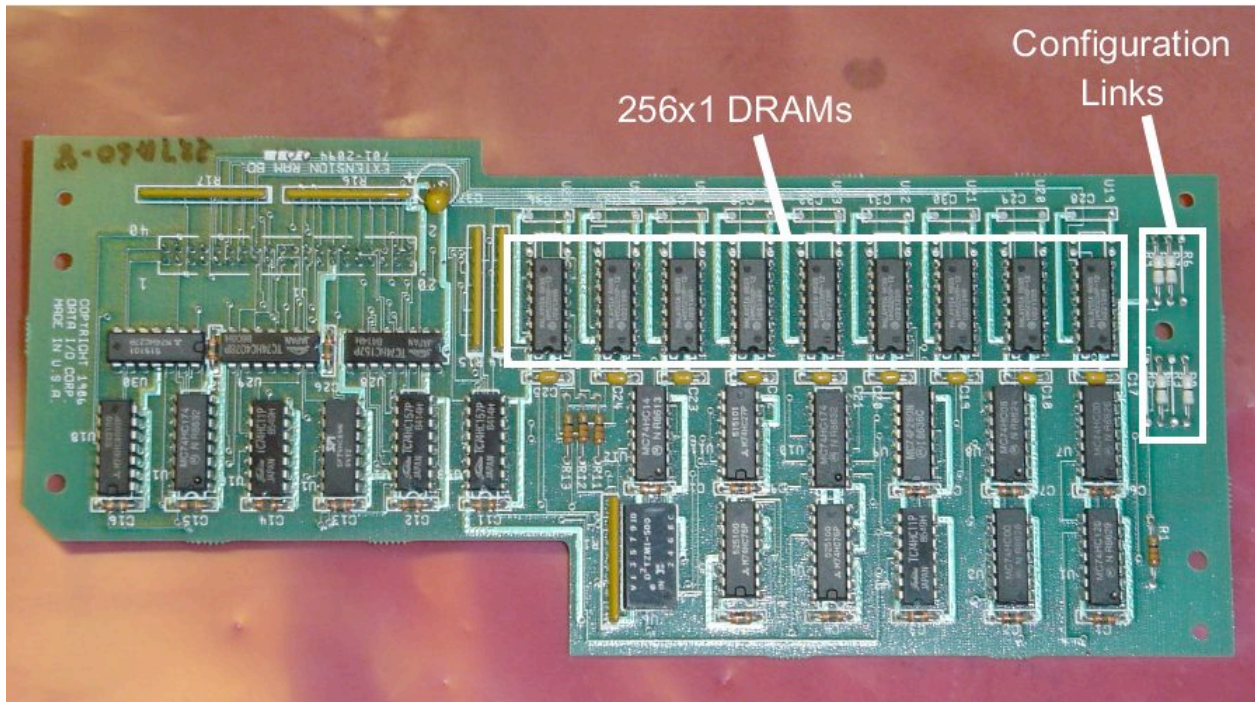


## 256K to 1Meg Memory Upgrade for the Data I/O 29B

Here is a set of simple to follow steps for you to upgrade your Data I/O 29B programmer from 256k to 1Meg memory.

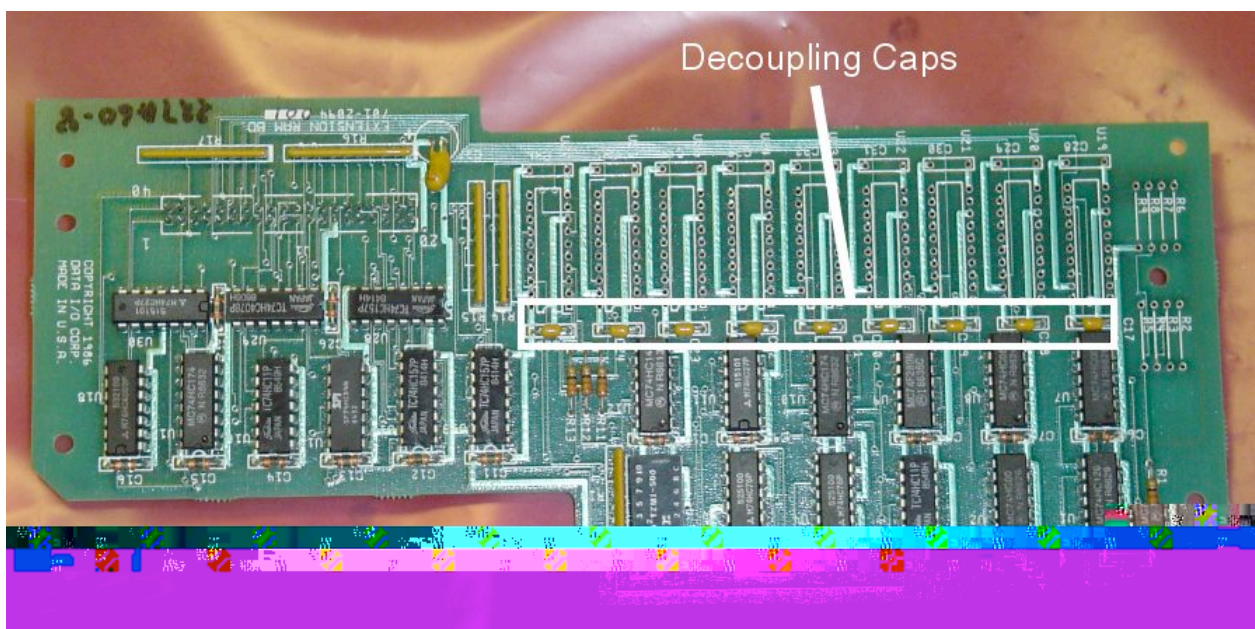
First, you can check to see what memory your programmer has in it, if you don't know. Press <SELECT><B><2><START>. The programmer will report it's ROM checksum, memory size, and version number. If you have only 64K, then that's a different RAM board, and cannot be upgraded, sorry!

Okay, dismantle your programmer, and remove the RAM board. If it is 256k, it will look like this



Now you'll need to get your soldering iron and de-soldering equipment ready. You will need to desolder all 9 of the existing DRAMs, and open up the 4 soldered through holes below each chip as well as the holes for C28 thru C36. Also, remove all 4 of the configuration links again opening all nearby holes, but keep them, if you don't have new ones.

You'll then be ready for the next stage

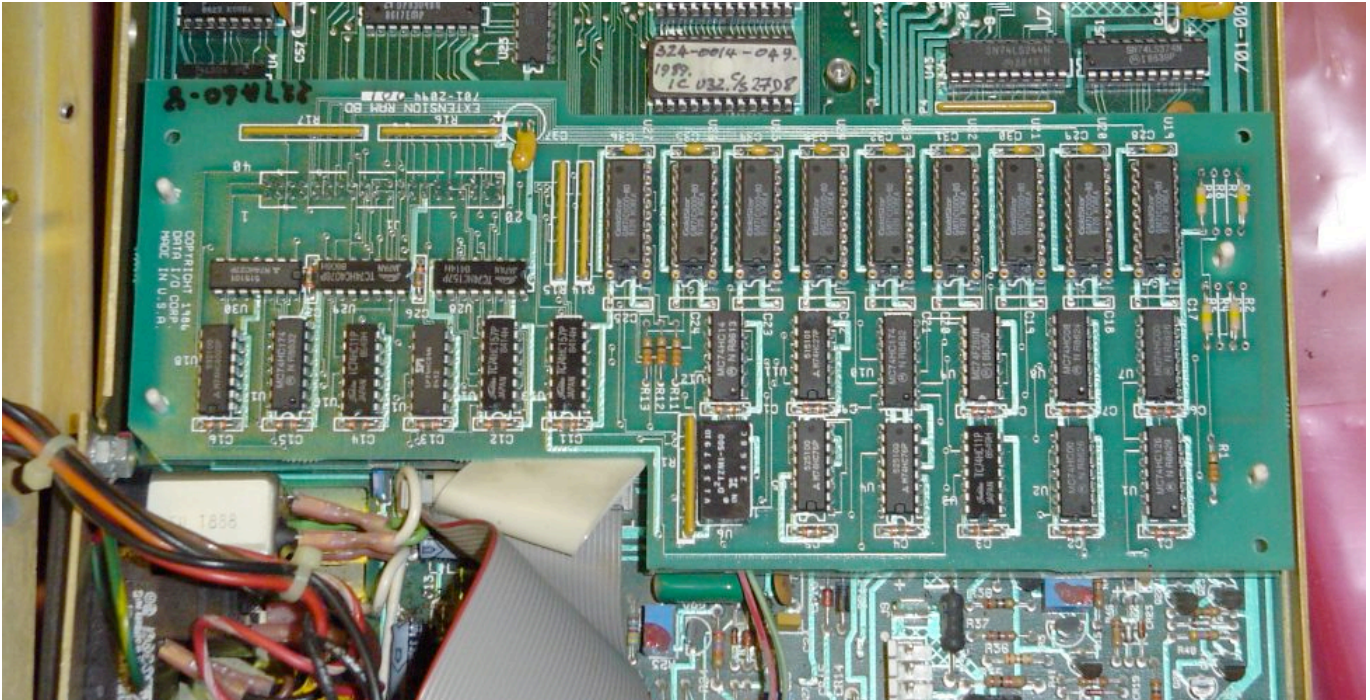


You now need to remove the decoupling caps at C17 thru C25, and place them at locations C28 thru C36. Solder 20 pin sockets into the empty 9 RAM



locations. Fit the shorting links to R6, R9, R3 and R5.

Fit 511000 type DRAM or equivalent of 120ns or faster to the IC sockets. CMOS types seems to work okay, I've used both 511000 and 71C1000 successfully. Make sure you keep pins 1 and pin 20 free, as in the photo below



Here is the memory board installed back into the programmer. If all has gone well, the self test will take longer to complete. Press <SELECT><B><2><START> and the programmer should now report you as having 1Meg.

Good luck! Any questions, please ask. Remember, you do this at your own risk. I can do the upgrade for you for a small fee and the cost of parts if you don't feel like doing it yourself. I would only need the memory board itself to do the upgrade, not the whole programmer. Contact me at [mark@leopardcats.com](mailto:mark@leopardcats.com) for details or questions.

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