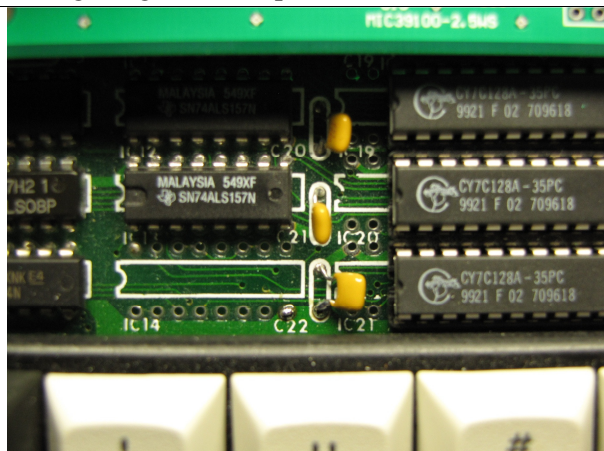# Microbee Technology Pty Ltd

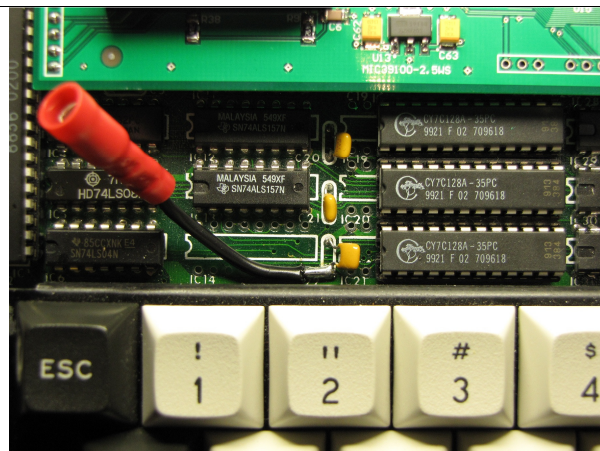## Fitting of Ground Strap to coreboard

Background:

The 25 way pin strip / sockets that connect the coreboard to the baseboard only have 2 pins for the ground connection. This has been a design flaw in every Microbee standard or Premium unit right from the very first kit supplied by Applied Technology. The problem is that having only 2 ground pins, return currents from components at the left hand side of the board have a very long way to travel and hence this gives rise to ringing and generally poor signal integrity. Although not a problem in the earlier units because of lower bus speeds and the use of static ram, later DRAM based units did have problems which would manifest in a number of ways. Some of the Premium Plus coreboards have also shown a susceptibility in this way and it is recommended that a ground strap be fitted to provide better ground connection and shorter paths for return currents.
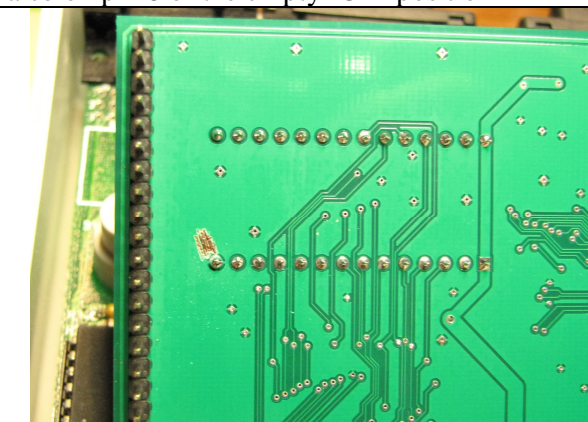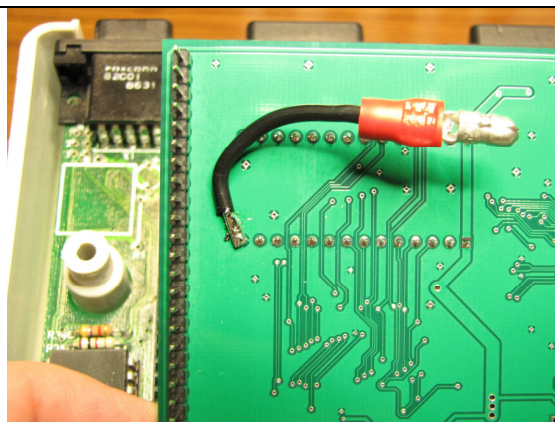
Fitting the ground strap:

Prepare the baseboard by putting a blob of solder on both the leg of C22 nearest the keyboard, and also on pin 8 of the empty IC14 position

Next, solder the prepared ground 'socket' wire to the prepared points.

Next, scrape away some of the solder mask near pin 14 of the Eprom socket on the coreboard.

Attach the prepared ground 'plug' to the exposed copper and also pin 14.

Replace the coreboard onto the baseboard and plug the 2 ends of the ground strap together ensuring that there are no bare metal parts showing that could short on other components.

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