

CROSSING EXPANSION

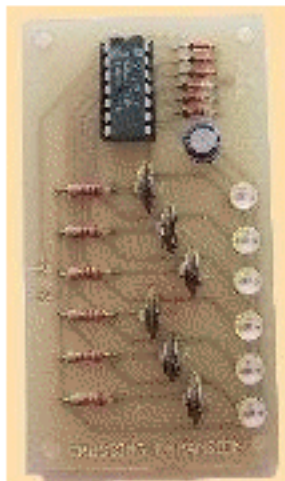
This kit is available from:

Talking Electronics

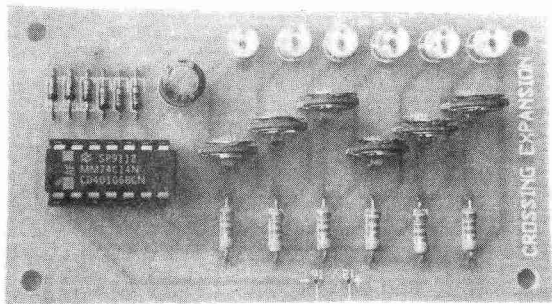
email **Colin Mitchell:**

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for pricing and postage.



CROSSING EXPANSION



If the level crossing on your layout spans four tracks you will need this expansion unit. It has six sensors that when used in conjunction with the two sensors on the Level Crossing project will enable the unit to span four bidirectional tracks or more single direction tracks. Adding another expansion unit to this allows seven bidirectional tracks to be spanned.

How it works

The circuit is made of six blocks, each exactly identical to the sensors described in the Level Crossing article.

The outputs of all of these blocks are fed into the 'trigger in' terminal on the Level Crossing board, becoming part of an eight input OR gate.

Covering one of the photo-transistors on the expansion board will have exactly the same effect as covering one of the photo-transistors on the Level Crossing board.

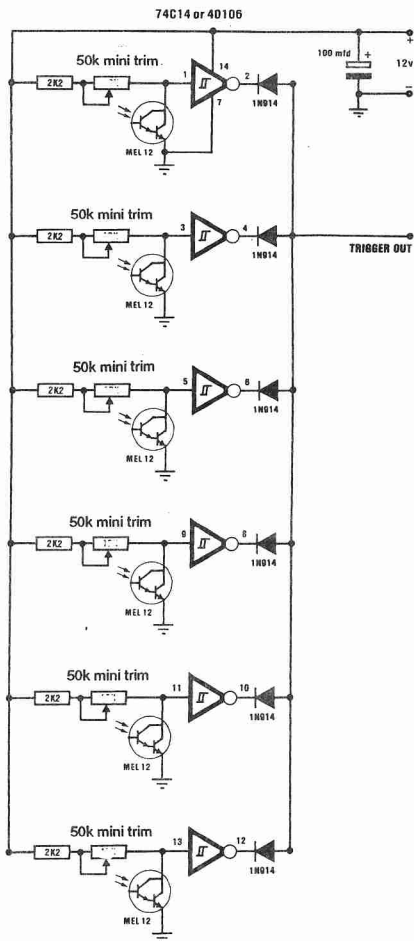
If you do not need all of the sensors on the board, leave out the resistor and trim pot on each one you do not require, and put a link in place of the photo-transistor. The diode can also be omitted.

Construction

First check to see if the holes are large enough for the trim pots. If not, enlarge them. The usual order of construction can be followed, starting with the link and ending with inserting the chip.

Power is connected to the unit through the two holes at the top of the PC board. If this board is placed against the lower edge of the Level Crossing board, power can be connected by two links from one board to the other. Use a short length of hook-up flex to connect the 'trigger out' line on the Crossing Expansion board to the 'trigger in' on the Level Crossing board.

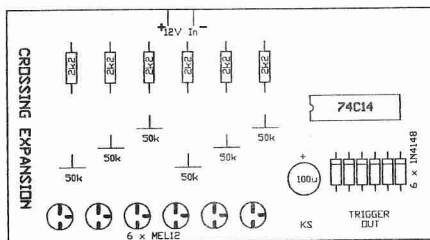
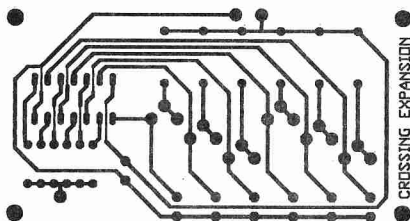
Alignment is as described in the Level Crossing article.



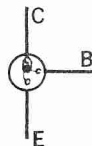
This is the circuit diagram of the Crossing Expansion unit. The circuit is made of six blocks, each the same as the sensors in the Level Crossing unit.

Crossing Expansion Parts List

- 6 - 2k2
- 6 - 50k mini trim pot
- 1 - 100 mfd electro
- 6 - 1N914 diodes
- 6 - MEL-12 photo-transistors.
- 1 - 74C14 or 40106
- 1 - 14 pin IC socket
- 1 - Crossing Expansion PCB



Shown here is the PC diagram and overlay for the Crossing Expansion board.



Pinout of the MEL-12