

803 TEST PROGRAM X 5

FLOATING-POINT TEST

FUNCTION

To test that the computer can perform the floating-point functions 60 to 64, and obey the conversion instruction 65 4096.

TAPES

The tape of 803 X 5 is punched in sum-checked binary. If, when it has been read, continuous output of sp's is seen, an error has occurred during reading.

METHOD OF USE

Cause the computer to read the tape by the method given in the description of 803 X 1. As soon as reading has been completed, and provided the continuous output of sp's mentioned above does not occur, the computer will output about 36 characters of heading and then proceed to perform the test at a rate of 6 cycles per second.

The test runs for approximately one minute. The actual time it takes should be checked to see that it is equal to the time taken on some particular day on which the computer was known to be in good working order.

Results observed on machine on196

803 X 5 took seconds, taking time from end of input of program tape to when the computer stops with the floating-point overflow lamp lit, (see below).

CHECK ON FLOATING-POINT OVERFLOW LOGIC

The operator must ensure that the following sequence of events takes place correctly. After X 5 has been running for approximately one minute, the computer should stop with the floating-point overflow lamp lit.

The operator must now press the 'operate' bar exactly six times and verify that the computer restarts and

- (i) after the first five depressions immediately stops again with the floating-point overflow lamp lit,
- (ii) after the sixth depression punches

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and stops.

ERROR INDICATIONS

The punching of

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indicates that the test has been performed correctly, provided that the test takes approximately one minute and that the operate bar was pressed exactly six times during the overflow test.

If an error is detected, two decimal digits are punched, indicating which of the several individual checks in the program has detected an error. Reference should be made to the program sheets to determine the exact meaning of each indication: the indications occur in the program in ascending sequence, 01, 02, 03 ... etc.

During the floating-point overflow check, the first, third and fifth stops indicate that the test for 'floating-point divide by zero' is functioning, while the second, fourth and sixth stops indicate that the test for exponent overflow is functioning. In case of failure, reference should be made to the program sheets: the relevant instructions are in locations 1155 onwards.

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January, 1964.