FLASHBANK™ INSTALLATION INSTRUCTIONS for the ENSONIQ EPS–16 PLUS Keyboard and EPS–16 PLUS Rack

INCLUDED IN THIS KIT:

- One FLASHBANK PC Board (FB-1 or FB-2)
- One 50-pin ribbon cable
- One FLASHBANK Test disk
- One EPS–16 PLUS O.S. disk * FOR CUSTOMER *
- One FLASHBANK User's Manual * FOR CUSTOMER *

Keyboard only:

- One set of bootup ROMs
- Envelope * for returning old **ROMs to ENSONIQ** *

Rack only:

- Four (4) 6-32x1/4" machine screws
- One FLASHBANK PC Board Insulator

STATIC WARNING

Do not remove FLASHBANK PC Board from the anti-static bag until you are ready to install it. Be sure to use a grounding strap when handling this board to avoid damage from static discharge.

FLASHBANK memory is treated by the EPS–16 PLUS like a disk in another disk drive (storage device). Like a disk, it has to formatted before it can be written to. The EPS–16 PLUS can only look at one storage device at a time. That storage device could be the floppy drive, a SCSI hard drive, or the FLASHBANK. To switch between these devices the EPS–16 PLUS has a command on the COMMAND/System•MIDI page called CHANGE STORAGE DEVICE. For example, to load a sound in from a floppy disk and then save it to the FLASHBANK you must first have the LOAD DEVICE=FLOPPY (on the CHANGE STORAGE DEVICE page), and load the sound; then use the CHANGE STORAGE DEVICE command and set the LOAD DEVICE=FLSH, and save the sound.

KEYBOARD ONLY (see page 3 for Rack)

GETTING READY

1. Remove all cables connected to the EPS–16 PLUS including the power cord.
2. Remove the four screws that fasten the control panel and raise the panel.
3. Install the O.S. EPROMs with the notch facing away from the jacks. The EPROMs are labelled indicating the appropriate socket on the Main Board (U27=LOWER and U28=UPPER).
4. Place the old EPROMs into the black foam and small zip-lock bag. Use the stamped addressed bubble envelope provided to return the old EPROMs to ENSONIQ.

MOUNTING THE FLASHBANK BOARD (Keyboard only)

1. Place the unit upside down on a soft surface and remove the ten (10) screws that attach the Keyboard to the case. See **Figure 1** for location of screws.

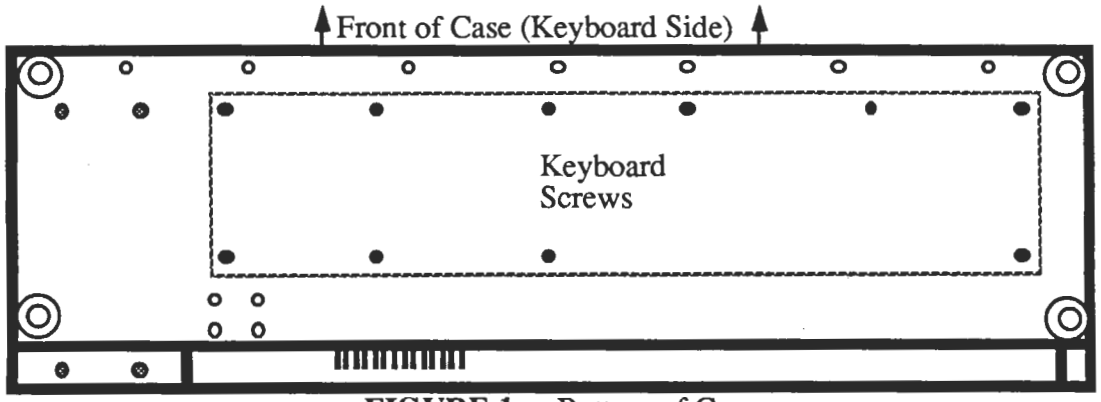

FIGURE 1 —Bottom of Case

2. Turn the unit right side up and raise the control panel.
3. Connect one end of the 50-pin ribbon cable to J1 on the FLASHBANK PC board (with the striped side on pin 1). See **Figure 2** below.

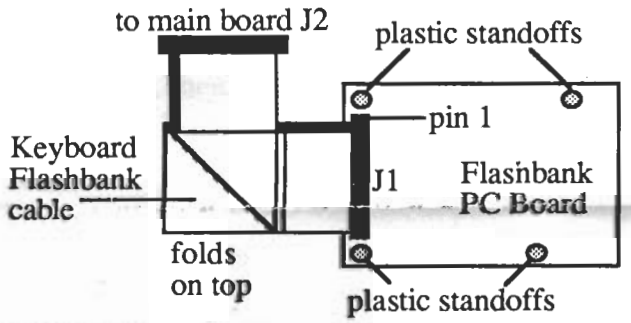

Figure 2 — Keyboard only Flashbank cable orientation

4. Mount the FLASHBANK PC board to the right side of the Keypad/Display board (be sure to support the keypad/display board with your fingers while you are pushing). Align the plastic mounting standoffs with the holes in the Keypad/Display board and push until they all snap into place. Note that the board will only mount one way (see **Figure 2**).
5. Slide the Keyboard from the case (by gently lifting up the front of it while pulling it toward the front of the unit) just enough to see J2 (50-pin) on the Main Board (labeled "non-volatile memory"). There is no need to disconnect the keyboard cable. If you do, remember that if the keyboard cable is mis-pinned, fuses F3 and F4 on the power supply will blow.
6. Connect the other end of the 50-pin ribbon cable to J2 on the Main Board (with the striped side on pin 1). Slide the keyboard back into place.
7. Test the FLASHBANK (see TESTING below). Be sure to do **all** steps.
8. Replace the ten (10) screws that attach the Keyboard to the case.
9. Close the control panel and replace the screws.
10. **BE SURE TO GIVE THE CUSTOMER THE MANUAL AND THE O.S. DISK.**

RACK ONLY

1. Remove all cables connected to the EPS–16 PLUS including the power cord.
2. Remove the twenty-two (22) screws that fasten the cover:
   a. one (1) 6-32 screw from above the disk drive (about an inch back from the front panel) that attaches the cover to the disk drive bracket,
   b. four (4) #8 screws from ***both*** side panels of the unit,
   c. four (4) #6 x 1/4" screws that attach the cover to the front panel, and
   d. nine (9) #5 x 1/4" screws that attach the cover to the base.
3. Place the FLASHBANK PC Board insulator in place over the four PEMs (internally threaded bosses) located on the inside left side panel of the unit (with the front panel closest to you). Push it down over the PEMs so that it is flat against the side wall of the unit. Note that it only fits on one way.
4. Use the four 6-32 x 1/4" machine screws to attach the FLASHBANK PC board to the PEMs. Note that it can only mount one way.
5. Connect one end of the 50-pin ribbon cable to J1 on the FLASHBANK PC board (with the striped side on pin 1).
6. Connect the other end of the 50-pin ribbon cable to J2 (non-volatile memory) on the Main Board (with the striped side on pin 1).
7. Test the FLASHBANK (see TESTING below). Be sure to do **all** steps.
8. Replace all of the screws into the cover (as listed in step 2 above).
9. **BE SURE TO GIVE THE CUSTOMER THE MANUAL AND O.S. DISK.**

TESTING (for Keyboard and Rack)

This procedure will take about 5 minutes. DO NOT skip any steps as it is imperative to the operation of the customer's unit. To test the FLASHBANK, you will first format it. This allows the EPS–16 PLUS to be able to talk to the FLASHBANK (similar to formatting a floppy disk before you can save sounds to it). Then you will save the O.S. and a test sound to it. After turning the EPS–16 PLUS off and on again, it should boot from the FLASHBANK. You will then load the test sound from the FLASHBANK (it should load very quickly) and play it to verify that there are no blatant crackles or buzzes. You will format the FLASHBANK again to erase the O.S. and test sound before returning the unit to the customer (this is similar to formatting a floppy disk to erase all the files on it).

Format FLASHBANK

1. Turn the unit on, boot with the enclosed O.S. disk and leave the disk in the drive.
2. Press ***Command***, then ***System•MIDI***.
3. Scroll using the left or right arrow button until the display shows FORMAT FLASH BANK.
4. Press ***Enter***. The display shows ERASE AND FORMAT FLSH? Press ***Enter***.
5. The display flashes * FORMATTING * while it is formatting. If the display shows NO FLASH INSTALLED, check the 50-pin ribbon cable to make sure it is not mis-pinned.
6. The display briefly shows COMMAND COMPLETED when the unit is finished formatting and then returns to the FORMAT FLASH BANK page.

Saving the Operating System to FLASHBANK

1. Change the storage device so that the EPS–16 PLUS is looking at the FLASHBANK:
   a. Press ***Command***, then ***System•MIDI***.
   b. Scroll using the left or right arrow button to CHANGE STORAGE DEVICE.
   c. Press ***Enter***. The display shows LOAD DEVICE = FLOPPY.
   d. Move the data entry slider all the way up to select FLSH.
   e. Press ***Enter***. COMMAND COMPLETED appears briefly when it has finished and then returns to the CHANGE STORAGE DEVICE page.

2. Scroll using the left or right arrow button to the COPY OS TO DISK command.
3. Press ***Enter***. The display asks, MUST ERASE MEMORY, OK?
4. Press ***Enter***. The display instructs INSERT MASTER OS DISK. Make sure the O.S. disk is in the drive then press ***Enter***.
5. The drive will engage and the display will flash READING OS INTO MEMORY. Once complete, the EPS–16 PLUS will immediately begin to write the O.S. into the FLASHBANK (display shows WRITING OS TO DISK). COMMAND COMPLETED appears briefly when it has finished and then returns to the COPY OS TO DISK page.

Save the Flash Test Sound to the FLASHBANK

1. Change the storage device so that the EPS–16 PLUS is looking at the FLOPPY:
   a. Press ***Command***, then ***System•MIDI***.
   b. Scroll using the left or right arrow button to CHANGE STORAGE DEVICE.
   c. Press ***Enter***. The display shows LOAD DEVICE = FLSH.
   d. Move the data entry slider all the way down to select FLOPPY.
   e. Press ***Enter***. COMMAND COMPLETED appears briefly when it has finished and then returns to the CHANGE STORAGE DEVICE page.
2. Eject the O.S. disk and insert the Flash Test Disk into the drive.
3. Press ***Load***, then ***Instrument***. The display shows FLSH TST SND.
4. Press ***Enter***, then Instrument•Track button 1 to load the flash test sound into the unit.
5. When the sound is done loading, press ***Command***, then ***System•MIDI***.
6. Change the storage device so that the EPS–16 PLUS is looking at the FLASHBANK:
   a. Press ***Command***, then ***System•MIDI***.
   b. Scroll using the left or right arrow button to CHANGE STORAGE DEVICE.
   c. Press ***Enter***. The display shows LOAD DEVICE = FLOPPY.
   d. Move the data entry slider all the way up to select FLSH.
   e. Press ***Enter***. COMMAND COMPLETED appears briefly when it has finished and then returns to the CHANGE STORAGE DEVICE page.
7. Press ***Command***, then ***Instrument***.
8. Scroll using the left or right arrow button until the display shows SAVE INSTRUMENT.
9. Press ***Enter***. The EPS–16 PLUS then allows you to rename the Instrument if you wish, using the data entry controls. To keep the same name, press ***Enter***.
10. The EPS–16 PLUS then saves the instrument to the FLASHBANK, briefly displaying DISK COMMAND COMPLETED when finished, then returning to the SAVE INSTRUMENT page.
11. For an FB-2, save the instrument again under a different name (changing one character). Press ***Enter***, then change the name (using the data entry controls) and then ***Enter*** again. Since the FB-2 has twice as much memory as the FB-1, this is needed to fill up and test it.

Booting from FLASHBANK

1. Turn the unit off and eject any disk that may be in the floppy drive.
2. Turn the unit on. The EPS–16 PLUS should boot directly from the FLASHBANK and then show FLSH TST SND. Note that since the EPS–16 PLUS has booted from the FLASHBANK, it is now "looking" at that storage device for loading instruments.
3. To load in this sound, press ***Enter*** and then Instrument•Track button 1. The sound should load *very* quickly. For an FB-2, load in the sound with the changed name into Instrument•Track 2.
4. Press the Instrument•Track button 1 to select the test sound.
5. Play **one note only**, and listen for at least three seconds verifying that there are no obvious clicks, pops, or buzzing while the note is sustaining.
6. For FB-2, press the Instrument•Track button 2 to select the test sound with the changed name.
7. For FB-2, play the second test sound and verify that there are no obvious clicks, pops, or buzzing.
8. Format the FLASHBANK (as described above) again to erase the test sound(s) and O.S.