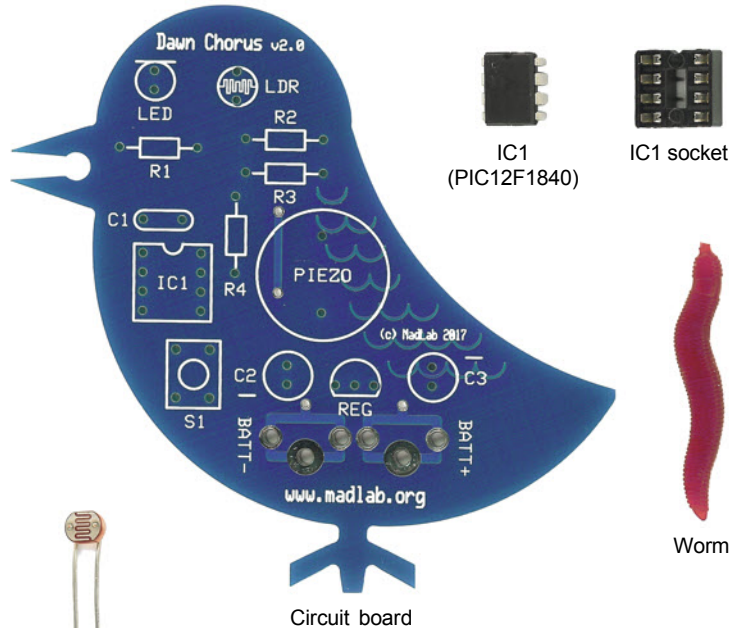
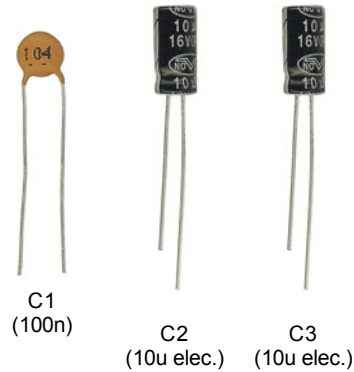
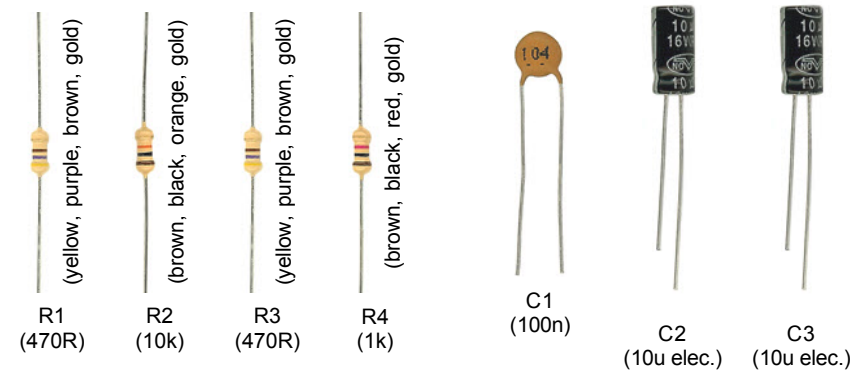

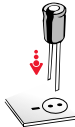



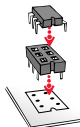


# DAWN CHORUS

a little bird that tweets and sings the dawn chorus



- 1 Identify the different components using the spotter chart.
- 2 Fit and solder the resistors (R1 to R4) to the circuit board telling them apart by the coloured bands around their bodies. They can be fitted either way around. 
- 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 electrolytic capacitors (C2 and C3) 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. Solder the other capacitor (C1) either way around. 
- 5 Solder the light sensor (LDR) to the board either way around.
- 6 Solder the light (LED) putting the shorter leg into the hole with the line. The shorter leg also has a flattened edge on the rim. 
- 7 Solder the regulator (REG) matching the half-circle shape of the regulator to the half-circle shape on the board. 
- 8 Solder the pushbutton (S1) either way around.
- 9 Solder the piezo (PIEZO) to the board either way around. 
- 10 Fit the battery connectors (BATT+ and BATT-) to the **back of the board** matching the shape to the symbol on the board (the hexagonal connector is positive, the circular negative). Ensure the connectors are pushed fully into the board and are at right angles to it. Solder the battery connectors to the **front side** of the board making sure all the holes are well filled with solder.
- 11 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. 
- 12 Fit the rubber worm into the beak.
- 13 Connect a battery (**9V PP3**) to the battery connectors. If *Dawn Chorus* is working properly the light should flash and it should beep twice.

## HOW TO USE DAWN CHORUS

*Dawn Chorus* will tweet when it senses motion near its light sensor.

Press the pushbutton (S1) to put *Dawn Chorus* to sleep. Then place *Dawn Chorus* on your bedroom window sill or beside your bed. When the room becomes light in the morning *Dawn Chorus* will wake and simulate the sound of bird song.

Press the pushbutton to stop the chorus.

Hold down the pushbutton for 2 seconds to begin a demonstration.

*Dawn Chorus* recognises dawn by looking for a gradually increasing light level over a period of about 10 minutes. So switching a light on in a room will not trick it into thinking dawn has arrived. The orientation of the light sensor is critical for this working reliably so you might need to experiment with the positioning of *Dawn Chorus*.