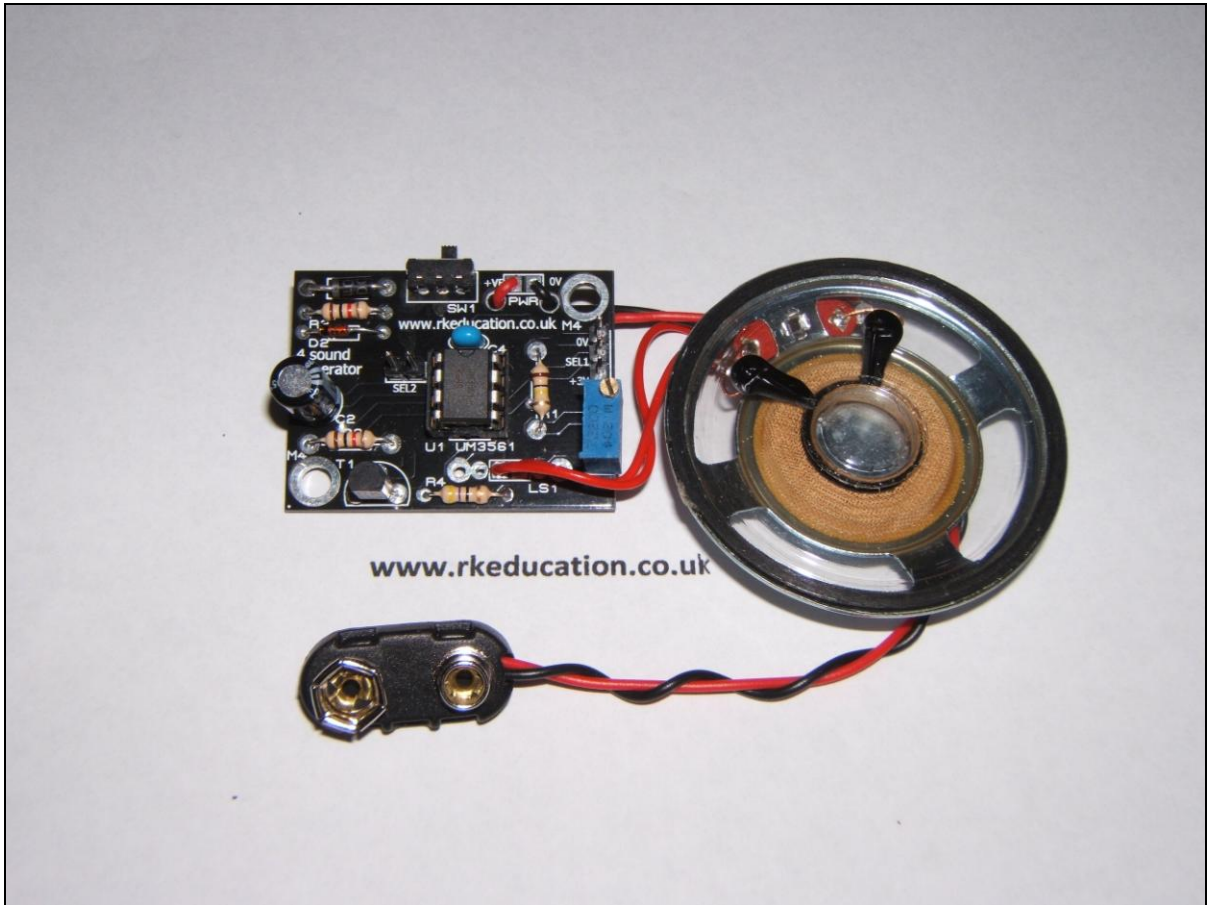
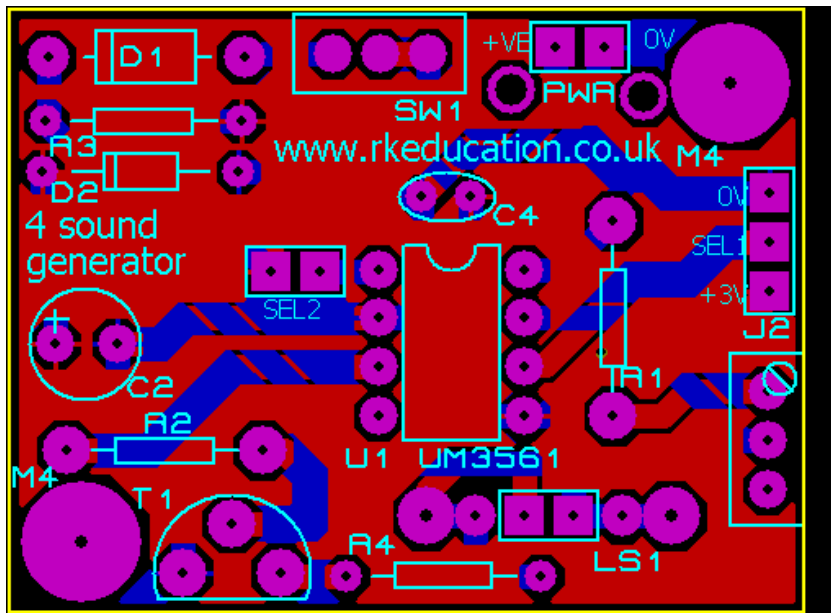


4 Siren Generator Component List and Instructions



Constructed PCB



PCB layout

Component List

PWR – for battery clip, ensure correct polarity, the holes either side can be used to thread the battery clip leads

J1 - 2 way header (SEL2)

J2 - 3 way header (SEL1)

C2 – 10uF electrolytic capacitor

C4 – 100nF multilayer ceramic capacitor

D1 – 1N400x diode

D2 – 3V3 zener diode

LS1 – speaker, attach using flying leads

R1 – 100k resistor (brown, black, yellow)

R2, R3 – 1k resistor (brown, black, red)

R4 – 47R (yellow, violet, black)

RV1 – variable resistor

SW1 – ultra miniature slide switch

T1 – MPSA13 transistor

U1 – 8 way DIP socket with UM3561

Instructions

For detailed information on the UM3561 please see the appropriate datasheet, this can be found at www.rapidonline.co.uk

When constructing PCBs it is advisable to start with the components with the lowest profile, for example resistors, and end with the components with the highest profile, for example capacitors.

It will be necessary to attach wires or speaker cables to the speaker, the speaker should be connected to the PCB by soldering the speaker wires to LS1 . Extra pads have been included for greater flexibility, normally the 2 pads in the centre should be used.

Connecting Power

The power is connected to the PCB pads marked PWR, the 0V input, usually black is put in the right hand terminal and the +VE, usually red, is put in the left hand terminal, a 9V battery should be used. A power switch is included and is labelled SW1, alternative switches can be used, if a switch is not needed shorting link will need to be used.

Using the PCB

When powered and if the PCB has been constructed correctly the siren will sound, by changing the position of the header socket the sound of the siren will change, there are 4 different sirens.

The pitch of the siren can be varied by adjusting the variable resistor RV1.

Please visit our website

www.rkeducation.co.uk

If you have any comments or queries please email us at

technical@rkeducation.co.uk

