

EMULATOR III BOOT ROM UPDATE

INSTALLATION INSTRUCTIONS

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EMULATOR III BOOT ROM UPDATE

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

Overview:

This update allows the EIII to interface with the Macintosh computer without booting from floppy disk software.

Materials needed:

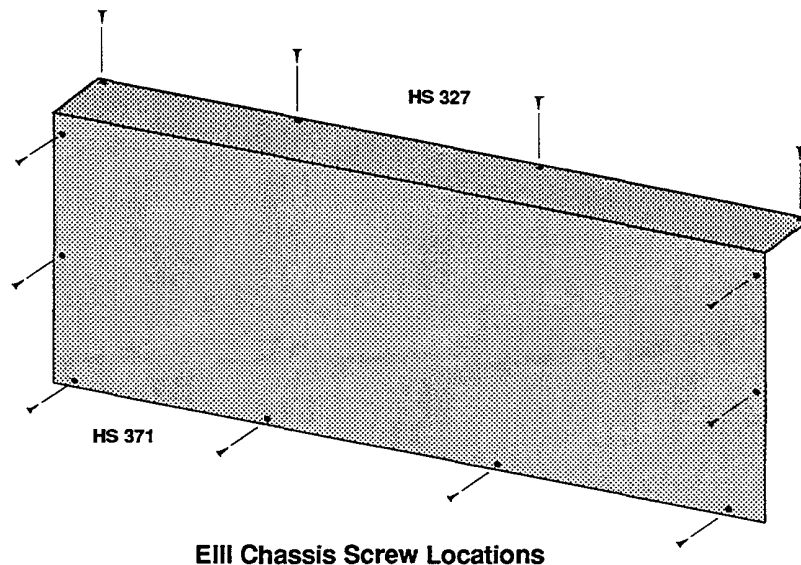
The EIII 2.00 Boot ROMS (IP380 and IP381) are available from E-mu Systems.

Tools needed:

Phillips screwdriver.

Opening the EIII (Keyboard):

1. Remove the (8) screws (HS371) from around the perimeter of the bottom panel of the EIII and set them aside in a safe place.
2. Remove the (4) screws (HS327) from the top edge of the back panel. Set these screws aside in a safe place.
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.



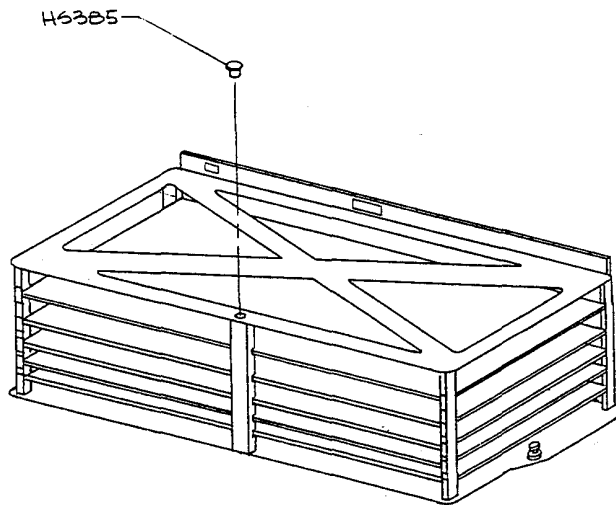
Opening the EIII (Rack Mount):

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 CPU 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.
2. Use the white nylon board ejectors to eject the second board from the top (the CPU board). Slide the board out and carefully place it on your workbench.

- Make sure not to stress the front panel ribbon cable when removing the EIII housing.
- Use the same procedures for keyboard and rack versions.



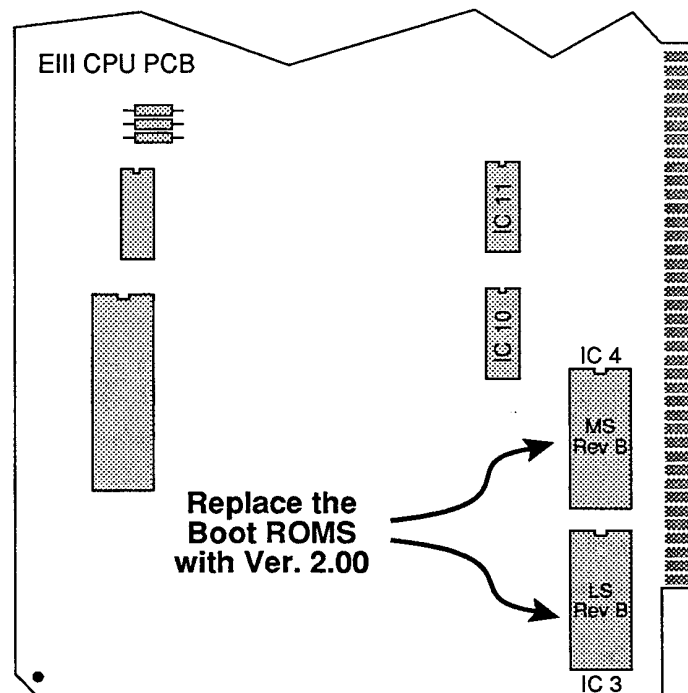
- The CPU board attaches to several ribbon cables. Make a note of the cable routings before removing them.

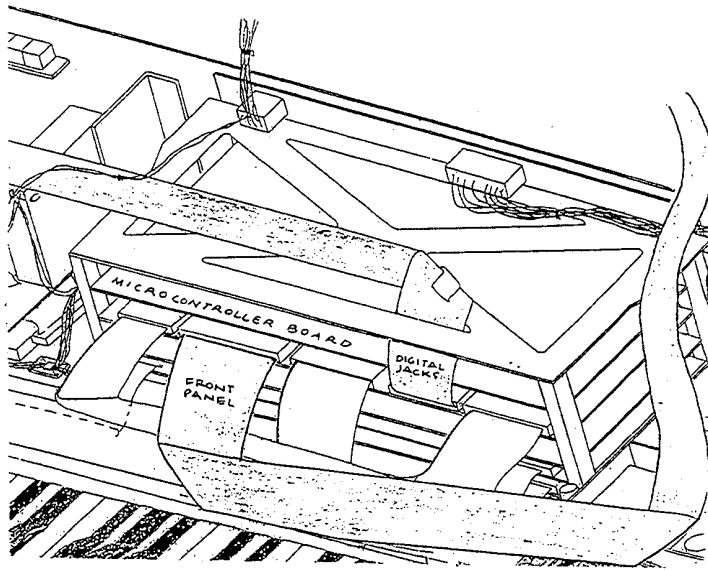
Update the ROMs:

1. Remove the old boot ROMs with an IC puller and replace them with version 2.00 as shown.

Replacement of the Circuit Boards:

1. Re-insert the CPU 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.





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

2. Carefully plug in the digital jack and front panel cables. Route the cables as shown in the diagram above.
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.
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 the audio cables and apply power. The EIII should power up normally.

NO!?! - First check the ribbon cables to the card cage.

Next, check the ROM's for bent pins.

Finally, check the seating of the SIMM's. After all, the EIII was OK before you worked on it.

YES - Great!

Run a memory test to make sure that all is indeed well.

EIII RAM Test:

(This test appears in the original E-mu Systems document. Whilst it is worth doing after a ROM change, the RAM has not been changed. It is the same test procedure for an EIII 8Mbyte Memory Upgrade).

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 EII should verify that it is a 4 or 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 a SIMM is not seated correctly, so check them before assuming a bad SIMM.
8. Done.