

Appendix B

Uses of Breadboard

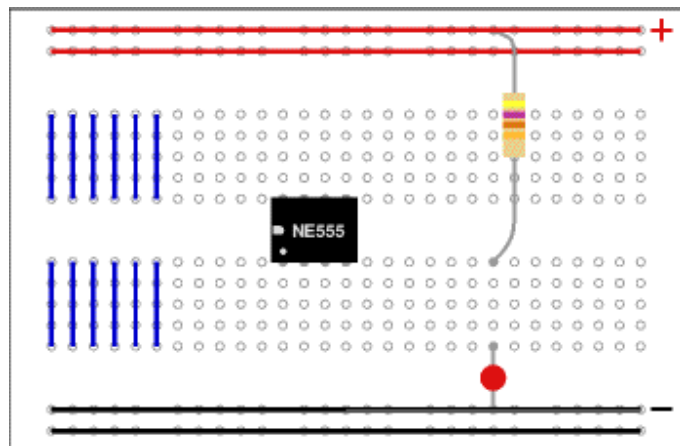
A breadboard is used to make up **temporary circuits** for testing or to try out an idea. No soldering is required so it is easy to change connections and replace components. Parts will not be damaged so they will be available to re-use afterwards.

Almost all the Electronics Club projects started life on a breadboard to check that the circuit worked as intended.

The photograph shows a typical small breadboard which is suitable for beginners building simple circuits with one or two ICs (chips). Larger sizes are available and you may wish to buy one of these to start with.

Connections on Breadboard

Breadboards have many tiny sockets (called 'holes') arranged on a 0.1" grid. The leads of most components can be pushed straight into the holes. ICs are inserted across the central gap with their notch or dot to the left. Wire links can be made with single-core plastic-coated wire of 0.6mm diameter (the standard size). Stranded wire is **not** suitable because it will crumple when pushed into a hole and it may damage the board if strands break off.



The diagram shows how the breadboard holes are connected:

The top and bottom rows are linked **horizontally** all the way across as shown by the **red** and **black** lines on the diagram. The power supply is connected to these rows, + at the top and 0V (zero volts) at the bottom.

I suggest using the upper row of the bottom pair for 0V, then you can use the lower row for the negative supply with circuits requiring a dual supply (e.g. +9V, 0V, -9V).

The other holes are linked **vertically** in blocks of 5 with no link across the centre as shown by the **blue** lines on the diagram. Notice how there are separate blocks of connections to each pin of ICs.