Admin Guide for

CONTROL DATA

MSL 150 / CMSE OPERATIONS

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CONTENTS

TABLES

INTRODUCTION

This ESE individualized training administration guide is intended to provide you with the information requird to deliver the MSL 150 CMSE Operation course.

Additional, detailed administrative information and procedures can be found in the ESE Guide for the Delivery of Individualized Training and the ESE Course Specification Catalog.

SECTION 1

COURSE DESCRIPTION

PRODUCT NUMBER PI0002

MSL 150 CMSE Operation is a 100 percent individualized self-study course. Material is presented in this course through the use of PLATO lessons, text readings, reference readings, and simulation exercises. The student's progress and testing during the course is controlled by PLATO Learning Management (PLM).

Major topics in this course include deadstarting MSL 150 on CYBER 170 Model 815/825 and 835/855 systems, CMSE commands, command buffers, utility programs, and DEMOT operation. Refer to table 1-1 for module titles and sequence.

TABLE 1-1. MODULE SEQUENCE AND LENGTHS

Sequence	Title	Estimated Length (Hours)
1	Deadstart and Initialization	2.0
2	CMSE Commands-1	2.0
3	CMSE Commands-2	3.5
4	Command Buffers	1.0
5	Utility Programs	4.5
6	Edit Utility	1.0
7	DEMOT	2.0

GOALS

Upon completion of this course, the student will be able to deadstart MSL 150 CMSE, use CMSE commands to bring up displays; load tests and alter memory/register data; load and execute utility programs; create, modify, and execute command buffers; and load and run peripheral equipment tests using DEMOT.

PREREQUISITES

Students enrolled in this course must:

- Have an understanding of the purpose and function of off-line maintenance software.
- Have a basic knowledge of the purpose and function of the Series 800 maintenance channel, control store, and mainframe hardware units.

The above requirements can be met by successful completion of the CYBER 170 Series 800 Hardware Overview course (R3101).

LENGTH

Average length of this course is 2 days.

SECTION 2

COURSE STRUCTURE

MSL 150 CMSE Operation is divided into six modules of instructions. Each module consists of a number of learning activities. Each learning activity teaches one or more instructional objectives.

DELIVERY CONSIDERATIONS

The six modules of the MSL 150 CMSE Operation course can be delivered wherever the student has access to a PLATO terminal and the necessary delivery equipment.

LEARNING ACTIVITIES

Table 2-1 provides the number, the title, and a brief description of each learning activity included in the MSL 150 CMSE Operation course. The table also indicates the medium used, and the estimated time to complete each learning activity. This information can help you schedule the use of equipment efficiently. The table also references each learning activity to its objective(s) by number. A list of the course objectives and their numbers follow the learning activity table.

TABLE 2-1. LEARNING ACTIVITY SUMMARY BY MODULE

MODULE 1

Learning Activity	Description	Median Time To Complete	Objective Number
1-A	Text Reading: MSL 150 CMSE Introduction. This learning activity describes hardware requirements, software restrictions, and terminology for MSL 150 and CMSE.	15 min.	1

TABLE 2-1. LEARNING ACTIVITY SUMMARY BY MODULE (Contd)

Learning Activity	Description	Median Time To Complete	Objective Number
1-B	Reference Reading: Deadstart. This learning activity describes programs for deadstarting from tape and disk.	15 min.	2,3
1-C	PLATO Lesson: Deadstart. This learning activity provides practice in generating a deadstart program and describes how to enter the program into the deadstart panel switches or microprocessor.	30 min.	2,3
1-D	PLATO Lesson: CMSE Loading and Initial Displays. This learning activity shows how to load CMSE, how to interpret screen header information and explains the use of the special keys on the CC545 console.	30 min.	6
1-E	PLATO Lesson: CMSE Displays. This learning activity presents all CMSE displays and provides practice entering CMSE commands to select any display.	30 min.	5

TABLE 2-1. LEARNING ACTIVITY SUMMARY BY MODULE (Contd)

MODULE 2			
Learning Activity	Description	Median Time To Complete	Objective Number
2-A	Reference Reading: CM Commands. This learning activity describes CMSE commands for entering data and programs into CM, altering CM data, and writing a CM program to the MSL disk.	30 min.	6
2-B	Reference Reading: PP Commands. This learning activity describes CMSE commands for entering data and programs into PP memory, and writing a CM program to the MSL disk.	30 min.	7
2-C	PLATO Lesson: CM/PP Commands. This learning activity provides practice using CM and PP commands.	60 min.	6,7

TABLE 2-1. LEARNING ACTIVITY SUMMARY BY MODULE (Contd)

MODULE 3

Learning Activity	Description	Median Time To Complete	Objective Number
3-A	Reference Reading: CS Commands. This learning activity describes CMSE commands for loading CS, altering CS data, controlling CS operation, and writing the contents of CS to the MSL disk.	30 min.	8
3-B	Reference Reading: MCH Commands. This learning activity describes CMSE commands for entering data into a maintenance register, and for master clearing and clearing errors via the maintenance channel.	30 min.	9
3-C	PLATO Lesson: CS/MCH Channels. This learning activity provides using the control store and maintenance channel commands.	30 min.	10
3-D	Reference Reading: Utility and Library Commands. This learning activity describes the CMSE commands for controlling PP, channel and card reader operation, and for adding/deleting programs to/from the MSL disk.	30 min.	10

TABLE 2-1. LEARNING ACTIVITY SUMMARY BY MODULE (Contd)

Learning Activity	Description	Median Time To Complete	Objective Number
3-E	Reference Reading: Command Buffer Commands. This learning activity describes the CMSE commands for creating, modifying, and executing command buffers, and for adding and deleting command buffers to/from the MSL disk.	30 min.	11
3-F	PLATO Lesson: Utility, Library, and Command Buffer Commands. This learning activity provides practice in using the CMSE utility, library, and command buffer commands.	30 min.	10,11
3-G	Reference Reading: Program Control Commands. This learning activity describes CMSE commands that alter the parameter bits which control program execution.	30 min.	12

TABLE 2-1. LEARNING ACTIVITY SUMMARY BY MODULE (Contd)

MODULE 4

Learning Activity	Description	Median Time To Complete	Objective Number
4-A	Reference Reading: Creating Command Buffers. This learning activity describes how to create a command buffer from either the system console or a card reader, and how to edit an existing command buffer.	30 min.	13
4-B	PLATO Lesson: Creating and Executing Command Buffers. This learning activity describes how to display, interpret, edit, and execute an existing command buffer, and how to create a new command buffer.	30 min.	13

MODULE 5

Learning Activity	Description	Median Time To Complete	Objective Number
5-A	Reference Reading: TDX Utility. This learning activity describes the TDX utility program.	30 min.	14

TABLE 2-1. LEARNING ACTIVITY SUMMARY BY MODULE (Contd)

Learning Activity	Description	Median Time To Complete	Objective Number
5-B	PLATO Lesson: TDX/HIVS TDX Operation. This learning activity describes the operating procedures for the tape-to-disk utility program.	45 min.	14
5-C	Reference Reading: CAU Utility. This learning activity describes CAU operating procedures, options, and commands.	30 min.	15
5-D	Reference Reading: DMP Utility. This learning activity describes the DMP utility program.	30 min.	16
5-E	Reference Reading: HDP Utility. This learning activity describes the HDP utility program.	30 min.	17
5-F	Reference Reading: RTD Utility. This learning activity describes the RTD utility program.	30 min.	18
5-G	PLATO Lesson: RTD Operation. This learning activity describes RTD operating procedures, options, and commands.	45 min.	18

TABLE 2-1. LEARNING ACTIVITY SUMMARY BY MODULE (Contd)

MODULE 6

Learning Activity	Description	Median Time To Complete	Objective Number
6-A	Reference Reading: Edit Utility. This learning activity describes the edit utility and its operating procedures.	30 min.	19
6-B	Exercise: Edit Utility Review. This learning activity reinforces information presented in learning activity 5-A.	30 min.	19

MODULE 7

Learning Activity	Description	Median Time To Complete	Objective Number
7-A	Reference Reading: DEMOT Introduction. This learning activity describes the purpose of DEMOT, its components, and capabilities.	30 min.	20
7-B	PLATO Lesson: DEMOT Displays. This learning activity describes how to load DEMOT and the purpose of each of the DEMOT displays.	30 min.	21

TABLE 2-1. LEARNING ACTIVITY SUMMARY BY MODULE (Contd)

Learning Activity	Description	Median Time To Complete	Objective Number
7-C	Text Reading: Operating Procedures. This learning activity describes the purpose of each executive directive.	30 min.	22
7-D	PLATO Lesson: DEMOT Oper- This learning activity provides practice in loading DEMOT, and in running a peripheral diagnostic.	30 min.	22

OBJECTIVES

The following list contains all the objectives for the MSL 150 CMSE Operation course. Each objective is assigned a number that is referenced in the preceding learning activity table.

These objective statements are also listed in the student manual and the PLATO terminal. The learning activity number and the objective number provide a cross reference to a specific learning activity.

OBJECTIVE LIST

Upon completing the MSL 150 CMSE Operation course, the student will be able to:

1. Define the terms MSL, CTI, CMSE, DEMOT, command buffer, and RTD.

2. Deadstart a Series 800 Model 815 or 825, and Model 835 or 855 system using both warmstart and coldstart procedures.

3. Load CMSE, define the purpose of the CTI package as found on MSL and OS deadstart tapes, and to identify the purpose of the following CTI displays: A, O, and U.

4. Load CMSE, define each indicator on the left and right screens, and state the purpose of each of the special keys on the CC545 system console.

5. Enter the command to select any CMSE display and state the purpose of each display.

6. Use CMSE commands to enter and modify data in central memory, load programs into CM, and write a CM program to the MSL disk.

7. Use CMSE commands to enter and modify data in PP memory, load programs into PP memory, and write a program to the MSL disk.

8. Use CMSE commands to enter and modify data in control store (CS), load the microcode into CS, and write the contents of CS to disk.

9. Use CMSE commands to enter data into a maintenance register and to master clear and clear errors via the maintenance channel.

10. State the purpose, format, and use of each of the CMSE utility commands and disk library commands.

11. State the purpose, format, and use of each of the CMSE command buffer commands.

12. State the purpose, format, and use of each of the CMSE program control commands.

13. Create command buffers from either a card reader or the console keyboard, and modify an existing command buffer.

14. State the purpose of TDS and HIVS TDS, list their hardware requirements, and identify the procedures for building a disk library using TDX and HIVS TDX.

15. State the purpose of CAU, list its hardware and software requirements, and identify its operating procedures.

16. State the purpose of DMP, list its hardware and software requirements, and identify its operating procedures.

17. State the purpose of HDP, list its hardware and software requirements, and identify its operating procedures.

18. State the purpose of RTD, list its hardware and software requirements, and identify its operating procedures.

19. State the purpose of the EDIT utility, list each of the EDIT directives, and state the meaning of each EDIT message.

20. State the purpose of DEMOT, identify its structure and organization.

21. State the purpose of each DEMOT display and enter the commands required to bring up each display.

22. Enter the DEMOT executive directives to assign devices, set parameters, and start execution of a DEMOT type diagnostic.

SECTION 3

EQUIPMENT AND MATERIALS

This section describes the equipment needed to deliver the MSL 150 CMSE Operation course. It also provides the publication numbers for materials used in the course.

REQUIRED EQUIPMENT

A PLATO terminal is required for the student to complete the course.

PRINTED MATERIALS

Two types of materials are used in this course: the student training materials and reference materials.

A description of each type and ordering information follows.

STUDENT TRAINING MATERIALS

The student training materials package consists of one binder containing the student manual.

The entire student training materials package is distributed under one Control Data publication number.

Title	Control Data Publication Number
MSL 150 CMSE Operation Student Manual	75446374

To order the student training materials, complete an Educational Material Request form (form number AA1679) and send it to the Engineering Services Education Distribution Center.

The student manual is a self-explanatory workbook that guides the student through the course. It contains all the text readings for the course, as well as introductions and instructions for the PLATO and text reading activities. The student should be encouraged to use the student manual for taking notes as needed.

REFERENCE MATERIALS

Reference materials are any printer matter (manuals, microfiche,) not included in the student manual.

The following list contains the reference materials used in the MSL 150 CMSE Operation course:

Title	Control Data Publication Number
MSL 150 Off-Line Maintenance Software Library Reference Manual	60456530
MSL 150 CMSE Commands	60456600

RETURN OF MATERIALS

When the student has completed the course, he or she may keep the student manual and CMSE commands card, but must return the MSL 150 Reference Manual.

SECTION 4

SPECIAL INSTRUCTIONS

This section provides special directions for the course administrator or technical advisor.

MSL 150/CMSE Operation does not require any special instructions. Administration of this course can be accomplished by following the procedures given in the ESE Guide for the Delivery of Individualized Training.

COMMENT SHEET

MANUAL TITLE MSL 150 CMSE OPERATIONS

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