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Memorandum M-2360

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Division 6 - Lincoln Laboratory  
Massachusetts Institute of Technology  
Cambridge 39, Massachusetts

SUBJECT: BIWEEKLY PROGRESS REPORT FOR AN/FSQ-7 (XD-1), AUGUST 7, 1953

To: AN/FSQ-7 Planning Group

From: A. P. Kromer, P. J. Gray

Primary Power Load Center

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A purchase order has been written for two power transformers, each having 500 kva capacity, of three phase construction.

Equipment Power Supplies

Quotations on an Inet 150 volt, 25 ampere, power supply have been requested. One of these supplies, which incorporates selenium rectifiers and magnetic amplifiers, will probably be purchased to determine how well it meets AN/FSQ-7 specifications, as compared to grid-control type power supplies.

Arithmetic Element & Control

A recent review of the block schematics made at IBM was held by R. L. Best, R. P. Mayer and others of the Systems Section. No major criticisms came out although a number of recommendations about circuits and logical errors were made. A summary of the recommendations is available in the Systems Section.

Block schematics for the Arithmetic Element are, except for the choice of a cathode follower and the specific design of the Gate Tube, ready for pluggable unit layout. It is possible that drafting on the Arithmetic Element could start in September.

Internal Memory

MTC Memory, Model II, may be delayed slightly beyond the November deadline because it has been placed in a lower priority than the second bank of magnetic memory for WWI. Design work is well underway on the Model II memory.

A first 64 x 64 test plane for vacuum tube drive is almost complete. It is expected that this plane will be tested on Memory Test Setup V.

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Internal Memory (Continued)

Memory Cores

General Ceramics has agreed to quote on cores for AN/FSQ-7 and believe delivery schedules can be met. Cores which meet the AN/FSQ-7 specifications, as outlined in E-563, are now being received at MIT. These cores are being tested for selection of cores to use in the second bank of WWI magnetic memory. Enough cores are also being selected for the Model II MTC Memory which will employ planes 64 x 64. General Ceramics' production capacity is now limited by their single Stokes press, and is approximately 10,000 cores per day.

The semi-automatic core tester began operating at MIT on August 4. The capabilities of the machines are not definitely known, but probably are between 5,000 and 10,000 tests per day.

R.C.A. has not yet delivered cores ordered in December 1952.

Input Buffer Drum

A review of the Input Buffer Drum was conducted by the Systems Section. Recommendations which resulted are contained in an inter-office correspondence by R. Cypser which is available in the Systems Section office.

Central Display Generator & Selector & Display Console

An active investigation of the Charactron manufactured by Convair has been carried on during the past two weeks. This device looks very promising for use in FSQ-7. A number of minor decisions concerning the display system have been made pending IBM concurrence. In addition, tests of necessary intensification time for characters have been run. Detailed information is available from vonBuelow.

Signed: *A. P. Kromer*  
A. P. Kromer

Signed: *P. J. Gray*  
P. J. Gray

Approved: *N. H. Taylor*  
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