

Pocket Money Kit of the Month – June 2019

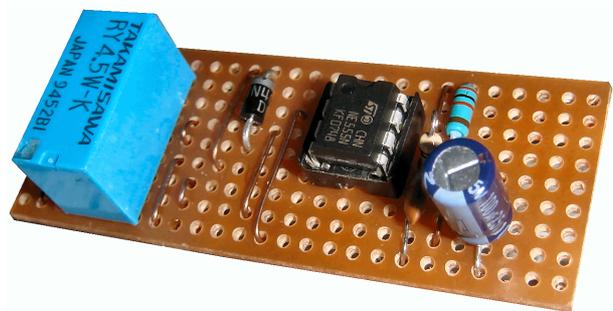
No 4 – Simple shuttle

This kit has become very popular nationally.

It runs a loco to one end of the track and stops for a set time. It then reverses to the other end of the track before stopping once more. This cycle repeats indefinitely.

The uses for a shuttle include:

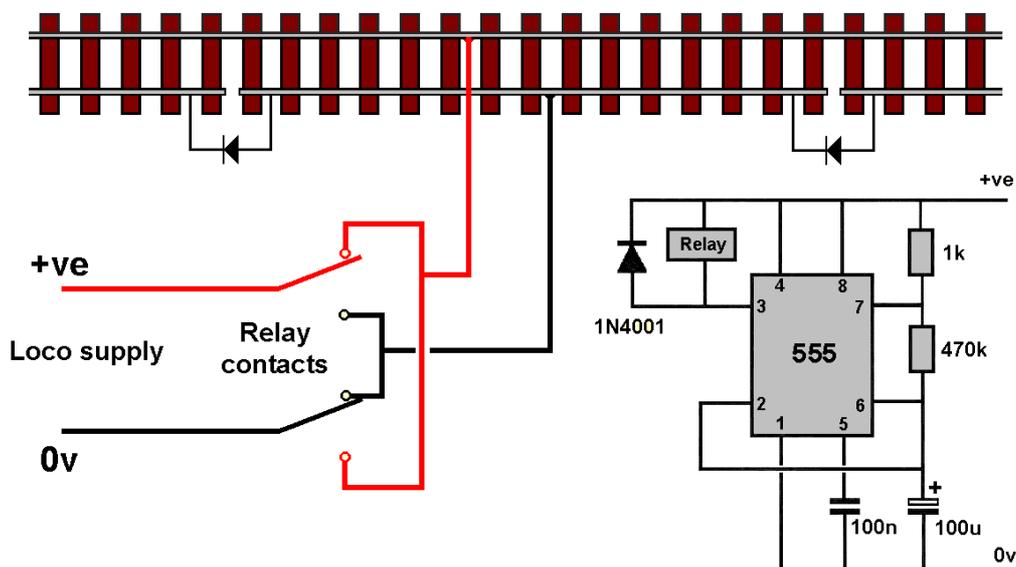
- Emulating a tramcar service.
- Emulating a country line, with tunnels at both ends (using longish waiting times at both ends).
- Emulating an industrial shuttle – e.g. ferrying material from mines to the docks or loading bays.
- Maintaining visitor interest at exhibitions, during back operations. People have something to watch while trains are assembled behind the scenes.
- Running in or warming up a motor, using short waiting times. The loco is constantly being exercised.
- Testing a loco before placing on a layout.



The kit uses just nine electronic components.

How it works

The timer chip switches a relay on for around 30 seconds, then off for around 30 seconds. The contacts on the relay are used to reverse the voltage on the track each time it changes.



The diagram shows that the track is split into three sections, with a long middle section and a shorter section at each end.

The cuts in the track isolate the three sections from each other. One rail is continuous the entire length of the track.

The centre section of track is constantly powered from a DC source, while the other sections have a diode wired across the gaps. Being diodes, they only allow current to pass in one direction.

When the loco goes past the break in the track, the current ceases to flow and the loco stops. However, when the relay reverses the polarity to the track the diode conducts and the loco moves in the other direction – until it moves past the other track break.

The components in the kit provide a delay of just over 30 seconds. Replacing a resistor will produce longer delays if required.

The kit is available at all West of Scotland activities (for £1.55) or can be purchased from the national MERG website as PMP 4.