

#### March 1980

This document provides an introduction to the software documentation set shipped with the current version of the VAX/VMS operating system. It provides a synopsis of each document in the basic set and of each optional document. The order number of each document is also identified. To help you locate key information, an index is provided to direct you to the specific document containing that information.

# VAX-11 Information Directory and Index

Order No. AA-D016C-TE

# **READ THIS FIRST**

SUPERSESSION/UPDATE INFORMATION: This revised document supersedes

the VAX-11 Information Directory

(Order No. AA-D016B-TE)

**OPERATING SYSTEM AND VERSION:** VAX/VMS V02

SOFTWARE VERSION: Not applicable

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ASSIST-11	RTS-8	ITPS-10
VAX	VMS	SBI
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# **Preface**

The VAX-11 Information Directory and Index provides a brief description of each manual in the VAX/VMS documentation set, and an index of major topics covered by the set.

This manual is intended for all VAX/VMS users. Its purpose is to guide each reader to the manual most suited to his or her needs.

This manual is divided into three sections:

- A note on system installation.
- Synopses of all documents in the basic VAX/VMS documentation set and optional VAX/VMS documents. Tables 1 and 2 list the title, order number, and intended audience for each manual.
- An index of major topics covered by the VAX/VMS documentation set. (Topics covered in the optional documents are not indexed.)

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# **System Installation**

As shipped, the VAX/VMS operating system is ready to run on your VAX-11 processor. This system must be installed according to the procedure described in the VAX-11 Software Installation Guide. To produce a system tailored to the specific hardware and software requirements of your facility, follow the guidelines described in the VAX/VMS System Manager's Guide.

Before installing the system, however, read the VAX/VMS Release Notes thoroughly. This document contains important, updated information concerning errors and changes in the software and documentation.

# **VAX/VMS Document Descriptions**

The VAX/VMS software distribution kit includes a software documentation set that provides programming and operation information for the VAX/VMS operating system. DIGITAL ships a complete software documentation set with each software system. The number of additional documents that you receive depends on the licenses that you have purchased. You can order additional complete documentation sets or individual manuals.

All VAX/VMS customers receive the software documentation set listed in Table 1. Customers receive the optional documents listed in Table 2 only when they purchase special licenses for optional software products. Check your set of manuals to make sure that it matches your system and language options.

The manuals in the basic VAX/VMS software documentation set are organized into 10 volumes covering the following topics:

General Information

Command Language and System Messages

Program Development Tools

System Services and I/O

Run-Time Library

VAX-11 Record Management Services

RMS-11 Record Management Services

Compatibility Mode (RSX-11M)

System Programming

System Management and Operation

Each volume consists of a ring binder containing several manuals. Table 1 lists all of the manuals contained in each volume as well as the suggested audience for each. Brief descriptions of the manuals are given below. For a more complete description of any manual, see its preface. The preface to each manual also lists pointers to other manuals containing related information.

Table 1: VAX/VMS Software Documentation Set

				Suggested Audience					
Volume	Title (Order Number)	OP	AP	SP	SM				
1	General Information								
	VAX-11 Information Directory and Index (AA-D016C-TE)	X	X	X	X				
	VAX/VMS Summary Description and Glossary (AA-D022B-TE)	X	X	X	X				
	VAX/VMS Primer (AA-D030B-TE)	X	X	X	X				
	VAX/VMS Release Notes (AA-D015C-TE)	X	X	X	X				
2A	Command Language and System Messages								
	VAX/VMS Command Language User's Guide (AA-D023B-TE)	·X	X	X	X				
·	VAX/VMS Guide to Using Command Procedures (AA-H782A-TE)	X	X	X	X				
2B	Command Language and System Messages								
	VAX/VMS System Messages and Recovery Procedures Manual (AA-D017B-TE)	X	X	X	Х				

(Continued on next page)

These job titles are only loosely defined, but are useful for indicating the general audience for each document. In small installations, all tasks may be performed by a single person. Elsewhere, an application programmer might program in assembly language and a system programmer might be responsible for system management. When functions overlap, you should make appropriate adjustments from the suggested audiences listed in Table 1.

<sup>&</sup>lt;sup>1</sup> The audiences for each document are identified by an "X" in one or more of the right-hand columns of the table. The job titles used are defined as follows:

**OP** The operator is anyone who uses the VAX/VMS operating system directly.

**AP** The application programmer uses high-level languages to develop programs for user applications.

SP The system programmer uses VAX-11 MACRO assembly language (or a development language) to maintain, modify, and develop system programs. These programs are used to operate the VAX-11 processor and its peripheral devices.

SM The system manager is responsible for overall operation of the VAX/VMS system, from installing the system to overseeing its performance to supervising day-to-day operations.

Table 1: VAX/VMS Software Documentation Set (Cont.)

		Suggested Audience			ence <sup>1</sup>
Volume	Title (Order Number)	ОР	AP	SP	SM
3A	Program Development Tools VAX-11 Text Editing Reference Manual	X	X	X	X
	(AA-D029B-TE)  VAX-11 EDT Editor Reference Manual  (AA-H944A-TE)	x	x	X	X
	VAX-11 Utilities Reference Manual (AA-H781A-TE)	X	х	X	X
	VAX-11 SORT User's Guide (AA-D113A-TE)		X	Х	
	PDP-11 SORT Reference Manual (AA-3341C-TC)		X	Х	
3B	Program Development Tools VAX-11 MACRO User's Guide (AA-D033C-TE)		X	X	
	VAX-11 MACRO Language Reference Manual (AA-D032C-TE)		X	X	
	VAX-11 Linker Reference Manual (AA-D019B-TE)		X	X	X
	VAX-11 Symbolic Debugger Reference Manual (AA-D026B-TE)		X	X	
4	System Services and I/O VAX/VMS System Services Reference Manual (AA-D018B-TE)		X	x	X
	VAX/VMS I/O User's Guide (AA-D028B-TE)			X	
5	Run-Time Library VAX-11 Run-Time Library Reference Manual (AA-D036B-TE)		X	х	
	VAX-11 Guide to Creating Modular Library Procedures (AA-H500B-TE)		X	x	
6	VAX-11 Record Management Services Introduction to VAX-11 Record Management Services (AA-D024C-TE)		X	x	
	VAX-11 Record Management Services User's Guide (AA-D781C-TE)		X	x	
	VAX-11 Record Management Services Reference Manual (AA-D031C-TE)		X	x	

(Continued on next page)

 $<sup>^{1}</sup>$  **OP** – operator; **AP** – application programmer; **SP** – system programmer; **SM** – system manager.

Table 1: VAX/VMS Software Documentation Set (Cont.)

	Title	Sugg	ested	Audience <sup>1</sup>		
Volume	(Order Number)	OP	AP	SP	SM	
7	RMS-11 Record Management Services RMS-11 User's Guide (AA-D538A-TC)	X	X	X	X	
	RMS-11 MACRO Reference Manual (AA-H683A-TC)			Х		
8	Compatibility Mode (RSX-11M)  VAX-11/RSX-11M User's Guide  (AA-D037B-TE)		X	X		
	VAX-11/RSX-11M Programmer's Reference Manual (AA-D020B-TE)		X	X		
9	System Programming VAX/VMS Real-Time User's Guide (AA-H784A-TE)		X	X		
	VAX/VMS Guide to Writing a Device Driver (AA-H499B-TE)			X	X	
	VAX/VMS System Dump Analyzer Reference Manual (AA-J526A-TE)			X		
	VAX-11 PATCH Utility Reference Manual (AA-H785A-TE)		X	X		
10	System Management and Operation VAX-11 Software Installation Guide (AA-D021C-TE)				x	
	VAX/VMS System Manager's Guide (AA-D027B-TE)				X	
	VAX/VMS Operator's Guide (AA-D025B-TE)	X	X	X	X	
	VAX/VMS UETP User's Guide (AA-D643B-TE)	X			X	

<sup>&</sup>lt;sup>1</sup> **OP** – operator; **AP** – application programmer; **SP** – system programmer; **SM** – system manager.

# **Volume 1. General Information**

This volume contains manuals that introduce users to the VAX/VMS operating system. The release notes should be read first, because they describe changes, errors, and corrections that have not been documented elsewhere. Two reference documents are included in Volume 1: an index of topics covered in the documentation set, and a glossary of terms used throughout.

## **VAX-11 Information Directory and Index**

This document provides an introduction to the software documentation set shipped with the current version of the VAX/VMS operating system. It provides a summary of each document and an index that directs the reader to the manual(s) in which each entry is discussed.

## VAX/VMS Summary Description and Glossary

This document introduces the concepts of the operating system and contains a glossary of VAX-11 terms.

#### **VAX/VMS Primer**

This tutorial document introduces a new VAX/VMS user to the DIGITAL Command Language (DCL), file manipulation, program development, and elementary operating system concepts.

#### **VAX/VMS** Release Notes

This document defines the VAX/VMS release kit. It provides information on installing the kit, a summary of the differences between this version of VAX/VMS and the previous version, and notes to published documentation. This document should be read before the system is installed.

# Volume 2 (A and B). Command Language and System Messages

This volume provides a detailed description of the DIGITAL Command Language (DCL), a guide to developing command procedures using this command language, and a complete list of messages produced by the operating system.

# VAX/VMS Command Language User's Guide

This document describes the DIGITAL Command Language (DCL). It provides detailed reference information and examples of all commands available to general users.

# **VAX/VMS Guide to Using Command Procedures**

This guide presents key concepts and techniques for developing command procedures using the DIGITAL Command Language (DCL). Many examples, including examples of complete command procedures, are included to demonstrate applications of the concepts and techniques discussed.

#### VAX/VMS System Messages and Recovery Procedures Manual

This document contains a list of system messages. For most messages, descriptions and suggested recovery procedures are also provided. The manual is intended for all users of the VAX/VMS operating system.

# Volume 3 (A and B). Program Development Tools

The program development volume describes how to edit, link, and debug a program with the VAX/VMS operating system. It also provides information on the VAX-11 MACRO assembly language and various utilities, including SORT routines.

## VAX-11 Text Editing Reference Manual

This document describes in detail the features and use of SOS, an interactive text-editing program provided with the VAX/VMS operating system. It is intended as a reference manual for users who are familiar with text-editing programs and who want to learn more about the SOS text editor.

#### VAX-11 EDT Editor Reference Manual

This document describes EDT, an interactive text editor with screen-editing capabilities. With EDT, users can edit files by character, using the keypad, and by line. Included in the manual are descriptions of EDT commands, the command options and qualifiers, and their usage. This manual provides the user with all the information necessary to create and modify files with EDT. Users can refer to the manual as an introduction to the editor and as a reference source.

#### VAX-11 Utilities Reference Manual

This manual is intended for users who are already familiar with VAX/VMS system concepts. The following utilities are discussed:

- Personal Mail Utility (MAIL), a program that allows users to exchange messages within the same system or between any VAX-11 processors connected via DECnet-VAX
- File Transfer Utility (FLX), a program that transfers files from one volume to another and performs volume format conversions
- SLP and SUMSLP, two batch-oriented editors used to incorporate changes into source files and to indicate these changes with an audit trail
- Disk Save and Compress Utilities (DSC), three programs used to back up and restore disk volumes that have been formatted and initialized as Files-11 volumes
- Bad Block Locator Utility (BAD), a program to determine and record the number and location of bad blocks on block-structured volumes
- File Structure Verification Utility (VFY), a program to check the readability and validity of Files-11 volumes
- Librarian Utility (Librarian), a program for storing useful modules in a central accessible location
- Message Utility, a program for creating customized message libraries

#### VAX-11 SORT User's Guide

This document describes how to use the VAX-11 SORT Utility, and is written for all VAX/VMS system users. VAX-11 SORT can perform various sorting and merging operations and can accept a variety of specifications. VAX-11 SORT operates in native mode.

#### PDP-11 SORT Reference Manual

This document describes the features and operations of the PDP-11 SORT Utility. PDP-11 SORT can perform various sorting operations and can accept a variety of specifications. PDP-11 SORT operates in compatibility mode (see Volume 8).

#### VAX-11 MACRO User's Guide

This user's guide contains the information required by an assembly language programmer to assemble VAX-11 MACRO programs and to use the VAX-11 MACRO assembly language efficiently.

## VAX-11 MACRO Language Reference Manual

This document describes the assembly language supported by VAX/VMS. All symbols, expressions, addressing modes, and directives are described in detail. Programmers should read the VAX-11 MACRO User's Guide before using this manual.

#### **VAX-11 Linker Reference Manual**

This document provides the information required for linking object modules into executable, shareable, or system images.

### VAX-11 Symbolic Debugger Reference Manual

This document contains the information required for debugging assembled and linked object programs, primarily those written in VAX-11 MACRO assembly language.

# Volume 4. System Services and I/O

This volume provides detailed information on VAX/VMS services as well as the information required to interface directly with the I/O device drivers supplied as a part of the operating system. Users of this volume should be familiar with a VAX-11 native-mode programming language. (VAX/VMS system services can be used only with languages that produce native code for VAX-11 hardware.)

# **VAX/VMS System Services Reference Manual**

This document describes the VAX/VMS system services. It provides coding conventions, tutorial information, examples showing how to use system ser-

vices, and detailed reference information on the arguments required by each system service.

#### VAX/VMS I/O User's Guide

This user's guide contains the information needed to interface the I/O device drivers directly with VAX/VMS using the I/O system services supplied with the operating system. This manual is intended for system programmers who want to take advantage of the time and/or space savings that result from direct use of the I/O devices. Readers are expected to have some experience with either VAX-11 FORTRAN or VAX-11 MACRO.

# **Volume 5. Run-Time Library**

This volume provides a detailed description of the VAX-11 Run-Time Library and describes how to design and code library procedures.

# VAX-11 Run-Time Library Reference Manual

This manual contains detailed information about the VAX-11 Run-Time Library. It introduces the library, describes the calling and naming conventions, and presents all procedures of a general nature. Each procedure is documented with a functional description, including algorithms and examples, and instructions for access from all VAX-11 supported languages. Readers should be familiar with the VAX/VMS operating system and should be proficient in at least one of the supported languages.

# VAX-11 Guide to Creating Modular Library Procedures

This document describes how to design and code procedures so they can be installed in an object module library or in a shareable image. It includes the modular programming standard and recommendations for modular programming in any language.

# Volume 6. VAX-11 Record Management Services

This volume provides information on the VAX-11 Record Management Services (VAX-11 RMS) for all levels of user. The introductory manual presents basic record and file concepts. The other two manuals present more detailed information for VAX-11 MACRO programmers.

# Introduction to VAX-11 Record Management Services

This document contains a general description of the native-mode VAX-11 Record Management Services (VAX-11 RMS) of the VAX/VMS operating system. The information in this document is introductory: it outlines the basic concepts of disk and tape files and describes their interface with VAX-11 RMS; it describes the various file organizations, record access modes, and record formats; and it outlines general procedures for creating and processing files.

## VAX-11 Record Management Services User's Guide

This user's guide contains detailed information on using the capabilities of VAX-11 Record Management Services (VAX-11 RMS) efficiently. The manual describes how VAX-11 MACRO programmers can use VAX-11 RMS I/O routines within their programs and how high-level language programmers can use VAX-11 RMS directly through a call facility within their language. Users of this manual should be familiar with the VAX-11 MACRO conventions observed in constructing symbols and the use of numbers, operators, and expressions.

# VAX-11 Record Management Services Reference Manual

The intent of this manual is to enable VAX-11 MACRO programmers to use the VAX-11 Record Management Services (VAX-11 RMS) with the VAX/VMS operating system. Many data operations can be performed by using VAX-11 RMS and associated control routines. Users can perform these operations simply by calling a VAX-11 RMS routine, with the appropriate parameters, rather than writing their own routines.

# Volume 7. RMS-11 Record Management Services

This file-management volume consists of manuals that describe the File Control Services (FCS) of the RSX-11M and RSX-11M-PLUS operating systems. The manuals describe how to install and use Record Management Services for PDP-11 operating systems (RMS-11) on these systems. On the VAX/VMS operating system, RMS-11 utilities run in compatibility mode (see Volume 8).

#### RMS-11 User's Guide

This document introduces data organization concepts; sequential and relative file applications; indexed file and indexed task design; and common optimization techniques. It also describes the operation and use of the following RMS-11 utilities:

- RMSDFN create files
- RMSCNV move data from one file to another
- RMSBCK create back-up copies of files
- RMSDSP list attributes of RMS-11 files and names of back-up files
- RMSRST restore back-up files to their original state
- RMSIFL load, using a fast method, an indexed file with records from any type of RMS-11 file

#### RMS-11 MACRO-11 Reference Manual

This document provides a complete description of Record Management Services for PDP-11 operating systems (RMS-11) as set up on an RSX-11M,

RSX-11M-PLUS, RSTS/E, or IAS operating system. RMS-11 files can be organized sequentially, relatively, or with embedded indexes. This document will help system programmers using MACRO-11 to declare RMS-11 facilities, access fields in control blocks at run time, allocate and initialize control blocks, and perform file and record operations.

# Volume 8. Compatibility Mode (RSX-11M)

Compatibility mode is a processor state that allows PDP-11 programs to execute under the VAX/VMS operating system. Software controls the processor mode. When a non-native program has been prepared for execution, VAX/VMS places the processor in compatibility mode just before passing control to the program. VAX/VMS accomplishes this in a manner that is transparent to the user.

#### VAX-11/RSX-11M User's Guide

This user's guide provides the information needed to use the VAX/VMS MCR command language, execute MCR indirect command files, and use RSX-11M components under VAX/VMS. The information in this document is intended both to allow RSX-11M users to operate in a familiar environment, and to ease their transition to the DIGITAL Command Language (DCL), the primary VAX/VMS command language. This manual also contains general information about performing an RSX-11M or RSX-11S system generation under VAX/VMS.

# VAX-11/RSX-11M Programmer's Reference Manual

This document describes VAX/VMS support of the RSX-11M executive directives. It contains the information needed by an RSX-11M programmer responsible for making RSX-11M Version 3.2 task images run under the VAX/VMS operating system.

# Volume 9. System Programming

This volume contains the information that system programmers need for real-time applications programming; for writing device drivers for devices that are not supported by DIGITAL software; and for modifying device-driver images, shareable images, and executable images. It also contains information on determining the cause of a VAX/VMS operating system failure.

#### VAX/VMS Real-Time User's Guide

This document discusses needs common to a variety of real-time programming applications and describes the features of the VAX/VMS operating system that meet these needs. It also contains a number of examples illustrating significant or complex points.

# VAX/VMS Guide to Writing a Device Driver

Under VAX/VMS, a device driver is a set of routines and tables that the operating system uses to process an I/O request for a particular type of device.

This document explains how to write device drivers for devices that are not supported by DIGITAL software and how to load these drivers into the VAX/VMS operating system.

## VAX/VMS System Dump Analyzer Reference Manual

This document provides the information required to use the System Dump Analyzer, a utility that helps determine the cause of an operating system failure. This manual is intended for users who are familiar with VAX/VMS internal design, such as VAX/VMS developers, DIGITAL Software Support Specialists, and programmers who are writing their own device drivers.

## **VAX-11 PATCH Utility Reference Manual**

This document provides the information necessary for examining and modifying shareable images, device-driver images, and executable images written in any language supported by the VAX/VMS operating system. This manual is intended for experienced system programmers.

# Volume 10. System Management and Operation

This volume contains information on generation and day-to-day operation of the VAX/VMS operating system.

#### VAX-11 Software Installation Guide

This document contains instructions for installing the VAX/VMS system and the optional software components on a VAX-11/780 processor.

# VAX/VMS System Manager's Guide

This document describes the tasks associated with VAX/VMS system management. These tasks include setting up the user authorization file; maintaining public files and volumes; setting up disk quotas; installing known images; setting up start-up procedures; maintaining batch, print, and terminal queues; monitoring and tuning the system; setting values for the system generation parameters; and logging errors.

# VAX/VMS Operator's Guide

This document describes the operating procedures and commands used by a VAX/VMS system operator. It also describes the messages produced by the Operator's Communication Process (OPCOM).

#### **VAX/VMS UETP User's Guide**

This document describes the purpose of the User Environment Test Package (UETP) and provides operating instructions for running it in its entirety or for running selected test phases. It also includes a listing of UETP system messages.

# **VAX/VMS Optional Document Descriptions**

Optional documents are shipped only to customers who have purchased special licenses for software components. Table 2 lists the optional manuals currently available and the suggested audience for each. Brief descriptions of the manuals are listed below.

Table 2: Optional VAX/VMS Software Documents

Title	Sugg	ence <sup>2</sup>		
(Order Number)	OP	AP	SP	SM
BASIC				
PDP-11 BASIC-PLUS-2 Language Reference Manual (AA-H774A-TC)		X		
RSX/IAS/VMS BASIC-PLUS-2 User's Guide (AA-0157C-TC)		X		
VAX-11 BASIC Language Reference Manual (AA-H867A-TE)		X		
VAX-11 BASIC User's Guide (AA-H869A-TE)		X		
VMS BASIC-PLUS-2 Release Notes (AA-J362A-TE)		X	:	
BLISS				
BLISS Language Guide (AA-H275B-TK)			X	
BLISS Pocket Guide (AV-H289B-TK)			X	
VAX-11 BLISS-32 User's Guide (AA-H322B-TE)			X	X

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- **OP** The operator is anyone who uses the VAX/VMS operating system directly.
- **AP** The application programmer uses high-level languages to develop programs for user applications.
- SP The system programmer uses VAX-11 MACRO assembly language (or a development language) to maintain, modify, and develop system programs. These programs are used to operate the VAX-11 processor and its peripheral devices.
- SM The system manager is responsible for overall operation of the VAX/VMS system, from installing the system to overseeing its performance to supervising day-to-day operations.

These job titles are only loosely defined, but are useful for indicating the general audience for each document. In small installations, all tasks may be performed by a single person. Elsewhere, an application programmer might program in assembly language and a system programmer might be responsible for system management. When functions overlap, you should make appropriate adjustments from the suggested audiences listed in Table 2.

<sup>&</sup>lt;sup>1</sup> Optional documents accompany software components for which you must purchase a special license.

<sup>&</sup>lt;sup>2</sup> The audiences for each document are identified by an "X" in one or more of the right-hand columns of the table. The job titles used are defined as follows:

Table 2: Optional VAX/VMS Software Documents (Cont.)

Title	Sugg	Suggested Audience <sup>2</sup>			
(Order Number)	OP	AP	SP	SM	
COBOL					
PDP-11 COBOL Language Reference Manual (AA-1749E-TC)		X			
PDP-11 COBOL Pocket Guide (AV-1750C-TC)		X			
PDP-11 COBOL User's Guide (AA-1757D-TC)		X			
VAX-11 COBOL-74 Language Reference Manual (AA-C985A-TE)		X			
VAX-11 COBOL-74 User's Guide (AA-C986A-TE)		X			
CORAL					
CORAL 66 Language Reference Manual (AA-D111A-TC)		X	X		
IAS/RSX/VMS CORAL 66 User's Guide (AA-D112A-TK)		X	X		
DATATRIEVE					
DATATRIEVE Primer (AA-J106A-TC)	X				
User's Guide to DATATRIEVE-11 (AA-C742A-TC)		X	X		
DECnet-VAX					
DECnet-VAX System Manager's Guide (AA-D902A-TE)		X	X	X	
and Update Notice No. 1 (AD-D902A-T1)		X	X	X	
DECnet-VAX User's Guide (AA-D901A-TE)		X	X		
and Update Notice No. 1 (AD-D901A-T1)		$\mathbf{X}_{i}^{r}$	X		
FORTRAN					
IAS/RSX FORTRAN IV User's Guide (AA-1936E-TC)		X			
PDP-11 FORTRAN Language Reference Manual (AA-1855D-TC)		X	:		
VAX-11 FORTRAN Installation Guide/Release Notes (AA-H953A-TE)			:	Х	

(Continued on next page)

<sup>&</sup>lt;sup>1</sup> Optional documents accompany software components for which you must purchase a special license.

 $<sup>^2\,\</sup>mathbf{OP}$  – operator;  $\mathbf{AP}$  – application programmer;  $\mathbf{SP}$  – system programmer;  $\mathbf{SM}$  – system manager.

Table 2: Optional VAX/VMS Software Documents (Cont.)

Title		Suggested Audience <sup>2</sup>				
(Order Number)	OP	AP	SP	SM		
FORTRAN (Cont.)						
VAX-11 FORTRAN Language Reference Manual (AA-D034B-TE)		X				
VAX-11 FORTRAN User's Guide (AA-D035B-TE)		X				
MUX200		}				
MUX200/VAX Release Notes (AA-H956A-TC)	X	X		X		
MUX200/VAX V1.0 Emulator System Manager's Guide (AA-H955A-TC)	X			X		
MUX200/VAX V1.0 Emulator User's Guide (AA-H954A-TC)	X	X		<u> </u>		
PASCAL						
VAX-11 PASCAL Installation Guide/Release Notes (AA-J181A-TE)				X		
VAX-11 PASCAL Language Reference Manual (AA-H484A-TE)		X				
VAX-11 PASCAL Primer (AA-J180A-TE)		X				
VAX-11 PASCAL User's Guide (AA-H485A-TE)		X				
Protocol Emulator				1		
VAX-11 2780/3780 Protocol Emulator User's Guide (AA-H473A-TE)	X	X	X	X		

<sup>&</sup>lt;sup>1</sup>Optional documents accompany software components for which you must purchase a special license.

#### **BASIC**

## PDP-11 BASIC-PLUS-2 Language Reference Manual

This document describes the BASIC-PLUS-2 programming language. It explains BASIC-PLUS-2 statements, functions, and error messages. For system-dependent information, see the RSX/IAS/VMS BASIC-PLUS-2 User's Guide.

#### RSX/IAS/VMS BASIC-PLUS-2 User's Guide

This user's guide describes the procedures for using BASIC-PLUS-2 on the RSX-11, IAS, and VAX/VMS (compatibility mode) operating systems. It

<sup>&</sup>lt;sup>2</sup>**OP** – operator; **AP** – application programmer; **SP** – system programmer; **SM** – system manager.

describes system-dependent features, use of the compiler, resident libraries, files, and utilities.

# VAX-11 BASIC Language Reference Manual

This document describes the VAX-11 BASIC programming language. It describes the syntax and usage rules for each language element. The manual is alphabetically ordered by statement and function, with each language element on its own page. A task-oriented table of contents allows an unsophisticated VAX-11 BASIC user to find information easily.

#### VAX-11 BASIC User's Guide

This document describes the BASIC language on the VAX-11 processor. It is divided into two parts: (1) an introduction to VAX-11 BASIC, and (2) advanced features of VAX-11 BASIC. Part 1 is designed to help the beginner acquire knowledge gradually. Part 2 describes the new features of VAX-11 BASIC and includes information on how to call procedures written in other languages, how to specify data types, and how to use the VAX-11 Symbolic Debugger.

#### VMS BASIC-PLUS-2 Release Notes

This document describes the changes made in BASIC-PLUS-2 after Version 1.5. These changes include new features and corrections to known problems.

## **BLISS**

#### **BLISS Language Guide**

This document is a combined tutorial and reference manual for the BLISS-32 programming language. BLISS-32 is oriented toward transportable system programming, and is primarily intended for knowledgeable users of the VAX-11 processor and the VAX/VMS operating system.

#### **BLISS Pocket Guide**

This guide presents a syntax summary for the family of BLISS language dialects consisting of BLISS-16, BLISS-32, and BLISS-36. It describes the Common BLISS language features that constitute the bulk of all three dialects, plus the system-specific features unique to each dialect. A summary of the command line syntax for each of the compilers is also provided.

#### VAX-11 BLISS-32 User's Guide

This document describes the VAX-11 BLISS-32 compiler and its use, and gives basic information about linking, executing, and debugging BLISS-32 programs. It also describes BLISS-32 machine-specific functions, BLISS tools, and other topics relevant to BLISS-32 programming.

#### COBOL

## PDP-11 COBOL Language Reference Manual

This document describes the PDP-11 COBOL programming language, including its organization, syntax, and semantics. For system-dependent information, see the PDP-11 COBOL User's Guide.

#### PDP-11 COBOL Pocket Guide

This guide contains the general formats for PDP-11 COBOL statements; it also includes other frequently needed information, such as data formats, in a convenient form.

#### PDP-11 COBOL User's Guide

This document describes the use of PDP-11 COBOL. It includes procedures for compiling, task building, and running PDP-11 COBOL programs. This user's guide also lists compiler, record management services, and Object Time System diagnostics. Under VAX/VMS, PDP-11 COBOL operates in compatibility mode and generates compatibility-mode object programs.

## VAX-11 COBOL-74 Language Reference Manual

This document describes the VAX-11 COBOL-74 programming language, including its organization, syntax, and semantics. For system-dependent information, see the VAX-11 COBOL-74 User's Guide.

#### VAX-11 COBOL-74 User's Guide

This document describes the use of VAX-11 COBOL-74. It includes procedures for compiling, linking, and running VAX-11 COBOL-74 programs. This user's guide also lists compiler, record management services, and run-time system diagnostics. VAX-11 COBOL-74 operates in compatibility mode and generates native-mode object modules.

#### CORAL

## **CORAL 66 Language Reference Manual**

This manual is intended for programmers using CORAL 66 on any DIGITAL computer. It provides a definition of DIGITAL CORAL 66. The manual should be used for reference purposes only; it does not attempt to teach CORAL 66 to the reader.

#### IAS/RSX/VMS CORAL 66 User's Guide

This manual describes the compiling, linking, and running of CORAL source programs under the IAS, RSX-11D, and RSX-11M operating systems. Two CORAL run-time libraries are also described: the Object Time System Li-

brary and the Stand-Alone Object Time System Library. In addition, this guide describes use of the compiler under VAX/VMS. Compiling is performed in compatibility mode; the linking and running processes, in native mode. The CORAL run-time library is also explained. Users of this manual should have some knowledge of the operating system, and should have an appropriate set of operating system manuals for reference.

#### DATATRIEVE

#### **DATATRIEVE Primer**

This document provides a tutorial approach to the basics of DATA-TRIEVE-11. It describes how to:

- Enter, store, change, and sort data
- Create tables
- Create domains and fields using the Application Design Tool

#### User's Guide to DATATRIEVE-11

This document describes the use of DATATRIEVE-11 to extract, display, create, and change data from RMS-11 files. On VAX/VMS, DATATRIEVE-11 operates in compatibility mode.

#### **DECnet-VAX**

# DECnet-VAX System Manager's Guide and Update Notice No. 1

This document tells the DECnet system manager how to control, monitor, and test a DECnet-VAX system, and how to down-line load a DECnet-11S node.

#### DECnet-VAX User's Guide and Update Notice No. 1

This document describes the programmed requests and terminal functions that allow a DECnet-VAX node to communicate with another DECnet node. It explains how to write a MACRO or FORTRAN program that uses DECnet, how to perform intertask communications, and how to access remote files. It also describes interactive facilities for transferring files to and from remote nodes.

#### **FORTRAN**

#### IAS/RSX FORTRAN IV User's Guide

This user's guide describes the procedures for compiling, linking, and executing PDP-11 FORTRAN IV programs on the IAS and RSX operating systems.

It also explains the FORTRAN Object Time System (OTS), a collection of routines that includes mathematical functions, utilities, input/output handlers, and system services; OTS routines are optional and may be selected during installation. On VAX/VMS, PDP-11 FORTRAN IV operates in compatibility mode.

# PDP-11 FORTRAN Language Reference Manual

This document describes PDP-11 FORTRAN IV, which is supported by VAX/VMS in compatibility mode. The manual defines the elements of FORTRAN IV and the structure of FORTRAN IV programming. It also describes the components of a FORTRAN IV statement in general, and the assignment, control, input/output, format, and specification statements in particular. The manual contains directions for using and writing FORTRAN IV library subprograms. It does not include system-dependent information, which is described in the *IAS/RSX FORTRAN IV User's Guide*. This manual also clarifies the relationships between PDP-11 FORTRAN IV and PDP-11 FORTRAN IV-PLUS, which is not supported by VAX/VMS.

#### VAX-11 FORTRAN Installation Guide/Release Notes

This document contains instructions for installing the VAX-11 FORTRAN compiler on the VAX/VMS operating system. It also contains information not included elsewhere in the documentation set, typically concerning software and/or documentation changes that were made late in the development cycle. This document should be read before the VAX-11 FORTRAN compiler is installed or used.

## VAX-11 FORTRAN Language Reference Manual

This document describes the FORTRAN language elements supported by VAX-11 FORTRAN. It is intended to be used as a reference manual in preparing VAX-11 FORTRAN source programs; it is not intended to be a tutorial document or to present information on the VAX-11 FORTRAN user's interface with the VAX/VMS system.

#### VAX-11 FORTRAN User's Guide

This document describes how to compile, debug, and execute VAX-11 FOR-TRAN language programs using the VAX/VMS operating system facilities. It also includes information on programming efficiency, VAX-11 FORTRAN input/output, error processing, and the compatibility of VAX-11 FORTRAN with PDP-11 FORTRAN.

#### **MUX200**

#### MUX200/VAX Release Notes

This manual contains information not included elsewhere in the MUX200/VAX documentation concerning changes in software and/or docu-

mentation that were made late in the development cycle. This information should be read before the MUX200/VAX V1.0 Emulator is installed or used.

## MUX200/VAX V1.0 Emulator System Manager's Guide

This manual is intended for the system manager or whoever installs and controls the MUX200/VAX V1.0 Emulator. Users should first read the MUX200/VAX V1.0 Emulator User's Guide and should possess knowledge of the VAX/VMS operating system. The manual covers the following subjects:

- Subsystem control using privileged commands
- Installation and trouble-shooting procedures

#### MUX200/VAX V1.0 Emulator User's Guide

This manual describes how to start and operate the MUX200/VAX V1.0 Emulator. It explains how to use the MUX200/VAX system to emulate as many as 16 CDC 200 User Terminals (UT) and how to communicate with the remote CDC or other host computer capable of using 200 UT mode 4A communications protocol. Users should have a basic knowledge of the VAX/VMS operating system. The manual gives no details about control of the host computer, because the facilities available will vary with the installation. Control of the host computer is described in the relevant host documentation.

## **PASCAL**

#### VAX-11 PASCAL Installation Guide/Release Notes

This document contains instructions for installing the VAX-11 PASCAL compiler on the VAX/VMS operating system. It also contains information not included elsewhere in the documentation set, typically concerning software and/or documentation changes that were made late in the development cycle. This document should be read before the VAX-11 PASCAL compiler is installed or used.

#### VAX-11 PASCAL Language Reference Manual

This document describes the elements of the Pascal language supported by VAX-11 PASCAL. It is intended as a reference manual for use in preparing VAX-11 PASCAL source programs.

#### VAX-11 PASCAL Primer

This document introduces VAX-11 PASCAL for programmers unfamiliar with the Pascal language. It also outlines the steps to compile, link, and execute VAX-11 PASCAL programs.

#### VAX-11 PASCAL User's Guide

This document describes how to compile, link, and execute VAX-11 PASCAL programs on the VAX/VMS operating system. It also contains information useful to VAX-11 PASCAL programmers, dealing with input and output, procedure calling, error processing, and storage allocation.

## **Protocol Emulator**

#### VAX-11 2780/3780 Protocol Emulator User's Guide

This document describes how to use the VAX-11 2780/3780 Protocol Emulator to pass files between a VAX-11 processor and an IBM system that is configured to support a 2780 or 3780 remote batch terminal. It also describes hardware and software requirements of the interconnected systems, how to install the software in your VAX/VMS system, and how to test your communications link.

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# Index

The following general index contains entries for major topics covered in the basic VAX/VMS documentation set. No entries are listed for optional manuals, that is, documents for software products purchased by special license. The index is not exhaustive, and is not intended to replace the indexes of the individual manuals. Rather, its purpose is to guide you to primary sources of information on the wide variety of topics covered by the documentation set.

Most index entries refer to one manual only, the primary source of information on that topic. When more than one manual is listed, you can assume that these sources contain closely related information.

Each manual is identified by a 3- or 4-letter abbreviation. The number of the volume that contains the manual appears in parentheses after the abbreviation. For example, the entry

Bus adapters, WDD (9)

points you to the VAX/VMS Guide to Writing a Device Driver (WDD), which is in volume 9. To find the actual chapter or page where bus adapters are discussed, you must consult the table of contents or the index of the manual specified.

The abbreviations and volume numbers of all of the manuals in the VAX/VMS documentation set are listed on the following pages.

#### **Volume 1. General Information**

IDI (1) - VAX-11 Information Directory and Index

SUM (1) - VAX/VMS Summary Description and Glossary

PRM (1) - VAX/VMS Primer

REL (1) - VAX/VMS Release Notes

# Volume 2A. Command Language and System Messages

DCL (2A) - VAX/VMS Command Language User's Guide

GCP (2A) - VAX/VMS Guide to Using Command Procedures

# Volume 2B. Command Language and System Messages

MSG (2B) - VAX/VMS System Messages and Recovery Procedures
Manual

# **Volume 3A. Program Development Tools**

SOS (3A) - VAX-11 Text Editing Reference Manual

EDT (3A) - VAX-11 EDT Editor Reference Manual

UTIL (3A) - VAX-11 Utilities Reference Manual

SORT (3A) - VAX-11 SORT User's Guide

SORT11 (3A) - PDP-11 SORT Reference Manual

# **Volume 3B. Program Development Tools**

MACU (3B) - VAX-11 MACRO User's Guide

MACR (3B) - VAX-11 MACRO Language Reference Manual

LINK (3B) - VAX-11 Linker Reference Manual

DBUG (3B) - VAX-11 Symbolic Debugger Reference Manual

# Volume 4. System Services and I/O

SSR (4) - VAX/VMS System Services Reference Manual

IOG (4) - VAX/VMS I/O User's Guide

# **Volume 5. Run-Time Library**

RTL (5) - VAX-11 Run-Time Library Reference Manual

MOD (5) - VAX-11 Guide to Creating Modular Library Procedures

# Volume 6. VAX-11 Record Management Services

IRMS (6) - Introduction to VAX-11 Record Management Services

RMSU (6) - VAX-11 Record Management Services User's Guide

RMSR (6) - VAX-11 Record Management Services Reference Manual

# Volume 7. RMS-11 Record Management Services

RMS<sub>11</sub>U (7) - RMS-11 User's Guide

RMS<sub>11</sub>R (7) - RMS-11 MACRO Reference Manual

## **Volume 8. Compatibility Mode (RSX-11M)**

RSXU (8) - VAX-11/RSX-11M User's Guide

RSXR (8) - VAX-11/RSX-11M Programmer's Reference Manual

#### **Volume 9. System Programming**

REAL (9) - VAX/VMS Real-Time User's Guide

WDD (9) - VAX/VMS Guide to Writing a Device Driver

SDA (9) - VAX/VMS System Dump Analyzer Reference Manual

PTCH (9) - VAX-11 PATCH Utility Reference Manual

### **Volume 10. System Management and Operation**

SIG (10) - VAX-11 Software Installation Guide

SMGR (10) - VAX/VMS System Manager's Guide

OPG (10) - VAX/VMS Operator's Guide

UETP (10) - VAX/VMS UETP User's Guide

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