



## Building a Dreadnought

Ray Aitcheson describes the joys of scratchbuilding...

Being scratch built, both of the locomotives illustrated are made of whatever material is on hand. Motors, gearboxes, axleguards, footplate mounted white metal lubricators, handrail knobs etc. were purchased ready finished. The driving wheels were, as an attempt to speed things up, also purchased ready finished, whilst tender and bogie wheels were turned from castings. Two cab detailing kits available for the "Crab" were bought, but progress soon got bogged down.

The chimneys, domes, safety valves, whistles, buffers etc. were turned from brass or mild steel. The frames were made from a mixture of 1 1/4 inch x 1/16 inch steel or 2 inch x 1/16 inch brass, with motors and gearboxes being fitted on the centre drivers with 18:1 gearing. Spring axle boxes for the front and rear coupled wheels including the jointed coupling rods were made as per E.J. Cooke's live steam articles in the Gauge 0 Guild Gazette.

As a result of the decision to make do with what was available, the framing steel used for the 4-6-4T was found to be short on length – but never mind let's do an L.M.S. in reverse. They apparently shortened the rear ends to make framings for twenty 4-6-0s, so I riveted a piece approximately three inches in length to the front of the brass frame material being used for the 4-6-0 frames to make a 4-6-4T leaving a small piece at the rear to be trimmed off.

### Boiler

Another "botch up" was what to use for boilers. Having no roller bars, flat biscuit tin metal was going to be difficult to form. The nearest tubing on hand was a length of early 1950's copper tubing hot

water piping with a 1/8 inch thick wall, which had been recovered when the heating at the factory I then worked at was being renewed. The tube was found to be just under the diameter required, but I slit this along its length and forced it open to required diameter and soldered in some Peco rail to hold the shape. In fact the natural spring in the tube brought it open to just about the right size, but forty-odd years of industrial use meant a very hard cleaning up job.

### Boiler bands

Then came the snag: attaching the boiler bands. I had some nickel silver banding on hand, with others made from flattened copper wire, to be attached to the tubing. However, copper tubing of such thickness just made the boilers into one big heat sink, and after nearly two days I had managed to apply only two bands in position. I even tried using my biggest soldering iron and a small blowlamp with camping gas cylinder, but this only succeeded in burning away the nickel silver bands.

So on to plan three. This time I abandoned the tubing as boiler material in favour of two hairspray canisters which had the paintwork rubbed off with wire wool, but the diameter of these was too big. So again, cut it down its length, wrap it around the original copper boilers, fix in place with soft iron wire and solder along the joining overlap. This was yet another mistake. I'd made such a good job of cleaning up the tubing that my new boiler was now soldered to the old one. Perhaps I should have left it at that, but no, reheat and dismantle the canister, then apply a light greasing to the copper tube, replace the canister around the

tubing with ease. Be careful not drop the canister, because the metal is so thin that without its ends it will bend and crease even when dropped onto carpeted flooring. The result was that I had to make boiler number three. This time after removing the boiler shell, a 3/8 inch wide circle of the copper tube was soldered into each end to give added strength. The rest of the boiler assembly was fairly straightforward using biscuit tin, odd lengths of tin plate, copper, brass, nickel silver, small diameter copper central heating tubing, wire and some 1/16 inch brass angle.

### Detailing parts

The axleguards for the tender are a "cop out". They are in fact white metal L.N.W.R. Cloughton type, which seemed to be the nearest looking available off the shelf.

The motion etc. was made from mild steel, milled where required in the lathe because there is no milling machine at this address. The motion is held together with Peco track pins. 10, 12 & 14 BA screws, bolts, nuts and washers are all in there somewhere. Other detailing, brake gear, sandboxes, pipes, lamp irons etc. on locomotives were added, as well as bits and bobs on the tender front. Beading as required was made from copper wire filed half round.

### Painting

When the locos were completed and running, they were first painted with "Jenolite" de-ruster followed by two coats of Halfords car undercoat grey from their spray-can range. They were then brush painted: L.M.S Crimson Lake for the Dreadnought and L.M.S mixed

traffic black for the Baltic tank, and lined with a bow pen. Lettering is a mixture of Pressfix and waterslide transfers, some of which may be more than 30 years old.

### Conclusion

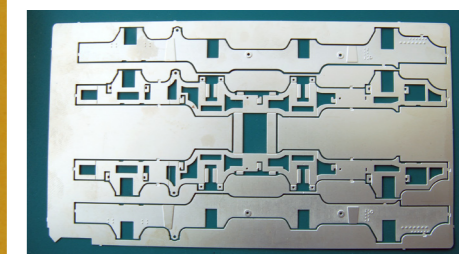
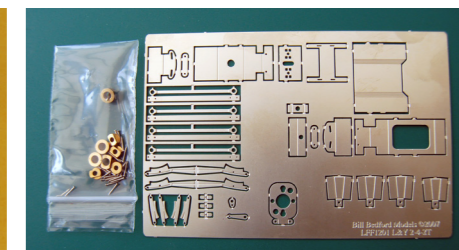
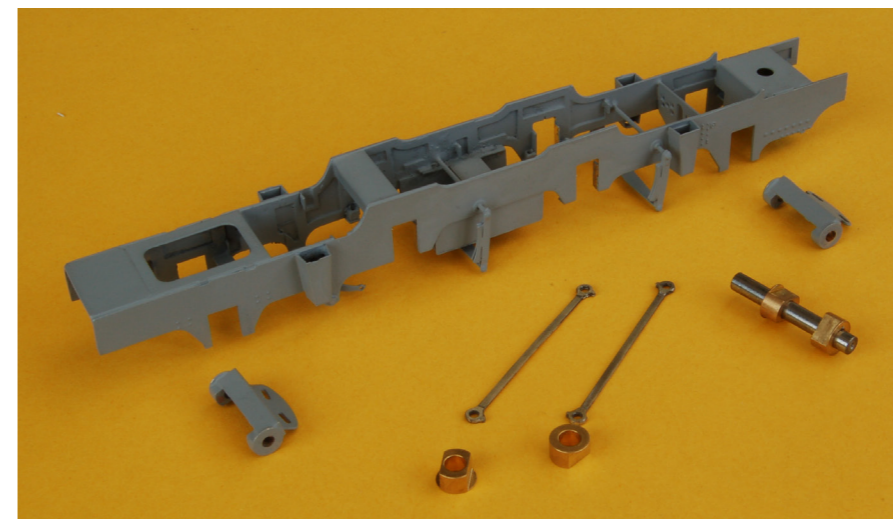
May I just add the models are built to 7mm coarse scale or to "non-preferred" as the Gauge 0 Guild once called it, and to stud contact into the bargain. But then my oldest loco is a Leeds model 0-6-2T repainted and lettered into the L.M.S ex L & Y group numbers, whilst a number of the vans and wagons are over 50 years old. Some of the locos have been running more years than their 12 inch to the foot brothers were able to manage.

If there is a moral to this story it would be, "If one of the experts is in the process of producing a kit for any loco you are contemplating, and you can afford to wait to buy the kit, then do so."



Andrew Wren-Hilton

## MODELLER'S WORKSHOP



## Aspinall 2-4-2T chassis

Dave Carter test assembles the latest 4mm scale chassis by Bill Bedford...

The L&YR 2-4-2T chassis kit part number LFF1201/4 is now available from Bill Bedford.

The kit comes on two frets which are etched from 0.35mm (0.018 inch) Nickel Silver. Three inner spacers fold up and set the frame width and hornblock settings. The end spacers are narrower – real radial tank frames tapered 2 1/2 inches (or 0.88mm at each end in 4mm scale). Folding everything up is a real Origami exercise.

When everything is soldered up the end result is quite rigid and easily fits into a George Norton/London Road Models radial kit; only the footplate opening needs to be slightly widened. The ashpan is designed to have curved bottom corners. I cut mine to take a piece of double sided copper clad for the pickups. Springing is by thin spring steel wire acting onto all eight bearings.

When assembled the chassis dimensions are:-	
width over frames at centre	15.75 mm
" " " " " with bearings in place	16.10 mm
" " " " front	15.36 mm
" " " " rear	15.26 mm

These spacings would suit P4 and possibly EM but not 00.

The side rods are designed to solder up back to back and are plain. Radial tanks had a variable depth of fluting, deep at the crankpins, almost flush in the centre.

Brake blocks, hangers and a motor mounting plate come in the fret but there are no wheel balance weights or lifeguards. Motor, gears, wheels and axles are required to complete the kit.

The price is £39 including postage and packing.

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