

Keeping the volts flowing

by Philip Parker

The question that I get asked more than any other at exhibitions is “How do you get the running so smooth?”. There is no one simple answer to this, rather it is a combination of several factors.

First, there is the controller. How many people have fine stud of locomotives but are still using an aged H&M device that was state of the art in 1958? Before considering buying another engine, why not splash out on a decent modern controller and associated transformer? Around £40 will get a device that will make locos, even the ones with poor quality RTR motors, run acceptably.

More important than this though is keeping everything clean. Why? Well, our models are powered by electricity (normally). The current flows from the controller along the rails, through the wheels via the pickups to the motor. Assuming your connections are good, the power from the controller will get as far as the rails OK, but to get to the motor it has to rely on the tiny contact area between the wheel tread and the top of the rail. What happens here? Well normally there is a nice layer of dirt to get in the way. If the dirt is thick enough, and it doesn't take a lot, then no electricity will flow. Enough instances of this on a loco and it will stall or run jerkily as its momentum carries it to the next clean bit of rail where it gets power again and takes off - to the next bit of dirt.

What can we do about this?

Fitting pickups to every wheel will help, as will compensation to allow all the wheels to touch the track, but if there is enough dirt present then all this effort will be for nought.

I don't have the magic solution, but what I will suggest is the system that works for me at exhibitions, surely the most testing environment for any model. The dirt is everywhere, and all those people breathing just make it stick to anything metal, especially my track!

First job is to clean the aforementioned track. The best tool for this is the infamous DOGA track rubber. I'm not just saying this for effect or to boost sales, it really is the best. Forget all these chemical solutions marked “Track Cleaner” or inflammable materials such as lighter fluid or meths, for me they tend to build up a scum of the rails that then needs a mechanical cleaner to remove it. Track is cleaned by lightly rubbing it with the rubber - you can sometimes see the colour change on nickel silver rail. This is done at the start of every day at a show, sometimes more if locos start to stutter on any part of the layout. Different halls behave differently as far as creating dirt is concerned - it seems ooze from the pores of some buildings. As mentioned, the colour of nickel-silver rails changes when it gets dirty, a layout unpacked after the summer break has markedly yellow rails. This isn't always a reliable guide though as dirt can make itself transparent (the fiend!) and so a routine of cleaning is the order of the day. Cleaning wheels seems to be something alien to most people but it is just as important as cleaning track. To make your treads gleam so you can see your face in them, you need two things - a fibre glass pencil and a PECO foam locomotive cradle. The fibre pen needs to be the larger type (around 4mm diameter) and while you are buying it get some refills. They cost around £3.75 with refills at around 25p each. To clean, put the loco upside down in the cradle,

use some flyleads attached to the back of the controller (this IS a good job for that H&M Duette) to turn the wheels under power and then rub the pen on the wheel treads until they shine. The amount of sheen will vary with wheel type. Aftermarket wheels (Romford, Gibson etc.) will really gleam whereas RTR wheels will just look clean, you will soon learn the difference. This can be an awkward exercise with compensated chassis as turning the loco upside down and the only putting pressure on one axle at a time makes it do strange things, but with a little practise it can be done.

While the engine is upside down, it is as well to check the pick-ups are fluff-free and bearing on the back of the wheels. The backs may also need cleaning but this is unlikely.

A minor health & safety point here, you will from time to time get fibres sticking in your finger. These are very irritating but can normally be removed by pushing the offending digit onto the sticky side of some sticky tape and then peeling it off.

This pulls the fibre out of the skin surprisingly reliably. The loco cradle is not essential for this job, you just need to support the engine on its back but for the cost (under a fiver) it is well worth the money. You will certainly need treatment if your prized engine falls off the table as you try and support it while holding power leads and a fibre pen all at the same time !

If you try all this and your running should improve in leaps and bounds. I know it would be better if all our locos had all wheel drive (actually all steam locos already do) and all wheel pickup but even then dirt will still get in there.

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