

Control system for model trains

In your April information page you refer to your proposed command control system for model trains.

I have built the Model Railroader magazine CTC system designed by Keith Guttierrez and found it very good, but a little expensive to construct. I would be very interested in your system also.

Regarding your Railmaster controller, I find that some locos tend to be a little "buzzy" with pulse power so I also use a pure DC throttle for such motors and this allows me to put sound effects through the rails.

The Railmaster does overheat the motor of highly geared locos such as the Shay type, whereas pure DC does not.

Have you thought of incorporating a memory system to your remote control-

lers. As it is now, when the remote is unplugged to move to a second location, the trains take off at full throttle. (P.F., Newtown, NSW).

- We haven't exactly been inundated with requests from readers for a command and control system for model trains. However, a certain person very high up on the EA staff is a rabid model train enthusiast, so it still might yet happen if more people write in and indicate interest.

As explained in the original article, the Railmaster will cause higher dissipation in the loco motor but we would not expect this to cause problems.

The reason that the locos take off at full throttle is that, when the remote control is unplugged, the pin 10 input of op amp IC1c is effectively open circuit

and so the op amp output (pin 8) is pulled towards the positive supply rail. This represents the full throttle condition.

It's quite easy to incorporate a substantial degree of memory into the system, however. All you have to do is replace the $0.1\mu\text{F}$ capacitor on pin 10 of IC1c with a $47\mu\text{F}$ 16V electrolytic. The $47\mu\text{F}$ 16V electro connected to position 1 of S2a can be used for this job and need not be replaced.

Now, when the remote control is unplugged, the voltage across the $47\mu\text{F}$ capacitor will determine the output voltage of IC1c and thus the locos will continue at the set speed. This 'memory' will not last indefinitely but will be more than adequate to allow the controller to be unplugged and moved to a new location.