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DIRECTORY**

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TOPS-10 Software Notebooks.

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PREFACE

This document is the starting point for all users of TOPS-10 software. Whether you are a beginning TOPS-10 user, system manager, system programmer, language user, assembly language user, Batch user, operator, or nonprogrammer user, this guide is your road-map to the TOPS-10 Software Notebooks.

This document serves three functions:

1. It introduces the reader to the set of manuals available with TOPS-10 software.
2. It guides each reader to those manuals most appropriate to his interests and to the order in which those manuals should be read.
3. It informs the reader of the numerous Software Support Services provided by DIGITAL.

CHAPTER 1

INTRODUCTION

Digital Equipment Corporation maintains TOPS-10 software documentation in a set of notebooks called the TOPS-10 Software Notebooks. These notebooks are updated frequently with the latest documentation changes. The update package, called the Monthly Update, is distributed only to notebook holders who have a yearly subscription.

In addition to the documentation contained in the Software Notebooks, "major interest" documentation in the form of stand-alone manuals is also available. These stand-alone manuals can be obtained only through the Software Distribution Center, and they are updated by an Update Notice.

Some manuals in the Software Notebooks serve a general purpose, while others are highly specialized. To get the most from each manual, it is important that you know where to look for the particular kind of information of interest to you.

Chapter 2, WHERE TO START, lists the eight categories of users and defines the duties and responsibilities of each category.

Chapter 3, GUIDE TO APPLICABLE MANUALS, is a reading guide. It contains a list of the manuals that apply to each category of user and the order in which the manuals should be read. Each manual listed has a reference to Chapter 4, which describes the contents of each manual.

Chapter 4, WHAT EACH MANUAL CONTAINS, lists the complete set of manuals, their order codes, and a synopsis of each.

Chapter 5, STAND-ALONE MANUALS, lists the TOPS-10 stand-alone manuals, and gives a synopsis of each. These are manuals that do not appear in Software Notebooks.

Chapter 6, SOURCES OF SOFTWARE INFORMATION, lists the Software Support Services provided by Digital Equipment Corporation.

A glossary appears at the end of this document. It is provided to clarify some TOPS-10 terms.

CHAPTER 2

WHERE TO START

Consider the eight categories of users listed below, and decide which category fits you best. Then turn to the section referenced in parentheses that immediately follows the category you have chosen. These descriptions are not intended to be complete, and there is bound to be some overlap.

1. Beginning TOPS-10 Users (Section 2.1)
2. System Managers (Section 2.2)
3. System Programmers (Section 2.3)
4. Higher-Level Language Users (Section 2.4)
5. Assembly Language Users (Section 2.5)
6. Batch Users (Section 2.6)
7. Operators (Section 2.7)
8. Nonprogrammer Users (Section 2.8)

2.1 BEGINNING TOPS-10 USERS

Beginning TOPS-10 users are not familiar with an operating system, or are familiar with an operating system, but not with TOPS-10. (See Section 3.1.)

2.2 SYSTEM MANAGERS

The system managers are responsible for the system's technical operation and upkeep at each computer installation. They diagnose and report problems in system software and are responsible for contracting with DIGITAL for hardware and software support services. (See Section 3.2.)

2.3 SYSTEM PROGRAMMERS

System programmers implement the software on the system. They write and test any installation modifications to system software, install new system software, and serve as technical consultants to programmers and operators. (See Section 3.3.)

WHERE TO START

2.4 HIGHER-LEVEL LANGUAGE USERS

Language users or application programmers design and test applications programs for use at the installation. The language users need to know what system tools are at their disposal to create programs. A language user is classified according to the type of language he uses: FORTRAN, BASIC, COBOL, ALGOL, or BLISS. (See Section 3.4.)

2.5 ASSEMBLY LANGUAGE USERS

Assembly language users have the same duties and responsibilities as language users except that they work with the assembly language, MACRO. (See Section 3.5.)

2.6 BATCH USERS

Batch users normally communicate with the system by way of the card reader. They can also enter jobs from an interactive terminal concurrently with timesharing jobs. There are two forms of Batch: Multiprogram Batch and Galaxy Batch. (See Section 3.6.)

2.7 OPERATORS

The operators keep the TOPS-10 running. They should be aware of all system resources available, know how to interact with the system and with the user, and be able to recognize and solve problems before they become serious. There are two categories of operators: Batch and timesharing. (See Section 3.7.)

2.8 NONPROGRAMMER USERS

Nonprogrammer users may have some knowledge of either programming or computers. They may be clerks or managers who use the output to obtain information. (See Section 3.8.)

CHAPTER 3
GUIDE TO APPLICABLE MANUALS

The following sections suggest which manuals should be read in what order. There is a section number following each manual that refers you to the section in Chapter 4 where a synopsis of the manual is provided.

3.1 APPLICABLE MANUALS FOR BEGINNING TOPS-10 USERS

NOTEBOOK 1

1. Introduction to DECsystem-10 Software (Section 4.1)
2. Master Software Glossary (Section 4.1)
3. Introduction to Timesharing (Section 4.1)
4. Getting Started With DECsystem-10 (Section 4.1)
5. Getting Started With TOPS-10 Commands (Section 4.1)

NOTEBOOK 3

1. SOS User's Guide (Section 4.3)
2. SOS Reference Manual (Section 4.3)
3. Introduction to TECO (Section 4.3)

3.2 APPLICABLE MANUALS FOR SYSTEM MANAGERS

NOTEBOOK 1

1. Introduction to DECsystem-10 Software (Section 4.1)
2. Master Software Glossary (Section 4.1)
3. Introduction to Timesharing (Section 4.1)
4. Getting Started With DECsystem-10 (Section 4.1)

NOTEBOOK 2

1. Operating System Commands (Section 4.2)

GUIDE TO APPLICABLE MANUALS

NOTEBOOK 11

1. SOUP - Software Updating Package (Section 4.11)

NOTEBOOK 12

Programming Specifications¹

1. FACT - A Brief Description of the Contents of FACT.SYS, the Accounting Systems Record File (Section 4.12)

NOTEBOOK 13

1. NEW602 - New Features and Improvements Contained in the 6.02 Monitor (Section 4.13)
2. REACT - Program for Maintaining Administrative Control File (Section 4.13)
3. PERF - System Performance Evaluation Package (Section 4.13)
4. SCHED - Program Logic Manual for Scheduler and Swapper (Section 4.13)
5. SIMPGK - Simulation Package for System Testing (Section 4.13)
6. SYSERR Manual (Section 4.13)
7. RSX-20F System Specifications (Section 4.13)

NOTEBOOK 14

1. Monitor Installation Guide (Section 4.14)
2. Networks Software Installation Guide (Section 4.14)
3. IBM Emulation/Termination DN61: 2780/3780 (Section 4.14)
4. Guides to 6.01 - A System Administrator's Guide to 6.01, A User's Guide to 6.01 (Section 4.14)
5. Crash Analysis Guide (Section 4.14)

NOTEBOOK 15

1. ADMCON - Administrative Controls (Section 4.15)
2. RUNREA - Running REACT (Section 4.15)
3. SYSINF - [System] Info Procedures (Section 4.15)
4. PCS-10/20 Installation Guide (Section 4.15)
5. PCS-10/20 Project Control System Reference Manual (Section 4.15)

NOTEBOOK 16

1. TOPS-10 Monitor Installation Guide for the DECSYSTEM-2020

¹ Specifications are intended to guide the TOPS-10 customer in instituting similar programming projects at his own installation.

GUIDE TO APPLICABLE MANUALS

3.3 APPLICABLE MANUALS FOR SYSTEM PROGRAMMERS

NOTEBOOK 6

1. Hardware Reference Manual Volume 1 (Section 4.6)
2. Hardware Reference Manual (Section 4.6)

NOTEBOOK 7

1. MACRO Assembler Reference Manual (Section 4.7)

NOTEBOOK 5

1. Monitor Calls (Section 4.5)

NOTEBOOK 2

1. Operating System Commands (Section 4.2)
2. Networks Programmer's Guide and Reference Manual (Section 4.2)
3. DN92 Remote Station User's Guide (Section 4.2)
4. DN200 Remote Station Guide (Section 4.2)

NOTEBOOK 3

1. SOS User's Guide (Section 4.3)
2. SOS Reference Manual (Section 4.3)
3. Introduction to TECO (Section 4.3)
4. TECO Reference Manual (Section 4.3)

NOTEBOOK 4

1. MPB Operation and System Programming Technique (Section 4.4)
2. Galaxy Operation and System Programming Procedures (Section 4.4)

NOTEBOOK 14

1. BACKUP - Program for Reading Distribution Tapes (Section 4.14)
2. CHK11 - CHK11 Reference Manual (Section 4.14)
3. FILDDT - Program for Examining Monitor Without Interrupting Timesharing (Section 4.14)
4. FNDBLK - Program for Determining the Physical Address of a Block Within a Disk File (Section 4.14)
5. MONTST - Instructions for TOPS-10 Monitor Testing (Section 4.14)
6. MULTI - Souping Parallel Monitor Development Testing (Section 4.14)

GUIDE TO APPLICABLE MANUALS

7. PATMON - Patching and Debugging the Monitor with DDT (Section 4.14)
8. Monitor Table Descriptions (Section 4.14)
9. IBM Emulation/Termination DN61: 2780/3780 (Section 4.14)
10. Crash Analysis Guide (Section 4.14)

NOTEBOOKS 12 and 13

Programming Specifications¹

1. All of the specifications in Notebooks 12 and 13 apply to the work of System Programmers. Select the particular specifications that apply to your installation.

NOTEBOOK 10

1. CREF - Cross Reference Listing (Section 4.10)
2. DDT - Dynamic Debugging Technique (Section 4.10)

NOTEBOOK 11

1. FILEX - File Transfer Program (Section 4.11)
2. LINK Programmer's Reference Manual (Section 4.11)
3. MAKLIB User's Guide (Section 4.11)
4. PIP - Peripheral Interchange Program (Section 4.11)
5. SORT/MERGE User's Guide (Section 4.11)
6. SOUP - Software Updating Package (Section 4.11)

NOTEBOOK 15

1. Operator's Guide (Section 4.15)
2. Operator's Guide (KL Series) (Section 4.15)
3. MEMPAR - Memory Parity Error Procedures (Section 4.15)
4. TWICE - Program to Define and Refresh Private File Structures Under Timesharing (Section 4.15)

3.4 APPLICABLE MANUALS FOR HIGHER-LEVEL LANGUAGE USERS

NOTEBOOK 1

1. Introduction to DECsystem-10 Software (Section 4.1)

¹ Specifications are intended to guide the TOPS-10 customer in instituting similar programming projects at his own installation.

GUIDE TO APPLICABLE MANUALS

2. Master Software Glossary (Section 4.1)
3. Introduction to Timesharing (Section 4.1)
4. Getting Started With DECsystem-10 (Section 4.1)
5. Getting Started With TOPS-10 Commands (Section 4.1)

NOTEBOOK 2

1. Operating System Commands (Section 4.2)

NOTEBOOK 3

1. SOS User's Guide (Section 4.3)
2. Introduction to TECO (Section 4.3)
3. SOS Reference Manual (Section 4.3)
4. TECO Reference Manual (Section 4.3)

NOTEBOOK 4

1. Beginner's Guide to Multiprogram Batch (Section 4.4)
2. MPB Reference Manual (Section 4.4)
3. MPB Operation and System Programming Technique (Section 4.4)
4. Galaxy Batch Reference Manual (Section 4.4)
5. Galaxy Operation and System Programming Procedures (Section 4.4)

NOTEBOOK 7

1. ALGOL Programmer's Guide (Section 4.7)
2. BASIC Conversational Language Manual (Section 4.7)

NOTEBOOK 8

1. BLISS-10 Programmer's Reference Manual (Section 4.8)
2. COBOL-68 Language Reference Manual (Section 4.8)
3. COBOL User's Guide (Section 4.8)
4. COBOL Utilities Manual (Section 4.8)

NOTEBOOK 9

1. COBOL-74 Language Manual (Section 4.9)

NOTEBOOK 10

1. FORTTRAN-10 Programmer's Reference Manual (Section 4.10)
2. Science Library and FORTRAN Utility Subprograms (Section 4.10)

GUIDE TO APPLICABLE MANUALS

3. CREF - Cross Reference Listing (Section 4.10)
4. DDT - Dynamic Debugging Technique (Section 4.10)

NOTEBOOK 11

1. FILEX - File Transfer Program (Section 4.11)
2. LINK Reference Manual (Section 4.11)
3. MAKLIB User's Guide (Section 4.11)
4. PIP - Peripheral Interchange Program (Section 4.11)
5. RUNOFF - Getting Started With RUNOFF (Section 4.11)
6. SORT/MERGE User's Guide (Section 4.11)

NOTEBOOK 13

1. SYMSMG - System Messages (Section 4.13)

NOTEBOOK 14

1. BACKUP - Program for Reading Distribution Tapes (Section 4.14)

NOTEBOOK 15

1. PCS-10/20 Project Control System Reference Manual (Section 4.15)

3.5 APPLICABLE MANUALS FOR ASSEMBLY LANGUAGE USERS

NOTEBOOK 7

1. MACRO Assembler Reference Manual (Section 4.7)

NOTEBOOK 5

1. Monitor Calls (Section 4.5)

NOTEBOOK 2

1. Operating System Commands (Section 4.2)

NOTEBOOK 3

1. TECO Reference Manual (Section 4.3)
2. SOS User's Guide (Section 4.3)

NOTEBOOK 10

1. CREF - Cross Reference Listings (Section 4.10)
2. DDT - Dynamic Debugging Technique (Section 4.10)

GUIDE TO APPLICABLE MANUALS

NOTEBOOK 11

1. FILEX - File Transfer Program (Section 4.11)
2. LINK - Programmer's Reference Manual (Section 4.11)
3. MAKLIB User's Guide (Section 4.11)
4. PIP - Peripheral Interchange Program (Section 4.11)
5. SORT/MERGE User's Guide (Section 4.11)
6. SOUP - Software Updating Package (Section 4.11)

NOTEBOOK 13

1. SYMSMSG - System Messages (Section 4.13)

3.6 APPLICABLE MANUALS FOR BATCH USERS

NOTEBOOK 1

1. Introduction to DECSYSTEM-10 Software (Section 4.1)
2. Master Software Glossary (Section 4.1)

NOTEBOOK 2

1. Operating System Commands (Section 4.2)

NOTEBOOK 7

1. MACRO Assembler Reference Manual (Section 4.7)
2. ALGOL Programmer's Guide (Section 4.7)
3. BASIC Conversational Language Manual (Section 4.7)

NOTEBOOK 8

1. BLISS-10 Programmer's Reference Manual (Section 4.8)
2. COBOL-68 Language Reference Manual (Section 4.8)
3. COBOL User's Guide (Section 4.8)
4. COBOL Utilities Manual (Section 4.8)

NOTEBOOK 9

1. COBOL-74 Language Manual (Section 4.9)

NOTEBOOK 10

1. FORTTRAN-10 Programmer's Reference Manual (Section 4.10)

NOTEBOOK 4

1. Beginner's Guide to Multiprogram Batch (Section 4.4)
2. Getting Started with Batch (Section 4.4)

GUIDE TO APPLICABLE MANUALS

3. MPB Reference Manual (Section 4.4)
4. MPB Operation and System Programming Techniques (Section 4.4)
5. GALAXY Batch Reference Manual (Section 4.4)
6. GALAXY Operation and System Programming Procedures (Section 4.4)

3.7 APPLICABLE MANUALS FOR OPERATORS

NOTEBOOK 1

1. Introduction to DECsystem-10 Software (Section 4.1)
2. Master Software Glossary (Section 4.1)
3. Getting Started With DECsystem-10 (Section 4.1)
4. Getting Started With TOPS-10 Commands (Section 4.1)

NOTEBOOK 2

1. Operating System Commands (Section 4.2)
2. Networks Programmer's Guide and Reference Manual (Section 4.2)
3. DN92 Remote Station User's Guide (Section 4.2)
4. DN200 Remote Station Guide (Section 4.2)

NOTEBOOK 3

1. SOS User's Guide (Section 4.3)
2. SOS Reference Manual (Section 4.3)

NOTEBOOK 15

1. Operator's Guide (Section 4.15)
2. Operator's Guide (KL Series) (Section 4.15)
3. ADMCON - Administrative Controls (Section 4.15)
4. MEMPAR - Memory Parity Error Procedures (Section 4.15)
5. RUNREA - Running REACT (Section 4.15)
6. SYSINF - [System] Info Procedures (Section 4.15)
7. TWICE - Program to Define and Refresh Private File Structures Under Timesharing (Section 4.15)

NOTEBOOK 16

1. TOPS-10 Monitor Installation Guide for the DECSYSTEM-2020 (Section 4.16)

GUIDE TO APPLICABLE MANUALS

2. TOPS-10 Operator's Guide for the DECSYSTEM-2020 (Section 4.16)

NOTEBOOK 4

1. Beginner's Guide to Multiprogram Batch (Section 4.4)
2. Getting Started with Batch (Section 4.4)
3. MPB Operation and System Programming Techniques (Section 4.4)
4. GALAXY Operation and System Programming Procedures (Section 4.4)

NOTEBOOK 11

1. PIP - Peripheral Interchange Program (Section 4.11)

NOTEBOOK 12

Programming Specifications¹

1. BOOTS - Level D Bootstrap Program (Section 4.12)
2. BOOT11 - PDP-11 Bootstrap From PDP-10 (Section 4.12)
3. DIRECT - Program for Producing Directory Listings (Section 4.12)
4. DTBOOT - DEctape Bootstrap (Section 4.12)
5. DTELDR - Load/Dump Utility for PDP-11 from DECsystem-10 over DTE (Section 4.12)
6. FACT - A Brief Description of the Contents of FACT.SYS, the Accounting System's Records File (Section 4.12)
7. GRIPE - Program for Submitting User Complaints (Section 4.12)
8. HELPER - Program That Prints Help Messages (Section 4.12)
9. INITIA - System Initialization Program (Section 4.12)
10. KJOB - Program for Confirming Dispositions of Files at LOGOUT Time (Section 4.12)
11. LOGIN - Program for Gaining Access to the System (Section 4.12)

NOTEBOOK 13

1. NETLDR - Remote Node Load and Dump Utility (Section 4.13)
2. NEW602 - New Features in the 6.02 Monitor (Section 4.13)
3. OMOUNT - Program for Operator Interfacing for Removable Media Requests (Section 4.13)

¹ Specifications are intended to guide the TOPS-10 customer in instituting similar programming projects at his own installation.

GUIDE TO APPLICABLE MANUALS

4. OPSER - Operator Service Program (Section 4.13)
5. PLEASE - Program for User-Operator Conversations (Section 4.13)
6. QUEUE and QMANGR - Programs for Creating, Listing, and Modifying Queue Entries (Section 4.13)

NOTEBOOK 14

1. Monitor Installation Guide (Section 4.14)
2. BACKUP - Program for Reading Distribution Tapes (Section 4.14)
3. Networks Software Installation Guide (Section 4.14)
4. DMPREF - DUMP Reference Manual (Section 4.14)
5. IBM Emulation/Termination DN61: 2780/3780 (Section 4.14)
6. Crash Analysis Guide (Section 4.14)

3.8 APPLICABLE MANUALS FOR NONPROGRAMMER USERS

NOTEBOOK 1

1. Getting Started With DECsystem-10 (Section 4.1)
2. Getting Started With TOPS-10 Commands (Section 4.1)

NOTEBOOK 3

1. SOS User's Guide (Section 4.3)
2. Introduction to TECO (Section 4.3)
3. SOS Reference Manual (Section 4.3)
4. TECO Reference Manual (Section 4.3)

NOTEBOOK 11

1. RUNOFF - Getting Started with RUNOFF (Section 4.11)
2. PIP - Peripheral Interchange Program (Section 4.11)

NOTEBOOK 15

1. PCS-10/20 Project Control System Reference Manual (Section 4.15)

CHAPTER 4

WHAT EACH MANUAL CONTAINS

This chapter lists the TOPS-10 software manuals, and gives a brief synopsis of each one. The software version number (such as, Vnn) and the order code (such as, DEC-xx-xxxxx-x-x), which is an identification number to be used when ordering additional copies, are in parentheses following the manual title.

4.1 NOTEBOOK 1

Introduction to DECsystem-10 Software (DEC-10-MZDC-D)

This manual is an overview of TOPS-10 software. Chapter 1 introduces the components of TOPS-10 as well as the concept of multimode computing. Chapter 2 discusses the languages, utilities, and applications. Chapter 3 describes the essential aspects of the resident operating system. Appendix A is a survey of the TOPS-10 hardware.

Master Software Glossary (DEC-10-XMSG-A-D)

This glossary contains definitions of TOPS-10 software terms.

Introduction to Timesharing (DEC-10-MTWB-D)

This manual discusses the uses, the operation, and the components of a timesharing system.

Getting Started With DECsystem-10 (DEC-10-XGSDA-A-D)

This manual introduces you to TOPS-10. This document has colored dividers that mark its sections; each divider outlines procedures for accomplishing specific tasks.

Getting Started With TOPS-10 Commands (DEC-10-OTSCA-A-D)

This manual is a simplified guide for the timesharing user of TOPS-10. The commands described in this document are the monitor commands most useful to the beginning user.

WHAT EACH MANUAL CONTAINS

4.2 NOTEBOOK 2

Operating System Commands Manual (V6.03) (AA-0916C-TB)
Update (AD-0916C-T1)

This manual is a complete reference document describing the commands available in the TOPS-10 operating system. Chapter 1 presents all the commands available to the user and introduces the various components of the operating system that interface with the user. Chapter 2 is a detailed description of the commands processed by the command language interpreter. Chapter 3 lists the TOPS-10 error messages and error codes along with descriptive information on how to correct errors. The appendixes contain supplementary reference material and tables.

Networks Programmer's Guide and Reference Manual (DEC-10-ONPGA-A-D)
Update (DEC-10-ONPGA-A-DN1)

This manual describes the networks facilities available to TOPS-10 users. The reader is assumed to be an experienced TOPS-10 programmer with a working knowledge of MACRO-10 or a higher-level language.

DN92 Remote Station User's Guide (AA-5711A-TB)

This guide is intended for users and station operators who are at remote sites, distant from the host computer. The guide includes an "Introduction" in Chapter 1, "DN92 Operator Procedures" in Chapter 2, "Station Peripherals" in Chapter 3, and "Trouble Shooting" in Chapter 4. The appendixes contain specifies on certain DN92 registers and the hardware error messages.

DN200 Remote Station Guide (CHK11 V3(35), DDT11 V4(14), DN200 V17(67), NETLDR V3(127)) (AA-D783A-TB)

This guide provides information on operating the DN200 remote station and discusses troubleshooting activities. Chapter 1 is an introduction to the use of the remote station. Chapter 2 describes the startup procedures. Chapter 3 describes the station peripherals. Chapter 4 explains how to troubleshoot for problems. The appendixes describe ROM switches, the NETLDR program, and how to read dump files and punched card code.

4.3 NOTEBOOK 3

Introduction to TECO (V23) (DEC-10-UTECA-A-D)

This manual describes only the basic commands of TECO, a text editor. This manual is designed for beginning users of TECO.

TECO Reference Manual (V23B) (DEC-10-UTPRA-A-D)
Update (DEC-10-UTPRA-A-DN1)

This manual is a complete reference for advanced TECO users. Chapter 1 is an introduction to TECO. Chapter 2 discusses the concepts of TECO. Chapter 3 describes the various commands. Chapter 4 discusses techniques for manipulating files. Chapter 5 explains user errors.

WHAT EACH MANUAL CONTAINS

SOS User's Guide (V1) (DEC-10-USOSA-A-D)

This manual explains the SOS editor. Chapter 1 describes how to get your programs, data, or text into a file. Chapter 2 tells you how to run a program. Chapters 3 through 5 describe how to modify files. Chapter 6 explains how to save a file and end SOS execution.

SOS Reference Manual (V21(134)+) (AA-D598A-TB)

This manual is a complete reference for the SOS text editor, a TOPS-10 utility program. It is written for the beginner who is familiar with other text editors, as well as for the experienced SOS user needing reference material for the SOS program.

4.4 NOTEBOOK 4

Beginner's Guide to Multiprogram Batch (SPRINT-10 V2, BATCON V12) (DEC-10-OMPBA-C-D)

This manual introduces you to Batch. Chapter 1 tells you what Batch is and how to use it. Chapter 2 describes how to enter a job to Batch from cards, and Chapter 3 describes how to enter a job to Batch from a terminal. Chapter 4 explains how to interpret the printed output. Chapter 5 includes sample jobs that are run through Batch from cards and from a terminal.

MPB Reference Manual (SPRINT-10 V2, BATCON V12) (DEC-10-OMBRA-A-D)

This manual is a complete reference document describing the commands that control jobs under the Multiprogram Batch System. Chapter 1 contains a brief introduction to the Multiprogramming Batch System and its various components. Chapter 2 describes several methods of submitting jobs to the Batch system. Chapter 3 gives a detailed description of each of the SPRINT-10 commands and describes the output produced by SPRINT-10. Chapter 4 contains a discussion of the Batch controller. Chapter 5 contains sample programs. Chapter 6 lists the Batch system error messages.

MPB Operation and System Programming Techniques (SPRINT-10 V2, BATCON V12, SPOOL V6) (DEC-10-OMBOA-A-D)

This manual describes the operator commands necessary for controlling the programs which comprise the Multiprogram Batch System. Chapter 1 describes the operator commands for BATCON. Chapter 2 describes the commands for the output spoolers; and Chapter 3 describes the SPRINT-10 operator commands. Chapter 4 lists error messages alphabetically. Chapter 5 contains instructions for installing the MPB system.

Getting Started with Batch (TOPS-10) (V4) (AA-D303A-TB)

This manual is written for the person who has some knowledge of Batch processing, or who is familiar with a programming language or with card processing on other systems. Chapter 1 is an introduction. Chapter 2 describes how to enter jobs to Batch from cards and Chapter 3 describes how to enter jobs to Batch from a terminal. Chapter 4 explains how to interpret the printed output. Chapter 5 includes sample jobs that are run through Batch from cards and from a terminal.

WHAT EACH MANUAL CONTAINS

GALAXY Batch Reference Manual (V2) (DEC-10-OGBRA-A-D)
Update (DEC-10-OGBRA-A-DN1)

This manual is a complete reference document describing the commands for controlling jobs under the GALAXY Batch System. Chapter 1 contains a brief introduction to the GALAXY system and its various components. Chapter 2 describes several methods for submitting jobs to the Batch system. Chapter 3 gives a detailed description of each of the SPRINT commands. Chapter 4 is a discussion of the Batch Controller. Chapter 5 contains sample programs. Chapter 6 lists the GALAXY Batch system error messages.

GALAXY Operation and System Programming Procedures (V2)
(DEC-10-OGBOA-A-D)
Update (DEC-10-OGBOA-A-DN1)

The first part of this manual is intended primarily for computer console operators; it tells how to run the programs in the GALAXY Batch system and includes commands, error recovery procedures, and helpful hints. The second part of this manual is intended primarily for the system programming staff or the operations manager. It contains instructions for the installation of the GALAXY system under an already running TOPS-10 monitor.

4.5 NOTEBOOK 5

Monitor Calls Manual (V6.03) (AA-0974C-TB)
Update (AD-0974C-T1)

This manual is a complete reference guide to monitor calls in assembly language programs. The manual is intended for experienced assembly language programmers.

4.6 NOTEBOOK 6

Hardware Reference Manual (Volume I) (EK-10/20-HR-001)
(KA/KI) (DEC-10-XSRMA-A-D)
Update (KL) (DEC-10-XSRMA-A-DN1)

This manual explains the machine-language programming and operation of TOPS-10. Chapter 1 discusses the general characteristics of the system. Chapter 2 covers all phases of the central processor, including the general principle of I/O programming and handling the interrupt system. The remaining chapters are devoted to the various categories of peripheral equipment. Chapters 3 and 4 cover the simple character-oriented devices that use form paper, paper tape, and cards. Chapter 5 treats the data interfaces that are employed in the tape, disk, and data-communication systems. Chapter 6 discusses the various magnetic tapes and tape formats. Chapter 7 explains disks and drums. Chapter 8 discusses data communications.

WHAT EACH MANUAL CONTAINS

4.7 NOTEBOOK 7

MACRO Assembler Reference Manual (V53) (AA-C780C-TB)

This manual is intended as a reference and is written for the programmer with some knowledge of an assembler or an assembly language. Chapter 1 introduces the MACRO-10 assembler and explains the programming conventions, definitions of terms, character interpretations, numbers, and expressions. Chapter 2 discusses MACRO-10 statements. Chapter 3 describes the use of MACROS. Chapter 4 discusses MACRO-10 commands and interactive use. Chapter 5 explains assembler output. Chapter 6 explains pseudo-ops. Chapter 7 describes errors and messages. The appendixes include program examples, a functional list of pseudo-ops, and storage allocation.

AID Conversational Language Manual (V20A) (DEC-10-NAIDA-A-D)

This manual describes AID, Algebraic Interpretive Dialogue, which provides the user with a facility to create external files for storage of subroutines and data for subsequent recall and use.

ALGOL Programmer's Guide (V6) (AA-0196C-TK)

This manual gives a general definition of ALGOL and explains its various components. It describes the program structure and the constants, expressions, and declarations used. It also explains the construction and execution of programs. This manual is not a tutorial on ALGOL.

BASIC Conversational Language Manual (V17D) (DEC-10-LBLMA-A-D)

This manual introduces BASIC and its restrictions and characteristics. It explains the different variables and steps in running a BASIC program. It also discusses functions, subroutines, and error messages.

4.8 NOTEBOOK 8

BLISS-10 Programmer's Reference Manual (V4) (DEC-10-LBRMA-A-D)

This manual contains the complete specifications of the BLISS-10 language syntax and semantics as processed by version 4 of the BLISS-10 compiler. The appendixes include BLISS-10 examples and error messages.

COBOL-68 Language Reference Manual (V12) (AA-5057A-TK)

This manual explains how to use COBOL on TOPS-10. Chapter 1 describes TOPS-10 COBOL. Chapter 2 discusses language elements and conventions used in a COBOL program. Chapters 3 through 6 detail the four major divisions of a COBOL program. Chapter 7 describes the COBOL library, and Chapter 8 discusses subprograms and LINK overlays.

WHAT EACH MANUAL CONTAINS

COBOL User's Guide (COBOL V5; LIBOL V6) (DEC-10-LCUGA-B-D)

This manual describes COBOL data files, COBOL recording modes, and some of the features of TOPS-10 COBOL. It gives some hints on optimizing COBOL programs. This manual also describes the devices available on TOPS-10. The error messages from the COBOL compiler and the object-time system are included in Appendix A. This manual is not a tutorial.

COBOL Utilities Manual (V10) (DEC-10-LCUTA-A-D)

This manual describes the utility programs that are used with TOPS-10 COBOL programs. Chapter 1 introduces the utility programs. Chapters 2 through 6 describe each program individually - COBDDT, ISAM, LIBARY, RERUN, and CSORT.

4.9 NOTEBOOK 9

COBOL-74 Language Manual (V12) (AA-5059A-TK)

This manual describes COBOL-74 as implemented on the TOPS-10 and TOPS-20 operating systems. Part 1 outlines the topics to be covered in each chapter. Part 2 describes the COBOL-74 compiler and presents the vocabulary and syntax of the language. Part 3 provides the information necessary to use the COBOL system, including performance improvement utilities, and various features of COBOL-74. Part 4 contains appended material. Several appendixes and a glossary of COBOL-74 terms are included.

4.10 NOTEBOOK 10

FORTRAN-10 Programmer's Reference Manual¹ (V5) (AA-0944E-TB)

This manual describes the minimum set of commands necessary to input, edit, and execute FORTRAN programs. It also describes the FORTRAN language as implemented for the FORTRAN-10 Language Processing System.

Science Library and FORTRAN Utility Subprograms Programmer's Reference Manual (DEC-10-SFLE-D)

This document is a concise summary of mathematical function subprograms found in the FORTRAN IV Science Library and FORTRAN Utility Subprograms.

¹ FORTRAN-10 is the newer optimized FORTRAN IV compiler. F40 is the older FORTRAN IV compiler.

WHAT EACH MANUAL CONTAINS

Interactive Query Language User's Guide (V3) (AA-H282A-TK)

This manual describes the features of IQL version 3.0, which is a full data management system with comprehensive input, update, browse, and report capabilities. Chapter 1 explains file handling by IQL. Chapter 2 explains how to access IQL. Chapter 3 explains how to prepare a query file. Chapter 4 explains how to create, update, and read a data file. Chapter 5 explains how to prepare a directory. Chapter 6 explains how to use IQL in a batch job.

CREF - Cross Reference Listing (V47)

This document describes the CREF system program, which produces a sequence-numbered assembly listing followed by one to three tables: one showing cross-reference for all operand-type symbols, another showing cross-reference for all user-defined operators, and another showing the cross-references for all op codes and pseudo-op codes.

DDT - Dynamic Debugging Technique (V36) (DEC-10-UDDTA-A-D)

This document describes the process for interactive debugging and testing of MACRO-10 and FORTRAN programs, and on-line program composition of object programs.

4.11 NOTEBOOK 11

FILEX - File Transfer Program (V16)

This document describes FILEX, a general file-transfer program designed to read and write various DECtape directory and standard disk file formats. FILEX facilitates the transfer of file data having different core image make-up. No processing is done on the data itself except what is needed to convert core image representation.

LINK Reference Manual (V4) (AA-0988C-TB)

This manual is a reference document on the TOPS-10 Linking Loader, LINK. Chapter 1 introduces LINK and describes the two methods of initializing the Linking Loader. Chapter 2 discusses the automatic use of LINK through the COMPIL-class commands. Chapter 3 discusses the direct use of LINK through the R LINK system command. Chapter 4 describes the output from LINK. Chapter 5 describes LINK switches in alphabetical order. Chapter 6 illustrates via examples the many uses of LINK.

LINED - Line Editor for Disk Files (V13A) (DEC-10-ULNDA-A-D)

This document explains the use of LINED to create and edit source program files that are written on disk in ASCII and assigned line sequence numbers.

MAKLIB User's Guide (DEC-10-UMUGA-A-D)

This document describes MAKLIB, a program that manipulates binary files. It explains the command-string format and command switches. This manual also describes commands used to create libraries and commands to manipulate library modules.

WHAT EACH MANUAL CONTAINS

LOADER - Linking Loader Programmer's Reference Manual (V52A) (DEC-10-LLZB-D)

This manual describes the LINKING LOADER, which loads and links relocatable binary programs generated by MACRO-10, COBOL, ALGOL, or FORTRAN IV preparatory to execution and generates a symbol table in core for execution under the Dynamic Debugging Technique (DDT) program.

PIP - Peripheral Interchange Program (V33B) (DEC-10-UPIPA-A-D)

This manual describes the functions provided to the user by the Peripheral Interchange Program (PIP). It explains the PIP command string and its basic elements, standard PIP switches, special PIP switches, PIP error reporting, and PIP error messages.

RUNOFF - Getting Started with RUNOFF (V10) (DEC-10-URUNA-A-D)

This manual is for the person who knows how to create a document with a text editor or Batch system, but knows nothing about RUNOFF. RUNOFF facilitates the preparation of typed or printed manuscripts by performing line justification, page numbering, titling, indexing, and formatting as directed by the user.

SORT/MERGE User's Guide (V4) (AA-0997C-TB)

This document describes the SORT/MERGE utility program. Chapter 1 introduces the SORT/MERGE program, including the hardware and software environment. Chapter 2 explains how to use SORT/MERGE. Chapter 3 describes the switches available in SORT/MERGE. Chapters 4 and 5 provide examples and messages.

SOUP (Software Updating Package) Programmer's Reference Manual (V3) (DEC-10-YUFA-D)

This manual describes the program which constitutes the Software Updating Package (SOUP). Chapter 1 introduces SOUP, describes the component programs, and gives the equipment requirements. Chapter 2 describes the updating of TOPS-10 software that has not been modified by the user. Chapters 3 through 6 describe the updating of user versions of system files. Chapter 3 gives the format of the correction file used in the updating process. Chapters 4 and 5 describe the various options of the SOUP programs. Chapter 6 shows examples of updating files. The appendixes summarize the switches and list the error messages.

4.12 NOTEBOOK 12

PROGRAMMING SPECIFICATIONS¹

ALCFIL - Program for Allocating File Space (V7)

This document describes a program used to allocate space on the disk.

¹ Specifications are intended to guide the TOPS-10 customer in instituting similar programming projects at his own installation.

WHAT EACH MANUAL CONTAINS

BATCON - Multi-program Batch Controller (V12)

This document discusses the responsibility of BATCON in the function of the Multiprogram Batch System.

BOOTS - Level D Bootstrap Program (V15)

This document explains a bootstrap program that is designed primarily for loading and saving 5-series monitors onto TOPS-10 rotating memory devices.

BOOT11 - PDP-11 Bootstrap From DECSYSTEM-10 (V4A) (44)

This document explains a bootstrap program designed to load or dump programs from the DECSYSTEM-10 into a PDP-11 through the DECSYSTEM-10/PDP-11 Data Link.

CREF - Input Formats for CREF (V52)

This document discusses the two input formats acceptable to CREF. One is produced by early versions of MACRO, and the other is produced by current versions of MACRO.

DAEMON - Swappable Monitor Extensions (V14)

This document describes DAEMON, which is intended to perform monitor functions that require significant amounts of code and/or table space, and that do not require particularly fast response.

DIRECT - Program for Producing Directory Listings (V3)

This manual describes a program designed to list disk, magnetic tape, and DECTAPE directories.

DISKIO - DISK I/O Processing

This document describes I/O processing on the disk. The document is written in flow chart form.

DMPFIL - Program for Preparing an Octal Dump of a User File (V6)

This document describes DMPFIL, a file dump program. DMPFIL reads a file and prepares a printable version of an octal dump of the file.

DSKLST - Program for Listing Disk File Structures (V32A)

This document describes DSKLST, a program that compiles and prints an analysis of the contents and the current status of the system's disk line storage devices.

DSKRAT - Disk File Damage Assessment Program (V10)

This document describes DSKRAT, a damage-assessment program for LEVEL D file structures.

WHAT EACH MANUAL CONTAINS

DTBOOT - DEctape Bootstrap (V3)

This document explains a bootstrap program intended to transfer programs.

DTELDR - Load/Dump Utility for PDP-11 from DECsystem-10 over DTE (V1(21))

This document describes a bootstrap program designed to load programs from the DECsystem-10 into a PDP-11, and dump programs from the PDP-11 into a DECsystem-10 through the DTE-20 10/11 Data Interface.

DUMP - Program To Output Selected Portions of a File In ASCII (V4)

This document describes a program to provide printable dumps of data files in modes and forms selected by the user, with particular emphasis on core-image files.

ERROR - Description of the Contents of the File ERROR.SYS (DAEMON V12, 6.02)

This document discusses the ERROR.SYS file, created by DAEMON from information stored in the monitor concerning performance and errors of system hardware.

FORTAN IV (F40) Programmer's Reference Manual (V27) (DEC-10-LFLMA-B-D)

This manual describes the specific statements and features of the FORTRAN IV (F40) language for the TOPS-10.

FACT - A Brief Description of the Contents of FACT.SYS, the Accounting System Records File

This document describes the FACT.SYS file, which contains a transaction record of the activity on a TOPS-10 timesharing system.

FILDAE - File Daemon

This document describes the File Daemon, which provides extended file protection. The File Daemon allows any user to specify who can and who cannot access his files.

FILTST - Test Program to Provide File-Handling Tests for Five-Series Monitor (V6)

This document describes FILTST, a MACRO source program that defines a MACRO-level language used to write procedures that test file-handling capabilities.

GRIPE - Program for Submitting User Complaints (V3)

This document explains GRIPE, a program that enables users to record comments and complaints.

WHAT EACH MANUAL CONTAINS

HELPER - Program That Prints Help Messages (V4)

This document describes the subroutine HELPER, which is used to output help texts.

INITIA - System Initialization Program (V7) (146)

This document describes a program used to initialize terminals each time a system is brought up, each time a dataset is activated, and each time a remote station enters startup.

KJOB - Program for Confirming Disposition of Files at LOGOUT Time (V45A)

This document describes KJOB, a program the user invokes when he has finished running his program on the TOPS-10.

KIFORM - KS10 Disk Formatter

This document describes KIFORM, a disk formatter program designed to run stand-alone on any DECSYSTEM-2020 KS10/RH11 RP06/RM03 system.

LIPS - Laboratory Interconnection Programming System

This document discusses LIPS, which is designed to connect a host computer with a set of external processors via a multiplexed data channel.

LOGIN - Program for Gaining Access to the System (V57)

This document describes LOGIN, the system program through which all users gain access to the TOPS-10 timesharing system.

LOGOUT - Program for Getting Off the System (V5.03)

This document describes the system program by which users get off the system.

LOKUUO - Mechanism for Locking Jobs in Core (V5.06)

This document describes a program for locking certain classes of privileged jobs in core.

METER - Mechanism for System Performance Metering (V5.06)

This document describes METER, a program used to dynamically select and collect performance statistics from the monitor.

MONERR - Overview of Monitor Error Reporting (V5.06) SYSERR V1, DEAMON V7)

This document gives an overview of the Monitor Error Reporting System and references the appropriate detailed documentation.

WHAT EACH MANUAL CONTAINS

MULTI-PROCESSING Functional Specification (V1)

This document describes the features of the MASTER/SLAVE Multiprocessing System.

4.13 NOTEBOOK 13

NETLDR - Remote Node Load and Dump Utility (V2A(110))

This document describes a bootstrap program designed to perform downline loads to remote stations from the host computer, or upline dumps from remote stations to the host computer.

NEW602 - New Features for the 6.02 Monitor (V6.02)

This document describes the new features in the 6.02 monitor.

OMOUNT - Program for Operator Interfacing for Removable Media Requests (V26)

This document describes OMOUNT, a program run by the operator as an OPSER subjob in order to service requests generated by UMOUNT and to perform services commanded by the operator.

OPSER - Operator Service Program (V5A)

This document explains OPSER, a program that facilitates multiple job control from a single terminal by allowing the operator to initiate several jobs from his terminal.

PERF - System Performance Evaluation Package

This document describes the TOPS-10 System Performance Evaluation Package. It consists of monitor code that allows you to collect data, a user-mode program that allows you to record the data on disk, and a number of user-mode programs that allow you to produce a graph, reports, and summaries.

PLEASE - Program for User-Operator Conversations (V11)

This document describes the PLEASE command, which is available to provide nonconflicting communication between an operator and system users via a terminal.

QUEUE AND QMANGR - Programs for Creating, Listing, and Modifying Queue Entries (QUEUE V5, QMANGER V4)

This document describes the actions and use of the Multiprogramming Batch Queue manipulator.

QUOLST - Programs for Printing Disk Quotas (V4)

This document discusses QUOLST, a program that prints the user's quotas for each file structure in his search list and the number of free blocks available in each file structure.

WHAT EACH MANUAL CONTAINS

REACT - Program for Maintaining Administrative Control Files (V31)

This document describes REACT, a program designed for maintaining administrative control files. REACT can be used to create, modify, delete, or list entries in a file.

REATTA - Program to Reattach a Job to Any Available Terminal (V3)

The document describes REATTA, a program that allows any user to move his job from one terminal to another.

RIBEXT - Extended RIBS for 5-Series Monitor (V5.06)

This document explains the extended file Retrieval Information Blocks for 5-Series Monitor.

RSX-20F System Specifications (V TOPS-10 6.03A, TOPS-20 3A) (AA-H212A-TK)

This document is a preliminary collection of information about the RSX-20F front-end operating system. It represents an interim step in the process of publishing an RSX-20F System Reference Manual. Chapter 1 contains introductory material on RSX-20F and the front-end file system. Chapter 2 describes the structure of RSX-20F and the management and scheduling of system tasks. Chapter 3 describes RSX-20F utility programs. Chapter 4 contains information on error detection, error recovery, and error reporting. Chapter 5 describes DTE20 hardware operations. The appendixes contain information on front-end tasks, a procedure for transferring files between TOPS-10 and RSX-20F, and a list of RSX-20F stop codes.

RTTRP - Real-Time Trapping Program (V5.06)

This document describes the RTTRP program, which allows timesharing users to connect real-time devices on the priority-interrupt system, and respond to these devices at interrupt level from their user programs.

RUNOFF - Text Justifying Program (V78)

This document discusses RUNOFF, a program that facilitates the preparation of typed or printed manuscripts, such as memos, manuals, or documents.

SCHED - Program Logic Manual for Scheduler and Swapper

This document describes the TOPS-10 scheduler developed by the Western Michigan University Academic Computer Center. The TOPS-10 scheduler provides several response levels for long-term, short-term, and high-priority computing needs.

SCNSER - Level D Scanner Service (V5.06)

This document describes SCNSER, which is a scanner service for the TOPS-10 timesharing monitor.

WHAT EACH MANUAL CONTAINS

SCRIPT - Program for Simulating Many Users (V1)

This document explains the SCRIPT program, which sends predetermined sequences of characters over multiple pseudo-teletypes to simulate a load on the system for testing, measurement, and analysis.

SETSRC - Program for Printing and Changing Job Search List (V11)

This document describes the SETSRC program, through which the user can manipulate a job's search list.

SIMPKG - Simulation Package for System Testing

This document describes a job simulation package developed by the Academic Computer Center at Western Michigan University. The package consists of a master control program and a number of user jobs that simulate various types of user activity.

SPOOL - Programs for Transferring Files From Disk to Low-Speed Devices (V4)

This document discusses the SPOOL program, which reads the system queue files and directs output to the proper device.

STOPCD - List of Monitor Error Stops (V6.03A)

This document describes the different types of error stops in the monitor and then lists all the error stops that can occur.

STRLIB - FORTRAN Oriented String Manipulation Library (V1)

This document describes the character-string manipulation facilities provided for the FORTRAN-10 user by the string manipulation package, STRLIB.

SYSMSG - System Messages

This manual is a complete alphabetical listing of all messages output on the TOPS-10.

SYSTAT - Disk and Drum Performance Summary Printed by SYSTAT and SYSDPY (SYSTAT V471, SYSDPY V431, V5.06)

This document describes SYSTAT, a program that outputs to the user's terminal the status information on the system as a whole, on selected aspects of the system, or on a selected job or set of jobs.

WILD - Wild Card Lookup Routine (V5)

This document describes WILD, a subroutine called from any program that needs to perform wildcard LOOKUPS or ENTERs on any device.

WHAT EACH MANUAL CONTAINS

TOPS-10 and TOPS-20 SYSERR Manual (6.03, SYSERR V10A) (AA-D533A-TK)

This document describes the error detection and recovery procedure, SYSERR. Chapter 1 is an overview and introduction. Chapter 2 describes error detection, recovery and reporting under TOPS-10. Chapter 3 explains how to run SYSERR on TOPS-20. The appendixes list the error messages and assembly instructions.

4.14 NOTEBOOK 14

Monitor Installation Guide (DEC-10-OMIGA-A-D) Update (DEC-10-OMIGA-A-DN1)

This manual describes the steps you must take to install the 6.03 monitor.

Networks Software Installation Guide (AA-5156A-TB) Update (V6.03A) (AD-5156C-T1)

This manual is for those responsible for installing TOPS-10 networks software. Chapter 1 is an introduction to TOPS-10 networks configurations and an overview of installation procedures. Chapter 2 describes the DIGITAL-supplied software. Chapter 3 describes the generation of a tailored configuration for each communication node in the network. Chapter 4 covers the assembly of the software. Chapter 5 contains the loading procedures for the communications front ends and the remote nodes. Chapter 6 describes DDT11, a dynamic debugging technique for PDP-11 based network nodes.

IBM Emulation/Termination DN61: 2780/3780 (DN61 V1, GALAXY V2) (AA-D612A-TB)

This manual provides information on the installation, operation, and use of DN61 software. Chapter 1 is an overview of DN61 software. Chapter 2 explains how to install the DN61 software. Chapter 3 describes DN61 user procedures, and Chapter 4 describes DN61 operator procedures. The appendixes describe the DN61 distribution tape, DN61 stop codes, and modems.

BACKUP - Program for Reading Distribution Tapes (V2)

This document describes the general capabilities of BACKUP, a program used to save disk files on magnetic tape, and later to restore any or all of these files back to disk.

CHK11 Reference Manual (DEC-10-CKRMA-A-D)

This manual describes CHK11, a hardware test module for PDP/11 communications systems. This module makes sure that the devices and memory of the system are functioning correctly.

WHAT EACH MANUAL CONTAINS

DMPREF - DUMP Reference Manual (DUMP V4, DAEMON V7)

This manual describes DUMP, a program that converts a file to a man-readable format.

FILDDT - Program for Examining a Monitor Without Interrupting Timesharing (V36)

This document describes FILDDT, which is a modified form of DDT. It looks at or modifies a file on disk, instead of in core memory, to examine or patch a monitor.

FNDBLK - Determining the Physical Address of a Block Within a Disk File

This document describes FNDBLK, a program that determines how to find the physical block number that corresponds to a relative block in a file.

GUIDES TO 6.01 - A System Administrator's Guide to 6.01, a User's Guide to 6.01 monitor

This document contains a System Administrator's Guide and a User's Guide to the 6.01 monitor.

MONTST - Instructions for DECsystem-10 Monitor Testing (V6)

This document describes the test programs used by DIGITAL in systems testing new monitor releases.

MULTI - Souping Parallel Monitor Developments Together

This document describes the use of SOUP in multifile mode to manipulate correction files.

PATMON - Patching and Debugging the Monitor with DDT (DDT V34, 6.03)

This document describes how to patch a monitor with FILDDT under timesharing, or EDDT under timesharing or stand-alone.

Crash Analysis Guide (V6.03A)

(AA-H206A-TB)

This guide describes the corrective or investigative action to take when a system crash occurs. Chapter 1 introduces you to the basic concepts necessary to begin crash analysis. Chapter 2 discusses how to save status information for future analysis. Chapter 3 offers guidelines for analyzing the crash dump file. Chapters 4, 5, and 6 discuss the types of system failures and how to track the causes. Chapters 7 and 8 describe memory locations and CPU registers which contain valuable information for crash analysis. Chapter 9 offers hints on how to patch the monitor. Chapter 10 explains how to examine the stack in analysis.

WHAT EACH MANUAL CONTAINS

Monitor Table Descriptions (V6.01/5.07) (DEC-10-OMTDA-A-D)

This document describes various tables of information within the monitor.

4.15 NOTEBOOK 15

Operator's Guide (V6.02) (DEC-10-ODOGA-B-D)

This manual serves as a task-oriented reference to virtually all facets of the operation of the TOPS-10 and its associated hardware. This document reflects version 6.02 of the monitor.

Operator's Guide (KL Series) (6.03, RSX-20F V6A) (AA-5104A-TB)

Update (AD-5104A-T1)

Update (AD-5104A-T2)

Update (AD-5104A-T3)

Update (AD-5104A-T4)

This document is a procedural text describing the operation of the KL-series TOPS-10 hardware, version 6.03 of the TOPS-10 monitor.

ADMCN - Administrative Controls

This document discusses control of computer access through passwords and project-programmer numbers.

MEMPAR - Memory Parity Error Procedures (V5.05/5.06)

This document describes the procedures that the operator performs when a memory parity error occurs.

RUNREA - Running REACT (V31)

This document describes how to run REACT, a program for maintaining administrative control files.

SYSINF - [System] Info Procedures (V6.01/5.06)

This document describes System INFO, a component of the Inter-Process Communication Facility, which is one of the features of the monitor available to programmers.

TWICE - Program to Define and Refresh Private File Structures Under Timesharing (V5.06)

This document describes TWICE, an adaptation of the monitor's ONCE-Only dialogue program. It can be used to refresh private file structures under timesharing, to set file-structure parameters, or to modify previously set file-structure parameters.

WHAT EACH MANUAL CONTAINS

PCS-10/20 Installation Guide (FORTRAN V5A) (AA-5513A-TK)

This installation guide is written for the system manager of a TOPS-10 or a TOPS-20 operating system. The procedures for building and installing the Project Control System (PCS) and PCS Editor (PED) programs from the distribution medium are described.

PCS-10/20 Project Control System Reference Manual (FORTRAN V5A) (AA-5512A-TK)

This manual introduces the concepts involved in working with PCS-10/20, an application program that is written in FORTRAN and runs under the TOPS-10 and TOPS-20 operating systems. This manual presents the descriptions and instructions for using the program.

4.16 NOTEBOOK 16

TOPS-10 Monitor Installation Guide for the DECSYSTEM-2020 (V6.03A) (AA-D978A-TB)

This manual describes the steps necessary to install the 6.03A monitor on the KS10 processor. Chapter 1 is an introduction describing the installation tools and procedures needed to prepare the system for installation. Chapter 2 describes the procedure for booting the installation monitor. Chapter 3 describes setting system parameters with ONCE dialogue. Chapter 4 explains how to create the TOPS-10 file system. Chapter 5 explains how to build the monitor. Chapter 6 describes starting the monitor. The appendixes contain MONGEN symbols and values, the configuration files, nonstandard device assignments, error messages, and BOOTM reference material.

TOPS-10 Operator's Guide for the DECSYSTEM-2020 (V6.03A) (AA-D979A-TB)

This document is a procedural text describing the operation of the DECSYSTEM-2020 hardware version 6.03A LIR of the TOPS-10 monitor. Chapter 1 describes the system operator's responsibilities and duties. Chapter 2 describes the DECSYSTEM-2020 system components. Chapter 3 describes starting the system. Chapter 4 explains standard operating tasks, and Chapter 5 explains management tasks. Chapter 6 describes system recovery procedures. Chapter 7 describes device operation and maintenance. The appendixes contain operator-privileged commands, microprocessor commands and messages, BOOTS error codes, BACKUP reference material, and a complete list of stopcodes.

CHAPTER 5

STAND-ALONE MANUALS

The following is a list of "major interest" documentation in the form of stand-alone manuals. These stand-alone manuals are not found in the Software Notebooks.

1. APLSF Programmer's Reference Manual (V1) (DEC-10-LPLSA-A-D)
Update (DEC-10-LPLSA-A-DN1)

This manual describes APLSF, a version of the APL language that supports shared-system variables. This document is a reference manual for all users of APLSF, and is an introductory text for novice APL users with computer experience and some background in mathematics.

2. BASIC Language Reference Card (V17D) (DEC-10-XBRCA-A-D)

This document is a pocket reference describing BASIC programming commands and conventions.

3. COBOL Pocket Reference Card (COBOL V6, LIBOL V7)
(DEC-10-OCRCA-A-D)

This document is a pocket reference for the COBOL language. It is a handy guide to COBOL program conventions and expressions, line and source program format, program structure, and commands.

4. COGO-10/20 User's Guide (AA-5510A-TK)

This document describes the use of COGO-10/20, a FORTRAN language program designed to solve plane coordinate geometry problems under the TOPS-10 and TOPS-20 operating systems. Chapter 1 describes COGO in general terms; Chapter 2 lists conventions and definitions of terms needed to use the COGO command language properly; Chapter 3 contains the explanation of each COGO command; and Chapter 4 presents sample problems that illustrate how a related series of COGO commands can be used to solve practical problems. The appendixes contain a summary of COGO-10/20 commands, a list of COGO error messages, and information on how to generate files.

5. COGO-10/20 Installation Guide (AA-5511A-TK)

This document describes the procedures for building and installing the COGO program from the distribution medium. This document serves as a guide to the system manager for a TOPS-10 or TOPS-20 operating system.

STAND-ALONE MANUALS

6. Conversational Programming Language User's Manual
(DEC-10-LCLA-B-D)

This manual describes how to use the Conversational Programming Language, CPL. This manual is intended to be both a tutorial and a reference manual. Each chapter discusses features in a general way which the beginning user should be able to understand. Later in each chapter is more detailed and comprehensive technical coverage of the subject.
7. Data Base Management System (DBMS) Administrator's Procedures Manual (V5) (AA-0899C-TB)

This document describes DBMS from the point of view of the Data Base Administrator and, as such, it is the reference manual for the system. Major concepts of DBMS, the role of the Data Base Administrator, and various languages known to the system are discussed.
8. Data Base Management System (DBMS) Programmer's Procedures Manual (V5) (AA-0901C-TB)

This manual contains a description of the TOPS-10 Data Base Management System from the point of view of the applications programmer who writes programs to access the data base.
9. MACY11 Assembler User's Guide (DEC-10-LMACA-A-D)

This manual explains how to use the MACY-11 assembler, which assembles MACRO-11 source code for the PDP-11. Chapter 1 is a brief introduction, and Chapter 2 describes MACY-11 operation procedures. Chapter 3 describes listing control, and Chapter 4 describes ENABLE/DISABLE control. Chapter 5 contains a summary of directives. The appendixes describe source/output file manipulation, and linking with LNKX-11.
10. Message Control System (MCS-10) Administrator's Procedures Manual (V2) (AA-0912C-TB)

This manual contains a description of MCS-10 from the point of view of the system administrator who will design and generate MCS-10 applications. This manual contains a general overview of MCS-10 and detailed information about the design of an MCS application.
11. Message Control System (MCS-10) Operator's Procedures Manual
(V2) (AA-0913C-TB)

This manual contains a description of MCS-10 from the point of view of the operator who will run MCS on a day-to-day basis. This manual contains an overview of MCS-10, a description of the functions that can be performed by the MCS-10 operator, and a list of commands available to the operator.
12. Message Control System (MCS-10) Programmer's Procedures Manual (V2) (AA-0914B-TB)

This manual contains the description of MCS-10 from the point of view of the programmer who writes application programs. This manual also explains the format and rules for communication programs.

STAND-ALONE MANUALS

13. Monitor Calls Pocket Reference Guide (V6.02)
(DEC-10-OMCRB-C-D)

This document is a handy guide to TOPS-10 monitor calls for experienced assembly language programmers.

14. Operating System Commands Pocket Reference Guide (V6.02)
(DEC-10-OTSMB-C-D)

This document is a handy guide to TOPS-10 programming conventions and commands.

15. SOS Reference Card (V21(134))
(AV-D578A-TB)

This document is a pocket reference describing the commands, options, and error messages of SOS.

16. System Reference/Reference Card (10/20) (DEC-10-XSRCA-B-D)

This document is a pocket reference describing the general characteristics of the system and the categories of peripheral equipment.

17. Utilities Manual (DEC-10-UTILA-A-D)
Update (DEC-10-UTILA-A-DN1)

This document contains all of the utilities manuals for TOPS-10 documentation. Included in this manual is documentation for: CREF, DDT, FILCOM, FILEX, GLOB, OPSER, PIP and RUNOFF.

CHAPTER 6

SOURCES OF SOFTWARE INFORMATION

6.1 SOFTWARE PROBLEMS

Any questions or problems relating to DIGITAL's software should be reported as follows:

North and South American submitters, upon completion of the SPR form, remove the last copy and send the remainder to:

Software Communications
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Maynard, Massachusetts 01754

An acknowledgment copy will be returned along with a blank SPR form upon receipt. The acknowledgment will contain a DIGITAL-assigned SPR number. The SPR number or the preprinted number should be referenced in any future correspondence. Additional SPR forms may be obtained from the above address.

All international submitters, upon completion of the SPR form, reserve the last copy, and send the remainder to the SPR Center in the nearest DIGITAL office. SPR forms are also available from our SPR Center.

6.2 PROGRAMS AND MANUALS

Software and manuals should be ordered by title and order number. In the United States, send orders to the nearest distribution center.

Digital Equipment Corporation
Technical Documentation Center
Cotton Road
Nashua, New Hampshire 03060
(Telephone: 800-258-1710)

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Technical Documentation Center
2525 Augustine Drive
Santa Clara, California 95051
(Telephone: 408-984-0200)

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Arlington Heights, Illinois 60005
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SOURCES OF SOFTWARE INFORMATION

Outside of the United States, orders should be directed to the nearest DIGITAL Field Sales Office or representative.

6.3 DIGITAL EQUIPMENT COMPUTER USERS SOCIETY (DECUS)

The Digital Equipment Computer Users Society (DECUS) is an association established to promote the interchange of information and ideas about the computers, computer peripheral equipment, and software manufactured and marketed by DIGITAL. It offers its members a variety of documentation and programs.

6.3.1 DECUS Program Library Catalogs

The DECUS Program Library contains programs and documentation written and submitted by users. The Library is maintained and operated separate from the Digital Software Distribution Center. It contains approximately 2600 programs covering a wide range of applications, languages, editors, numerical functions, utilities, and display routines.

The DECUS Program Library Catalogs, updated intermittently, contain descriptive abstracts and ordering information. Catalogs are available for the PDP-8, PDP-11, and TOPS-10/20 computers lines.

6.3.2 Proceeding of the DECUS Symposia

DECUS Symposia, held throughout the year in each of the DECUS Chapters, provide a forum for DECUS members to meet together to exchange information and ideas and to meet with DIGITAL management, engineers, and Software Services and Field Service representatives.

The technical papers and presentations presented at each of five meetings are published as the "Proceedings." They provide a permanent record of the meetings' activities. The proceedings may be purchased as individual issues or in an annual subscription plan.

6.3.3 Minutes of the TOPS-10/20 Sessions

The TOPS-10/20 sessions held at two U.S. DECUS Symposia are recorded in the TOPS-10/20 Reports.

6.3.4 COPY-N-MAIL

The TOPS-10/20 Special User Group issues a monthly newsletter.

6.3.5 SIG Newsletters

DECUS Special Interest Groups (SIGs) issue newsletters aimed at a specific product or application.

SOURCES OF SOFTWARE INFORMATION

6.3.6 DECUSCOPE

The association's newsletter, DECUSCOPE, is issued quarterly to all DECUS members. It contains news about the association including Library news, new policies, symposia information, etc.

6.3.7 DECUS Addresses

To obtain information about membership in DECUS and additional information about its publications, contact your local DECUS office:

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DECUS Canada
P. O. Box 11500
Ottawa, Ontario K2H 8K8
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DECUS Australia
P. O. Box 491
Crows Nest, New South Wales 2065
Australia

GLOSSARY

ALGOL

ALGOrithmic Language. A scientifically oriented language that contains a complete syntax for describing computational algorithms.

ASCII Code

American Standard Code for Information Interchange. A 7-bit code in which textual information is recorded. The ASCII code can represent 128 distinct characters.

ASSEMBLY LANGUAGE

The machine-oriented symbolic language specific to a given computing system. MACRO-10 is the standard TOPS-10 assembler supplied by DIGITAL.

BASIC

Beginner's All-Purpose Symbolic Instruction Code. A timesharing language that is used to write interactive programs for direct communication between terminal units and computer centers.

BATCH PROCESSING

The technique of executing a set of computed programs without human interaction or direction during their execution.

BLISS

A programming language that enables users to write programs consisting only of declarations which establish structure, and expressions which compute values. It is specifically designed for implementing system software.

BOOTSTRAP

A routine or device designed to bring itself into a desired state by means of its own action, for example, a machine routine whose first instructions are sufficient to bring the rest of the routine into the computer from an input device.

CENTRAL PROCESSING UNIT (CPU)

The portion of the computer that contains the arithmetic and logical facilities, control circuits, and basic I/O and memory interfaces. There can be more than one CPU in a computing system.

COBOL

Common Business Oriented Language. A programming language used in programming data-processing applications.

COMPILER

A programming system that translates a high-level source language suitable for a particular machine. A compiler is a translator that converts a source language program into intermediate or machine language. Some compilers used on the TOPS-10 are: ALGOL, BASIC, COBOL, FORTRAN.

CREATE

To open, write, and close a file for the first time. Only one user at a time can create a file with a given name and extension in the same directory or subdirectory of a file structure.

DDT

The Dynamic Debugging Technique program used for on-line checkout, testing, examination, modification, and program composition of object programs.

DECTape

A convenient, pocket-sized reel of random-access magnetic tape developed by Digital Equipment Corporation. A standard reel consists of 578 (decimal) blocks, each capable of storing 128 (decimal) words of data.

DIRECTORY

A file that contains the names and extensions of other files on the device.

DISK

A form of mass-storage device in which information is stored on rotating magnetic platters. On the TOPS-10, a disk is a directory device.

DSK

The generic device name for disk-like devices. The generic device DSK is translated by the system into actual file structure names that are defined for each job by the file structure search list.

EDDT

Executive DDT (Dynamic Debugging Technique). A version of DDT used for debugging programs, such as the monitor, in executive mode.

FILDDT

File DDT (Dynamic Debugging Technique). A version of DDT used for examining and changing a file on disk instead of in core memory. This program is used to examine a monitor for debugging purposes.

FILENAME EXTENSION

One to three alphanumeric characters usually chosen by the program to describe the class of information in file. The extension is separated from the filename by a period.

FILE STRUCTURE

The logical arrangement of blocks (which are normally 128 words long) on one or more physical input/output device units of the same type to form a collection of named files.

FORTRAN

FORMula TRANslator. A procedure-oriented programming language designed for solving scientific problems by expressing the procedure for their solution as arithmetic formulas. The language is widely used in many areas of engineering, mathematics, physics, chemistry, biology, psychology, industry, military, and business.

I/O

An abbreviation for input or output, or both. Pertaining to all equipment and activity that transfers information into or out of a computer.

INITIALIZE

To set counters, switches, or addresses to zero or other starting values at prescribed points in the execution of a computer routine, particularly in preparation for reexecution of a sequence of code.

LINK

A program that provides automatic loading and relocation of binary programs, produces an optional storage map, and performs loading and library searching. The program also loads and links relocatable binary programs and generates a symbol table in core for execution under DDT.

MACRO

The symbolic assembly program on the TOPS-10.

MASTER/SLAVE SYSTEM

A specific multiprocessing system involving two processors where one processor has a more important role than the other. Master/Slave relationships can also occur between disk, tape, CPU and other computer functions.

MONITOR

The collection of programs that schedules and controls the operation of user programs and system programs, performs overlapped I/O, provides context switching, and allocates resources so that the computer time is efficiently used.

MULTIPROCESSING

Simultaneous execution of two or more computer programs by two or more processors.

ONCE ONLY TIME

The time at which the operator can change a number of monitor parameters when the monitor is started up. This is done prior to scheduling any jobs.

OPERATING SYSTEM

The collection of programs that administer the operation of the computing system by scheduling and controlling the operation of user programs and system programs, performing I/O and various utility functions, and allocating resources for efficient use of the hardware.

PIP

The Peripheral Interchange Program which transfers data files from one standard I/O device to another and performs simple editing functions. PIP performs sequencing, trailing blank suppression, compressing blanks into tabs, and magnetic tape control functions.

PSEUDO-OP

An operation that is not part of the computer's operation repertoire as realized by hardware; hence, an extension of the set of machine operations. In MACRO, pseudo-ops are directions for assembly operations.

RETRIEVAL INFORMATION BLOCK (RIB)

The block that contains pointers to all the groups in a specific file. Each file has two copies of the RIB, one in the first block of the first group, and the second in the block following the last data block in the last group of the file.

SOFTWARE

The totality of programs and routines used to expand the capabilities of computers, such as compilers, assemblers, operational programs, service routines, utility routines, and subroutines.

SOUP

The Software Updating Package that consists of a set of programs for facilitating the update of system files or user source files.

SUBROUTINE

A routine designed to be used by other routines to accomplish a specific task.

TECO

A text editor and corrector program that allows simple editing requests, character-string searches, complex program editing, command repetition, and text-block movement.

TERMINAL

A unit, normally consisting of both a keyboard and printing mechanism, that is used to enter information into a computer and to accept output from a computer.

USER

A person who utilizes the facilities of the TOPS-10, or the person who invokes the program that calls another program.

READER'S COMMENTS

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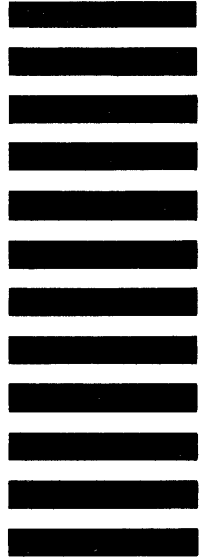
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