# INSTALLING THE SUPRARAM 2000™

To install the SupraRAM 2000 board in an Amiga® 2000, follow the steps below. Each of these steps is described in detail in the rest of this manual.

l. If you have RAM that you need to add to the board, do this before placing the board in the computer.

2. Indicate how much RAM is on the board.

3. Install the board in the Amiga 2000.

4. Test the board.

> **CAUTION** — This product uses static-sensitive components. Make sure that you ground yourself (discharge static electricity) before touching the RAM board The easiest way te do this is to touch the computer case before touching the RAM board and to avoid moving your feet during the installation, especially if your floor is carpeted.

# Adding RAM to the SupraRAM 2000 Board (Optional)

The SupraRAM 2000 can be purchased with 2, 4, 6, or 8MB of RAM already installed. If your SupraRAM 2000 contains 2, 4, or 6MB of RAM, you can add more RAM (in 2MB blocks), when it's convenient for your needs or budget.

If you don't want to add more RAM to your SupraRAM 2000 at this time, you can skip this section.

> **CAUTION** — It is strongly recommended that only someone with electronics experience (i.e. your computer dealer) add the RAM chips to the SupraRAM 2000 board. Improper installation can ruin the board and the chips.

If you need assistance obtaining RAM chips, please contact your local dealer. The RAM chips used in the SupraRAM 2000 must be 1 megabit x 1 DRAM chips, 120 nanoseconds or faster. You'll need 16 chips for each 2 Megabytes (MB) of RAM.

Be sure to place each RAM chip so that its notched or indented end (pin 1) is toward the board's gold edge connector. Also be sure the RAM is in the correct sockets, as described and shown below.
- The first 2MB of RAM must be in the row of sockets labeled U10.
- The second 2MB must be in the row labeled U20.
- The third 2MB of RAM go in U30.
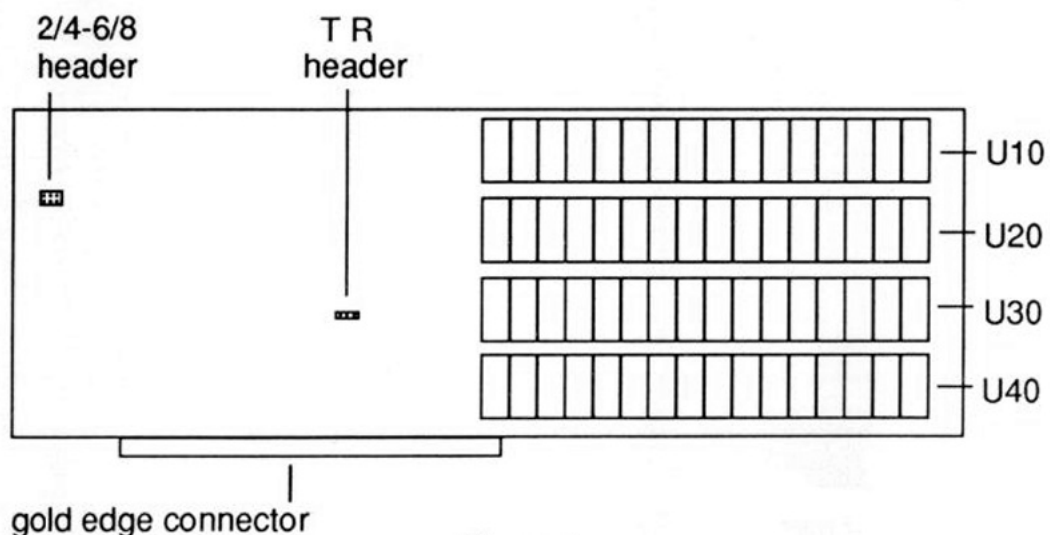- The fourth 2MB go in row U40.



Figure 1

## Indicating How Much RAM is on the Board

Before installing the SupraRAM 2000 board, you must set two "jumpers" to indicate how much RAM the board contains – 2, 4, 6, or 8MB. The illustration below shows a six-pronged "header" with no jumper and the same header with two jumpers on it.
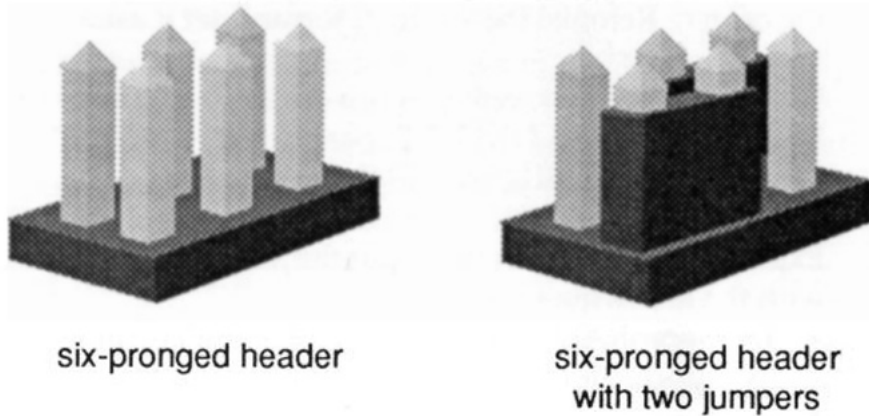
six-pronged header

six-pronged header with two jumpers

*Figure 2*

To indicate how much RAM is on the board, first locate the header marked 2/4-6/8 on the SupraRAM 2000 board. (It's shown in Figure 1.) Then move the two jumpers so they accurately indicate how much RAM the board contains. To do this, place the jumpers next to the numbers printed on the RAM board as follows. If the jumpers are placed next to both of the 2 labels, 2MB is selected; if they are next to both of the 4 labels, 4MB is selected, and so on. Two examples of this system are shown below (both are top views):
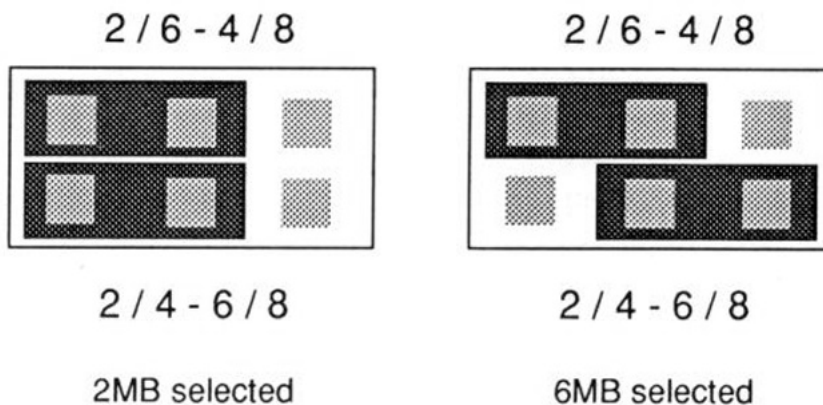
2 / 6 - 4 / 8

2 / 6 - 4 / 8

2 / 4 - 6 / 8

2 / 4 - 6 / 8

2MB selected

6MB selected

*Figure 3*

# Installing the Supra RAM 2000 Board in the Amiga

1.  Make sure your computer is turned off and unplugged.

2.  Using a Phillips screwdriver, loosen the five screws that hold the Amiga's case together. There are two screws on each side and one on the back; the one on the back is at the top in the center. Remove the Amiga's top and set it aside.

3.  With the cover removed, you can see the five internal Amiga Expansion Slots and the PC Expansion Slots. (If you're not sure which are which, refer to the picture in your Amiga 2000 computer manual.) Decide which one of the Amiga Expansion Slots you want to put the SupraRAM 2000 in, with the following in mind:
    *   The SupraRAM 2000 board will work in any of the Amiga Expansion Slots.
    *   If you have more than one RAM board in your system, the board that contains the most RAM must be closer to the floppy disk than is the board with less RAM. For example, if you have one RAM board that contains 6MB of RAM and another that contains 2MB, the 6MB board would go in a slot closer to the floppy disk, and the 2MB board would go in a slot farther away from the floppy disk
    *   Refer to the manuals for your other peripherals and cards to determine if they need to be in specific slots or connected in a specific order.

4.  On the back of the Amiga are metal plates that cover holes that correspond to the Amiga's internal expansion slots. Remove the plate that lines up with the expansion slot you're going to put the SupraRAM 2000 in. Save the screw that held the plate in place.

5.  Note that the SupraRAM 2000 has a metal plate attached to it that is similar to the one you just removed from the back of the Amiga. Hold the SupraRAM 2000 over the expansion slot so its metal plate faces the back of the Amiga and the RAM board's gold edge connector points down. Make sure the Amiga's internal power cable and LED wires are out of the way.

6.  Put the SupraRAM 2000 into the slot and push it down so the edge connector is snug in the Amiga's expansion slot. Make sure the board's metal plate goes through the hole in the bottom of the Amiga case. You have to push firmly on the SupraRAM 2000 to get it in as far as it needs to go; when pushed in far enough, less than 1/4" of gold shows above the expansion slot Also be sure the SupraRAM 2000 is level

7.  Get the screw that formerly held in the Amiga's metal plate. Use that screw to connect the RAM board's metal plate to the Amiga case in the same way the Amiga's metal plate was connected before you removed it.

## Testing the Board

1.  Locate the three-pronged header marked **T R** in the center of the RAM board (shown in Figure 1). This is the memory test header. Move the jumper to the **T** position to enable test mode.

2.  After making sure that no stray objects are touching the RAM board, power up your system.

3.  Run SupraRAMTest, which is on the floppy disk that came with your SupraRAM 2000. Let the RAM test program run for at least one pass, which takes about 4 minutes per 2MB. If you need more information, refer to the **SupraRAMTest** documentation that is in the floppy disk's Docs directory.

4.  When you are through testing the RAM, turn off the computer and unplug it.

5.  Move the **T R** jumper to the **R** position to enable run mode.

6.  Tuck the LED wires inside the Amiga case, replace the Amiga case top, and replace the five screws that hold the top in place. Then connect your system. Your RAM is now ready to use – enjoy it!

## Troubleshooting

The following are the mostly likely causes of problems with the
SupraRAM 2000:
- RAM chip orientation
- bent under RAM chip pins
- chips that were "zapped" during handling

If you need assistance, please call Supra Technical Support at (503)
967-9081 between 9 a.m. and 4 p.m. PST.

## Warranty

Supra Corporation warrants this product to be free of defects in
material and workmanship for a period of 90 days from date of
original purchase. If any parts or equipment become defective
through normal use within this period, Supra will repair or replace
them without charge. Any product deemed to be defective through
accident, misuse, or neglect will be repaired at current shop charges
for materials and labor. Supra Corporation does not assume any
liability for any consequential damages caused by the use of this
product.

**Supra Corporation**

7101 Supra Drive S.W.
Albany, OR 97321 USA

ORDERS (503) 967-2400
TECHNICAL SUPPORT: (503) 967-2440

7M0540

*Amiga Hardware World*

*Everything about Amiga hardware...*

*~*

*http://amiga.resource.cx*