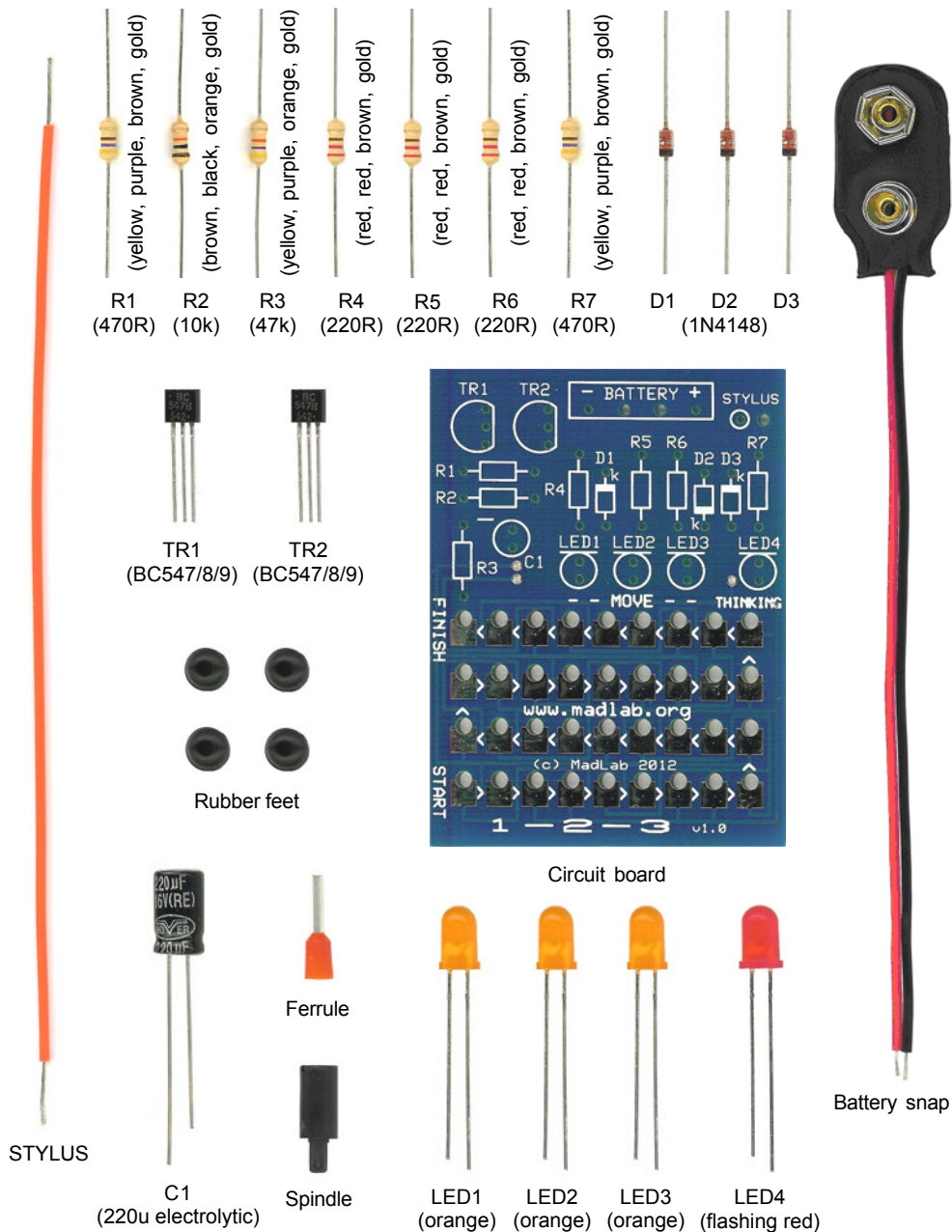
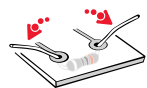




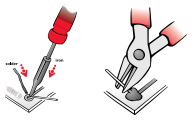



# 1 - 2 - 3

a simple game of logic in which you play against the machine



- 1 Identify the different components using the spotter chart.
- 2 Find the resistors (R1, R2, R3, ... R7) telling them apart by the coloured bands around their bodies. Bend the legs into a U-shape then fit them flat onto the picture side of the circuit board. Bend the legs outwards into a V-shape to hold them in place. They can be fitted either way around. 
- 3 Fit the diodes (D1, D2 and D3) matching the black stripe to the 'k' sign on the board. Bend the legs outwards to hold them in place. 
- 4 Fit the 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. Bend the legs outwards a little to hold it in place. 
- 5 Fit the lights (LED1, LED2, LED3 and LED4) 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. 
- 6 Open the legs of the transistors (TR1 and TR2) a little and fit them to the board matching the half-circle shape of the transistor to the half-circle shape on the board. Push the transistors half way down and bend their legs. 
- 7 Solder the legs of all the components to the metal side of the board then clip the legs close to each solder joint. 
- 8 Push the battery snap leads up through the larger holes in the board from the metal side of the board. Fit the metal tip of the red lead into the BATTERY + hole and the metal tip of the black lead into the BATTERY - hole. Solder the metal tips to the tracks on the board then pull the wire loops back. 
- 9 Solder the flexible wire to the hole marked STYLUS. (The metal strands may need twisting together.) Push the other end through its support hole then crimp the ferrule to the metal at the loose end with a pair of pliers.
- 10 Attach the self-adhesive rubber feet to the four corners of the board, then push the spindle into the hole marked START.
- 11 Connect a battery (9V PP3) to the battery snap and touch the ferrule to the metal pad by the spindle. The red light should flash and after a few seconds all three orange lights should come on.

## **HOW TO USE 1-2-3**

*1-2-3* is a game of logic where you play against the machine.

Place the spindle in the start position in the hole marked 'START'. Decide who goes first - you or the machine.

Players move alternately. On each move a player can move the spindle 1, 2 or 3 holes along the zigzag path marked with arrows. Each player must always move the spindle at least one hole on their turn. The player who moves the spindle to the final hole marked 'FINISH' is the winner.

To determine the machine's move touch the metal end of the ferrule against the metal pad where the spindle is. The red light will flash and after a few seconds one or more of the orange lights will come on. If one orange light is on then move the spindle one hole for the machine's move, if two lights are on then move it two, and if all three orange lights are on then move it three holes.