

EMULATOR III

8 MEGABYTE

MEMORY UPGRADE

Materials needed:

EIII 8 Megabyte update kit (E-mu P/N 6084 or 6085)

6084 Contains:

- (1) Memory expansion instructions (you're reading them)
- (8) 1 Megabyte SIMM's (1C356)
- (1) RAS PAL (1P376)
- (1) Address PAL (1P377)

6085 Contains:

- (1) Memory expansion instructions
- (4) 1 Megabyte SIMM's (1C356)
- (1) RAS PAL (1P376)

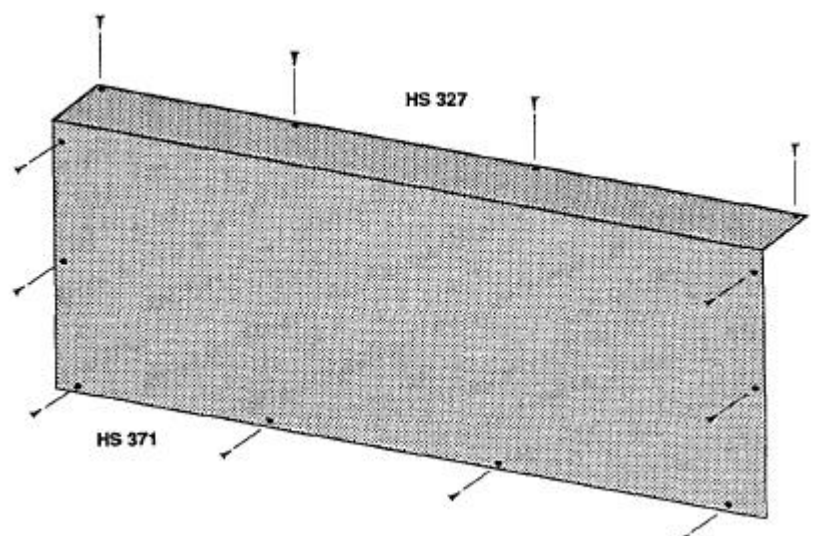
Tools needed:

Phillips screwdriver

- Before you Begin.
Check the unit out thoroughly to make sure the unit is completely functional.

Opening the EIII (Keyboard)

1. Remove the (8) screws (HS 371) from around the perimeter of the bottom panel of the EIII and set aside in a safe place.
2. Remove the (4) screws (HS 327) from the top edge of the back panel. Set these screws aside in the safe place.



EIII Chassis Screw Locations

EIII MEMORY UPGRADE (continued)

3. With the keyboard facing you, carefully lift the plastic housing up from the rear about an inch. Next, slide the housing toward you so that it clears the key of the keyboard. Gently lift up the housing and set it down behind the chassis so that you are looking through the keyboard cutout.

Opening the EIII (Rack Mount)

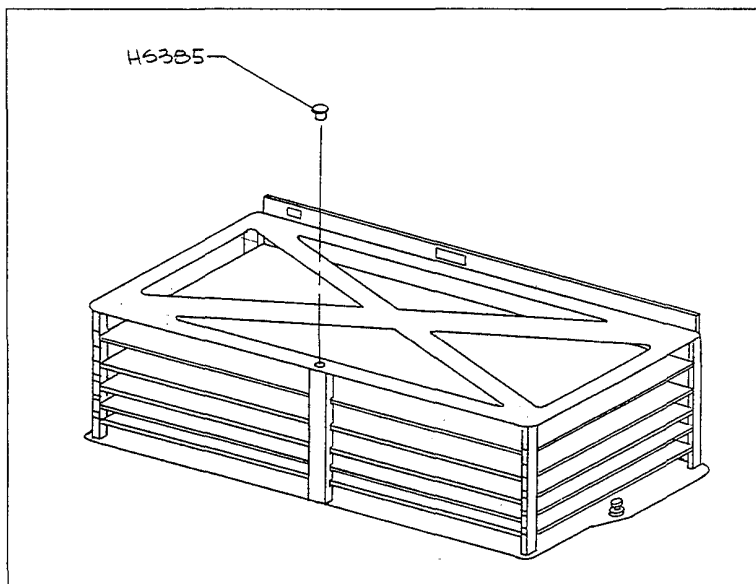
1. Remove the (6) phillips screws from the top panel of the rack and set aside in a safe place, then remove the top panel. The card cage can now be easily seen.

Removal of the Microcontroller Board

1. Before any boards can be removed the white nylon circuit board support must be removed. To do this, first remove the phillips screw (HS 385) fastening the support to the card cage and put it in your safe place. Next, press down slightly next to the other end of the card support. This action should allow the little pin on the lower end of the support to pop out of its hole. Set the support aside.

➤ Make sure not to stress the front panel ribbon cable when removing the EIII housing.

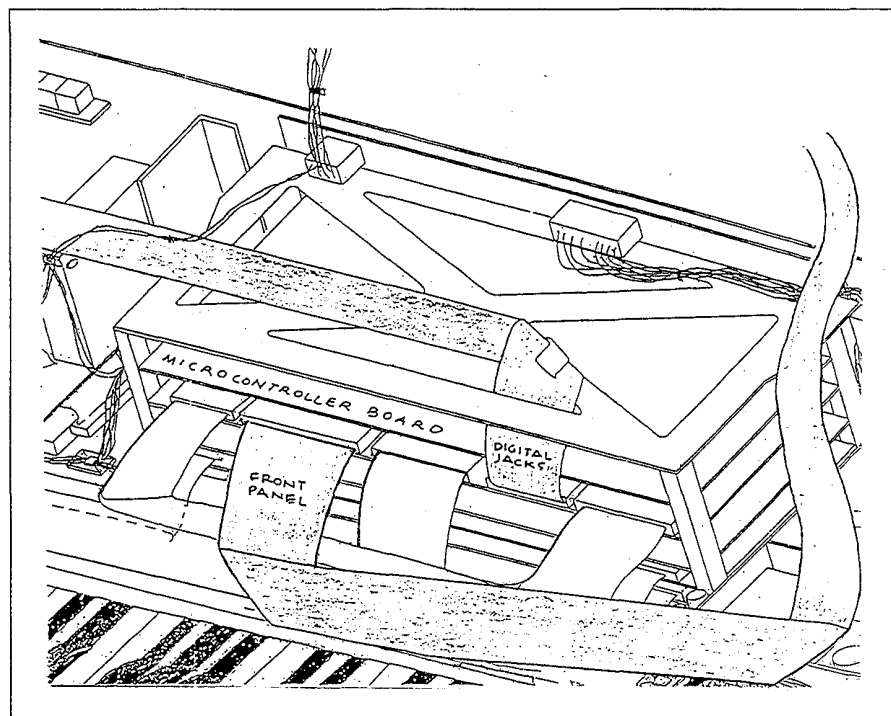
☐ Use the same procedures for keyboard and rack versions.



- On the rack version EIII the microcontroller board is blocked by all of the ribbon cables. Make a note of the cable routings before removing them.

EIII MEMORY UPGRADE (continued)

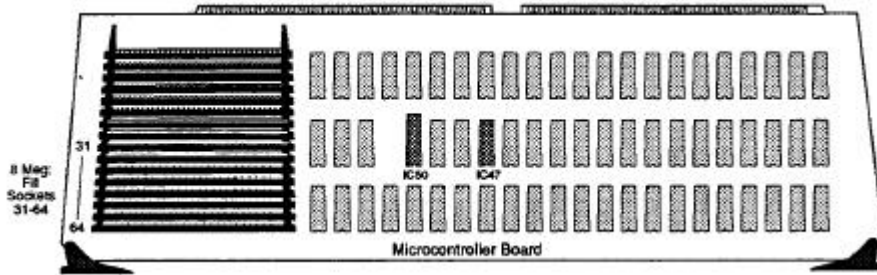
2. The microcontroller board, which contains the EIII's memory, is the top board in the card cage. The digital jack and front panel cables block its exit from the cage. These cables must first be removed.
3. Use the white nylon board ejectors to eject the second board from the top (the CPU board). Slide the board out only slightly.
4. Use your fingers to remove the ribbon cables that are blocking the exit of the top board. These ribbon cables are very fragile so work carefully.
5. Now the microcontroller board can be removed. Use the board ejectors to eject the board and carefully slide it completely out of the card cage. Take the microcontroller board to a padded work area to perform the upgrade.



EIII MEMORY UPGRADE (continued)

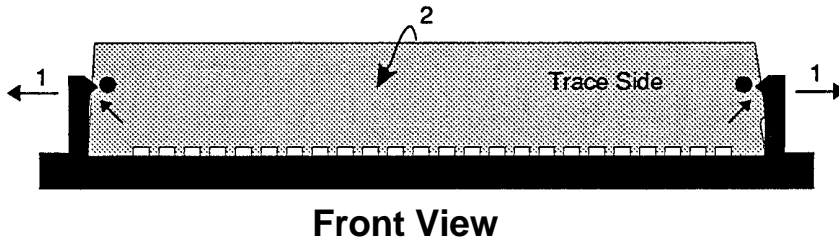
Update the Memory

1. Place the EIII microcontroller board in front of you as shown in the diagram.



➤ Caution: the SIMM modules are static sensitive. Use static protection when handling these expensive parts.

2. Remove all of the 256 Kbyte SIMM boards. Start at the IC 64 location and work toward the other end. The SIMMs are easily removed by pushing the two end tabs outward (1) and tilting the SIMM toward you (2). Set the 256 Kbyte SIMMs aside so that they are not confused with the 1 Mbyte SIMMs.



3. Insert the 1 Mbyte SIMMs starting at location IC 31 and ending at location IC 64. With the microcontroller board in the position shown in the diagram, the chip side of the SIMM will face away from you.



EIII MEMORY UPGRADE (continued)

- The most common mistake when installing memory upgrades is not firmly seating the SIMM modules.

4. Make sure that all the SIMM boards are firmly seated in their sockets. They will “snap” into place when inserted correctly.
5. Locate the RAS PAL (IP376). Replace the chip in location IC50 with this PAL.
6. Locate the Address PAL (IP377). Replace the chip in location IC47 with this PAL (6084 kit only).

Replacement of the Circuit Boards

- ☐ The ribbon cables may not be routed as shown in the diagram. You should re-route the cables as shown.

1. Re-insert the microcontroller board. Lift up the center of the board before pressing it in all the way. It should now slide easily into its sockets on the motherboard. Exercise caution but make sure that the board is securely mated.
2. Carefully plug in the digital jack and front panel cables. Route the cables as shown in the diagram.
3. Re-insert the CPU board. Again lift the center of the board and use caution when mating it with the motherboard.
4. Line up the notches in the nylon circuit board support with the edges of the circuit boards. The support should be positioned next to the pin mating hole. Now press down on the lower side of the card cage and slide the card support over so that the pin slips into its mating hole. Secure the support to the top side of the cage with the phillips screw.

Re-assembly

1. Lift up the plastic housing and slide the keyboard cutout under the front edge of the keyboard.
2. While continuing to hold the rear of the housing up, tuck the front panel ribbon cable down near the rear of the keyboard. This is to make sure that the cable does not get pinched between the housing and the card cage.
3. The plastic housing should seat snugly to the bottom chassis. Again, make sure that no cables are being pinched.

EIII MEMORY UPGRADE (continued)

4. Replace the (4) back panel screws, then replace the (8) bottom screws. Be careful not to cross-thread the screws.

Power on

1. The moment of truth. Plug in audio cables and apply power. The EIII should power up normally.

NO!? First check the ribbon cables to the card cage. Next, check the seating of the SIMMs. After all, it was OK before you worked on it.

YES Great! Let's do a memory test to make sure that all is indeed well.

EIII RAM Test

1. Activate the Master module.
2. Select Submodule 8 (Special).
3. Move the data slider up to show the last choice.
4. Use the keypad and type in one number past the last choice. For example: if the last numbered choice was 7, you would type in 8.
5. The display will say: **DIAGNOSTICS, Enter Magic Code.**
6. The magic code for EIII diagnostics is 1-3-5-8. A good way to remember this number is to recall that 1-3-5-8 = Major chord.
7. Now select 2, RAM Test from the diagnostics menu. The EIII should verify that it is now an 8 MB machine and begin testing RAM. If all is well, the display will indicate RAM Test Complete!! If an error is detected, the display will indicate which SIMM failed. A failure might indicate that you have not seated a SIMM correctly, so check them before assuming a bad SIMM.
8. Done.