



Risborough and District
Model Railway Club

Jul-Aug 2021 Summer

FOOTPLATE



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WELCOME

Our Virtual Railex show started at the end on May and has run all through June. We have had a lot of positive feedback so well done to all those involved in the show. The live sessions have been recorded and are becoming available on the club's

YouTube channel. The videos we made for Virtual Railex will also become available on the channel at some point.

Wheeltapper was run as part of Virtual Railex and the results are on page 18. A good selection of excellent models, well done everyone. The trophies will be presented when we start meetings.

We are still working on a new clubroom and are now investigating a site at Quainton Railway Centre. We have been running a poll of club members on their thoughts on this and the vast majority would like us to have discussions with QRS to see if this option would work. Once we have more details we will let you know. We will also look at any other sites that we find.

Reopening of the club has been delayed again and is now expected to be 23rd July at the Community Centre. This needs to be confirmed with the TC who are still to decide the opening date. They have previously told me the centre will reopen some time in July but are still to make a final decision.

We are also waiting to hear from the TC if we need to vacate the storeroom by the end of August or if we can stay. I am expecting the TC to discuss this at their meeting on 13th July. We have removed some junk and some items of equipment. If we do need to move out we will have to clear the room quite quickly.

Paul

From the Internet

Isle of Wight Steam Railway - '50th Anniversary Gala' 04-06/06/2021

<https://www.youtube.com/watch?v=N5iEmSVM5s4>

British India Line Flattens Ais Gill - The Full Return Of Mainline Steam!

https://www.youtube.com/watch?v=4sQobCcbx_E

2999 'Lady Of Legend' Final Severn Valley Trains!

https://www.youtube.com/watch?v=ka94Ec6_leA

South Australian Steam

https://www.youtube.com/channel/UCJkNjbKPERSk9nMTkZ2_kzw/videos

A4 60009 Union of South Africa on the East Lancs Railway & A Royal Surprise!

<https://www.youtube.com/watch?v=oqdiU0ceLtU>

Nederlandse stoomtreinen in 1919 in kleur! Dutch steam trains in 1919 in colour!

<https://www.youtube.com/watch?v=Cn0qtB1Z-NM>

Historic railways in Luxembourg - Steam locomotives at Train 1900 & Minieresbunn, (you can put the subtitles into English).

https://www.youtube.com/watch?v=WsPPm4LK_6g

Front cover: "Thumping through Risborough. July 4th 2015". Francis Gomme

Making Signs and Posters on Buildings – an alternative to Decals.

At the March Zoom get-together I mentioned a method I've used quite successfully for making building posters and signs which have been pasted onto buildings or painted directly on them where the underlying wall texture of materials such as brick, stone or wood shows through the sign. This is a useful method where you're unable to make or source a decal. It isn't a replacement for making and using decals but is another way to achieve a similar goal, and has one or two advantages over decals, one particular one being it can overcome the issue that you can't print in white with a home computer printer.

Here's a more detailed look at how to do it.

First, find or make the sign itself on your computer. I'm not going to spend much time on that process, other than to suggest a few things that might help. You can find vast amounts of imagery online. Google or your favourite internet search engine is your friend here. 1920s and 1930s railway timetables, destination advert posters, adverts for products long gone are all easily found and captured - right-click on the image and save it. Or if you need to originate it yourself, search on the web for fonts to use on your computer. It's easy to find such things as 1930s art deco fonts, California Zephyr, Railroad Gothic, Gill Sans and other less common fonts. These are all there for the download in ttf (TrueType) format. Lastly, if you really can't find the font you need, the website and app WhatTheFont enables you to point your phone at some text and it will tell you what it thinks the best font to use is. You then search for that font. The chances are very good that you'll be able to do all this for free, too.

I mostly used Word to create my artwork for the signs shown in the photos. You just type the text, import the image, resize as required. I'm not a great fan of Word but it is generally available and doesn't mess small images up as much as some other things, and it makes printing stuff easy, because that's ultimately what Word is for. Use the various formatting tools as needed, and note that you can use the top and side ribbons to set the size. Sometimes you'll need to use a table to get the text formatted and placed as you need it; don't forget to tell it to have no borders on the table once you're done, unless of course borders are what you need. If you need a coloured background, or want to pre-weather your sign as part of the artwork, do that here with background colours or background or watermark images.

Print the resulting artwork; use your printer's best quality, in B&W or colour as required. Ordinary typing paper is best here, rather than photo paper I've

almost always used white paper and coloured the whole sign on the computer, but there is no reason at all for not using coloured paper if it gets you to the end result you need. Note too that in reality that up to here, making your own decals to print is exactly the same. I've done that too. Once printed, optionally, spray the lettering side of the paper with some matt varnish and let dry, completely. Use the sniff test to check - if you can still smell the varnish, it's not dry. This step is optional but it does add a little strength to the ink layer, which as you're about to see, may come in handy.



Above: I'm re-making a shop sign, so I haven't cut it out yet as I'm after sharp edges. Now here's the bit that may take a go or two practice to get right. Just place it face down and gently sand the back of it. I used 220 grit paper. Keep going as evenly as you can all over until the lettering starts to darken. That means that you're getting very close to having gone all the way through the paper to the ink on the other side. Ensure that you sand out to the intended edges. The photos on the next page show this - the second photo was taken holding it up to the light. If you are making a poster that was pasted on a wall a long time ago and you want tattered edges, the simplest way is to cut it out at this stage and then sand the back of the edges just a little more, so that it gets a wee bit distressed at the edges. Note that at this stage it is very delicate, so do be careful. Indeed, when I'm making these, I often print several copies (just copy/paste in Word do that you have more than one on the sheet when you print it) in case it tears while sanding. You will have some failures, so don't be too



upset if it tears. Just swear a bit and start again. Sanding from centre to edges only helps reduce the risk of crinkling and tearing.

Now you're ready to apply it to the building. Undoubtedly this method works best on slightly porous surfaces - wood, MDF, but it does work well with painted plastic or metal and rather less well on unpainted hard surfaces. Cut it out now, carefully - new blade! - if you've not yet done so. In this demo, I was working with a removable sign so I was able to cut it out afterwards, but that is a luxury.

Apply a thin - and I mean thin - layer of full-strength white glue to the whole of the rear of the sign, then pick it up with tweezers and place on the model. Get the location right as you don't get a second chance. When you have it in place, press down, but do not rub; that will break up the surface. You can then carefully use hard but not sharp tools like your fingernails, a cocktail stick or the back of a scalpel blade to press the paper layer down into the underlying wall features, and also at this point remove any glue that splurges out from under the poster.



Above: Sign glued down to scribed styrene to represent wood, and then cut out.

The photos below shows the sign fitted and weathered. I suggest that when you weather it you avoid acrylics, as the water in them risks the white glue softening - and of course don't do it at all until the glue has properly dried. Water with acrylic paints is also a risk to unprotected ink-jet printer ink.



Some more examples are given on the next page.



Above: A very tatty poster on cast plaster brick.

Below: another one mounted on clapboard wood.





Above: Dr Peacocks Elixir on painted plastic clapboard,
Below: a decal - made with Word in the same way as the printed signs - applied to a resin casting structure.



You'll note from Kasproicz Mining Supply that there is a risk of the thing warping gently from the glue pulling the paper fibres together as it dries. I had that also happen with Aitken Stores, so you do need to guard against it when adding stand-alone signs to buildings like Kasproicz.

Mick Moignard

Model Railway Signalling – Part 3

In this note I am going to look at the running signals for a terminal station. This gets more complicated because sections of track, like the platform roads, have trains moving in both directions.

8. A Terminal Station

Figure 6 shows a small three-platform terminus. This could be somewhere with a reasonable amount of traffic, perhaps a seaside location which needs more capacity for the holiday season. There may also be more pointwork for goods sidings or locomotives but protection for them will follow the same principles that we applied to an intermediate station.

To clarify the pattern of running movements, figure 6 shows the track in different colours. The blue sections only carry down movements for arriving trains. Similarly, the green sections only carry departing trains. The orange tracks are used in both directions and need to be signalled to avoid conflicting movements.

To see which signals apply to a movement, hold the diagram so that the train is moving up the page. The signals standing upright are the ones the driver will see and obey. Anything upside-down will be facing away from the driver and can be ignored.

9. Terminal Departures (Up)

Signalling for departing movements (green track) is relatively straightforward. To avoid confusion when more than one train is standing in the station each platform has its own starter signal. No route information is needed because all movements from platforms converge on a single departing up line.

The other up-running signal is an advance starter after all the pointwork. As with an intermediate station the issue is setting the boundary between the station limits and the up main block controlled by the next box. If there is no advanced starter the up main block would begin with the platform starters. This would leave down moves into a platform passing over the first few yards of the up block. Although both trains should be moving away from each other strict absolute block working would require an up train to have cleared the block at the remote box before a down move can take place into a platform.

Local shunting movements would also infringe the up main block and need to be authorised by the remote signaller. Unless the traffic level is very low provision of an advance starter will be advantageous. On a freestyle model it is likely to be at the exit from the scenic section and, if working, contribute to the visual activity.

10. Terminal Arrivals (Down)

Turning to trains arriving on the down (blue) line, the first task is to ensure that they slow down as they approach the end of the line. This follows the normal practice of having a distant signal at caution $\frac{3}{4}$ of a mile away and then a stop signal checking arrivals $\frac{1}{4}$ of a mile out. Note the distant signal is drawn with a line through the middle indicating that it is fixed at caution. In almost all models these signals will be off scene but drivers should have reacted to them and not charge in from the fiddle yard.

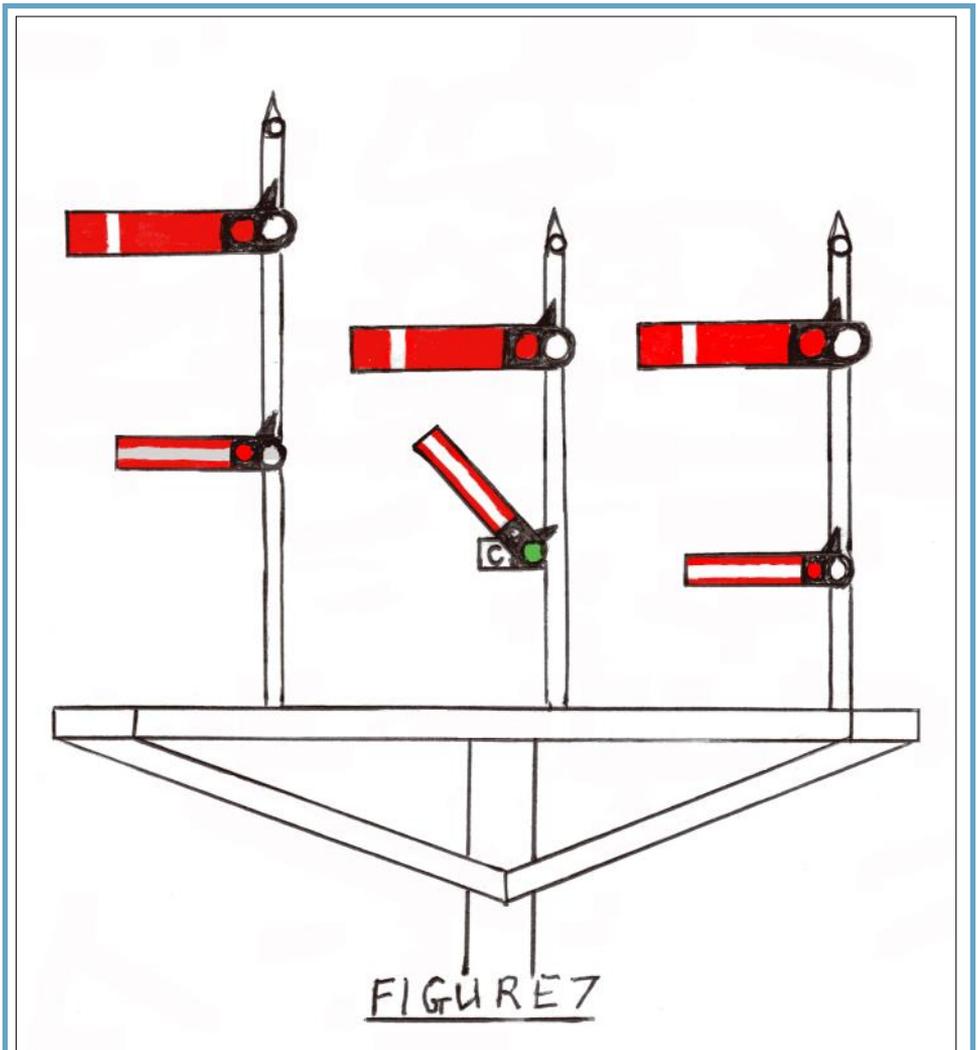
The critical on-scene difference is the down home signal protecting the pointwork. The driver needs to enter the station throat at the correct speed for the selected route. When operating a model from the “eye in the sky” it is easy to see the route set through the points. However, when driving from the locomotive footplate they cannot be seen and the driver gets this information from the signals.

The home signal in figure 6 has three stop arms, one for each of the routes into the three platforms. On signals like this the left arm is the leftmost route and so on. In a restricted space, signals can be placed one above the other on a single post. In that case they read top to bottom for routes running left to right. When signals are on separate posts (dolls) their relative height shows the relative speeds for the routes. Since the run into platform 1 is straight, figure 6 shows this signal on the taller doll. Don't forget model trains taking diverging pointwork too fast can derail just as easily as real ones!

Although I have been leaving shunting signals for another note, one type of subsidiary (non-running) signal is particularly relevant at a terminus. Where platforms are long enough it can be useful to ‘pack’ two short trains into one platform. For example, two 1960s two-car DMUs will fit easily into a 300 ft. platform. The driver of the second train is entering an occupied section but pulling off the stop arm would indicate that the section is empty.

Figure 7 shows the home signal with a calling on arm under each stop signal arm. There are variations between regions and companies in the design of subsidiary signals and some research is going to be needed to find the right design for your model. The design in figure 7 shows a white arm with red edges top and bottom which exposes a backlit C when the arm lifts to distinguish it from other types of subsidiary signal.

When operating a model with calling on moves, it is important to remember that the driver will pass the home signal at a slower speed when called on. Passengers may be standing to retrieve baggage and sudden braking must be avoided. The signaller will also be aware of the need to enter the platform at slow speed. They will use the checking procedure described in section 5 and the calling on arm will not be pulled off until they have seen the train stopped



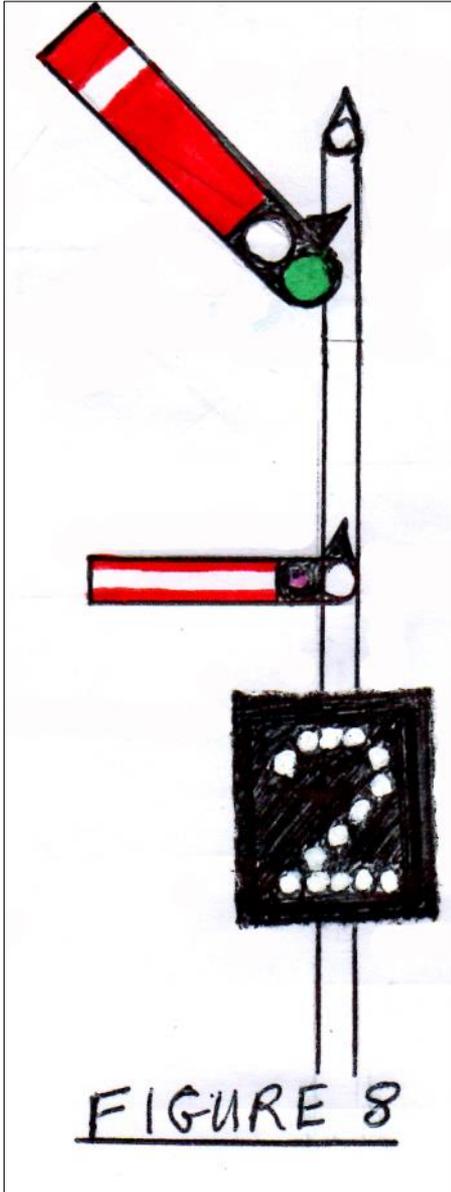
(or almost stopped) at the home signal.

11. More Platforms

As terminal stations get bigger, the home signal has more work to do carrying information about all the different moves available. They may also have more than one arrival (down) line. A home signal gantry with a set of arms for each arrival line covering all the platforms quickly becomes cluttered. There are some spectacular, but confusing, photographs around.

Instead of providing an arm for each platform, the post carries a single arm and

a route indicator. Figure 8 shows an example as an alternative to the home signal in figure 7. The post still carries both a running signal and a calling on arm. The route indicator applies to whichever arm is cleared. In figure 8, the approaching train is cleared to run into an empty platform 2. The route indicator no longer shows relative speeds for the different routes. However, at a larger terminal station low speed limits will apply to all routes through the station throat.



Route indicators use a variety of electrical or mechanical means to show a one or two character route designation. Once again some research to find the appropriate style will be needed. For example King's Cross used indicators above the signals consisting of a roll of black material with white lettering. This would scroll up or down to display the selected route.

Large stations with many platforms pose an extra challenge. The 1930s King's Cross had sixteen platforms and four other destinations all reachable from the up relief line. For nine of these there were two possible routes through the station throat. For several of these the restricted space required a crossover to the down main before reaching the up relief home. Routing information is shown in two stages. The outer home indicates which line and "home" signal the driver will approach. This then indicates the specific platform.

Increasing the number of platforms has less impact on departing traffic. A single starter is still sufficient to show that the route is set when there is a single departing line. Only where there are more departure routes will additional platform starter signals will be required. Even so, there will rarely be a need for more than two or three routes.

Although this note covers the basics for

a variety of terminals, practice was different in the details as stations evolved and grew in size. Try to find a similar prototype station and check your design against that. For example, my design of Prince's Cross uses King's Cross as its reference. In the 1960s it had no calling on signals. Instead, it used three aspect coloured lights which showed yellow (caution) instead of a green aspect when running into a short or partially occupied platform. This practice is clearly documented in the 1930s resignalling plan but I am not sure how common it was elsewhere on the network.

Tony

Laser Cutting Materials

In stock we have:

0.5, 0.75, 1, 1.5 & 3.2mm white plastic (Rowmark) with some 1.5 & 3.2mm in black. Sheets are 1220 by 610mm.

Clear acrylic in 0.5 & 1mm. Sheet sizes vary but some are 1000 by 1000mm.

MDF in: 1.5, 2, 3.2, 4 & 6mm, sheet sizes are 1220 by 600mm

The max. size the cutter takes is about 350 by 450mm. The larger sheets will be cut down to approx. A3 or A4 and we will calculate the prices.

Articles for Publication in Footplate

Articles can be on any subject including, model reviews or construction, places you have visited, your own layout etc. and should be sent at least 1 month before publication dates, i.e. beginning of March, June, September and December for publication in April, July, October and January. Plain text, no formatting, photos as high a resolution as possible.

War World Scenics Pro Grass Detailer Static Grass Applicator

WWS make a range of static grass applicators, the latest of which is the “Pro Grass Detailer”. The handle is the same as the Pro Grass Micro (which is a medium sized unit) but it then has two interchangeable small heads. These have been 3D printed and are a push fit to the handle. Apart from the size, the difference is that the static grass has to be put into the head, which is then pushed onto the handle whereas most other applicators have the grass holder attached to the handle and a screw-on cover.



The heads are approx. 20mm and 40mm diameter. WWS state it is suitable for grass lengths of 1-6mm. For comparison, the Pro Grass Micro has a hopper of 65mm diameter with an opening in the mesh of 55mm diameter. This smaller size is very useful for small areas such as the farmhouse garden in the photo opposite. I will have quite a few areas with small details to grass over as well as much larger wild or field grass areas. It is also suitable for working in between buildings that are already attached to the layout. This smaller unit is going to prove very useful. The cost of the Detailer is £74.99 for the unit only or £84.99 for the unit plus a plastic case and some static grass. I bought the Pro Grass Detailer when WWS had a 15% off sale and bought it with the box. Both static grass units can be kept together in the case.



Above: the start of the garden in front of the farmhouse. The gravel paths are made from wet-n-dry paper.

You can see the full range at:
<https://www.wwscenics.com/>

Sign up for the newsletter and watch out for the frequent sales.

Paul

Wheeltapper Winners

This year as we have not been able to have real events, we thought we would try running the Wheeltapper competition as part of Virtual Railex using photos to judge the models. The judge was Jerry Clifford and the winners are:

- 1 D&RGW 271 [Mick]



The Wheeltapper Trophy has been awarded to Mick for his D&RGW 271 loco.

- 2 GWR Parcels Railcar [Tim]



3 Ex GWR Siphon G [Tim]



4 Ex GWR Crocodile H [Tim]



5 Coal Cart [The Robbie Robinson Trophy] – [Paul]



6 Banner repeater signal [The Jack Kine Trophy] – [Tim]



7 PW Depot [Tim]



8 16T Mineral wagon [The Derek Turner Trophy] – [Gary]



9 Aylesbury Bracket signal [The Robin Lane Trophy] – [Roy]



The Chairman's Cup has also been awarded to Roy for his Aylesbury signal.

The trophies will be presented once we start meeting again.

009 Ffestiniog Palmerston

I found out that Eveleigh Creations had produced a test set of etchings for himself and possible sale of the Ffestiniog Prince sometime ago. Then heard nothing more about it. I found his website and contacted him. He replied that he had dropped the idea as Kato/Peco were going to do a ready to run model. I said I might still be interested as the RTR one was some way off. I heard nothing for quite some time then he contacted me and said a few people were interested and he would do another set of modified test etches. If these were ok and we were prepared to pay upfront for the etches he would get a batch produced. I then checked him out on RM web and everything seemed ok so agreed. A few months later he asked for the payment, now I just had to wait for them to be produced.

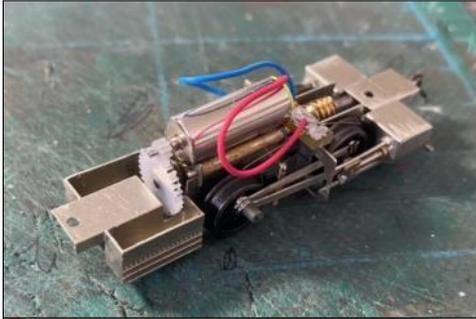


Another few months passed and eventually they arrived but no instructions. When asked he said he would email them when he had written them. The chimney, domes and sandpots etc were going to be available from Shapeways. First I don't like the surface finish on their printing and the postage was more than the parts. I did ask if I could have the Stl files to get someone else to print them but no was the answer. I did eventually get some instructions but with details missing. A lot of the assembly was obvious but others not so.



I decided to build it as Palmerston as the option was included in the parts and it would not clash with the Kato model. The parts went together very well and the quality of the etches was very good. I used 145 and 188 wire solder cut into small beads to pick up on the tip of the soldering iron. This way I could get a very small amount of solder. I don't like solder paste as I find it makes a mess outside the joint. I used an 80 watt iron with a small tip about 1.6mm for most of it and a 2.4 for the larger parts.

The chassis is designed to use a belt drive from the motor to the lay shaft but I



changed this to nylon gears. The design calls for disc wheels and then an etched spoke overlay is fitted over the disc. The problem with this is that it makes all the valve gear live and as the cylinders are etched and fit across the chassis it will short out. He suggests sawing the cylinders off and reattaching them with double sided pcb soldered on. I managed to find some 8 spoke 8mm diameter 009 wheels at the back of the Gibson catalogue and after a phone call got hold of some. As these were not driving wheels I had to adapt them to take a crank pin. The crank pin throw was 2.2mm so two holes were drilled in a piece of brass one for the axle and the other for a piece of small diameter brass tube for the crank pin 2.2 mm apart. Release tape was stuck on top and the axle, wheel and brass tube inserted. I then filled the void around the tube between the spokes with UV glue and cured it using a UV torch. I made most of the missing parts and some extras from brass.

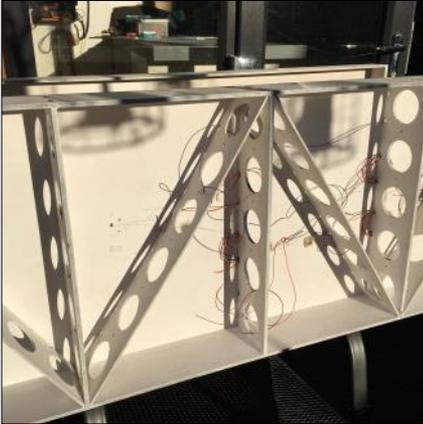


As you can see from the photos it now needs painting and lining, the bit I don't like doing and tend to put off for sometime especially the lining. I'm not sure how I'm going to do the white/black/white on the tank sides. I might go for transfers and not paint but what scale 4 or 2mm?

Alec

Brackets

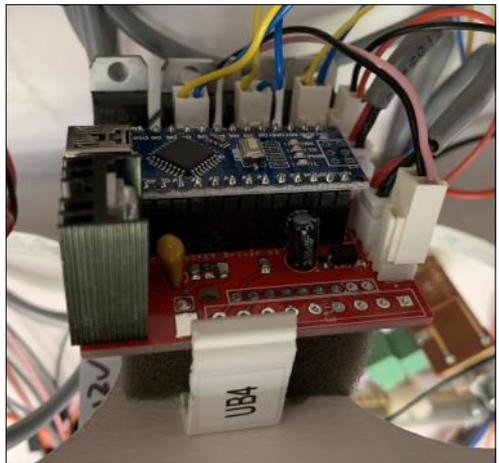
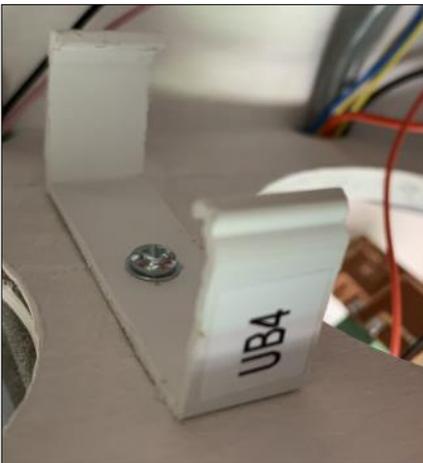
With the easing of lockdown Mark was able to let me have the 3D printer we share. Having got it I decided I should probably do something, something both straightforward and useful and I addressed an issue on our layout I had considered for some time, brackets. Very unglamorous but brackets for what I hear you ask. Well, in our case, circuit boards, but with simple modifications suitable for many things under a baseboard or in a fiddle yard.



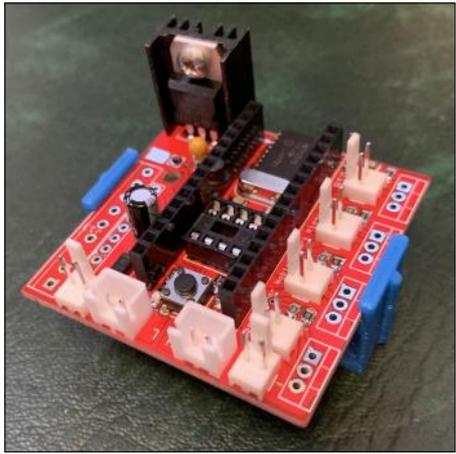
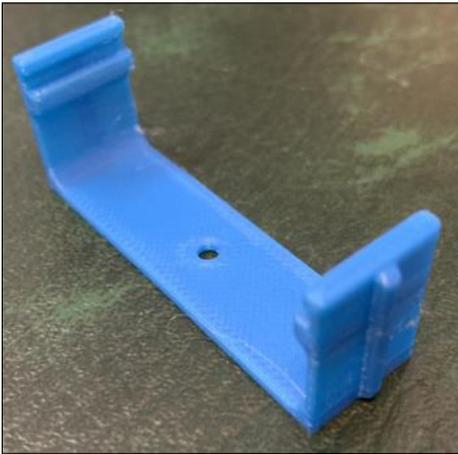
We use Tim Horn baseboards (see left) on Peter Hamble, if you've seen them, you will be aware of the diagonal stiffeners he puts on the boards, complete with weight saving/wire passing holes. We drilled 3mm holes centrally between all these holes to give us mounting points for our custom PCBs but as will be seen, they could be any PCBs and almost any mounting position.

Initially we used a piece of plastic electrical trunking, with the boards supported by a piece of foam. This is OK as far as it goes but you are limited to boards that are an exact fit into the electrical trunking, 50mm, 38mm, 75mm or 100mm seem the common sizes. In addition, the foam can be a nuisance, it deteriorates over time and loses its "spring", increasingly becoming poor at its job.

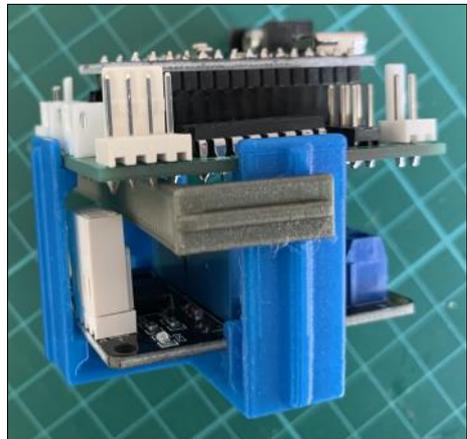
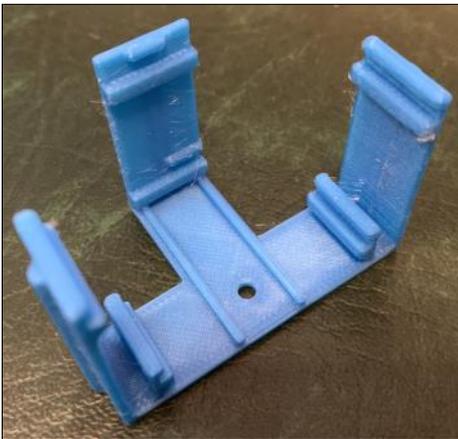
Below: Simple bracket and a board mounted on the bracket.



So I desperately tried to remember what I knew about Fusion 360 (which became far easier over time, as is the way of these things) and designed a simple bracket that did the job, via a couple of “test” efforts, which is easy enough with a 3D printer.



Above left: Simple 3D printed bracket.
Above right: Simple bracket fitted with the board..



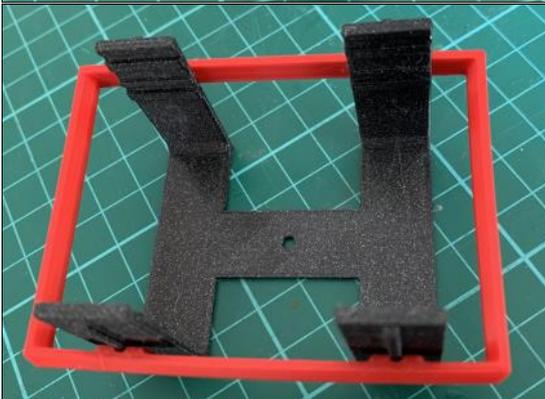
Above left: 2 layer bracket
Above right: 2 layer bracket with boards and tension clip.

Getting the required amount of tension in the “legs” of the bracket to retain the board was the only real issue. I decided to go with a width, between the faces of the bracket that met the edge of the board, of 49mm, i.e., 1mm less than the board. In practice this causes the base of the bracket to bow slightly but when bolted to the baseboard this straightens out and provides tension to the “legs”.

This type of job is ideally suited to an FDM printer, as I'm sure you learnt from the various Virtual Railex presentations. FDM being Fused Deposition Modelling, the one that lays one layer of material at a time on top of the previous one. The material is hard and resilient but can be designed to have an element of "spring". The resultant bracket takes about 20 minutes to print and costs about 7p in material.



Left: 2 layer bracket for long boards.



Left: 2 layer bracket with tension clip.



Left: 2 layer bracket with boards and tension clip.

Having got that far I decided to get more adventurous. We have some of our custom 50mm by 50mm boards that control the point motors, two per board. In association we use an off the peg, well, off eBay anyway, twin relay board to switch the frogs. These are 48mm x 38mm approximately but are, obviously, always found as a pair, a point board and a relay board. Currently we used a mounting space for each, we can just about get away with the 48mm relay board in a piece of 50mm trunking. To save some mounting space and to provide a better mounting for the relay board I developed a 2 layer bracket to take these two boards, utilising the shorter side of the relay board. There were some important changes. I provided a third “leg” to the bracket to provide some additional support. I also found that the top position didn’t have enough tension to grip the board as the legs splayed further outwards, so I designed a “tension clip” that added tension to the bracket and helped keep everything secure.

The next variation was to accommodate a MERG DTC8. This is a Track Occupancy detector. It comes as a long thin board with 4 pairs of detectors, which can be separated if desired. (There is a new MERG DTC8a design which now comes as a single square board but we have some of the older type to use). Given the length I decided, via trial and error, that it needed additional supports and developed a version which is, essentially, two brackets joined together and, in this case, two layers as well. Again, it needed a tension clip but again, as I gained more experience as to what worked and what didn’t, I ended up with a different style of clip that works very well and one that I think I will retrofit to the earlier design.

There were several takeaways for me:

- As an idea it produces very practical brackets to hold PCBs of all sizes and is very cost effective.
- Customising to provide multiple layers was also a practical proposition but additional support may be required.
- If you design it correctly then producing brackets for any size of board, within reason, is simple.
- It's an idea that has the potential to build brackets for things other than PCBs with a little imagination.

Roger

Club Diary

2021

Many shows are now being cancelled for 2021, a few are still listed as going ahead at present but this may change at short notice.

July	31	Annual Convention of The World Wide Group of the NGS, Wyllyotts Theatre, Wyllyotts Place, Darkes Lane, Potters Bar, EN6 2HN. I will be there with a Dutch N gauge display.
	31	NMRA British Region Summer Meet, organised by Mick Moignard, Oxford Belfry Hotel, Milton Common, by J7 M40.
August		
September	18	European Railways Association, The Venue - Edgbaston, 100 Icknield Port Road, Birmingham B16 0AA
	11-12	The International N Gauge Show, Warwickshire Event Centre, A425, Southam Road, Leamington Spa, CV31 1FE
October	16	Abingdon & District Model Railway Club, Didcot Civic Hall, Britwell Road, Didcot OX11 7JN
November	27-28	Warley Model Railway Club, NEC, Birmingham B40 1NT