

Memorandum 6M-3729

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Division 6 - Lincoln Laboratory
Massachusetts Institute of Technology
Lexington 73, Massachusetts

SUBJECT: PROPOSED XD-1 EVALUATION, 13 JULY 1955

To: N. H. Taylor

From: J. D. Crane

Date: 28 JUNE 1955

Approved: 
J. A. O'Brien

Abstract: The addressable fields of the magnetic drums (CD side), the central computer, and the drum entry portion of manual inputs are to be included in the fourth XD-1 evaluation. This evaluation will include shock tests, an eight-hour evaluation test run, and a study of records pertaining to all units included in this evaluation. It is proposed that the evaluation test run be made on 13 July 1955.

I. EQUIPMENT TO BE EVALUATED

It has been proposed that an evaluation of XD-1 be made on 13 July 1955. The central computer, card machines, the line printer, core memories I and II, CD addressable drum fields, and the drum entry portion of manual inputs would be included in this evaluation.

II. PROGRAMS AND SCHEDULE FOR EVALUATION TEST - 13 JULY 1955

The programs to be used during the evaluation test run are as follows:

Program
RCC 03

Use or Function
Tests manual operations

SY 001

Combines card machine, arithmetic, and memory programs

<u>Program</u>	<u>Use or Function</u>
RCM 03	Tests the card punch
DDR 01	Intersperse arithmetic and drum operations
RDR 09	Tests all drum fields except RD, OB, and XT (manual field selection)
RDR 30	Tests field selection on addressable drum fields and reads and writes "one's", "zero's", and alternate "one's" and "zero's" on addressable fields
DMI 10	Tests card machines and drum entry portion of manual inputs
DMI 09	Tests interlock features on card machines for a full MI drum condition

The evaluation test will take about eight hours, and the time will be allotted according to the following schedule:

3.5 hours	Run SY 001 twice. Run RCM 03. Then run RCC 03. Repeat this sequence for three and one-half hours. Also, perform shock tests on the drum system during this time.
1.5 hours	Run DDR 01
.25 hour	Run RDR 30
1.25 hours	Run RDR 09
.5 hour	Power-off power-on sequence (check drums to see if they retain their information)
.5 hour	Run DMI 10
.5 hour	Run DMI 10 for shock tests on manual input frame.
<u>Total 8.0 hours</u>	

III. SHOCK TESTS

A series of shock tests would be performed on the plug-in units, tubes, and diode cans associated with magnetic drums and the drum entry portion of manual inputs. A power-on power-off sequence for drum power and computer power should be performed. The ability of the drums to retain information during power switching can be checked.

IV. EVALUATION REPORT

Following the evaluation test, an M note discussing the record studies and the evaluation test on 13 July 1955 will be published.


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JDC:mf

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