

TITLE: Non-Destructive Track Tester

AUTHOR: James H. Boatwright
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Winston-Salem, North Carolina

DATE: October 6, 1958

ABSTRACT:

DISCLAIMER:

"The authors of this program material, the POOL organization and Royal McBee believe this program to be correct; however, they bear no responsibility, financial or otherwise, for errors resulting from its use. This program is distributed only to individual and installation members of POOL. Further distribution of this manual and accompanying tapes for use by non-members is prohibited".

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Purpose:

To check the ability of the computer to record into and read from every sector in the tracks $T_o - T_f$ (except the 3 tracks occupied by the program if they are in the region $T_o - T_f$).

Method:

The contents of each track to be tested are stored in $Lo + 0300 - Lo + 0363$ (which may be tested); then each sector of the test track is checked with the hexadecimal words:

F17JF8FF
DQ83D4DD
00000000

Output upon error is the track, sector, and first digit of the code for which the error occurred. The testing then continues automatically. After testing each track, the original contents of the track are restored.

Timing:

1 track = 40 - 45 seconds.

61 tracks (all memory except the 3 tracks required by this program) = 40 - 45 minutes.

Storage:

4 tracks, no subroutines (3 tracks of Program; 1 of Storage). Program will not test itself, but will test storage.

Stops:

- Lo + 0001; Flexowriter off; no error - through with test
turn Flex on and start to continue
- Lo + 0056; Halt before start to test next track, $T_w + 0100$.
If B.P. 16 up, Halt; B.P. 16 down, No Halt.
- Lo + 0134; Overflow; error; Start to continue
- Lo + 0139; Flexowriter Off; error; turn Flexowriter on and
Start to continue.

Note: This program should not be interrupted during a test of a track. If B.P. 16 is up, it is safe to interrupt testing after the stop at Lo + 0056 (BP-16) (here one track has been moved, tested and restored). If the program is stopped at any other point, the safest place to re-enter is Lo + 0037. This will cause the original contents of the track under test to be reloaded. Further tests in that track will be omitted.

Operation:

1. Transfer to beginning of program. (L_0)
2. Enter: XX00YY00 $XX = T_0 =$ First track to be tested.
 $YY = T_f =$ Last track to be tested.
 One track is tested if $XX = YY$.
3. Press "Start Compute" The Sector Portions of both XX00
 and YY00 must be zero as indicated.

Controls:

- | | | |
|---------|------|--|
| B.P. 16 | Up | Halt before starting to test each track.
Press start to continue. |
| | Down | No halt. |

Transfer Control:

Depressing T-C during an error print and releasing the T-C after the code word has been printed will stop testing for this code. The next code will be then loaded and tested. For example, if track 12 were in error, the machine would print out "1200 f, 1201 f, -- 1263 f". I.e., if the T-C is pushed down during or before any error print, say "1201f" and let up after the "f" has been printed, the computer will step to the next code for that track and begin testing, and printing if necessary.

To sum up, depressing the T-C causes, after any error print, the next code to be tested. Release the T-C after the error print is complete. If the T-C is left down, only one error print per code per track will be printed.

Legend

- P₀ First track of program
- P_f Last track of program
- P_s Storage track
- T₀ First track to test
- T_f Last track to test
- T_w Track being tested

