

Emergency Recovery Procedure

This chapter describes emergency recovery procedures in the event of a power interruption during the flash PROM updating process.

3.1 Recovery Procedures

Only one board is updated at any given time in the flash PROM updating process. If there is a power interruption to the system while the flash PROMs are being reprogrammed, only one board will have its flash PROMs in an inconsistent state.

Note – Power interruption during reprogramming of the flash PROMs aborts the reprogramming at the point of the power interruption. Turn the key switch to the Standby position (FIGURE 1-1) to prevent power surge to the system when power is restored.

The following recovery procedure requires another board of the same type with an uncorrupted PROM image (if you are reprogramming an “I/O Type 1” board, you must use another “I/O Type 1” board). In the following code examples, the flash PROM on board 3 recovers by copying the flash PROM image from board 0.

1. **Connect a null modem cable to port A and to either a terminal or a workstation.**
2. **Set the serial port at 9600 bps, 8-bit word, no parity, and 1 stop bit.**
3. **Remove the board that was being programmed when the power went out.**
4. **Turn the key switch to the On position (FIGURE 1-1).**

The system responds with the message:

```
Hardware Power ON
```

5. Wait 15 seconds and type `s` on the keyboard terminal or the tip window connected to the serial port.

The system responds:

```
0,0>  
*** Toggle Stop POST Flag = 1 ***
```

This message shows that POST has recorded your request to stop after testing is completed.

When POST stops, it will display the following options menu:

```
0,0>Extended POST Menu  
0,0>Select one of the following functions  
0,0>  '0'      Return  
0,0>  '1'      Reset  
0,0>  '2'      Peek/Poke device  
0,0>  '3'      Environmental Status  
0,0>  '4'      Test Menu  
0,0>  '5'      State Dump  
0,0>  '6'      Frequency Margining  
0,0>  '7'      Display System Summary  
0,0>  '8'      Display Fatal Reset Info  
0,0>  '9'      Scan System Board Ring  
0,0>  'a'      Set Memory Test Megs  
0,0>  'b'      Print SIMM Info  
0,0>  'c'      Focus CPU  
0,0>  'd'      CPU State  
0,0>  'f'      fcopy  
0,0>  'g'      System Power Off  
0,0>  'h'      Bounce Patterns  
0,0>  'i'      Focus I/O Board  
0,0>
```

6. Type f to select fcopy.

```
Command ==> f
0,0>Flash PROM Copy Menu
0,0>Select one of the following functions
0,0>  '0'      Return
0,0>  '1'      Copy
0,0>  '2'      Verify
0,0>  '3'      Display Version
0,0>  '4'      Activate System Board
0,0>

Command ==>
```

7. Insert the board with the corrupted flash PROM. Be sure its power LED is lit.

8. Type 4 to select Activate System Board.

The system prompts you to enter the board number in hexadecimal notation. In the example below, board 3 is entered as the board to be activated.

```
Command ==> 4
0,0>Input board number in hex ('0' thru '9' and 'a' thru 'f')
?3
0,0>
0,0>Flash PROM Copy Menu
0,0>  '0'      Return
0,0>  '1'      Copy
0,0>  '2'      Verify
0,0>  '3'      Display Version
0,0>  '4'      Activate System Board
0,0>

Command ==>
```

- 9. Type 1 to select Copy. Respond to the prompts for source (where to copy *from*) and destination (where to copy *to*) board numbers in hexadecimal notation.**

In the example below, board 0 is entered as the source and board 3 is entered as the destination:

```
Command ==> 1
0,0>Input board number in hex ('0' thru '9' and 'a' thru 'f')
0,0>
    from board? 0
    to board? 3
0,0> Mfg code 04, Dev code a4
0,0>Erasing prom at 000001cc.f8000000
0,0>Copy prom at 000001c0.f8000000 to prom at 000001cc.f8000000
0,0>.....
0
```

- 10. Type 3 to select Display Version.**

The system responds by showing all PROM versions in the system.

```
Command ==> 3
0,0>Slot 0 CPU/Memory OBP 3.2.1 1996/3/11 09:57 POST 3.0.1 1996/3/11 18:38
0,0>Slot 1 IO Type 1 FCODE 1.6.0 1996/1/23 13:44 iPOST 1.1.4 1996/3/05 04:06
0,0>Slot 2 CPU/Memory OBP 3.2.1 1996/3/11 09:57 POST 3.0.1 1996/3/11 18:38
0,0>Slot 3 Memory OBP 3.2.1 1996/3/11 09:57 POST 3.0.1 1996/3/11 18:38
0,0>Slot 5 CPU/Memory OBP 3.2.1 1996/3/11 09:57 POST 3.0.1 1996/3/11 18:38
0,0>Slot 7 Memory OBP 3.2.1 1996/3/11 09:57 POST 3.0.1 1996/3/11 18:38
0,0>
```

- 11. Turn the key switch to the Standby position (FIGURE 1-1). Wait 15 seconds.**
- 12. See Section 2.1 of this document, “Reprogramming Scenario” and follow the reprogramming procedure to attempt the flash PROM updating process again.**