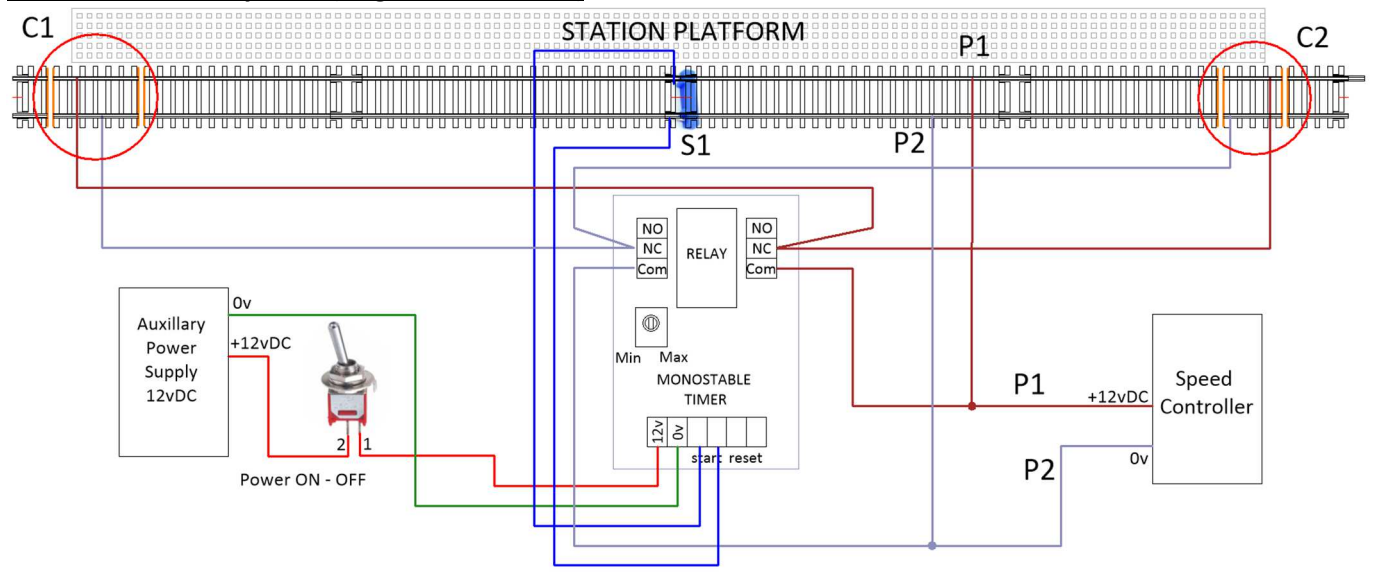


MR352 Station Stop Timer from 5 sec to 5 minutes.

This project adds a Station Stop Timer to your layout. This will allow you to run your train on a continuous loop with it stopping each time it gets to a station.

The basic principle is to have two sections of track inside the station isolated from the power, and switched ON and OFF by an electronic timer.

How to Install the system. (Negative Actuation)



The first thing you need to do is replace either the track fishplates with 'Insulated Fishplates' in positions C1 & C2 to the nearest joint.

Next connect a wire to each rail within the area between C1 and C2 shown as P1 and P2, back to the Speed Controller. Now connect the brown wires to the top track in C1 and C2 and run them back to the NO contact on the Timer Relay. Repeat this for the Grey wire from the bottom rail in C1 and C2 back to the NC contact on the Timer Relay. Then take a Grey wire from the Relay COM to the Speed Controller, and a Brown wire from the Relay COM to the Speed Controller.

At this stage the train should run normally as though there is no added circuit.

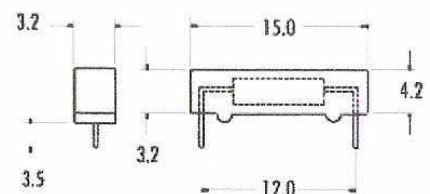
You need to solder a wire to each of the pins on the Reed Switch S1, long enough to get back to where you are positioning the timer. Now drill 2 holes (2mm) between the sleepers at the distance the pins are apart (12mm). You now need to fit the reed switch to the space between the sleepers, and check the clearance by running the loco over the reed switch.

Now connect the Auxiliary Power Supply positive via the switch to +12v on the timer. The 0v from the Power Supply goes to the 0v on the timer.

The kit comes with 1 miniature magnet which should be fitted on the under side of the locomotive.

Parts List

Timer Kit	MR350 (1)
Reed Switch	SW927 (1)
Magnet	SW932 (1)
Mini Toggle Switch	SW305 (1)
Track Insulators	By others (4)
Power connectors	By others (2)

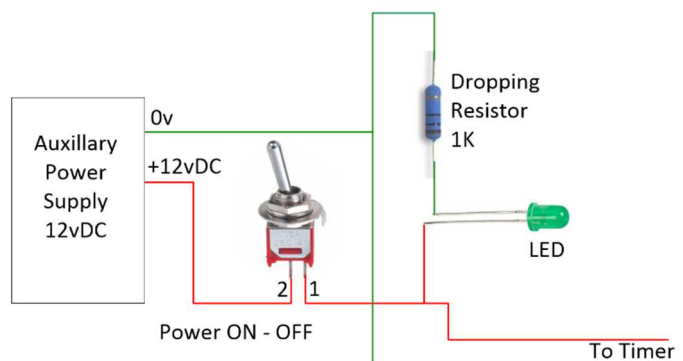


ON / OFF Indication.

You might want to have an ON/OFF Indication near the ON/OFF switch. This can be easily added to the circuit as follows.

You will need to add an LED and a 1K resistor. The resistor is connected to the 0v of the Power Supply. The other end of the resistor is connected to the LED. The positive side of the LED is then connected to the Pin 1 of the ON/OFF switch. This will then indicate Green when the timer is active and the Train will be stopped.








Please note LED's are polarised, this means there is a positive lead and a negative lead. The Negative lead is shorter and the plastic housing has a flat on the casing.



NOTE:

- 1) By adding our EM134 relay card to the above circuit you can control the electric light signals around the station, with a stop indication on the control panel, see project 'Station Stop Timer & Signals'.
- 2) By adding our EM135 relay card to the above circuit you can switch OFF both tracks and control the signals around the station, with a stop indication on the control panel, see project 'Station Stop Timer & Signals'.

The following is a list of Sensor equipment that can be used on Model Railway layouts to indicate positions or activate other circuits.

Magnets		SW932	This is a 6mm diameter by 2mm high magnet with a small indent on one side to indicate the North side. Can be glued to the underside of Locomotives or carriages
		SW933	This is a 3mm diameter by 2mm high magnet with a small indent on one side to indicate the North side. Can be glued to the underside of Locomotives or carriages
Reed Sensor Switches		SW925	General purpose glass magnetic reed switch, suitable for a wide range of sensing applications. Normally open contact. Ideal for use as points position detector. Length 18.5mm, Diameter 2.6mm Current Rating 0.5 Amps.
		SW927	Encapsulated magnetic reed switches, Normally open contact. Switching current 100mA. Size 15mm long, 3.2mm wide, 4.2mm high. Lead spacing 12mm. Operating Distance 5 to 12mm.
		SW928	General purpose glass magnetic reed switch, suitable for a wide range of sensing applications. Changeover contact. Ideal for Switching from one state to another e.g. signal lights, etc. Length 14.5mm, Diameter 2.54mm Current Rating 0.2 Amps.
Leaf Switch		SWP100	This Leaf switch is a direct replacement of the Peco PL-32 open micro switch. The switch is used as a points position detector. The switch can then be used to indicate points position, by switching control panel lights. Can also be used to switch signal lights
Micro-switch		SW052	V4 type ultra-miniature micro switches with blade actuator. S.P.D.T Switching. Ideal for all position sensing. Can be fitted beside points to be activated by the points lever.