# Hints on inserting the ARM3

Every ARM3 that IFEL ever made was installed in a computer to make sure that it worked before dispatch. It is therefore not an exaggeration to say that I have inserted an ARM3 into its socket a very large number times. Even though the pins on the ARM3 and socket on the main board cannot be seen, you soon get a feel for whether the alignment is correct and a knack for it generally. However, if you have never inserted this type of ARM3 before you may find the fact that the pins/socket cannot be seen rather awkward. What we are going to describe here is a simple trick which may be useful.

Imagine the ARM3 installed in the socket and viewed directly from above. The various dimensions are going to be as shown below (all figures in mm);
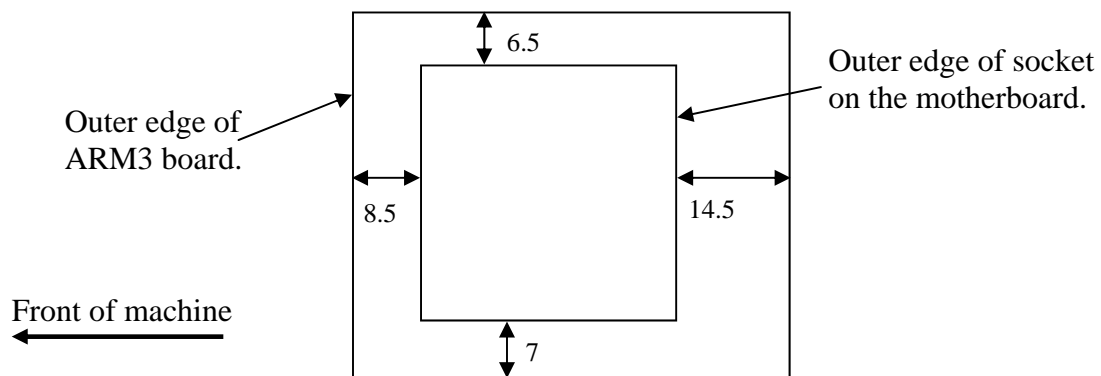
What this diagram shows is that the edge of the ARM3 board overhangs the outer edge of the socket on the motherboard by a certain known amount on all four sides. The size of the ARM3 board is fixed at 48.5mm by 58mm and the motherboard socket is usually about 35mm x 35mm but by all means check these numbers. Using a combination of measurement and simple maths, the various overhang figures shown above were obtained.

Ideally there would be marks on the main board coinciding with the outline of the ARM3 board to act as an installation guide. The next best thing, however, is to cut out some small pieces of card of exactly the right width and lay them on the motherboard along the edge of the ARM2 socket. For example, one piece of card might be 6.5mm wide and laid along the left hand edge of the socket (as viewed from the front). Make absolutely sure that the card does not slide under the ARM2 socket at all as this will clearly throw the measurements out.

When inserting the ARM3 and when viewed from directly above (ie correcting for any parallax errors), simply ensure that the edges of the ARM3 are in line with the outer edges of the strips of card. The pin alignment should then be correct.

Clearly, you only really need two pieces of card along any two adjacent edges. The use of some card along all four edges may be helpful however.