

Hello everybody,

I finally tried to put this story in the files, I couldn't trace the original author (if there's anything's wrong, he'll certainly find me), but I'm very grateful to him for making the first step and Russell Dunn for helping me translating typical expressions like Tinman's solder.

On the original site (<http://www.trossachs.freeserve.co.uk/rslr.htm>), one can find the original description, some pictures of the components and the engine in action at Sinsheim in 1998.

As a word of warning I like to tell about a gas fired engine, standing close to an air vent of a spirits fired example, the result was a nice flash and a lot of time spent by the horrified owner to solder his engine into a recognizable shape again.

Good luck and much fun with it.

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The spirits burner:

As the fuel Esbit isn't the most ideal solution, something else had to be invented. As I'm not a hero in metalprocessing, it had to be something to be constructed with modest skills.

Spirits is cheaper and easier to obtain as Esbit, so I spent some evenings thinking out a simple construction, after two prototypes were constructed and subsequently thrown away the final type popped up.

Flame tube:

For a flame tube I took a 9 mm brass tube and made some 10 cuts (about a quarter of the tube deep) with a hacksaw (see drawing), the tube is filled with wick (**Docht**) so that the spirits will be evenly divided in the tube, the ends of the tube are pressed together with a vice, afterwards these ends are closed with soldering with 50/50 tinman's solder and a burner.

Tank:

I used a 28 mm piece of copper heatingtube, I closed this with pieces of copper sheet, which I shaped with tinsnips.

You could also use end - caps used for plumbing systems, as long as you also made holes for filling, venting and emptying.

Regulator:

Important is a regulator, or else you'll be leaking spirits everywhere, this can be done with a simple construction: A square piece of brass in which you drill holes and cut thread according the drawing and a screw needlevalve (Düsennadel), this is a brass M4 screw with a tapered end, this has to fit in the narrow hole in the regulator block, not having a lathe I made this with the drill and file technic.

The screw is carefully screwed in and all the parts are soldered with 50/50 tinman's solder.

Halteblech (mounting plate)

To secure this burner in the cab, a mounting plate (**Halteblech**) is fixed between the regulator and the flame tube, the distance between tank and regulator is big enough to enable me to observe the water level in the boiler. If you don't want to use the gauge glass you could lower the tank and create some space for an RC receiver.

Installation:

After the burner has been put together, the back bufferplate is removed, the burner can be pushed in like the original esbit burner, and the buffer plate can be mounted again, the mounting plate should be that big that the burner can't move, the flame tube should clear the axles by 2-3 mm, for stabilizing and a firm fit I bent the sides the mounting plate down with a plier.

Lighting:

Turn the adjusting screw about half a turn, when you can see the spirits in the cuts in the flame tube you can light it from the underside (without lifting the engine of the track).

The adjusting screw should be turned until you see the flame evenly spread over the length of the flame tube, and in the upper third of the tube (can't translate that properly, I'm always in for a word of advice on that).

Conclusion:

The burner has passed the acid test, it has run some 12-12 hours over a three day period, with a full boiler and about 28 ml of spirits and a load of 12 LGB lorries, it ran some 15 minutes before it ran out of fuell, still with water left in the boiler.

