

Using the DSP4000 built-in Sampler Board tests.

- 1) Ensure that the DSP4000 has been modified to operate the sampler. See Sampler Installation Notes (Technote 75).
- 2) Enter the built-in selftest menu system by holding down key [5] and powering up. Do not release key [5] until you see the message "Hit SELECT to start test...."
- 3) Spinning the knob will allow one of a large number of tests to be selected (see Service Manual for more info on these).
- 4) Look at the sampler DRAMs.
 - ◆ If the DRAM sites are full, it is an 174 second (4M) board. (Check that J1 and J2 are clear).
 - ◆ If only half the DRAM sites are full and the chips are marked *4100 (* means the first few characters may vary), it is an 87 second (2M) board. (Check that J1 is clear and J2 is bridged).
 - ◆ If only half the DRAM sites are full and the chips are NOT marked *4100 (* means the first few characters may vary) it is a 22 second (512K) board. (Check that J1 and J2 are bridged).

In the instructions below, references to "bank 1" only apply to the 4M board. 2M and 512K boards only have bank 0.

- 5) Select "Sampler xx dram" test from the test menu, where xx is the capacity in seconds, determined above. Hit SELECT. The system will display "loading data" for a few seconds, then "waiting for refresh", then "testing data". Note the "errors:" line. Asterisks appearing here show single bit errors. The "accum:" line shows the accumulated total. If no errors appear after several passes in a warm system, the sampler is functional. If errors in all or most bits occur, check that the Sampler PAL U90 is present and functional (testing another known working Sampler is the best way). If this PAL is faulty it usually shows itself by disrupting normal DSP functions. If U90 is OK, move onto step (6).
- 6) If errors occur, restart the test schedule with "Sampler xx adrs". If errors occur see if they occur at all addresses (number after "testing data"), or, on a 4M board, only occur above

400000 (bank 1) or only below 400000 (bank 0). Then follow the chart below on the next page:

