

INTRODUCTION

The 64K STATIC RAM you have just purchased is one of the best RAM bargains on the SS-50 market today. We have gone to great lengths to combine the right mix of features that are most often required on the high density RAM boards for SS-50 systems.

FEATURES:

- * Static! Static! Static!
- * Fully SS-50C compatible
- * Uses the popular 24-pin 2716" style 2K x 8 ram devices
- * On board extended addressing
- * Board access times under 250 nS. (with 200 nS. Rams)
- * Printed circuit board is solder masked and silk screened
- * All data and address lines fully buffered
- * Low power dissipation (<500 mA. Typ.)
- * Top 16k may be disabled in 2k blocks to eliminate conflicts with other memory or I/O that may reside in these locations
- * RAMS and 2716 style EPROM's are fully interchangeable on one board.
- * 2 MHz operation is standard
- * May be partially populated as a 16K board
- * Board is configured as 3-16K blocks and 8-2K blocks (within any 64K bank) for maximum flexibility

GENERAL CONSTRUCTION HINTS

For soldering we recommend a 32 watt soldering pencil. Do not use a soldering gun!!! Use small diameter (such as 22 gauge) rosin core 60/40 alloy solder.

Keep the soldering pencil clean with a wet sponge or cloth.

After such components as resistors or capacitors have been soldered, use a small pair of diagonal cutters to remove the excess lead length.

Observe polarities on all tantalum caps and LEDs.

If you notice any discrepancies between the parts received and those listed, please notify us.

LIMITED WARRANTY

Read the enclosed yellow sheet for a statement of our LIMITED WARRANTY as relates to this kit.

Also note that when this product is purchased as a blank board, all that is covered by the limited warranty is the PC board itself.

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Digital Research Computers (of Texas) Document Circa 1981

The board is identified with a Tanner Computers Inc logo.
It was sold by Digital Research Computers for \$199 (48K kit.)

- [] Give the pc board a good visual. inspection for any obvious shorts or opens. There should be none, but a few minutes spent here could save hours later.
- [] Using an ohmmeter, insure that there are no shorts between +8 and ground on the buss.
- [] Install and solder the 24 pin sockets for IC locations X1 through X32. Note that all pin #1 on all RAMS is oriented to the top.
- [] Install and solder the two 20 pin sockets at locations U12 and U15.
- [] Install and solder the five 16 pin sockets at locations U4, U9, U10, U13 and U16.
- [] Install and solder the seven 14 pin sockets at locations U1, U3, U5, U6, U7, U18, and U19.
- [] If your kit contains the jumper pins install and solder the 96 pins into the 3-hole jumper area near the bypass caps at each memory location.
- [] If your kit contains the shorting blocks then install the terminal posts in the jumper areas. It may be necessary to cut the posts into groups of three from a strip, use an old pair of diagonal cutters for this.
- [] Install and solder two dip switches at locations S1 and S2.
- [] Install and solder the five 10 pin SIP resistors at locations U2, U8, U11, U14, and U17.
- [] Install and solder the 5 10 pin MOLEX sockets into the holes at the edge of the board.
- [] Install the indexing pin into the Molex socket hole directly below C39.
- [] Install and solder the bypass caps in locations C5-C42.
- [] Install and solder the 220 ohm resistor at location R1.
- [] Install and solder the LED at location DS1. The cathode (denoted by the flat side) goes toward the right side of the board.
- [] Using the heatsinks and hardware install and solder the two 7805 regulators.
- [] Install and solder the 4 tantalum capacitors in locations C1-C4. Note the polarity as marked on the board.
- [] Using any of the regulator mounting tabs as ground, measure the output of each 7805 under power in your system. The output is measured on the right pin of the 7805. The measured voltage should be between 4.75 and 5.25 VDC. Any regulator out of spec must be replaced.

- [] Install a 74LS00 in socket location U6. All pin #1 are up.
- [] Install a 74LS04 in socket location U5.
- [] Install a 74LS20 in socket location U3.
- [] Install a 74LS30 in socket location U7.
- [] Install a 74LS138 in socket locations U4, U9, U10, U13, and U16.
- [] Install a 74LS244 in socket locations U12 and U15.
- [] Install a 74LS266 in socket location U1.
- [] Re-measure the voltage regulator outputs on the 7805s now to insure proper operation.

SET UP AND USE

- [] Determine which locations you need to be RAM and which need to be 2716 EPROMs. Using 24 gauge wire (clipped leads from monolithic caps are usually perfect) or shorting blocks, jumper the center pin at each location to either RAM (right) or ROM (left).
- [] You must have properly jumpered all locations that you are using to insure that none of the RAMS or EPROMs are damaged.
- [] Install your RAMS and EPROMs at their predetermined locations. Note that X1. is the first memory location and X32 is the last. Block A includes X1-X7, block B includes X8-X15, block C includes X16-X23 , and C000H is X24, C800H is X25, etc. Normally a partially populated system is populated starting at location 0000H and continuing until all memory devices are installed.
- [] Note that the functions for each dip switch are shown next to the switch position.
- [] S1 is the multifunction switch. Positions 1 through 4 are the extended addressing switches. Position 5 is used to enable the extended addressing (off is disabled). Position 6 through 8 are enables for the lower 48K of ram where A is the first 16K, B is the second 16K, and C is the third 16k (ON is enabled).
- [] S2 is used to enable the top 8 memory locations (16K). Each location is labeled with the memory address that corresponds to the switch position.
- [] Unless your system supports the S0 through S3 lines (extended addressing) make sure S1 position 5 is open.
- [] By using the A, B, and C switches and switch S2 properly you may populate this board in increments of 16k through 48K and in 2K increments to the end of ram. An ON Switch is enabled.

PARTS LIST:

7	14 PIN SOCKETS
5	16 PIN SOCKETS
2	20 PIN SOCKETS
32	24 PIN SOCKETS
5	MOLEX 10 PIN CONNECTORS #09-52-3101
1	MOLEX INDEXING PIN #15-04-0219
96	JUMPER PINS OR 32 SHORTING BLOCKS AND 32 3 PIN POSTS
2	HEATSINKS (THM 6106-14) WITH HARDWARE
38	.01-.1 MFD 10V OR GREATER DISK BYPASS CAPS
4	1 MFD 16V OR GREATER TANTALUM CAPACITORS
1	20 OHM 1/4 WATT RESISTOR
2	2.2K TO 5.6K 10 PIN SIP RESISTOR PACKS
2	7805 VOLTAGE REGULATORS
32	TMM 2016, HM6116, OR EQV.
1	74LS00
1	74LS04
1	74LS20
1	74LS30
5	74LS138
1	74LS242
1	74LS244
1	74LS266
2	8 POSITION DIP SWITCH
1	RED LED

