



## SPIRIT

Thank you for buying this locomotive kit from Boot Lane Works, please read all the instructions carefully before assembly.

### Tools & Adhesives

I recommend a few tools to help you assemble your kit –

- Small Bench Vice
- Modelling Knife (*I use a scalpel*)
- Tweezers, Pliers, etc...
- Needle Files, various shapes
- Wet & Dry abrasive paper (*the mixed selection from Halfords is very good*)
- Selection of small twist drills, including 1.5mm & 2mm diameter
- A 90-degree angle (*I use a set block, but a small set square will work well*)
- Personally, can't manage without my small, tapered reamer, look for them on eBay!  
*TAKE CARE WITH THE REAMER - MAKE A SMALL CUT, TRY, AND CUT AGAIN*

I also recommend the following adhesives –

- Super Glue  
*I use Gorilla Super Glue*
- Dichloromethane, A liquid solvent for the acrylic  
*I use E.M.A. Model Supplies "Plastic Weld"*

### **ABOUT THE PRINTED FILAMENT**

**THE FILAMENT WILL SOFTEN IF IT GETS HOT - DO NOT LEAVE IN DIRECT SUNLIGHT**

*The printer extrudes a filament of plastic, layer by layer, to create an object. As it does so, it can leave tiny ridges along the object.*

*For best results use a file to clean the surfaces, then apply a primer or a primer/filler and rub back with a wet 'n' dry. A little effort with preparation will reward you with great a topcoat.*

### **THE RESIN PARTS ARE BRITTLE AND MUST BE HANDLED WITH CARE**

*The resin is hardened by an ultraviolet light process but continues to adsorb the light after the process. Please ensure the resin is thoroughly painted to stop the hardening process continuing.*

## CHASSIS

There are separate instructions for the “No 5” chassis kit, intended for use with your SPIRIT model. Please bear in mind that this model, although intended for garden use, is still a small power unit, designed for hauling a handful of wagons or a couple of small carriages.

**We DO NOT guarantee this chassis if used for “Heavy Haulage”!**

## THE 40HP “OPEN” SIMPLEX

The Motor Rail & Tramcar Co. Ltd. built the 40hp type Simplex, for the Ministry of Munitions for use by the War Department Light Railways in the First World War. They were built with varying degrees of protection for the driver to protect against shrapnel & sniper fire.

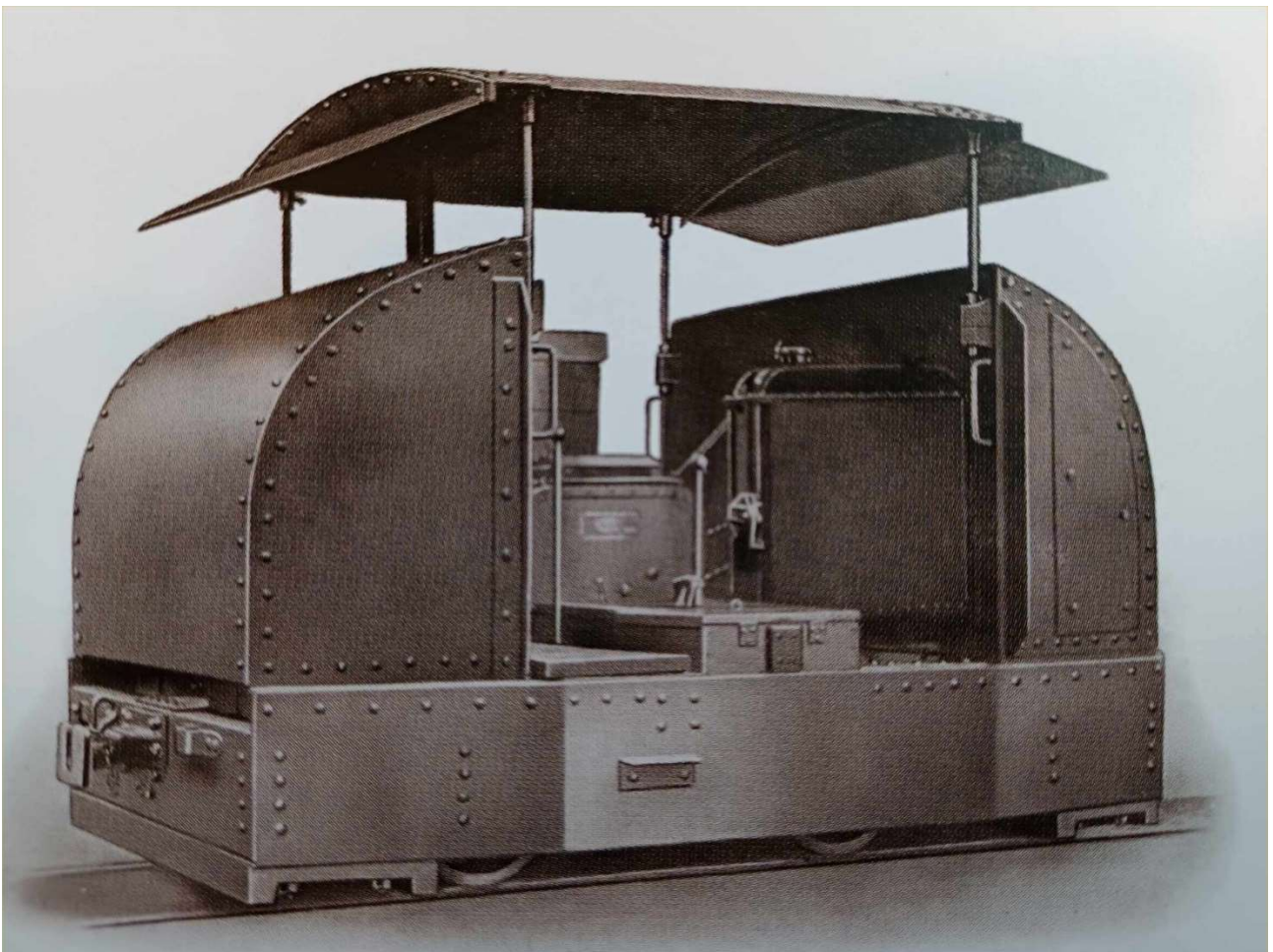
Three variants were the “Open”, the “Protected” and the “Armoured”.

The Boot Lane kit is inspired by the “Open” Simplex type.

Several options are included within the kit, to allow the modeller to adopt a specific prototype.

The important aspect of these locomotives is that they were altered not only during wartime service, but also in postwar use.

No two of any of the existing machines are the same!



*40hp Open Simplex Type  
(credit: R. C. Link collection)*

## **THE BODY**

The main body is built from 3D filament parts (white in colour) and to achieve best results these should be prepared with a “Primer Filler”, we swear by Halfords rattle can paints. Their yellow primer/filler is a “go to”.

A good coat of primer/filler should be “rubbed” down with “wet-n-dry” (we use 400 & 800 grade) and the process repeated one or twice to give a good base for the top coat.

The kit is very easy to construct, the main part being the “skirt” or main frames.

These are designed to allow the end “armoured” sections to be screwed to the skirt from the underside using 8x M2 8MM pan head screws.

There are a few end section options included in the kit, either two armoured sections or a pair of sides sections.

The 40hp Simplex the operate on the Ffestiniog Railway, ran for many years with some of its armour removed. My suspicion is this done to improve the air flow through the radiator. The FR even rotated the radiator through 90° to allow better air flow.



*Ffestiniog Railway 40hp Simplex  
(credit: festipedia.org.uk)*

There were “slots” in the sides of the end sections that were covered with extra armour, again we see evidence of the plate covers having been removed on several prototypes.

The kit includes 1mm laser cut acrylic plates that can be used to recreate the armour if desired. These should be mounted over the slots with a gap behind to allow for air movement. There is a length of 1.5mm styrene strip to offset the plates from the armoured ends.

## **THE HOOD**

The hood attaches to the skirt with 2x M8 8MM panhead screws. The holes in the top will accommodate the supplied micro-switch, if desired. There is also a hole in the skirt to accommodate further wires if needed.

## THE ROOF

As usual, the Boot Lane roof is built from a printed frame and a laser cut piece of 0.5mm styrene. Ensure the holes in each corner of the roof frame will accept the 1.5mm brass rod supplied. Open out the holes if necessary.

The roof two parts should be glued together to create a strong roof.

My preferred method of gluing the two together is to suspend the whole, upside down over two same sized objects (two short lengths of timber). Then, apply weight (a couple of heavy books) to the top of the whole assembly and leave it to dry for a good while.

There are two “visors” cut from 1mm acrylic and two visor roof ends to attach the visors too. Again, they can be added to your model at your discretion. I note that the visors appear to have been quickly removed from the originals, postwar!

The roof is mounted on the 1.5mm brass rod, cut these to approx. 30mm length. The original had a clever system whereby the roof could be raised or lowered by the driver using a turnbuckle!

With a little ingenuity, I suspect the modeller could recreate a roof that is adjustable in height!

## DETAILS

A wooden floorboard appears on some locomotives, wooden strips have been provided to recreate a footboard. A resin printed radiator; fuel tank & handbrake are included in the kit.

Buffer/couplings are attached to the underside of the skirt using 2x M8 8MM panhead screws.

The chassis is attached using 2x M3 10MM panhead screws, down through the top of the skirt.

The supplied rivet heads can be attached (follow images) using a tiny amount of “Blu tack” attached to a length of rod to pick up the rivet. A dab of glue on the base of the rivet and place rivet in required spot.

A PDF copy of this document can be downloaded from –  
[www.bootlane.org.uk/instructions](http://www.bootlane.org.uk/instructions)

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