

## 32 K Memory for Mark-8

By Bryan K. Blackburn 10/2006

In 2006, I built a memory board for my Mark-8 in order to be able to run large programs like SCALBAL and Galaxy (Star Trek), & etc. The most the Mark-8 can address is 16K, but the chips I had on hand were 32K. Rather than waste the other 16K, this design employs bank switching to make better use of the available memory.

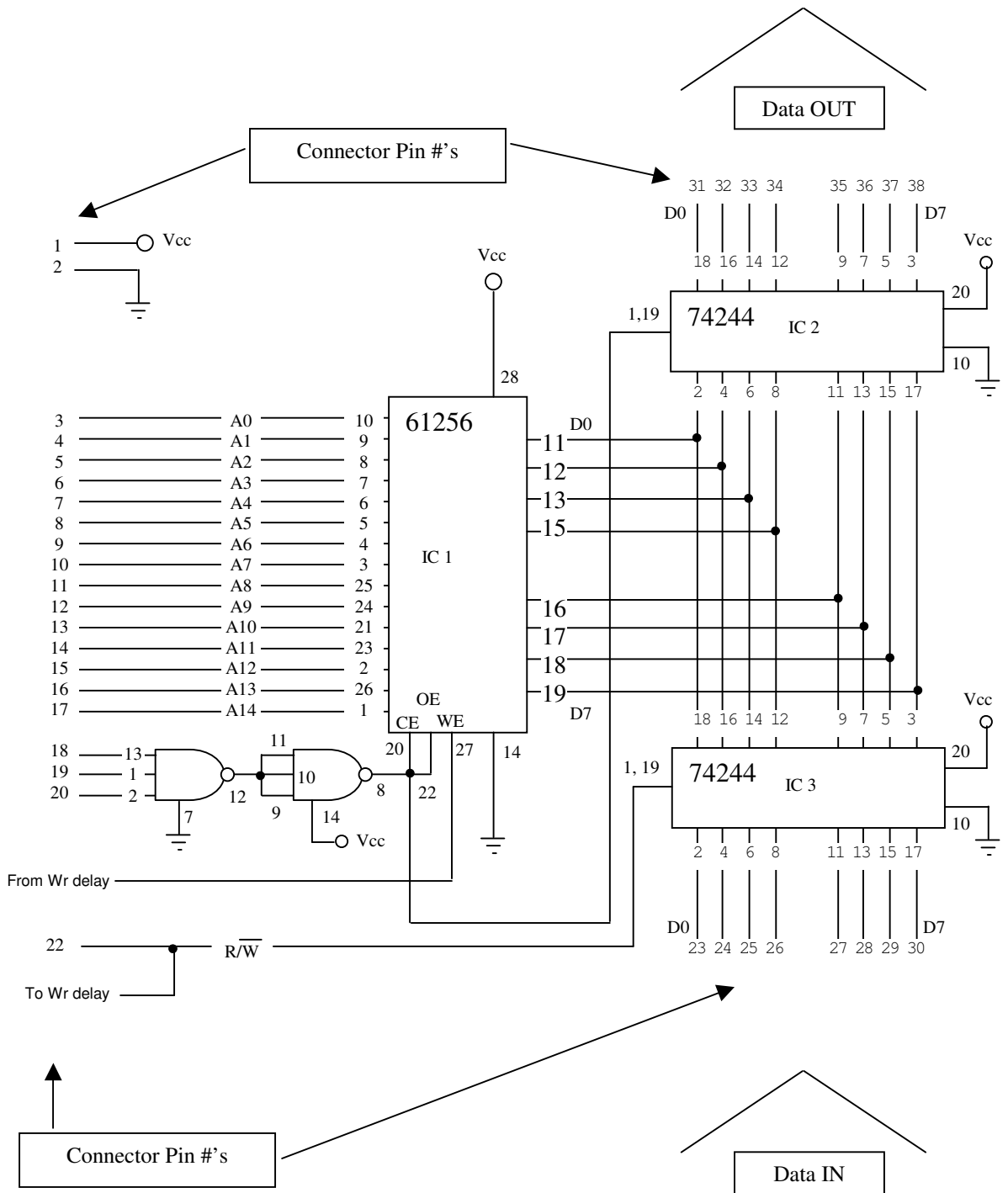
The first version did not work. It took me a few minutes to figure out the problem... Duh! The memory chip is a high speed SRAM from an old PC. The memory was done writing before the data latches were finished with address & etc. So, I added the delay. Now it works just fine.

I'm afraid I did not keep my hook up diagram, but it is pretty simple. Just hook up power and ground, address and data lines, reserving one address line to connect either to a toggle switch (manual bank select) between +5 and Ground or to an unused output port (program controlled bank select). Use the three 'select' lines to pick when the memory will be active—I wired mine to ignore the lower 4k of addressable space, in order to use my original memory, and to reserve an unswitched portion of program space. Those connections were made directly to my memory card to avoid duplicating the select circuitry.

If you don't know enough about how the Mark-8 works to do this on your own, you should learn more before you begin anyway—now is a good time to start! ☺

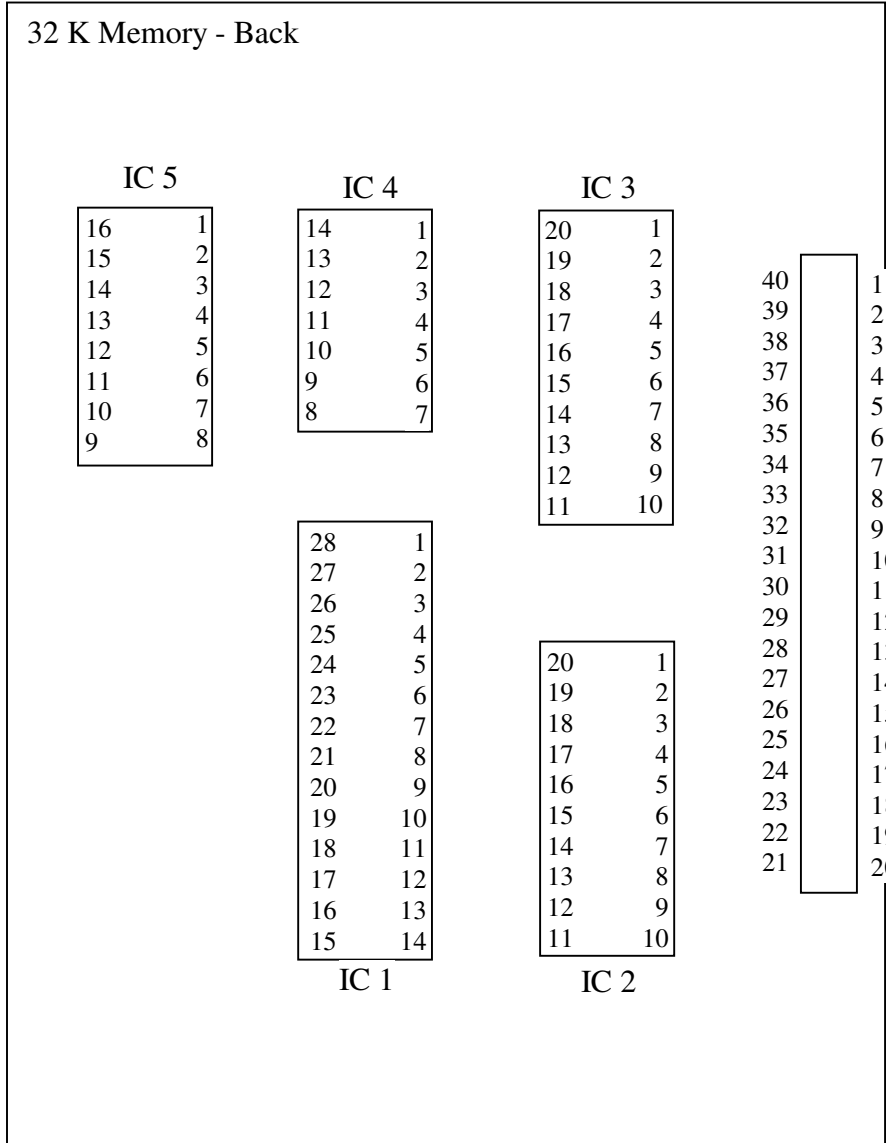
My memory board was built in a single evening using point-to-point wiring, soldering wire wrap wire to standard sockets on perf board. I hate wire wrap sockets; they take up too much room! I considered ordering a PC board, but I would have had to wait for it! If you decide to do a PC board, make one for me too!!!! ☺

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