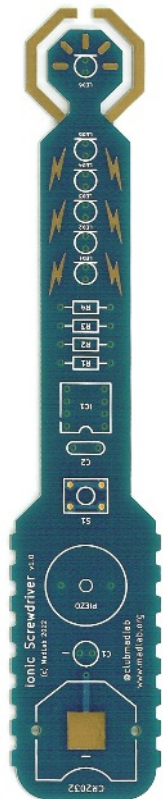
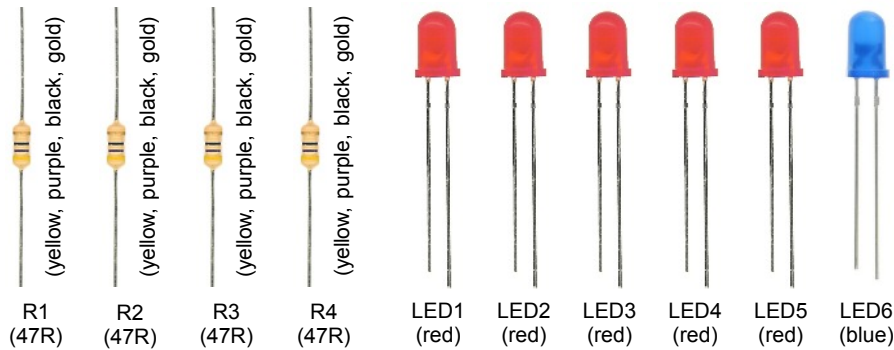


# IONIC SCREWDRIVER

a must-have tool for your space-age utility belt



Circuit board



Coin cell retainer



PIEZO



S1



IC1  
PIC12F1840



C1  
(10u elect.)



C2  
(100n)



Socket

- 1 Identify the different components using the spotter chart.
- 2 Fit and solder the resistors (R1 to R4) to the circuit board and trim their legs. They can be fitted either way around and are all the same value.
- 3 Solder the chip socket (IC1) matching the notch in the socket to the notch on the board. **Do not solder the chip directly to the board.**
- 4 Solder the pushbutton (S1) to the board.
- 5 Add a small blob of solder to the middle of the gold metal square on the **top** side of the board to help make a better connection with the coin cell. Spread the solder around a little with the soldering iron so it is not too high then fit the coin cell retainer to the board matching the marked outline. Solder the two tabs to the board using plenty of solder to make the joints physically strong.
- 6 Fit and solder the electrolytic capacitor (C1) to the board putting the shorter leg into the hole with the - sign. The shorter leg also has a stripe on the side of the body. Fit and solder the other capacitor (C2) either way around.
- 7 Fit the lights (LED1 to LED6) to the board putting the shorter leg into the hole with the line. The shorter leg also has a flattened edge on the rim. Bend the legs away from each other then solder them to the board. Clip the legs close to the solder joints.
- 8 Solder the speaker (PIEZO) to the board either way around.
- 9 Carefully bend the legs of the chip inwards a little with your fingers. Fit the chip into its socket matching the small notch in the chip to the notch in the socket.
- 10 Insert a **CR2032** coin cell into the retainer with the positive (+) side uppermost. The lights should flash and it should beep twice.

## HOW TO USE

Press and hold down the pushbutton to activate *Ionic Screwdriver*. If you press the pushbutton quickly twice the sound and light pattern will change.

