Blue Point Engineering

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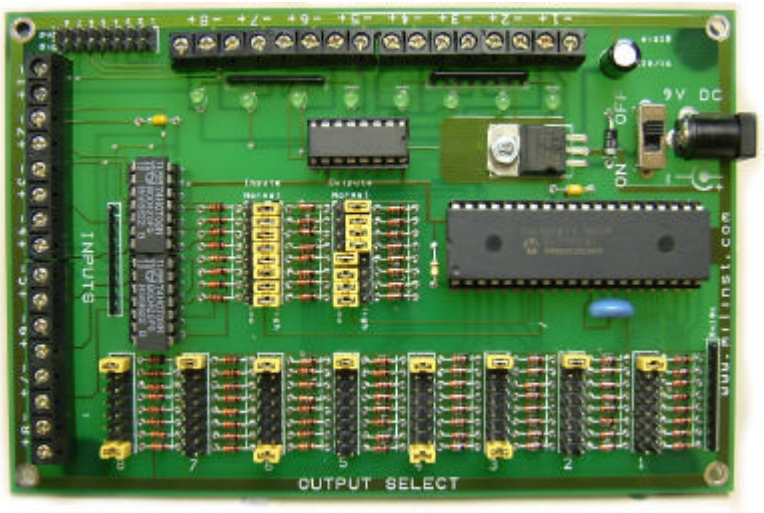

Wizard 15 I/O Router Board

The Wizard 15 I/O router board provides a convenient way of matching up to 8 inputs with up to 8 outputs at 5V TTL levels. The board can accommodate normally high or low inputs and outputs and one single input may be routed to any or all of the output lines. A small led by each output indicates the current status.

Connections

Power Supply: 2.1mm connector, centre positive. 9V DC at 500mA

Inputs: 8 inputs via 2-way terminal blocks. The "-" connection is to the board ground. Each of the + connections is pulled to +5v by a 10k resistor.
Inputs may be volt-free or 5V TTL.

Outputs: 8 outputs via 2-way terminal blocks and a 2x8 pin header connector. Each output is capable of sinking or sourcing up to 25mA.

Input Configuration Headers

In operation, the state of an input pin is compared to the corresponding Input configuration jumper- if they are both the same (ie both low or both high) then the input is judged to be inactive. If they differ (ie one high, one low) then the input is judged active.

The 8 input lines are each pulled high to +5V by a 10k resistor.
If this is the normal, inactive state for a particular input (eg if you have a press- to-make switch connected to that input) then set the corresponding Input configuration jumper to the High position (ie between the centre and RHS pins corresponding to that input).
If however the normal inactive state for the input is 0V (ie low- this would be the case for most PIR outputs) then set the corresponding Input configuration jumper to the Low position (ie centre and LHS pin).

Output Configuration Header

Set the Output configuration jumper to represent the normally inactive state required for that particular output- eg if the output is normally inactive low (ie 0V) then set the jumper to the Low position, if the output is normally inactive high (ie +5V) then set the jumper to the High position.

When an input goes active, the output configuration jumpers are read and the output set to the opposite of the output configuration pin.

Output Routing Jumpers

There are 8 sets of 8 header pin representing the outputs. The matrix rows represent the inputs (1 to 8 starting with input 1 along the top row) and the 8 columns the 8 outputs.
Placing a jumper at the junction of a row and column will activate that particular output when that input is active.
For example, if jumpers are inserted at all 8 top row positions, then when input 1 is active, outputs 1 through 8 will be activated. If jumpers are located at row2, column4 and row2 column 7 then outputs 4 and 7 will become active when input 2 is active.
The actual active state of the output is determined by the configuration jumpers.

Note that only 1 input should be "active" at any one time otherwise the outputs may not be correctly predicted.

Board Size: 100x150mm