
GN15 ^{THE} TOME

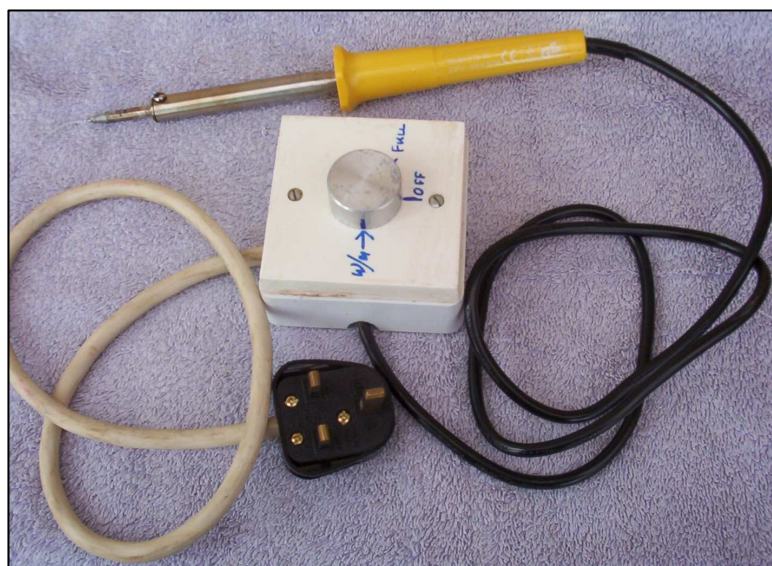
Welcome to another Gn15 Tome, this time edited by George Hims! I hope to be able to follow Michael Mott's hard work producing the previous Tomes, and I would also like to thank him for the time he spent compiling all the contributions.

I have decided to produce a Tome whenever sufficient material is available to do so, so please email me (georgehims@hotmail.com) with your latest projects and ideas discovered along the way; your contributions are very welcome.

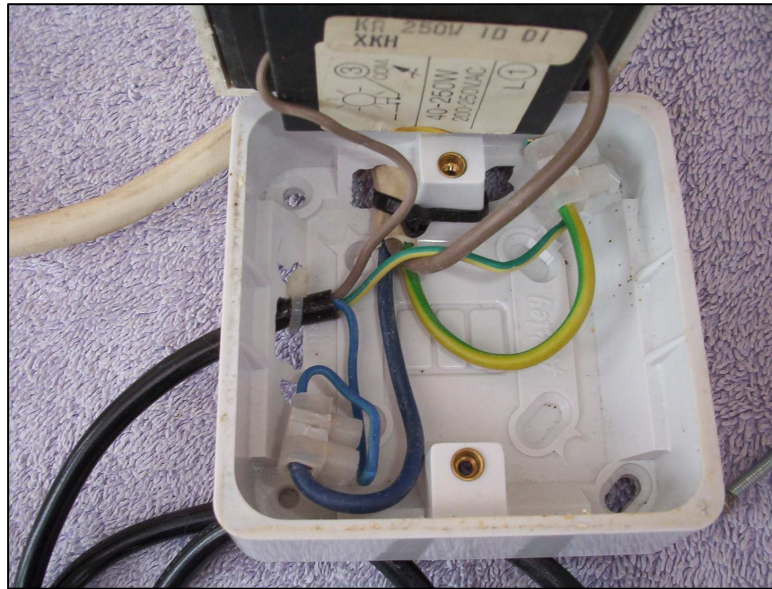
A DIY Variable Temperature Soldering Iron

One item that is very handy to have when constructing whitemetal models, modifying plastic figures, or many other jobs, is a temperature controlled soldering iron. When I was modelling in the smaller scales, my temperature controlled iron was a 12 volt 12 watt iron which I used to run from the variable output of a H&M "Clipper". This was adequate for the usage at the time, but as the size of whitemetal castings increases somewhat as you go up the scales, you need a bigger iron. I looked at buying a dedicated temperature controlled soldering station but encountered a problem with the mainstream products that were available. The biggest problem was the temperature range, most of the units didn't go down low enough for my needs, and those that did were very expensive. I decided to make my own (basic) unit.

I obtained a 60 watt iron from eBay at a cost of well under £10 including postage; a rummage through my electrical spares shed produced a dimmer switch, a surface box, cable and plug, and a couple of connectors. The result is this:



The connections inside the box are very simple, the two earth wires go together in a connector, the two neutral (blue) wires go together in a connector, the live mains (brown) from the plug and cable goes into the L1 terminal of the dimmer switch, and the live (brown) to the soldering iron goes to the COM3 output of the dimmer switch:



Once the unit is connected it is time to test the iron and calibrate it for the types of solder you are planning to use it for. This iron is to be used solely for whitemetal, so I will run through the calibration for 70°C solder. Before starting this calibration, turn the dimmer all the way down and mark on the knob and the faceplate an “OFF” position, then you will have a datum to start from.

Firstly turn the dimmer all the way up and let the iron heat up to full temperature, then clean and tin the tip with “normal” solder, turn off iron and let it cool down. Tinning the tip will help protect it and the 70°C solder will adhere better to the other solder than it will to the plain tip (in my experience anyway). To calibrate the iron for whitemetal soldering, you will need some whitemetal (70°C) solder and flux and a piece of scrap whitemetal about the same cross-sectional area of the solder. Turn on the iron and set it fairly low, let it heat up. One thing I will mention at this point is that because the effective wattage of the iron is reduced because of the impedance of the dimmer switch, the iron will take longer to get to any temperature than it would if the dimmer was set all the way up. It is because of this reduction in effective wattage that I chose a 60 watt iron instead of say a 15 watt or a 30 watt iron. At the value I have the iron set for; it effectively becomes a low temperature 18 watt iron.

Once the iron has warmed up to the maximum temperature it can reach at the setting of the dimmer, dip the solder in some flux and apply it to the tip of the iron. If at this point it melts, reduce the temperature of the iron and try again (allowing the iron time to change temperature), if the solder does not melt, increase the temperature of the iron, again allowing time for the iron to heat up. What you are looking for is the point at which the iron will just start to melt the solder. Once this point has been found, mark it on the faceplate in pencil.

Now what we need to do is find the point at which the iron will melt the white-metal itself. Increase the temperature of the iron in stages until it will just start to melt the piece of scrap whitemetal, again mark this on the faceplate in pencil.

You now have, between the two pencil marks, the temperature range in which you can safely solder without melting the whitemetal parts. Choose a point about midway between the two marks, and this time using a permanent marker; mark a “whitemetal” point. You may also want to permanently mark on the unit the point that the iron will start to melt whitemetal, I didn’t, but you might want to just as a reference.

One thing you will find is that if the iron has been on for a long time the temperature will rise above the point that you thought you had set it to, this is mainly because of the amount of mass in the larger irons, especially if you are fettling pieces and haven’t drawn any heat out of the iron for a while. This is why it is advisable to put the setting about midway between the two extremes; you can always boost the temperature a bit if you have some larger items to solder.

There is another way of building a unit which is more flexible and can be used with more than one appliance. It looks like this:



This unit has a dimmer switch connected in series with a socket; the connections are even more straight forward than on the dedicated unit. The mains cable enters the unit at the dimmer switch end and is stripped back far enough so that the neutral (blue) and the earth (green/yellow) can pass straight through the dimmer switch box and be connected directly into the appropriate terminals of the socket. The mains live (brown) wire from the incoming cable gets connected to the live input (in this case C1) on the dimmer switch, and then the switched live is connected from the dimmer switch output (L1) to the live terminal of the socket.



One thing to bear in mind with dimmer switches is that they have both a minimum and a maximum wattage that they can handle. If you overload it, it will over-heat, if you underload it, it won't work at all.

As with all mains voltage wiring, do not attempt it if you are unsure what you are doing. If in doubt, get a qualified electrician to do the work for you.

Barry Weston

Bigger than your average diesel...



Having been interested by the models created by John Baxter (Gnatter Gname SOUTHPASS) I decided I wanted to 'break out' of the conventional 15' guage modeling and go for something bigger. I acquired an SW7 HO loco (I believe it's an At-learn) and found the running qualities very good indeed. An Atlas O gauge 'Industrial Switcher' would serve as the basis for my new loco.

The cab was mocked up a few times in card to get an idea of size and proportion, before I made a styrene version from 80 thou Plasticard. This was weathered and distressed with a variety of tools; practically anything to hand that was sharp or hot - I managed to create areas where the rust had rusted all the way through the metal sheet. I also considered at this stage how I would paint the loco, deciding upon a black basecoat with drybrushed colours. I added some corrugated sheet to the rear and inside of the cab to create some interesting textures that would work well with the black undercoat.

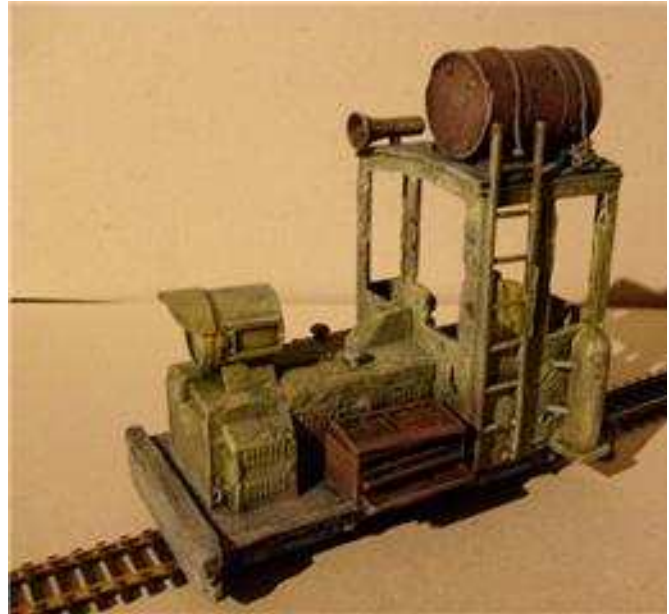
The cab was then fixed to the 'footplate'; the chassis of the O gauge loco. I also recycled bits of bobs from the scrap box including a Snap On style toolbox, a large light from a 45mm gauge Mogul, and a compressed air cylinder. The rest of the body was then distressed to match the condition of the cab.

The roof of the cab was created by using the original roof of the O gauge switcher, with a couple of accessories; a Sidelines oil drum and a Playmobil megaphone that looks a little like a klaxon or air horn.

At this stage, the loco was shaping up nicely, but one thing was troubling me; the chassis of the SW 7 was so far under the scale 6ft wide body that it looked unsteady (even though it actually performs remarkably well around curves considering its size). I decided to construct a pair of sideframes for the loco to bulk up the 'undercarriage'; these were created from 80 thou styrene, square styrene rod and the side frames of the SW7. I was much happier with the loco once the sideframes were on, a large pair of chunky wooden buffer beams completed the major construction work of the loco.

I've already touched on painting the loco, but as is often the case, the painting did not go exactly to plan. Having primed it with a red oxide primer (the only colour of primer I can get easily), I brushed on acrylic black to create the basecoat. Once this has dried, the fun began and I cracked open a tube of acrylic yellow paint to get started. The contrast of an almost luminiscent yellow and the dark black was not really what I was after, so a dirty black wash subdued the yellow, and I had another go with a more 'pastelly' yellow. This turned out better, and some grey drybrushing also helped.

By this point, I was staring at a very yellow loco. After a quick scout on the web for some inspiration I found the Boulder Valley Models website with some helpful tutorials by the proprietor. I also liked the livery of many of his locos which were yellow, like mine, but with a grey underframe. I returned to the loco and painted a black over the sideframes and buffer beams, to repaint them grey. Due to my enthusiasm with the amount of black I used, as well as my impatience to get the job done, the black was not completely dry by the time I was adding the grey. As a result, the underframe is more of a dirty, oily grey; but I quite like it nonetheless.



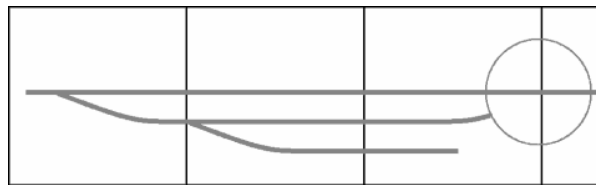
That just about sums up the construction of my latest 'critter'; actually only the second loco I have ever scratchbuilt! I know that it's proportions are wholly unprototypical (a 6ft wide, 11ft tall loco with an oil drum atop the roof would surely topple over in the real world) but I have accomplished what I set out to achieve and had a good time building it between revision for my exams!

George Hims

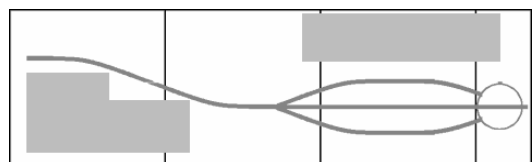
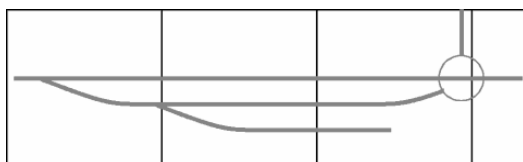
Homage to 'Arue'

For the moment, at least, this is the last part of my series on developing concepts and design for our G_n15 micro-layouts. Until now, these have been based around the concept for our long-term project Breakwater Point (Jaywick and St Osyth Railway), which was originally based on Fried Lagerweij's "Arue". Just after the third part of the series appeared in the Tome, I learned of Fried's death. I hastily reworked what was then the final part to describe how the layout had developed into a g_nine-1:35 version, and that article was published in the last Tome. I promised to come up with a new final article, as my own homage to an inspirational man I'll never now get to meet.

As with many such concepts in G_n15, things began wander away from the beaten track. I've done virtually no actual modelling for about nine months but this has left plenty of time for thinking. Several concepts emerged in order to reach the design described in this article, so as an introduction I'll summarise how we got here. Here's a schematic for Fried's original 'Arue':



I didn't want to simply build a G_n15 replica, but to add a little something. Two ideas emerged that would fit on a 1000x300mm board that I already had. One was an expansion of our Begijnendijk concept: Fried used the turntable to turn his railbus and also to allow a loco to run around a train, but with the smaller loco's and the operation scheme described in part one of this series, the turntable ceases to be such a focal point, so to restore that we envisaged it also giving access to the asparagus market. That design is below left. I also dusted off a concept that we sketched on our honeymoon some seventeen years ago, dubbed 'Bad Stockhausen (Gurkentalbahn)', and based on the Spreewald in Germany (I apologise to our German readers for whom the name is not a pun). This uses the turntable either to run around a train or as the long section of an Inglenook puzzle (as in Arue), shortening the length of the Inglenook and allowing the train to 'hide' behind the passenger shelter (below right).



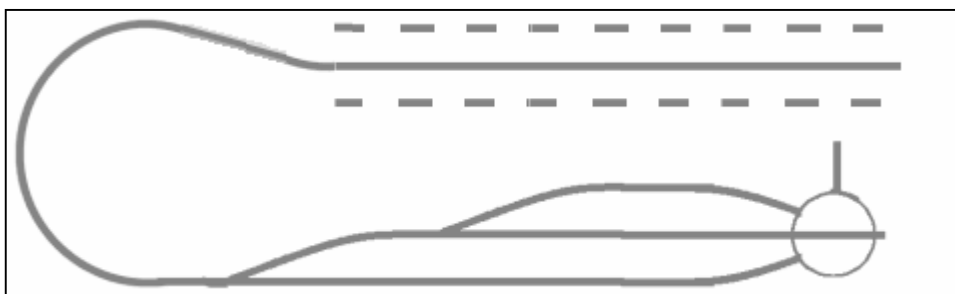
Either of these would have made a good layout, but I found a new inspiration whilst doing some electrical wiring in a local pub. On the wall were three pictures of our 'Old Town' in the early 1900s. What first caught my eye was this one, of the Old Town walls. It's actually taken just along from the old Town Quay, and I fell to wondering whether the Begijnendijk concept would work as a dockside, with the relatively modern building set back into the wall and accessed by the turntable - a bonded warehouse, perhaps.



What crystallised this concept was the next photo, of Simnel Street, and here I need to give a little history. The gap here was originally a gate in the wall, Pilgrim's Gate, giving access to what was formerly Pylgersput, named for the Pilgrim's Well which was to the right. At the top of Pylgersput was a tavern. All three features had gone by the time Speed's map was drawn in the 1600s, but what if...? I love Gn15 because the crowd don't get on their high horses when you do 'what if...?', for many of us it's part of the point of the thing. On a napkin (but this time I was working rather than drinking) I sketched Begijnendijk with the tail of the track disappearing through the gate into the Old Town. Then I went back to work, thinking things through.



I already had the operating concept and there seemed to be no point in changing that or the stock lengths, since they work well enough. This meant that I needed just 90mm for the turntable. If I put the turntable right up against the warehouse door, I could feed the front track into it at right angles to the wall, model the door open and configure the layout making continuous running possible - an advantage for running in loco's even if you never intend to exhibit the layout. I could also bring the third track to the turntable, as in Stockhausen. More napkins and dividing the layout up into squares suggested that by using the one remaining 500mm wide board as the base, I could just fit it in with 150mm (six-inch) radius curves. Will a pair of 120mm coaches go round a 150mm curve, well, it ain't pretty, but yes. Besides, the coaches don't need to be part of the continuous run: they can sit on the centre track looking pretty whilst a goods runs in front of them. The curves at the 'gate' end can be a more reasonable 200mm.



Now for the details. This time I've divided the detail planning task into three sections: the back-story; the look and feel; and, critically this time, a similar list of things to make sure it will get built. The back-story is relatively easy. The land here was never reclaimed and this version of "Pilgrim's Quay" (classier than "Ascupart Wharf", named for our local giant, but which sounds too industrial) is the terminus for ferries to the Isle of Wight, rather than the real Town Quay, about half a mile away. When Hythe Pier got its railway in the early 1900s, a 15" line was constructed through the Old Town to carry freight and passengers' luggage. Eventually some coaches were obtained to carry passengers from the Dolphin Inn to the quay for the morning ferry. Since we're modelling something very local, we don't really need much more of a story this time.

Similarly, we don't need to worry too much about the initial rakes of rolling stock - three coaches, a luggage van (replacing the original travelling post office), two vertical boiler trams and at least five freight wagons. This hasn't changed since way before part one of this series appeared, and chassis have been acquired from ebay; I simply need to get round to building the models. But we can think about the actual freight, which should be at least five different distinctive pieces to allow working as an Inglenook (where we started, of course). Two are obvious: strawberries and watercress destined for the Isle of Wight. In the early 1900s both of these local crops were carried to London by train and I can't imagine that they didn't go to the relatively affluent Isle of Wight as well. A third less obvious commodity is garlic coming from the island. There's a famous garlic farm there today, and the Port Book of Southampton reveals imports of garlic from the Low Countries as early as the fifteenth century. Add in bricks inbound from the various kilns to the east of the city and perhaps outbound to the island, and beer from several different local breweries, and we easily have a working concept.

Now let's look at making sure that it gets built. This will be a long-term concept but the trick is to get something running fairly quickly without making compromises that we'll regret later. So, for the first thing, setrack points and flextrack: Peco because that's what the local shop stocks and they've been very good to us (specifically OO/HO, because the rail-joiners fit). The track will be buried anyway, and having learned our lesson about setts and cobbles, the surface will be large flagstones much like the current pedestrian area.. The main backdrop will be the wall and the bonded warehouse, which can be modelled as a separate piece, shaped and then removed for detailing. Beyond the gate will be a separate backdrop, with a private house and the tavern in the background. Eventually these can be low relief, but we can start with a flat backdrop printed on the computer because the gate constrains the perspective viewpoint anyway. That should get us going relatively quickly - okay, for many modellers that basic framework would take a weekend at most, but for us? A realistic target for us is three months, I guess.



Finally, the look and feel. This is a quayside, so there'll be a fair bit of clutter: stacks of boxes and so on breaking up the sight-lines. If the basic stonework is pretty much brown tones we can model a number of vignettes in high key, building them up separately. First, we'll need a small wooden passenger platform, with a few people chatting, luggage and a luggage trolley. Because of the slow film speeds, all three photographs are posed (I have a fourth of the real Town Quay equally so) and we think that this is the trick to making the figures look realistic: they've just done something, are just about to do something or are waiting for something to happen. There's a nice little trolley in the photo of Winkle Street (above) that would fit into one of the arches: someone selling tea and perhaps snacks, chiefly for the workers on the quay but perhaps an elegant passenger is also chatting with the group. Perhaps some barrels are stacked near the turntable, and one is about to be hoisted up to the first floor. A stack of boxes can become a vignette if there are a couple of stevedores sitting on them and sharing a snack. And right at the back a couple of customers are chatting outside the tavern. As we have discovered, the trick is not to overload the scenes at the start - like an oil painting, we can gradually build up the density in layers over the coming months and years, until it 'looks right' whilst all the time having something that can be shown off to visitors instead of hidden because it's 'not finished'.

Something else that stands out from the Winkle Street picture, and provokes thought, is the lamp. It's like many large gas-lamps we've seen in Belgium and always thought we'd have on the Belgian layout, but here it provokes some thoughts. We could have a row of them along the wall, and I might be able to make them light the same colour as gas-lamps. That would mean we could have a nighttime scene, to provide variety. That crystallises a few last thoughts. We're using the wall as the main backdrop, but we could have a skyline behind it, 200mm being enough to give some perspective, in shades of grey so that it could be lit separately in sunrise, daylight or sunset colours. In the spirit of avoiding future compromises, this means looking at the lighting angles right from the start, to be able to get a late evening lighting scheme that looks believable.

And, in the late evening light, there's just one last thing. In this version of the Old Town, the Pylgersput well is still there, through the gate and on the right part-way up Simnel Street; a popular shrine of no particular religious leaning. So in the sunset we can walk there and light a candle for Fried before walking up to the tavern and hoisting one in his memory. Here's to you, Fried.

Andy Anderson