

SEARCHLIGHT ADAPTOR

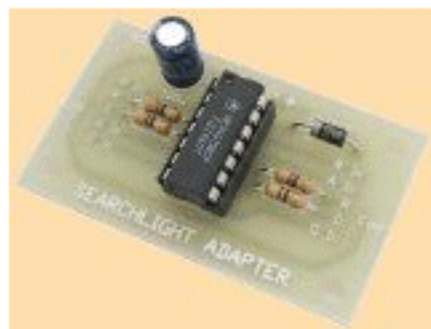
This kit is available from:

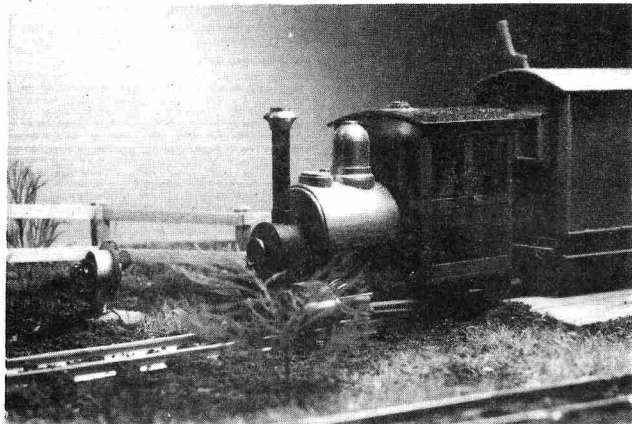
Talking Electronics

email Colin Mitchell:

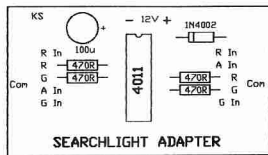
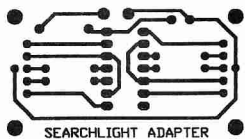
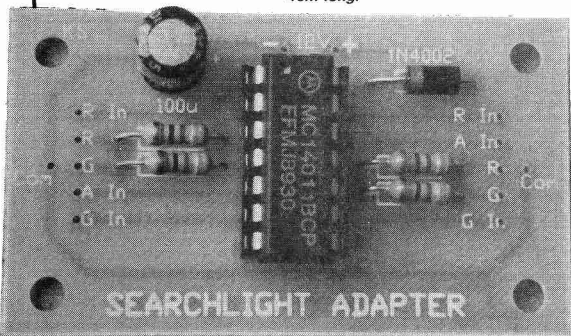
talking@tpg.com.au

for pricing and postage.





A narrow gauge locomotive pauses, waiting for the ground signal to turn green. The locomotive is about 4cm long.



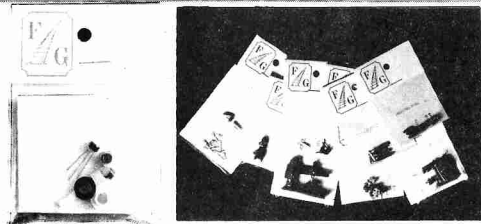
SEARCHLIGHT ADAPTER PARTS LIST

4 - 470R
6 - 100K

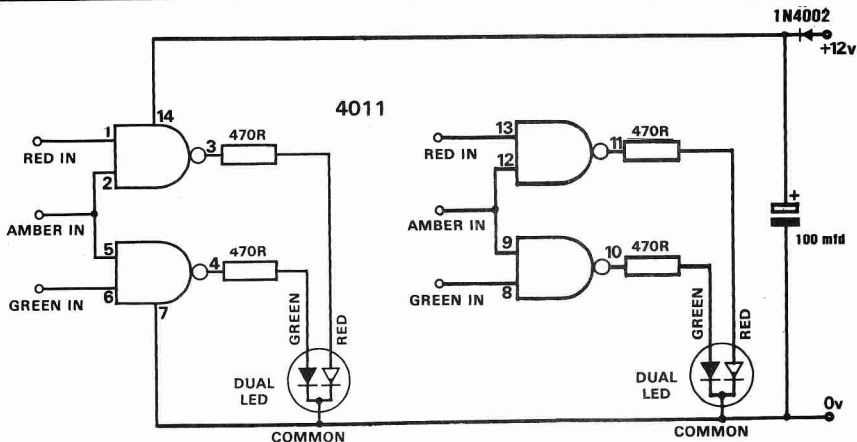
1 - 100 mfd electro

1 - 1N4002 diode
1 - 4011 quad NAND

1 - 14 pin IC socket
1 - Searchlight Adapter PCB



The Operating Ground Light kit comes neatly packed on a small card. Some wiring instructions are included. The kit is one of a range of excellent metal castings offered by F&G models.



There are two adapter circuits on the Searchlight Adapter PC board. Pull-up resistors are needed on each input of the circuit, if they are being driven by a relay or an open collector transistor driver.

Connecting a dual LED to a common positive system is not as easy. It requires a little extra circuitry. Look at the circuit diagram of the Search Light adapter. All of the signals from the common positive signal drivers need to be inverted. This is because each time a lamp is to be turned on, the active line to it goes LOW. This means that the active lines of all lamps that are not lit will be HIGH. If your system is only two aspect, this may not seem to be such a problem. Sometimes all that you have to do is swap the red and green wires around and wire the common of the dual LED to earth instead of positive. Resistors will be needed in each active line again. However, this will not work for all two aspect systems. If the output to the signal lamps is from a relay or transistor, it is likely that the circuit is not capable of taking the anode of the LED to positive. Now a chip is needed to invert the signal to the dual LED. This is what the Search Light Adapter does. It also works on three aspect signals.

The three lines from your existing system are connected to the corresponding inputs on one of the two adapters that are on the Searchlight Adapter PC board. An external 100K pull-up resistor is needed on each input of the adapter if the signal system uses relays or open collector drivers. If the signal system uses digital chips the pull-up resistors can be omitted.

Wire the dual LED to the output of the adapter and test the signal. If you only have a two aspect signal, take the input of the colour not in use to positive. On a HOME signal, this will be Amber and on a DISTANT signal it will be RED.

The dual LEDs can also be mounted on the track plan display, to give a novel indication of signal status.

