TL10 - Traffic light set: Comprises 1 operating and 1 non-operating Traffic Light

CAUTION - ALWAYS SWITCH OFF ALL POWER TO YOUR LAYOUT BEFORE CONNECTING OR DISCONNECTING ACCESSORIES!

TL10 contents: •1 Operating traffic light: •1 Non-functioning dummy traffic light: •1 Instruction leaflet

Operation

This model traffic light displays the standard UK sequence as follows:

Red
Red + Amber
Green
Delay 10-35 seconds
Amber
Red
Delay 10-35 seconds - then repeats sequence

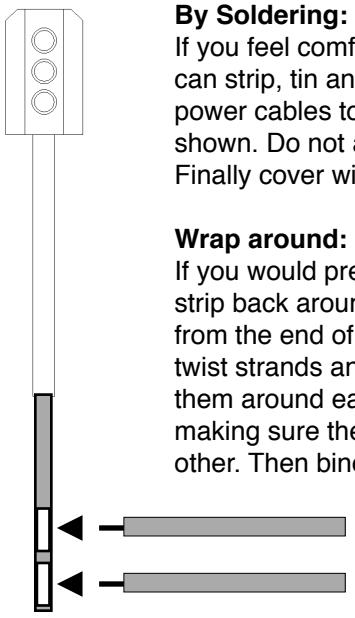
The delay time varies just like real traffic lights do to ensure that if you have several traffic lights in different parts of your layout that they do not all change at the same time (note that multiple traffic lights cannot be synchronised together).
The Traffic Light runs from 8-16 volts max smooth DC or DCC and will draw current of between 0.004A and 0.015A, depending on the supply voltage. Note it cannot be controlled by DCC commands, just run on DCC power. A 9 volt battery can also be used. *NEVER use AC!*
The traffic light head will get warm in use - this is normal.
We can recommend the Gaugemaster GMC-WM4 12 volt Smooth Regulated DC Power Pack as an inexpensive power supply ideal for this and other electronic products.

Caution

DC must be capacitor smoothed regulated DC (not just rectified AC). The Power supply must not exceed 16 volts DC *or the traffic light will be permanently damaged* - if in doubt check supply with a voltmeter BEFORE connecting!

Wiring the Traffic Light

The traffic light has just two connections for power at the bottom. Regular thin modelling wire such as 7/0.2 or 1/0.6 can be used as the traffic light takes little current. Wires can be connected either way around - there is no polarity. When connecting your wires make sure you can pass them down the 2.8mm mounting hole or alternatively consider connecting them after you have mounted it.



8-16 Volts DCC or DC **Maximum**

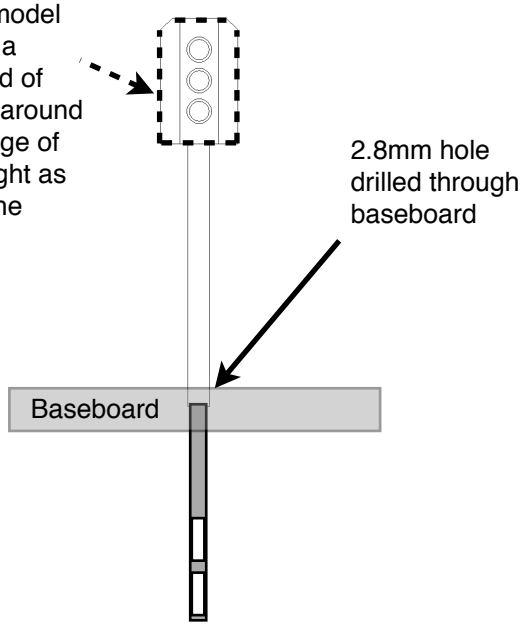
By Soldering:
If you feel comfortable soldering you can strip, tin and attach your two power cables to the two contacts as shown. Do not apply heat for too long. Finally cover with insulating tape.

Wrap around:
If you would prefer not to solder, then strip back around 15mm of insulation from the end of your power cables, twist strands and then tightly wrap them around each of the two contacts making sure they do not touch each other. Then bind with insulating tape.

Mounting and finishing the Traffic Light

To mount the traffic light, drill a 2.8mm hole through your baseboard and push the traffic light in.
(2.8mm is the optimal size - available from model shops, builders merchants or direct from dcpexpress.com)
You can add extra realism to the model by painting a narrow band of white paint around the front edge of the traffic light head just as many real traffic lights have.

Finish the model by painting a narrow band of white paint around the front edge of the traffic light as shown by the dotted line.



Troubleshooting

This should be an easy product to fit and use on your layout, the only really important thing to watch being the power supply which must be either DC or DCC and in the range of 8 to 16 volts smooth DC maximum. We have squeezed all of the circuitry into the small space at the back of the traffic light head but if supplied with too much voltage or AC instead of DC or DCC it will likely be permanently damaged and will not be covered under our guarantee.
So check before connecting your traffic light - even if you have a controller with output terminals labelled '16V DC' its worth checking the actual output with a multimeter.

Limiting the power

If you have a smooth DC source but the voltage is too high you can reduce power by connecting a resistor in series with the traffic light (in series means in between). A 1000 ohm (1K) 0.5Watt resistor will limit power to safe levels from a 20 volt supply. (DCP Express will be happy to supply one free of charge with any order or on receipt of a stamped addressed envelope - UK only)
If in doubt we recommend the Gaugemaster GMC-WM4 as a good value 12 volt power supply with a smooth and regulated output ideal for this and other products.

Care

- Avoid getting the traffic light head wet - circuitry inside
- Power by DCC or DC only 8-16 volts maximum

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