

## COMPUTATION CENTER

Massachusetts Institute of Technology  
Cambridge 39, Massachusetts

To: Restricted Distribution  
From: Operating Staff  
Date: February 7, 1962  
SUBJECT: OPERATING INSTRUCTIONS FOR THE MIT COMPUTATION CENTER'S VERSION OF THE  
IBM FMS SYSTEM

Abstract

This memo is a brief description of the M.I.T. - modified IBM 709/7090 Fortran/Fap Monitor System, Version I. Programming conventions and directions for operating this system are also described.

A. The System:

1. Programs written in MAD may be batched with Fortran and/or Fap programs. Compilation and execution will proceed in a manner similar to Fortran. Our version of MAD differs from the manual in specification of Format statements. See CC Memo 186.
2. The first card of the input deck must be an identification card. This card must be punched according to specifications found in Section 7.1.2 (Nov/60) of the Procedures Handbook.
3. Two statistics cards are punched on-line at the termination of each run.
4. The library has been expanded and is on a tape other than the system tape.
5. The BSS loader allows octal correction cards to be used. See CC Memo 176 for information concerning this feature.

B. The Tape Setup:

1. A description of the standard tape setup will be found in the Procedures Handbook, Section 5.4.1 (Nov/61) and in CC-187.
2. The system tape must be mounted on A1.
3. The library tape must be mounted on B10.

C. The Deck Setup:

1. A general description will be found in the Procedures Handbook, Section 7.1.3 (Nov/60) and the CC Memo 180-2.
2. The I.D. card (Refer to A,2) must always contain the word "FMS" in the second field.
3. The number of printed lines (output records on A2) is estimated in field 6 of the I.D. card. Execution is terminated when the number of user output lines exceeds this number plus 25% or 32,767 (Refer to D,1).
4. The individual jobs are placed on tape off-line separated by an end-of-file. This tape is then mounted on A2 for running.

**D. The Library:**

1. The routine (STH) counts the number of user output lines. It will stop execution and cause the system to start the next job by calling EXIT if this number is too large. (Refer to C,3)
2. If the generalized debugging program (F2PM) (See CC-167-2) is not desired, "dummy (F2PM)" must be included with the input deck.
3. The routine "XSIMEQ" is suitable for use with Fortran/Fap programs only.
4. The 'scope routines have not been modified for use on the 7090.
5. The routine "SETUP" initializes lower core for (FPT) and (F2PM). Both MAD and FORTRAN main programs compile a call to "SETUP". It is recommended that FAP coded main programs should also supply this call.

**E. Operating Procedures:**

1. The SHARE-2 printer board is used in the on-line printer. This board provides a dummy clock setting.
2. The "MISTRT" card must be used to start a job. This card is similar in operation to the IBM start card. The other IBM utility cards may be used.
3. Output printing during user execution may be monitored via the on-line printer if sense switch 5 is down.
4. Chain jobs should be treated carefully. Program common and Erasable storage in MAD jobs must agree in all links. Octal correction cards (Refer to A,5) must not be used.

**Enclosures:**

**Procedures Handbook**

**Share Board II Wiring Diagram**

**2 MI Start Cards**

**2 Binary decks for dummy (F2PM)**

**CC Memo 176**

**CC Memo 167**

**CC Memo 180-2**

**CC Memo 181-1**

**CC Memo 186**

**CC Memo 187**

**List of routines found in library**

**Descriptions of all library routines except the 'scope routines.**