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# AMIGA A500 2.0Mb Memory Extension

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#### IMPORTANT

Please do not remove the product from its packaging until you have read all the instructions.

## AMIGA 2.0 Mb EXTENSION WITH CLOCK

When you receive your Amiga extension, the Memory Enable jumper link should be located on the left of the 3-pin jumper strip as in diagram A. In the unlikely event that it is not, position it as shown in the diagram before following the fitting instructions below.

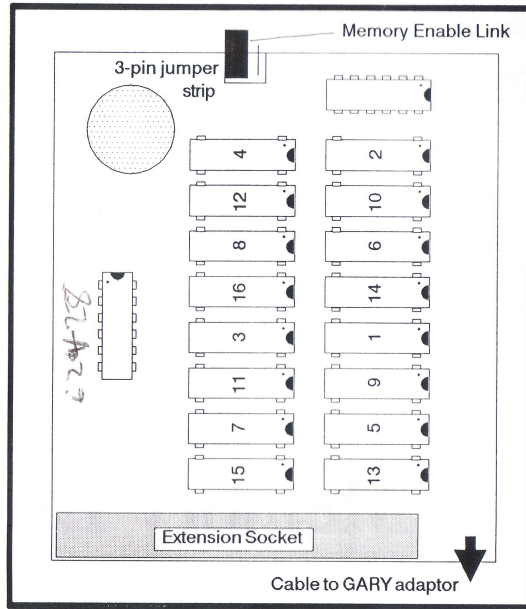


diagram A

### Tools required

Medium Posidrive screwdriver  
Medium flatblade screwdriver

You may find that Torx screws (with star-shaped heads) have been used to fix the PCB to the casing. The ideal tool with which to remove these screws is the Torx driver T10. However, a hexagonal key size 2mm is a suitable alternative which is cheaply and widely available.

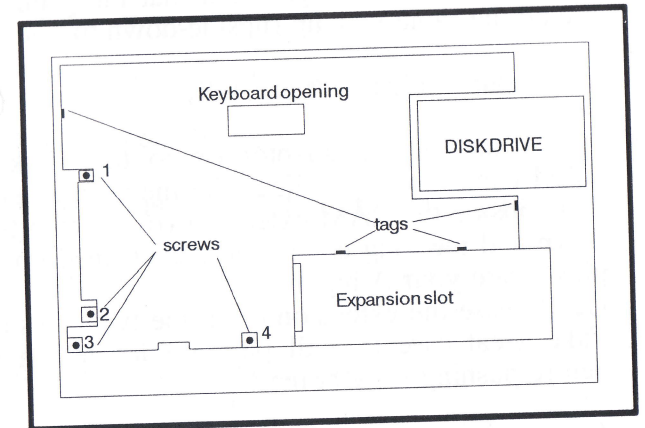
**Note:** The memory extension board will operate with Amiga Kickstart versions 1.2 & 1.3, however with kickstart 1.2 only a fully populated 2.0Mb card will work.

Fitting a 2.0Mb memory extension board will invalidate your guarantee on the Amiga. We regret that we can accept no responsibility for any damage which may be caused by installation or attempted installation of the memory extension board.

## To fit your 2.0Mb extension

1. Disconnect your Amiga from the power source and remove all cable connections.
2. Carefully turn your Amiga upside down and place on a flat, clean work surface.
3. Using the flatblade screwdriver, remove the panel which covers the expansion slot.
4. Using the Posidrive screwdriver, remove the six screws which secure the casing. You will find these in a line of three across the top and in a line of three across the bottom. One or more may be obscured by a warranty seal. Place the screws safely to one side.
5. Turn your Amiga right side up. Hold the casing at each side and ease it off.
6. Unplug the keyboard connector and pull it out from the rectangular opening in the metal shield. Remove the keyboard, taking care not to pull on the keys, and set it aside.
7. Remove the four securing screws from the metal shield. These are positioned as shown in diagram B. Use the Torx driver/hexagonal key or Posidrive screwdriver as appropriate. Set aside separately from the 6 screws already removed. Gently bend upright the 4 metal securing tags and remove the shield.

diagram B



8. Locate the GARY chip. It is situated almost in the centre of the board and is labelled 5719. Using the flatblade screwdriver, carefully remove the chip.

### Some do's and don'ts:

Do lever it up from each end in turn, gently and evenly.

Don't force it. Your chip may snap expensively in the middle.

Don't be tempted to pull it up from one end. We know the disk drive is in the way, but bent pins are to be avoided at all costs.

Do take your time. Sit in the lotus position and play soothing music. What's another five minutes?

9. Remove the memory extension board and adaptor from the anti-static bag. At this stage, do not remove the protective foam from the pins of the adaptor. Take the GARY adaptor (the smaller unit) and plug in the GARY chip as follows:

With the wire away from you, plug the GARY chip into the socket ensuring that the crescent cut-out on the face of the chip is positioned to your right. Take care that all the legs are located correctly before pushing the chip evenly and firmly home, i.e. with only the thick portion of the legs still visible. As a check on orientation, make sure that the crescent on the face of the existing chips is also to the right, and that the printed letters on the chips are all the same way up (upside-down to you). Set to one side.

10. Turn your Amiga over carefully.
11. Lower the GARY adaptor on to the work surface through the RAM expansion slot. Place the memory extension board on to the ledge inside the RAM extension cover, with the components facing down and the long connector socket lined up with the two rows of pins inside your Amiga.  
Gently ease the extension on to the two rows of pins in the Amiga. Take great care that all pins are located in the extension socket before pushing fully home.
12. Turn your Amiga over again, taking care with the GARY adaptor now attached.

13. Carefully remove the protective foam from the pins of the GARY adaptor. Insert the adaptor into the vacant GARY socket in the centre of the Amiga motherboard. The adaptor must be positioned with the wire towards you, i.e. towards the expansion slot. As a check on orientation, make sure that 'PIN 1' (see top of adaptor) is towards the disk drive.

Note: The pins on the adaptor are fragile.

Ensure that all pins are correctly located (this cannot be stressed too often), then ease the GARY adaptor into place. The installation has now been completed.

14. Re-assemble your Amiga.
  - a) Replace the metal shield. Ensure that the metal tabs appear through the slots, and check that the cable is free, i.e. not caught under the shield.  
Screw the shield on.  
Fold down the metal tabs.
  - b) Replace the keyboard, sliding the lower edge under the plastic tabs on the bottom of the casing.
  - c) Plug in the keyboard connector. Check that the black lead is on the left, the purple lead is on the right, and that the pins are correctly located.
  - d) Replace the casing. If it does not locate properly, check the position of the keyboard.
  - e) Turn your Amiga over and screw down the casing.
  - f) Replace the panel which covers the expansion slot.

### To check that your Amiga has found its extra memory

1. Replace the cable connections and connect your Amiga to the power source.
2. Insert the Workbench disk in the drive and power up.

When the Workbench has loaded, you can check the amount of free memory.

## If nothing happens...

1. Check that the position of the Memory Enable jumper link is as shown in diagram A.
2. Check for bent and misaligned pins. Go through the fitting instructions, checking pins carefully at each step.

If you are still experiencing difficulty, please telephone 0734-890588 and ask for Amiga Technical Support. We shall do all we can to help you.

## To set the clock

Using the Workbench disk, enter Shell mode and type:

DATE HH:MM:SS DD-MMM-YR

e.g. DATE 18:30:00 02-JUL-90

Now type:

SETCLOCK OPT SAVE

If your Amiga responds with an error message, the clock battery has not reached a sufficient level of charge to allow the clock to operate. Leave your Amiga switched on for ten minutes, then try again.

Note: When the memory extension board is first installed, the clock battery is in a state of low or no charge, and will require two to three hours' power supply to become fully charged.

## Adding more memory

If your memory expansion board has not been fully populated, extra RAM can be added in 0.5Mb 'blocks' up to the maximum 2.0Mb. Each block of 0.5Mb is made up of four 414256 RAM chips (120ns or faster), which are fitted as follows:

1. Disconnect your Amiga from the power source and remove all cable connections.

2. Carefully turn your Amiga upside down and place on a flat, clean work surface.
3. Using a flatblade screwdriver, remove the panel which covers the expansion slot.
4. Remove the memory expansion board from your Amiga by carefully easing it off the connecting pins. Ensure that no tension is put on the wires leading to the GARY adaptor inside the Amiga.

5. Position the board, component side up, as in diagram C.

6. As you can see from the diagram, the four chips which make up the first 0.5Mb should sit in sockets 1,2,3 & 4.

Place the next four chips, to bring the total extra memory to 1Mb, in sockets 5,6,7 & 8.

Place the next four chips, to bring the total extra memory to 1.5Mb, in sockets 9,10,11 & 12.

Place the final four chips in sockets 13,14,15 & 16.

Check a) that all legs are located correctly before pushing them into their sockets.

b) that the crescent cut-out on the face of each chip is as shown in diagram C.

7. Finally, replace the extension, easing it gently on to the two rows of pins in the Amiga expansion slot.

Take care that all pins are located in the extension socket before pushing the board fully home.

8. Replace the panel, turn your Amiga right side up, replace the cable connections and switch on.

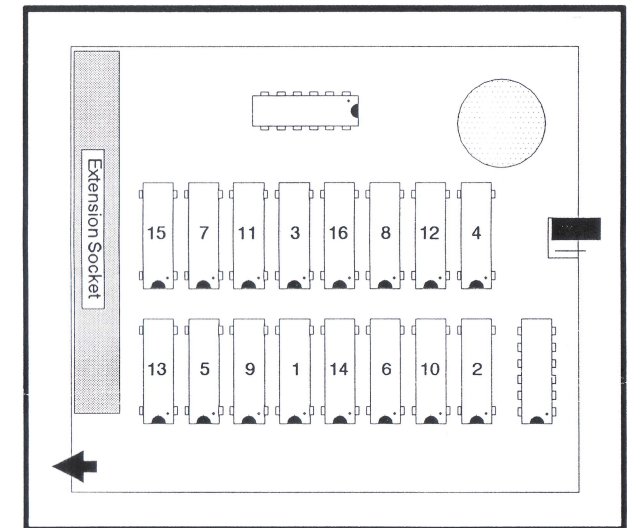


diagram C

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