



SHERBET

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.

THE ACRYLIC IS ALSO BRITTLE, CARE SHOULD BE TAKEN DURING CONSTRUCTION

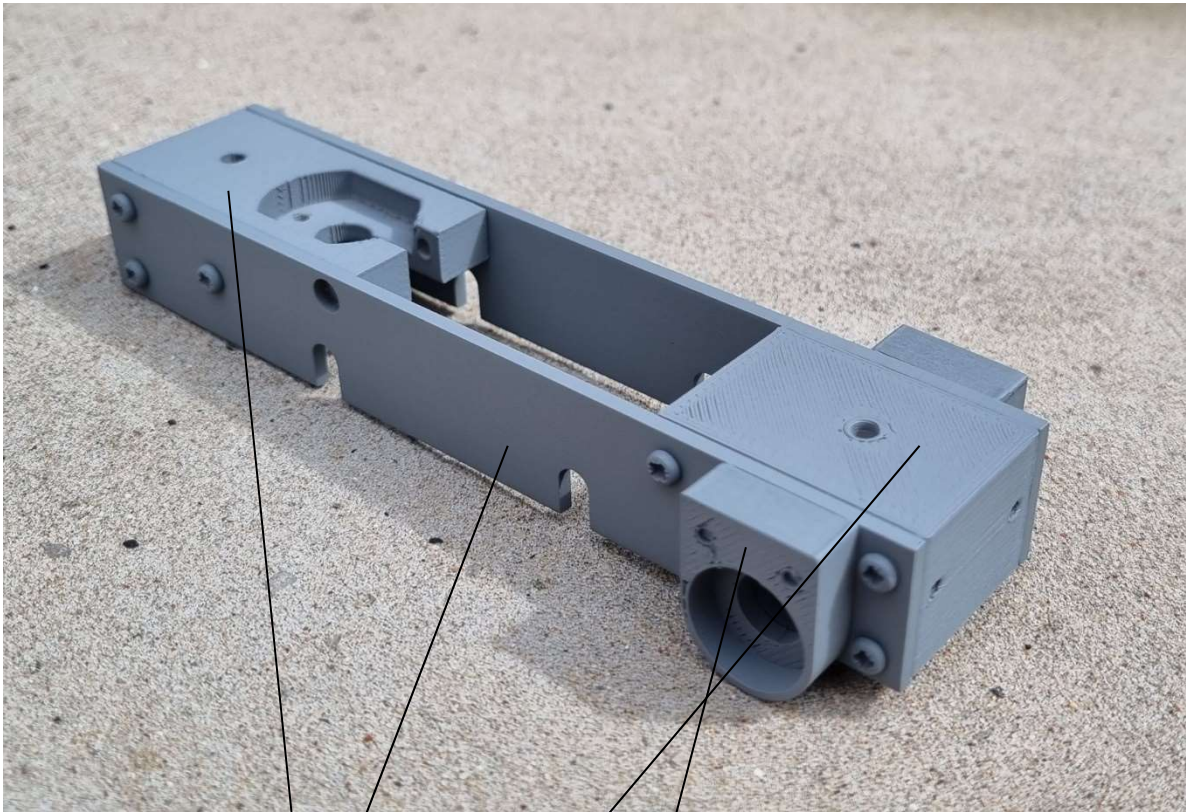
CHASSIS

Please bear in mind that this kit, 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 MOTOR IS 3-6 VOLTS AND WILL COMFORTABLY PULL A SHORT TRAIN WITH ONE AA OR AAA BATTERY

Let's start with the chassis...



Above is the main chassis –

The two mainframes are from the 2mm acrylic.

Also in the image are the two Jackshaft mounts, left & right.

And the two stretchers, front & rear. (The rear of the chassis is closest to the camera)

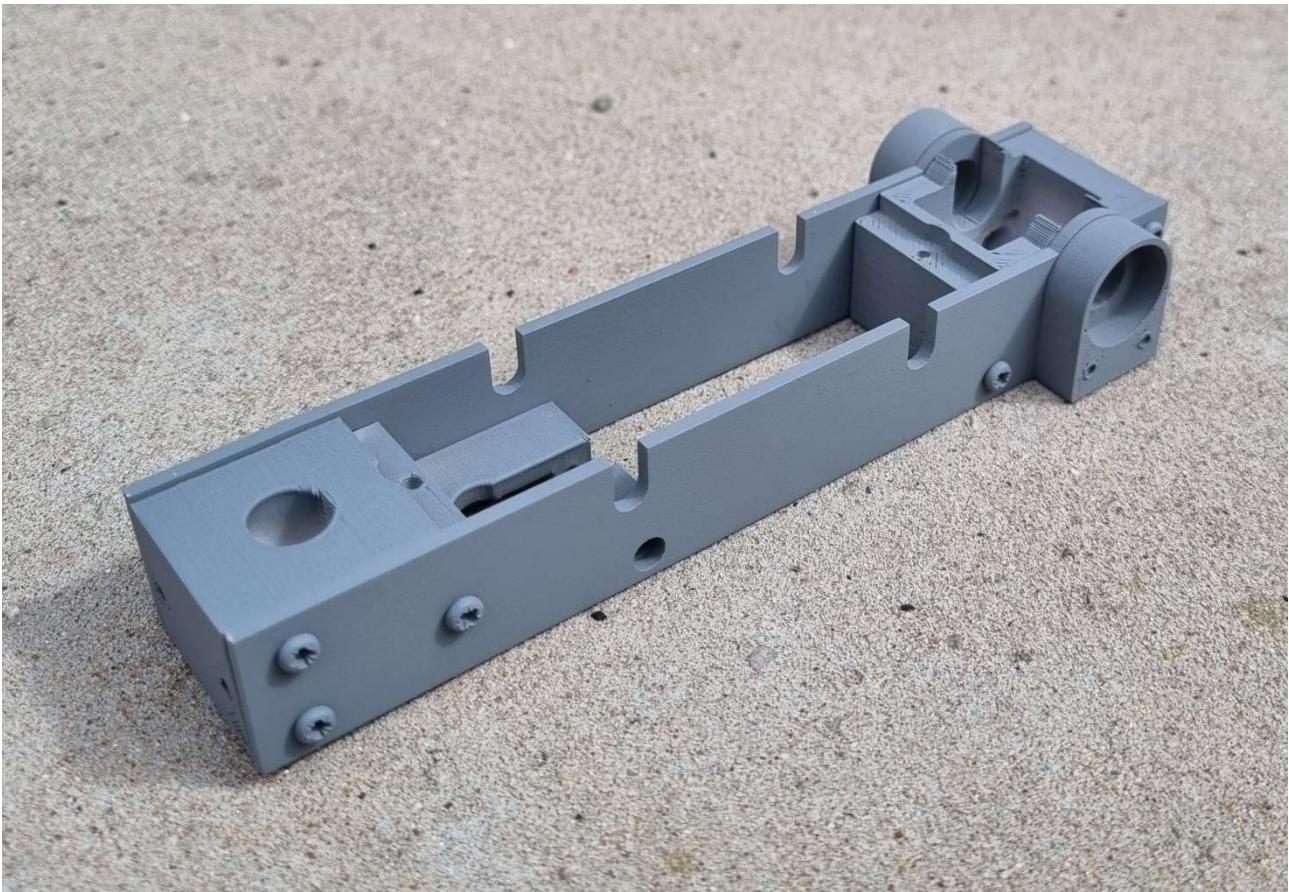
Identify these parts and screw them together.

Almost ALL of the kit is secured together with M2 8mm panhead screws. The white filament parts are soft enough to allow the screws to “self-tap” into the filament. However, I personally use an M2 tap (from eBay) to start all my threads prior to building.

The two Jackshaft mounts are secured from behind the frames using X2 M2 8mm screws each side. The stretchers use X12 M2 8mm screws in total, three on each side of each stretcher.

Try to keep the whole assembly as square as possible, I did a final tighten of all the stretchers screws with the chassis upside-down on a piece of glass to get it true.

I also painted the chassis assembly once it was all screwed together as in the image above.



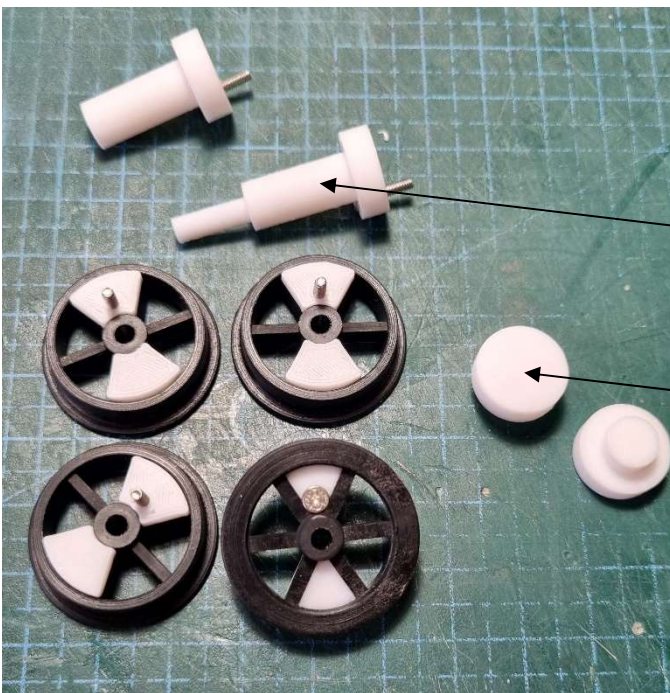
Next, we need to build our wheelsets...

This is easy, don't get too worked up over this.

Find the Binnie 24mm six-spoked wheels and the small, triangular printed inserts. Notice that these inserts have small holes in four of them. Select two, one with and one without a hole. These need to be pressed into the wheel.

I use a small bench vice to squish the inserts into the wheels, one wheel at a time.

Once you have all the inserts in the wheels, locate four of the M2 1mm conehead screws. These need to be screwed into the rear of the insert with a hole.



The four wheels with their inserts and M2 10mm conehead screws. Ensure the screws are good and tight in the inserts.

In this image is the Jackshaft in its two halves, with their M2 10mm conehead screws also fitted.

Also, the two blank Jackshaft ends. **IMPORTANT**, see the next page.

The Jackshaft

As I designed this locomotive, I followed the original as closely as possible, including the iconic Jackshaft drive.

Supplied with the kit is a Jackshaft in two halves, that pushes together, into the frames and the Jackshaft mounts, already quartered.

THE IMPORTANT BIT...

However, I experienced a degree of difficulty in getting the chassis to run smoothly with the Jackshaft, but while watching the finished chassis in action, I noticed that I couldn't really tell if the Jackshaft was rotating in operation!!!

So, I conceived an alternative option for the builder.

Included in your kit is a pair of dummy Jackshaft ends, that simply fit into the mounts. Also included is a second set of rods with dummy bearings/crankpins that merely hover over the Jackshaft.

I'm really amazed how it's almost impossible to tell the difference!

The choice is yours!

I digress, lets quarter these wheels...

The wheels need pushing onto the axles.

They also need the brass top-hat bushes fitting while doing this.

DON'T FORGET THE BUSHES...

The lip of the bush sits up against the wheel, between the frame & the wheel.



Keeping the whole wheelset square to the axles and using the jaws of the vice against the inserts, squeeze the wheels onto the axles.

Notice the brass bushes.

Also, both crankpins are currently in line.



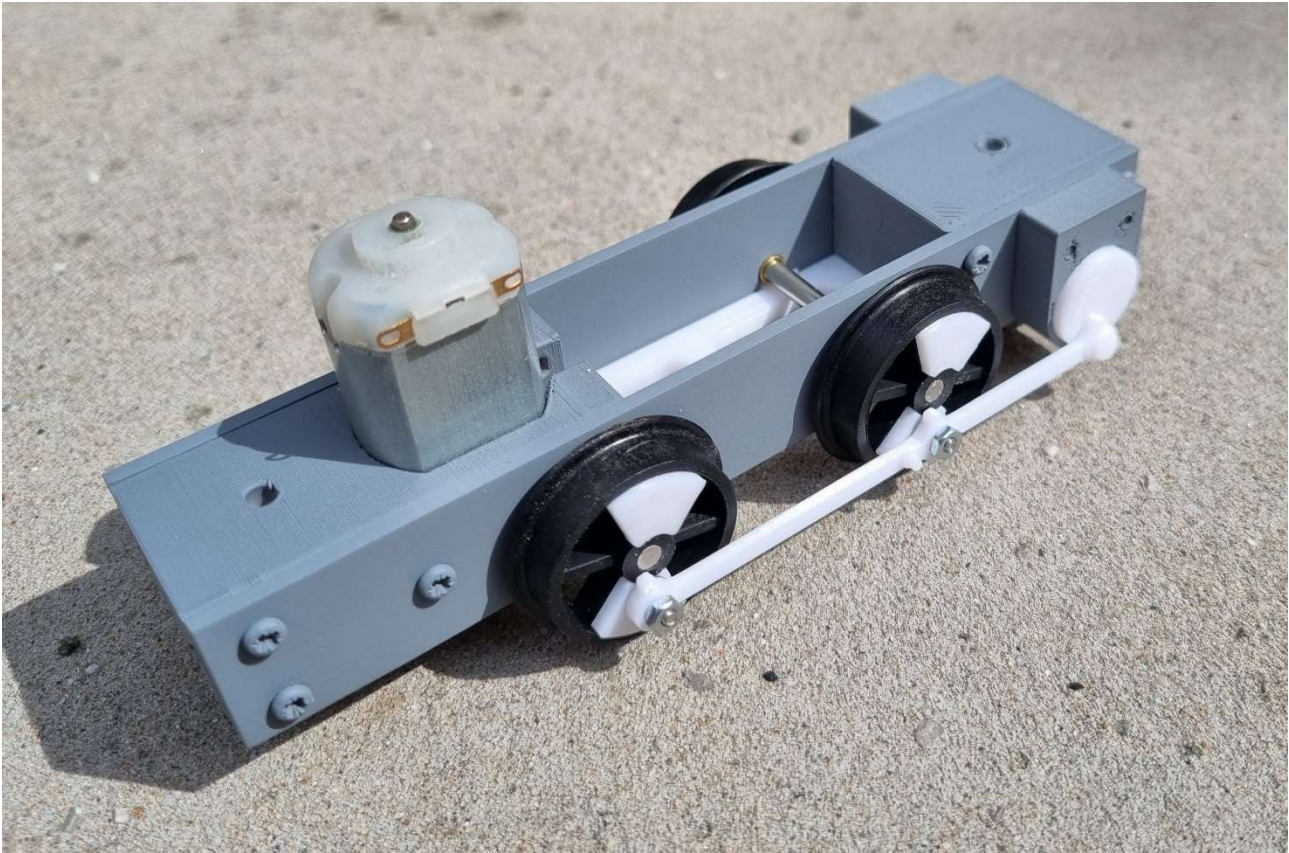
Once the wheelsets are together, we need to quarter them. Using the vice to trap the lower set of inserts, look over the vice and rotate the top wheel to be at exactly 90° to the lower wheel.

My preferred option is to have the lower crankpin to the left and the top one pointing away from me.

This is particularly important if you are going to use the Jackshaft, as you will need to quarter as it is.

With the wheelsets quartered, they can be added to the chassis unit.
Drop the wheelsets in, the front wheelset is the driven set, so will be the one with the grey gear.

The wheelsets are held in place with the retaining plate. This is offered up from underneath the chassis and fits one way round. It has a small notch at one end to clear the worm gear. Again, X2 M2 8mm panhead screws hold the retaining plate in place.



This image also shows the motor and the dummy Jackshaft & rods.

Now let's fit the rods...

The rods drop onto the crankpins, there are small white ABS tubes, precut to length, that drop over the pins, and the rods drop over the ABS tube. When the M2 nut is offered to the crankpin, it tightens against the ABS tube, not the rod.

There are small M2 washers provided, I needed to use these against the wheel inserts, to keep the rods away from the inserts when the wheels rotated. In other words, washer first, then ABS tube, then the rod, and finally the nut.

You should have a free rolling chassis at this point. I usually find that if it isn't free rolling, either the quartering is off, or the holes in the rods need opening very slightly.

The motor can be added once the chassis rolls freely.

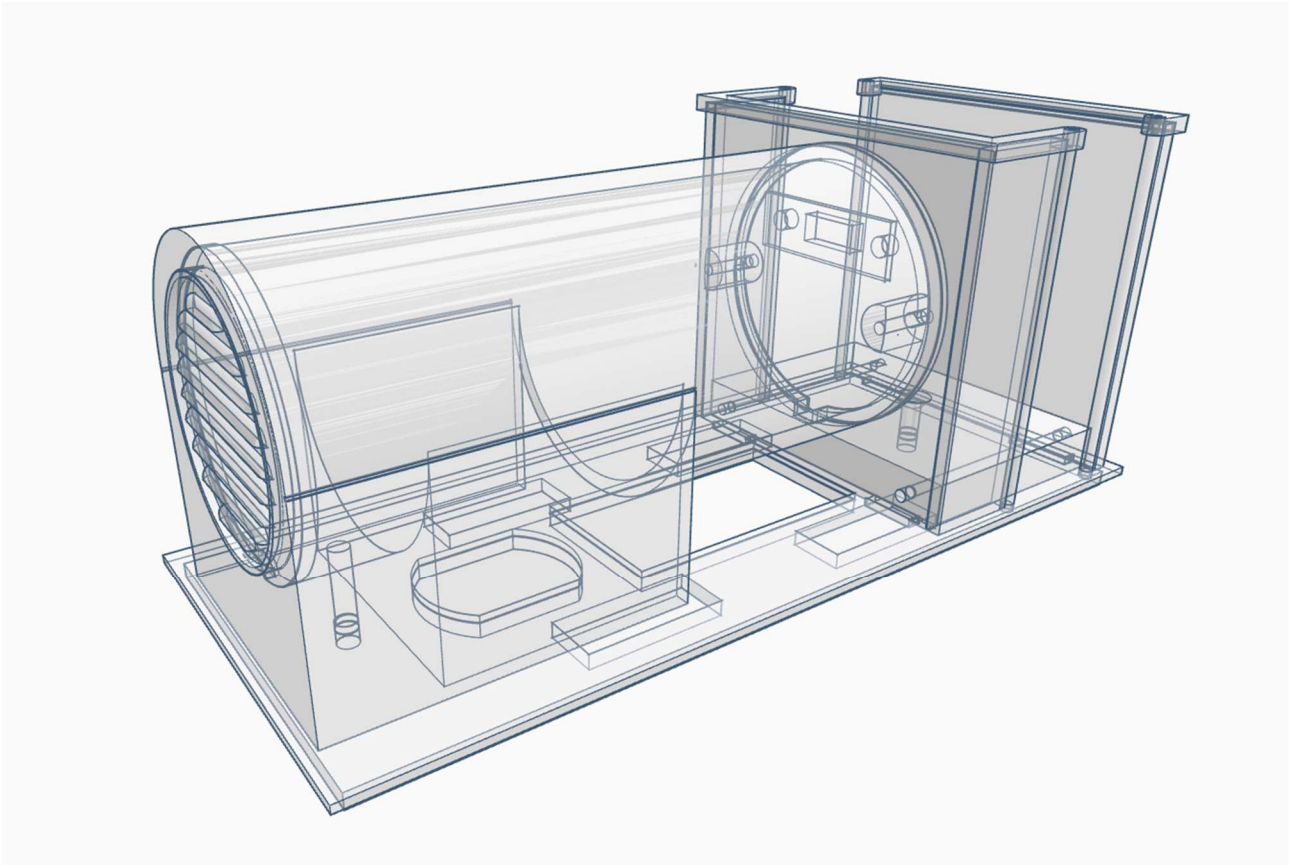
It drops into front stretcher.

There is a M2 16MM conehead screw provided, that fits into the front stretcher and clamps the motor tight to the stretcher.

Unfortunately, the front wheelset needs to be dropped to access the hole in the frames.
Do this by undoing the retaining plate.



The Body...



The body is built up from a handful of components.

Primarily, the bonnet/water tank, which is a single filament print. There is a printed radiator grill that fits into the main bonnet.

The cab is built up from 2mm acrylic, that is in turn screwed to a small, printed footplate section. This is actually a raised area over the gearbox on the original but creates a good base to screw the cab front & back too.

The beading around the top of the cab sheets is also used to attach the top of the handrails. The beading will need the guide holes drilling out to 1.5MM, to accept the 1.5MM brass rod supplied to represent the handrails. There are locating holes in the 1MM acrylic footplate.

The footplate consists of two pieces of acrylic. The 2MM under the 1MM.

The body is attached by an M3 panhead screw at the front, from below up into the bonnet. The rear by a M3 conehead downwards into the rear stretcher.

The bonnet fits into the cab front sheet, and has a printed back part, that can take the switch provided, and mounts on the bonnet in several different orientations.

Other details include resin printed handbrake and sandpots. Wooden strips to simulate the footplate floor.

Very grateful thanks to Steve Currinn & the team at the Welsh Highland Heritage Railway, who arranged for me to visit 760 at Gelert's Farm Works in May 2024, and allowed me to crawl all over the lovely little machine.

A PDF copy of this document can be downloaded from – www.bootlane.org.uk/instructions

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