

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

SUBJECT: MTC DRAWINGS AND SERVICE FILE

To: Group 62 Staff and Technicians

From: Louis Sutro

Date: February 5, 1954

Abstract: Logical divisions have been made of the Memory Test Computer to serve as divisions of the MTC Service File. Abbreviations of the divisions will be placed in the title block of each MTC block diagram, block schematic, circuit schematic and assembly drawing. Parts of the computer within the major divisions will also be abbreviated, and the abbreviations used will be limited to those shown in Table 1.

1. Introduction

Division of the Memory Test Computer into approximately a dozen major divisions is desirable so that all the drawings for each division may be placed together in the Service File.

2. Divisions of MTC

Like all large-scale digital computers, MTC consists of the five elements shown in the left column of Table 1. Each of these elements consists of the major divisions shown in the second column. The memory element, for example, consists of three divisions: core memory, drum memory and panel memory.

The abbreviation of each division is shown in the third column. In most cases this is mnemonic, but in the case of the console it follows established practice. The division abbreviation is to be placed in the title block of every MTC circuit schematic, assembly drawing, and any other drawing to be kept in the MTC Service File. It should be placed in the title block in the manner that "AE", for Arithmetic Element, is placed in the example of Figure 1.

AE	MASSACHUSETTS INSTITUTE OF TECHNOLOGY		
	DIGITAL COMPUTER LABORATORY		
DEPT. OF ELECTRICAL ENGINEERING D. I. C. PROJECT NO. 6889			
CIRCUIT SCHEMATIC			
AC SHIFT GATES, MTC			
SCALE: _____	DR. G.A.T	1/12/54	D-57546
ENG 1/24/54	CK. Nyma	APPD. 2/2/54	
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Figure 1.
 Example of AE in Title Block

Table 1. DIVISIONS OF MTC SERVICE FILE

<u>COMPUTER ELEMENTS</u>	<u>DIVISIONS OF SERVICE FILE</u>	<u>ABBR.</u>	<u>PRINCIPAL CONTENTS</u>	<u>ABBR.</u>
ARITHMETIC ELEMENT	Arithmetic Element	AE	Accumulator	AC
			A-Register	AR
			B-Register	BR
CONTROL	Console	T	Indicators Audio System	ID AU
	Control	C	Control Switch Program Counter Step Counter Alarm System Group and Field Control	CS PC SC AL GFC
IN - OUT	Display	DS	Camera Charactron Decoders Scopes	
	In - Out	IO	Flexowriter Ferranti Reader	FL PETR
MEMORY	Core Memory	CM	Core Address Register	CAR
	Drum Memory	DM	Angular Position Counter	APC
			Drum Address Register	DAR
			Drum Write Register	DWR
Drum Read Amplifier			DRA	
Panel Memory	PM	Panel Address Register	PAR	
		Live Register #1	LR1	
		Live Register #2	LR2	
POWER SUPPLY	Marginal Checking	MC		
	Power	PWR	Rectifiers Regulators	
	Power Supply Control	PSC		

Table 1. DIVISIONS OF MTC SERVICE FILE (cont'd)

<u>COMPUTER ELEMENTS</u>	<u>DIVISIONS OF SERVICE FILE</u>	<u>ABBR.</u>	<u>PRINCIPAL CONTENTS</u>	<u>ABBR.</u>
	System	SYS	Block Diagram Computer Room Layout Equipment Cooling	
	Basic Units	BU	Plug-in Unit Cathode Follower Dual Buffer Flip Flop Gate Tube Standard Test Equipment	PIU CF PIU DB PIU FF PIU GT
	Hardware			

In the second column of Table 1, below the line of dashes, (see page 3) are three divisions of the service file that are not logical divisions of the computer. The System division will contain drawings that are applicable to all or large parts of the computer system, such as the block diagram, the computer room layout, and the equipment cooling drawings. The Basic Units division will contain drawings of units which are used in more than one part of the computer, such as plug-in units and standard test equipment. The hardware division will contain drawings of mechanical parts frequently referred to.

3. Other Abbreviations Used on MTC Drawings

The fourth column of Table 1 shows both the principal contents of the service file and the titles for which there are abbreviations in general use. The fifth column shows these abbreviations. Only these abbreviations and those accepted in electronics, such as FF for flip flop and CF for cathode follower, should be used in drawing titles. An example of a drawing title is "CS and PAR FF PIUMP" standing for "Control Switch and Panel Address Register Flip Flop Plug-in Unit Mounting Panel".

4. The Service File

In the service file the first division will be System, the second will be Basic Units, then will follow the eleven divisions listed first in Table 1, arranged in alphabetical order. The final division will be Hardware.

Each folder will contain only one drawing. The drawing number will appear on the tab of the folder. In general, only block diagram, block

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schematic, assembly and circuit schematic drawings will be kept in the service file. A few detail drawings that are frequently referred to will be kept in the hardware division.

Signed: Louis L. Sutro
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Warner Ogden, Jr.

LLS/bjk

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