

**CAPABILITY & FEATURES**

- 1) The DT-90 can test 64K x 1, 256K x 1 and 1 MEG x 1 DRAM's or Dynamic Random Access Memory IC's.
- 2) It can test at "read access times" from 60 ns to 200 ns.
- 3) Alternate read/write test patterns of "1010" and "0101" are automatically run to all device addresses.
- 4) Vcc MARGIN tests can be selected, allowing read/write function tests to be run at three voltage levels.
- 5) A "CYCLE" switch allows continuous testing.
- 6) Test immediately stops upon detecting a read error.
- 7) LED indicators are provided to indicate: TEST RUNNING, TEST SUCCESSFULLY COMPLETED, TEST STOPPED ON ERROR, DRAM Vcc level (HI, LO or normal 5V).
- 8) 16 & 18 PIN "ZIF" Zero Insertion Force test sockets are provided for DRAM's being tested.

OPERATION & CONTROLS**POWER ON**

The unit is powered ON with 9 VDC from an AC adaptor (200-300 mA output rating). A 2.1 mm DC power jack is located on the right side of the unit. The GREEN/RED, PASS/FAIL indicator will illuminate RED upon initial power up. To maximize accuracy of ACCESS TIME measurements, unit should be powered ON several minutes or longer.

INSERT DRAM TO BE TESTED

A DRAM to be tested may be installed or removed from a test socket with the DT-90 powered ON. Only one DRAM at a time can be tested; insert a 1 MEG DRAM in the 18 PIN ZIF socket on the left or a 64K or 256K DRAM in the ZIF socket on the right. The socket is opened by raising the handle; lower the handle to grip the IC PINS after inserting the device to be tested, position PIN 1 or the notched end to the top.

ACCESS TIME (SPEED) SELECT

Set speed control full clockwise (200 ns). Momentarily press TEST push button to start test. A successful test sequence will run about 5 to 7 seconds and stop with a continuous GREEN indication on the PASS/FAIL indicator LED. To determine the minimum access time or speed of a DRAM being tested, simply reduce the access time until you find the speed at which the device fails and then slightly increase the access time to find the fastest error free operation. NOTE: The tester should be powered ON for a couple minutes or longer to maximize the accuracy of the dial settings.

CYCLE SWITCH

The CYCLE switch will simply repeat the test sequence until an error is detected. Switching the CYCLE switch ON will also start the test sequence.

MARGIN SWITCH

The MARGIN switch will run the first half of the test sequence at LO voltage (Vcc=4.5V), and the last half of the test sequence at HI voltage (Vcc=5.6V). When the MARGIN switch is OFF the DRAM is tested at the normal 5V level.

INDICATORS

HI - 5V - LO Three LED indicators show the Vcc level currently applied to the test sockets.

GREEN/RED, PASS/FAIL LED Flashes GREEN to indicate a test sequence is running, indicates continuous GREEN to indicate a test has successfully completed and indicates continuous RED to indicate an error was detected. Will indicate continuous RED upon initial power ON.

TEST SEQUENCE

When a 1 MEG DRAM is tested, a "0101" data pattern is written to all addresses in the DRAM, then each address is read back and compared for correct data. An error stop will occur immediately during the read test if the data is not correct. After the "0101" pattern test, a "1010" pattern is written to all addresses, read back and compared. Upon successful completion of the two pattern test cycle, the tester stops and a continuous GREEN is indicated on the PASS/FAIL LED. A 256K DRAM receives the same test except each address is written to and read back 4 times in each pattern and a 64K DRAM receives the read/write test 16 times in each pattern.

LIMITED WARRANTY - FACTORY ASSEMBLED MODEL DT-90

STARTEK INTERNATIONAL INC. warrants this hardware product, to the original purchaser, against defects in material or workmanship for a period of 180 days from the date of purchase. Parts and labor costs to repair a defective unit are covered provided the instrument was not modified, did not receive unauthorized repairs or was not subjected to misuse or abuse. This warranty is limited to the value of the instrument and does not cover any incidental or consequential damage or expense. This warranty does not cover transportation costs; all repairs are FOB our factory in Ft. Lauderdale, FL.

THERE ARE NO OTHER WARRANTIES THAT EXTEND BEYOND THE ABOVE DESCRIBED LIMITED WARRANTY.

For questions or service, please contact the factory at
PHONE: (305) 537-5577.