

SCUTTLEBUT

an annoying little noise maker



- 1 Identify the different components using the spotter chart.
- 2 Fit and solder the resistors (R1 to R8) 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 variable resistors (VR1 and VR2) to the board.
- 5 Solder the pushbuttons (S1 and S2) either way around.
- 6 Solder the light sensor (SENSOR) to the board either way around. Be careful soldering it as excessive heat may melt the plastic.
- 7 Solder the jack socket (AUDIO).
- 8 Fit and solder the electrolytic capacitors (C2, C3 and C4) 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 capacitors (C1 and C5) either way around.
- 9 Solder the lights (LED1 and LED2) to the board putting the shorter leg into the hole with the line. The shorter leg also has a flattened edge on the rim.
- 10 Solder the transistor (TR1) and regulator (REG) matching the half-circle shape to the half-circle shape on the board. Be careful not to mistake the regulator for the transistor - tell them apart by their markings.
- 11 Push the battery snap leads up through the larger holes in the board from the metal side of the board. Solder the metal tip of the red lead to the BATTERY + hole and the metal tip of the black lead to the BATTERY - hole. Pull the wire loops back.
- 12 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.
- 13 Push the spindles firmly into the variable resistors.
- 14 Connect a battery **(9V PP3)** to the battery snap. If *Scuttlebut* is working properly the lights should flash twice.

HOW TO USE SCUTTLEBUT

Scuttlebut is a simple noise generator with a built-in mini sequencer. A variety of waveforms and modulations can be selected.

Connect a pair of headphones or earbuds to the jack socket.

The two variable resistors VR1 and VR2 control a pair of oscillators - VR1 on the left controls the pitch of the main oscillator and VR2 on the right controls the modulation of the main oscillator.

The pushbuttons cycle through different waveforms for the two oscillators (sine, triangle, sawtooth etc.).

Pressing both pushbuttons together then releasing them cycles through different modulations (frequency, amplitude, phase etc.). *Scuttlebut* flashes the lights twice to indicate the change of modulation.

The word **Scuttlebut** in metal on the board functions as a touch pad. Touching it activates the light sensor which then further modulates the sound. Covering the sensor with a finger for example will modify the sound.

Record mode

Press and hold both pushbuttons down for a couple of seconds (until the lights flash twice) to activate record mode. In this mode a sequence of different sounds can be recorded.

Adjust the controls to the sound you want then touch the pad to record the sound. *Scuttlebut* will briefly mute to indicate the sound has been recorded.

When you have finished recording a sequence of sounds press and hold both pushbuttons again for a couple of seconds (until the lights flash twice) to exit record mode. The recorded sequence will then start to play back and loop with VR1 controlling the playback tempo.

Up to 63 sounds can be recorded and the recording is non-volatile - if either pushbutton is pressed on power-up (i.e. as the battery is connected) then any previously recorded sequence is played back.