



Component list

Note that the PCB can accommodate a NE555 timer and associated components - this is not currently used

- Resistors - all SMD 1206 except R13
 R1, R2 12k | - attenuator to keep PIC input under 5v
 R3, R4 47k | see notes on circuit diagram
 R5 100k
 R6 4k7
 R7, R11, R12 1k
 R8 620R
 R9, R10 22k
 R13 100k (wired ended)

- C1, C2 15pF ceramic
 C3, C4, C5, C7 10uF electrolytic
 C6, C28 47uF electrolytic
 C8-11 100nF 1206 ceramic
 C12-26 100nF 1206 ceramic

- D1, D2 BAT85 Schottky (or similar)
 TR1, TR2 2N3704 or other NPN silicon
 VR1 10k - millitum preferred (PCB fits RS 154-2432)
 X1 20Mhz crystal
 IC1 PIC16F876-20 28 pin DIP
 IC2 ST232N 16 pin DIP
 IC3 (NE555 timer - never user - but PCB wired for it)
 IC4 78L05 5v regulator
 J1 12 way 0.1 inch pitch connector see below
 J2, J3 4 way 0.1 inch pitch connector see below
 J4 4 way 0.1 inch pitch SIL strip
 28pin (0.3inch) and 16 pin DIP turned pin sockets

I have used Maplin YW14 etc connectors but the 12 way are discontinued. If you want to use a connector rather than wiring direct to the board then you might look at RS components connectors by Molex: 360-6083, 360-6263, 360-6143, 360-6134. (I haven't used these)

The top side of the board is a ground plane.

- X - marks a link through to the ground plane
 - none of these links are component wires
 - all have square pads for easy identification.

Drilling: Drill the holes. Then solder in the X links and then countersink the ground plane side of the remaining holes.

There are only two top side routes. (VR1 to C28 and 5v to R5 & R6)
 - I used wire links its not worth etching the top surface just for two links.

Electrolytics C4, C5, C6, C7, C27 have negative terminal soldered direct to top side copper ground plane.

**PICSWR circuit board
 Component list and layout
 Ian Sumner G3VPX 22.7.2007**

Rev. 29.8.2007 - C5 & C6 labelling reversed.
 - C11 added to component list
 - R8 & R9 corrected in component list