

# Working Brake Pipes

Ever in pursuit of realism **Jim Smith-Wright** takes a look at the humble brake pipe.

Photographs **Jim Smith-Wright**



I think it best to begin by defining what “working” means. Ok there is no air or vac braking system, the brakes on the vehicles don’t actually come on and off but what I mean is these brake pipes connect up.

It all started at Expo EM. In a conversation with a fellow DEMU member I asked why he didn’t model brake pipes on his wagons. “because they look daft when they are inside a train and not connected up” was the reply - or words to that effect. A-ha - a challenge!

A quick search on the internet directed me to [www.engconcepts.net/List\\_Of\\_Disc\\_Magnets.asp](http://www.engconcepts.net/List_Of_Disc_Magnets.asp) and the product at the top of the page, Super disc magnet - 1.0mm dia x 0.5mm thick. Perfect for brake pipes? An order was placed to find out and an envelope arrived from the States within the week.

To make the pipes themselves I surveyed the luggage straps, or bungee cords I had to hand and a suitable donor was found. The elastic seemed the right diameter but wasn’t black. Nothing a spot of paint couldn’t fix.

Initially assembly was very straightforward. The magnets naturally

arrange themselves into strings, so I cut a length of elastic to 15mm long. Experimentation has found this length to be the best functionally. Then I dipped the end into a puddle of superglue and stuck it to the end of the magnets. After a few seconds the glue sets and I could remove the pipe and TWO magnets from the string. Repeating the process for the second magnet ensured I have a matching pair.

The pipes were then glued into a hole drilled into the bufferbeam. Drilling the hole diagonally upwards ensures that the pipe hangs down rather than sticking straight out.

## Experimentation

On the up side connecting the pipes is a doddle. you only need to direct one roughly in the direction of a correctly paired partner and the magnets take over and join together automatically. In fact some times the couple up completely by themselves! However for something so tiny I have found the grip they have to be too strong and uncoupling can be problematic. Also the magnets attach themselves to the links in instanter couplings ( I use Smiths as standard.)

The first problem was easily solved. After the pipe has been painted black the end was dipped into games workshop paint to form a blob on the end. This helps reinforce the join between magnet and elastic and at the same time provides a layer of paint over the end of the magnet which reduces its efficiency. The result being that the magnets still held together while in a train and connected up as easily but now when the wagons are uncoupled the pipes pull apart easily.

The coupling issue was solved by using Smiths Brass links, available separately.

Having proven the idea next step was to glue a single magnet to a piece of plasticard which became my orientation guide. Ends of wagons that connect to this end are marked as A, the other end B. This ensures all vehicles in a train are the same way around.

## Further refinement

Or that is what i thought! Then I thought about it a bit more and decided a redesign was in order. Time for another experiment. This time I glued the magnet onto the end of the pipe side on. This I reasoned would do away with the need for handed wagons plus it had the added bonus of looking a bit more like a real brake pipe. I have

found that I can do both an air pipe and a Vac pipe on a loco using this arrangement and they don't clump together. Question is though, is ensuring you couple up the correct brake pipes on a 4mm loco good for your sanity?

### Ideas

So called because I haven't tried them yet. But the possibilities are far reaching. How about high level jumpers on, say, a pair of class 50s? Or inner multiple cables on units? Where more that one cable is required perhaps a larger magnet and a steel bracket to which several pipes are connected is the way to go?

There is one more thing to bear in mind, if you are a fan of steel rail then this is not for you as the pipes will attach themselves to the track rather like the "squiddies" in The Matrix but that aside give it a try - you will be amazed how easy it is!

