale, and that’s precisely where I was until I stumbled across an explanation posted to the Templot forum by Martin Wynne about what was actually going on as a wheel set glided through a common crossing – in which he happened to mention 00-SF.

What actually happens in the Common Crossing then?

Right dear reader, this is so rarely talked about in polite circles that I think the simple explanation is called for in order to save you from mental overload:

- It ought to be common knowledge that the most important dimension on a wheel set is something called “**Checking Gauge**”,
 - this is defined as the distance from the **BACK** of one flange to the **FRONT** of the flange on the opposite wheel so that:
 - When a wheel set enters a common crossing with the **BACK of one flange** hard against the checkrail the flange on the other wheel will drift thereabouts **CENTRALLY** through the flangeway in the crossing

So, what's wrong with the published standards?

Right, this is where it starts to get political; I'm sure someone will be offended by this so I apologise in advance if you feel this is having a personal dig at you or your strongly held beliefs but...

- The Ready-to-Run manufacturers seem to have settled on a back-to-back measurement of around the 14.2/14.3mm mark.
- This neatly corresponds to the so-called "intermediate" standard as promulgated and works reasonably well with commercial set-track and the likes of Peco Streamline **BUT**
 - it leaves you with the slightly unsightly flangeway of thereabouts 1.25mm.
 - Oh, and I don't think anyone makes gauges for this standard anyway!
- The so-called "00 Finer" standard relies on a track gauge of 16.5mm **AND** gives you the nice neat 1mm flangeway **BUT**
 - In order to work this requires a back-to-back of 14.8mm, a full 0.5mm wider than the intermediate standard allows.

And therein lies the problem, never the twain shall meet...

It might only be fractions of a millimetre at play here, but every single fraction counts. Our aspiring modeller who comes to my demonstration table is right! Moving into hand built track and over to the "finer" standard involves the twin tasks of learning to build track **AND** having to re-gauge the stock that will run on it. The problem here is that if things don't work out they are faced with the problem of not knowing if the issue lies with their hand built track **OR** the re-gauging of their stock.

Further, they must also deal with the problem that, once re-gauged, there is a high probability that their stock will no longer run reliably on a traditionally tracked layout with – say – Peco Streamline points which are built to conform to the more commercial standard. I won't bore you with the detailed explanation here, this paper is already too long so if you can just take my word for it please?

So what is the attraction of 00-SF over other 00 gauge combinations?

Those of you of a certain age may remember the concept of "The Man on The Clapham Omnibus", it was a once favoured analogy used by some sections of the legal profession when they were trying to put across the need for common sense to be allowed to prevail in difficult circumstances.

So, members of the jury, I put you: if you were coming at this problem from a position of little knowledge and even less practical experience would you be happy with diving into a situation of simultaneously making two drastic changes? I think not! I certainly wasn't and the only way I was eventually tempted out of the safe waters of ready-to-run track was the discovery of 00-SF – and I rather think our passenger on the Clapham Omnibus would be inclined to agree.

What our aspirational modeller needs is to be able to prove to himself is that he can successfully build his track to get the "look" he craves, and to do this without having to mess around with the wheel gauging on his stock.

Where 00-SF comes in is that by bringing both stock rails just 0.15mm closer to the common crossing on each side (and adjusting the position of the check rails to suit) **THE WHOLE THING SUDDENLY WORKS!** You can build your turnout, take the out-of-the-box Hornby or Bachmann locomotive and

wagons, and they will happily run though your formation; and if they don't then the problem **CAN ONLY LIE WITH YOUR TRACK**, there is no risk that you can have made a mess of resetting the back-to-back of any of the wheels thereby ruining your prized locomotive.

Speaking as a veteran of some 30+ 00-SF formations, I can vouch that I have yet to find a piece of stock that will not negotiate any of the track I have built. Yes, there were some teething problems with the first 2 or 3 turnouts, but once you understand the rules and follow them these are very quickly bowled out with the help of a more experienced modeller.

Where does our aspirational finescale modeller go from here then? Well,

- He's proved you can build your track,
- He could do what I have done and choose to stay there or
- He could then go the whole hog and move over to the 00 "finer" standard, re-gauging his wheels along the way but...
 - we all know what the problem with 00 is don't we?
 - it's under gauge by a couple of mil so...
 - why faff about?
 - why not go the whole hog and switch straight over to EM or P4 safe in the knowledge they CAN successfully build track?

Useful Resources

Martin Wynne has produced a useful "standards" page which can be found at <http://4-sf.uk/> and there is a Yahoo discussion group (which is a bit dormant these days) but is still monitored by the people who set up 00-SF: <https://groups.yahoo.com/neo/groups/00-SF/info>

Currently the gauges produced by the Yahoo Groups gang are now stocked by C&L Finescale: They are:

- a 3-point gauge
- a roller gauge
- a checking gauge (possibly the single most massively useful track gauge I own)
- Flangeway gauging can be achieved with a 1mm shim or feeler gauge (EMGS market a suitable gauge)

C&L had an article by Martin Wynne on their website but as of Feb 2019 this seems to have been taken down.

IN MEMORIAM

Rodney Hills

Called to Higher Service February 2019

Rodney was one of the main movers who used his expertise to move 00-SF from something talked about on a discussion forum to a practical way of track building

Rodney was also the original inspiration for this article