

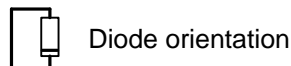
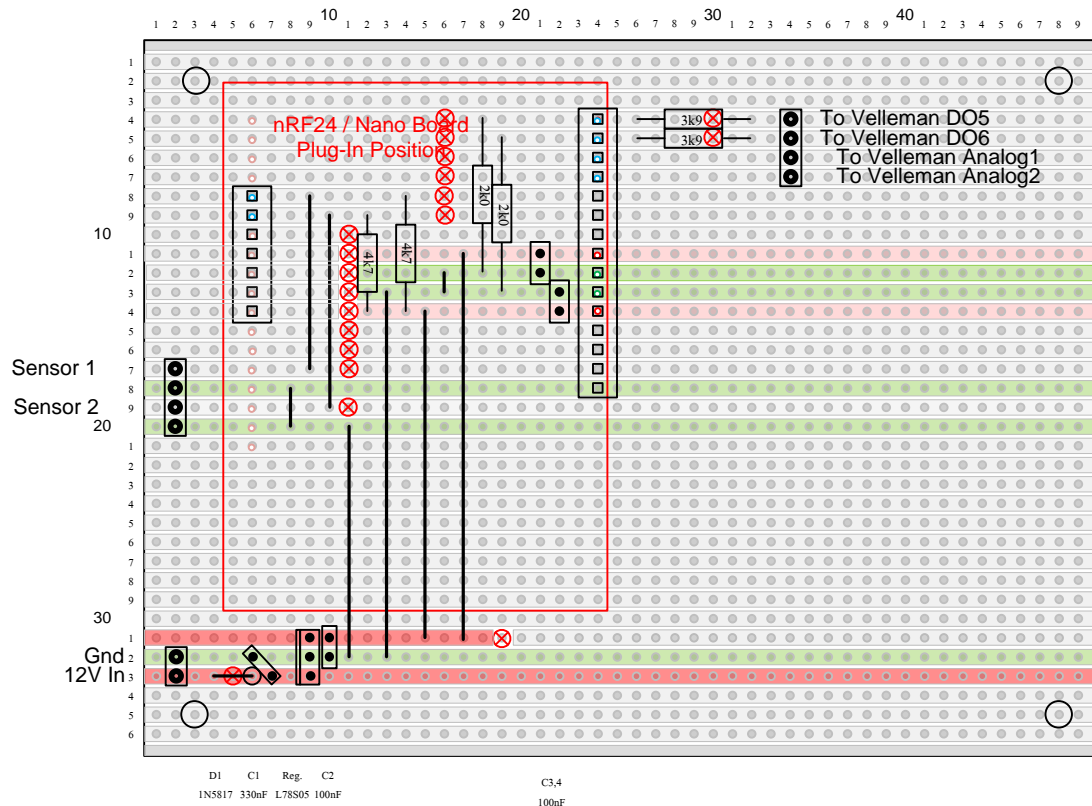
## LESVEDOME DOME CONTROL HARDWARE

### 'MAGIC WIRE' SHUTTER CONTROL VIA RADIO

#### 1: STATIC MODULE Revision 0.1

#### Stripboard Layout.

The view is the COMPONENT side of the board  
with the copper Strips UNDER the board.



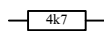
Diode orientation



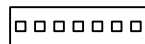
Cut copper track at this point



Board mounted screw terminal



Resistor



Socket strip



Ceramic capacitor



7805 Regulator

#### ASSEMBLING THE STATIC RADIO MODULE

- 1: It is very helpful to use a fine-tip marker pen to mark the top of the stripboard. Mark the top left-hand corner, then make a small mark every 5<sup>th</sup> hole and a bigger mark at every 10<sup>th</sup> hole along the top edge. Repeat this down the left hand edge.
- 2: After marking as above the next task is to turn the board over and use a suitable tool to cut the copper strips in the locations shown. To make sure you are in the right place it helps to poke a bit of wire ( a resistor is good) through the correct hole location BEFORE you turn the board over. CHECK CHECK and CHECK again before you cut!!
- 3: Now drill 4-off mounting holes using a 3.5 mm bit. One hole in each corner in the locations shown.
- 4: The preferred order of soldering the components is from lowest to highest. So, the order should be link wires, then resistors, capacitors and the diode. Next the PCB socket strips and the screw terminals. Finally the 7805 regulator can be soldered in place.
- 5: The Schottky diode, 1N5817, is supplied for use with the EmbeddedCoolness nRF24 / Nano module. For this application it is not needed on the module and so it is used on the stripboard to guard against a reverse polarity connection damaging the regulator.

Be especially careful with getting the socket strips in the right place. They are almost impossible to remove if you make a mistake.

To keep the sockets aligned vertically, it is helpful if a jig is made using a spare piece of stripboard with a few pins soldered in position to fit across the socket rows. The jig is plugged in before starting soldering.

#### Revision History

- 0.1: Added voltage divider resistors to connections to Velleman / K8055 outputs DO5 and DO6. These are required if the Velleman / K8055 CLAMP terminal is connected to 12 volts.

Wire link