

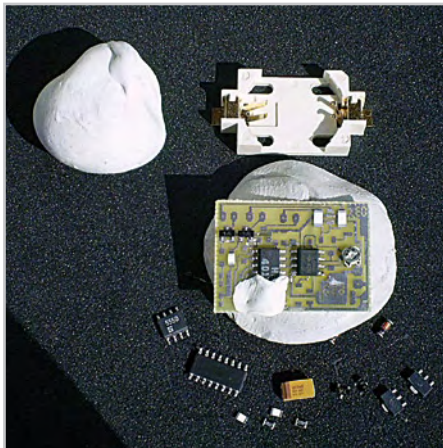
Hassle-free Placement of SMD Components



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Gadgets can be very useful to assist the task of placing components in printed circuit boards. Some people clamp the PCB in a small vice, either the vacuum-fixing variety (with a sucker) or the type that clamps to the edge of the workbench, or else they use one of those 'third hand' devices with several crocodile clips. But none of these is much help when you are dealing with surface mount (SMD) components. Even the steadiest hand is of little use if just the smallest slip causes the PCB to jump out of the croc clips. In this kind of operation you cannot steady your hands on the work surface and they soon get tired.

The author has discovered a better, albeit unconventional, solution: a substance like modelling clay that is sold for cleaning the



gummy mess out of the metal type letters on traditional typewriters (yes, some people do still use these good old machines). This substance is sold in specialist stationery shops

but if you can't find it, a good substitute is Blu-Tack adhesive putty (or one of the several similar products), which you can buy in strips, square or small pads. You'll need to knead it in your hands a while for this kind of assembly work.

Once you have softened a lump to a suitably elastic consistency, you can press it onto the actual work preparation area and place the printed circuit board on top (see photo). The underlay should be rectangular or circular, about 20 to 25 cm (8 to 10 inches) across. This approach enables you to manoeuvre the SMD printed circuit board into the best position at any time during the parts placement process and fix it firmly in place with both hands. Using a conductive material for this underlay enables it to be earthed for discharging any static electricity charge. Many mousepads are

suitable for this purpose, used with the conducting surface uppermost.

Instead of Blu-Tack you could use other materials such as Plasticine or even chewing gum,

although the author has not tested these personally. Here practitioners will state that SMD printed circuits boards can also be populated using double sided sticky tape. Blu-Tack has the advantage, however, that you can use it

to fix individual components onto the PCB tidily and 'squarely' before soldering, leaving both hands free for the actual soldering.

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