digital

Hardware Documentation Microfiche Libraries

PRINT SET
MP 00586
NEW PRODUCT

VT48,VT50,VT52,VT61,VT62,
VT78,VT100,VT105

TECHNICAL
INFORMATION

COMPANY CONFIDENTIAL

MF11-L/LP/U/UP,PC04/PC05,
PDP-81/8L,PDP-11/05/11/40,
PDP-11/45,PDP-11/70,PDP-12

MAINTENANCE PLAN, INFO.

SUMMARY, LOGISTICS PLAN,
USER'S GUIDE

NEW PRODUCT INTRODUCTORY

INFORMATION INDEX

WIRE LIST
PIN SORT

EP-DLV11-J-PS-NP
COPYRIGHT © 1978
FICHE 1 OF 1

SEP 1978
digital
MADE IN USA

EP-00020-IP-F
COPYRIGHT 76-79

APR 1979
digital
MADE IN USA

EP-LS11-TI-A
COPYRIGHT © 1978
FICHE 1 OF 1

APR 1978
digital
MADE IN USA

EP-00006-PM-B
COPYRIGHT © 75-77
FICHE 1 OF 1

DEC 1978
digital
MADE IN USA

EP-LA120-NP-01
COPYRIGHT © 1978
FICHE 2 OF 2

EP-IND79
COPYR
FICH

FE

DLV11-J

IPB-20

LS11

PM-PROC-06

LA120

INDEX 79-06

KS10 (D)

User's Guide

HARDWARE DOCUMENTATION

MICROFICHE LIBRARIES

USER'S GUIDE

HARDWARE DOCUMENTATION
MICROFICHE LIBRARIES

INTRODUCTION

This manual describes the microfiche libraries produced by Document Control and Micro-publishing.* They are Minicomputer, PDP-8, PDP-11, Large Computer, VAX11/780, and KS10-based system hardware.

- MINICOMPUTER LIBRARY – Contains information on the PDP-8, -9, -11, -12, -14, and -15 computer systems.

  Distribution Code: MINI – All cost centers except Field Service (700 series) are charged for each library and its updates.

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* Document Control and Micropublishing is located at Bedford, Massachusetts (M/S BU-D2) and is part of the Bedford Operations Group within Educational Services Development and Publishing.

- VAX 11/780 LIBRARY – Contains VAX-specific information and is intended to be used in conjunction with the Minicomputer or PDP-11 Libraries. Information on cross product line options is contained in the Minicomputer and PDP-10 libraries.

  Distribution Code: VX780 – All cost centers, except Field Service (700 series), are charged for each library and its updates.

- KS10-BASED SYSTEMS LIBRARY – Contains information on the KS10 processor and its options.

  Distribution Code: KSD – KS10 libraries are distributed as described above for the Large Computer Library. The Distribution Code, KSD, corresponds to the Code DMF; the Code KSC† corresponds to CMF.

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† Cost centers are not charged for these libraries.

- PDP-8 LIBRARY – Contains PDP-8 information which is extracted from the Minicomputer Library.

  Distribution Code: PDP-8 – All cost centers except Field Service (700 series) are charged for each library and its updates

- PDP-11 LIBRARY – Contains PDP-11 information which is extracted from the Minicomputer Library.

  Distribution Code: PDP-11 – All cost centers except Field Service (700 series) are charged for each library and its updates.

- LARGE COMPUTER LIBRARY – Contains information on the KI and KL based systems. KA processor information is available on request.

  Distribution Code: DMF – The requesting cost center is charged for each DMF designated library and its updates. A DMF library may be ordered for use at a specific customer site or as required by the cost center. When a KI or KL based system is shipped, Document Control and Micropublishing initiates the shipment of a Large Computer Microfiche Library to the cost center responsible for system maintenance. This library (Distribution Code CMF)† is intended specifically for use at the particular system site. The DMF and CMF libraries are identical in content.

Tech Tips – A system for documenting technical problems, maintenance procedures and other *nice to know* information. A complete explanation of the TECH TIP program is provided on the TECH TIP Miscellaneous fiche located in the Technical Information section of the Mini-computer, PDP-8, PDP-11, Large Computer, and KS10-based systems libraries. Tech Tips are COMPANY CONFIDENTIAL.

Field Change Orders (FCO's) – FCO's order field implementation of field-effective Engineering Change Orders (ECO). The FCO documents provide complete instructions for field implementation. Whenever there is a Revised Print Package (RPP) cover sheet, which lists drawings revised by the FCO, it will be published with the FCO.

DEC-O-LOG (DOL) – The DEC-O-LOG provides synopses of ECO's, both in-plant and field-effective, for options and modules. The DEC-O-LOG page for a device or module is released/updated and published when:

- An FCO is released.

- Product Support determines that an ECO will impact field maintenance.

NOTE
DEC-O-LOG is not available for all Digital options. It is published when either of the above conditions is true.

CHAPTER 1
LIBRARY OVERVIEW

1.1. LIBRARY CONTENTS

The Hardware Documentation Microfiche Libraries provide DIGITAL Field Service personnel, and other DIGITAL employees who use the libraries, with microfiche versions of the following documents:

Hardware Manuals - Maintenance, Technical, Hardware Reference and Service Manuals, Illustrated Parts Breakdown (IPB), and Preventive Maintenance (PM) Manuals. *

Diagnostic Program Descriptions and Listings.

Diagnostic Engineering Change Orders (DECO) and Diagnostic Engineering Patch Orders (DEPO). These were formerly MAINDEC Change Orders (MCO) and MAINDEC Change Notices (MCN).

Wire Lists — Name Sorts, Pin Sorts and Special Sorts. Only Name Sorts are available for the Minicomputer, PDP-8 and PDP-11 Libraries.

---

* User Guides (UG), Operator Manuals (OP), Maintenance Print Sets (MP), and Installation Manuals (IN) documentation are shipped with the hardware as hardcopy and are not normally included in microfiche libraries.

Module Circuit Schematic (CS) and Unit Assembly (UA) drawings – included in the MODULE/ASSEMBLY section of the library.

Microcode and ROM Listings – When not included in the hard copy print set, these are published in the HARDWARE MANUAL section of the library.

Option Summary – A summary of the basic field maintenance information available for a hardware option. It provides ECO/FCO/REV history, DECO/DEPO history, documentation and media lists, compatibility criteria, TECH TIP reference, etc. The Option Summary manual on OPSUM-01 fiche provides a complete explanation of the option summary data.

Miscellaneous Information – MAST (PDP-11 Modular Approach to System Testing), Handbooks, Site Prep Guide, PDP-11 Communications Manual, Diagnostic Components Catalogs, Revision Level Status, etc.

1.2 MICROFICHE FORMAT

Each fiche may contain 208 frames of information (*see* Figure 1-1). A frame contains the equivalent of an 11 inch x 14 inch paper document. In many cases, two trimmed 8-1/2 inch x 11 inch pages are combined on one frame. The reduction ratio is 42:1.

FCO Cross Reference (FCR) – The FCR provides a chronological listing of field retrofit FCO's (synopses and quick checks) which must be considered in the field installation and maintenance of options, modules, and power supplies. The FCR is updated when an FCO is released that affects the operation or maintenance of the device. The FCR's are only produced for the microfiche libraries and are not available on hard copy.

NOTE

FCR's are not available for all Digital options since they are in the process of being replaced by the Option Summary (see below).

ECO Quick Check (ECOQC) – Provides basic information required to determine the ECO status of options. ECOQC is no longer supported. It will be replaced by the Option Summary described below.

NOTE

ECOQC's are not available for all Digital options since they are in the process of being replaced by the Option Summary (see below).

1.3 MICROFICHE TITLE STRIPS

Each fiche is titled for easy identification (*see* Figure 1-2).

| DX20 | PROGD DEV ADPT DIAG
DFDXCD0 | AH-E179D-DD
COPYRIGHT©78-79
FICHE 1 OF 6 | JUN 1979
digital
MADE IN USA |

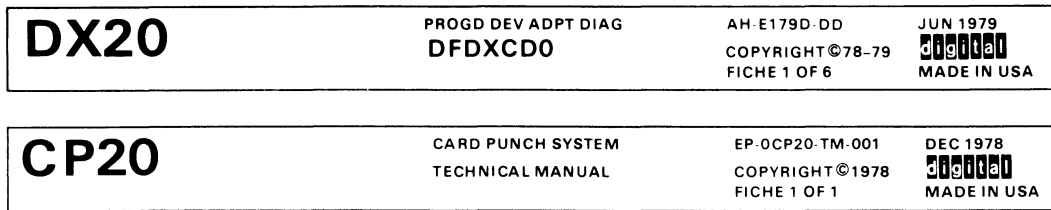| CP20 | CARD PUNCH SYSTEM
TECHNICAL MANUAL | EP-0CP20-TM-001
COPYRIGHT©1978
FICHE 1 OF 1 | DEC 1978
digital
MADE IN USA |

Figure 1-2   Sample Fiche Titles

The title strip contains the following:

1. At the left, device(s), module designation(s), diagnostic package identifiers, or section sequence numbers. Fiche are filed by these designations. Diagnostic listings may, at the user's option, be filed by the MAINDEC number which is located in the center of the title strip.

2. In the center, document description, types of fiche (e.g., Technical Information, Module/Assembly), diagnostic MAINDEC number, and security classification.

TITLE STRIP

MA-2972

Figure 1-1   Microfiche Format (42:1 Reduction)

- Keep your libraries in a secure place when not in use.

- Return obsolete fiche marked 'COMPANY CONFIDENTIAL' or 'DEC Confidential' to the microfiche librarian for disposal.

Each microfiche library is the property of DIGITAL Equipment Corporation and its security is the responsibility of the individual to whom the library is assigned. When the library is no longer required, it should be submitted to the Cost Center Microfiche Librarian for re-assignment or disposal. *See also* 3.5, Transferring of Libraries/Change of Address.

1.6 HANDLING AND STORAGE OF MICROFICHE

Fiche is rather rugged, but it is not indestructible. At temperatures above 160°F (71°C) the emulsion will soften; in extreme cold the fiche will become brittle. *DO NOT* leave fiche in direct sunlight or in the reader (with the power on) for a long period of time, because the fiche image will fade. X-rays do not affect fiche – they will not be damaged by airport detection systems.

Fiche may be stored in portable readers, library containers, or any acid-free container designed for fiche storage. *DO NOT* carry fiche loose in a tool case; it will become scratched, dirty and oily. Fiche may be washed with water using a soft cloth. *DO NOT* use chemical cleaners on fiche.

3. At the right, part number, month and year fiche was prepared, copyright date(s) of the document, and number of fiche, e.g., 1 of 2, 2 of 2.

1.4 MICROFICHE PRODUCTION

The Hardware Manual, Technical Information, Module/Assembly, and Miscellaneous fiche are produced primarily from hard copy documents which are photographed by a high speed step-and-repeat camera. The Wire Lists and Diagnostic Program Listings are normally produced directly from magnetic tape; no hard copy is required. The tape is run on a computer output microfilm (COM) machine in which the data is processed, displayed on a cathode ray tube (CRT), and photographed by a camera similar to the one used for the hard copy. COM-generated fiche have an INDEX in the lower right frame. This INDEX provides frame numbers and selected information from each frame.

Silver film, produced by the microfiche cameras, is used as the "MASTER" to reproduce the blue diazo film microfiche for the libraries.

1.5 LIBRARY SECURITY

Some microfiche contains proprietary and/or Company Confidential information. These microfiche are labeled 'COMPANY CONFIDENTIAL' or 'DEC Confidential' and are to be used only by DIGITAL employees. They should not be allowed to fall into the hands of unauthorized persons.

Spare Parts for portable readers are available from Stock Room 17 via the Cyco-order mode. The current list is included on the PDP-8, PDP-11 and Minicomputer INDEX fiche under the eye-readable frame heading, 'FICHE NOTES'.

When portability is not required, a desk-type reader is recommended. A dual-lens (24X and 42X) and dual-carrier type reader will satisfy the requirements of most offices. Contact your purchasing group for information on types of readers available and their respective costs.

1.9 READER/PRINTERS

Reader/printers generate paper documents from microfiche. Their cost varies from $2000 to $8000. Some Digital sites have this capability. If not, many commercial office supply stores and copy centers can usually handle your fiche-to-hard copy requirements.

1.7 COMMENT CARDS

Two types of Comment Cards, Microfiche Comment (white) and Reader Comment (brown), are provided for your use.

Returned Microfiche Comment Cards are reviewed by Document Control and Micropublishing. Individual responses are made when possible and responses of general interest are published on the Speed Bulletin under 'FICHE NOTES'.

The Reader Comment Cards should be used to comment on the contents and usability of the hardware manuals. These cards replace the Reader Comment sheets contained in hard copy manuals which are reviewed by the Educational Services Development and Publishing site operatons manager responsible for that manual.

1.8 MICROFICHE READERS

Generally, large computer sites (DEC 10/20) are equipped with a table-top reader which is shipped with the system. Minicomputer sites are serviced by technicians who carry portable microfiche readers. The portable readers are listed in the Field Service Tools and Test Equipment Catalog and can be acquired through Field Service Logistics. Document Control and Micropublishing *DOES NOT* distribute microfiche readers, but we will help you select the reader that best suits your needs.
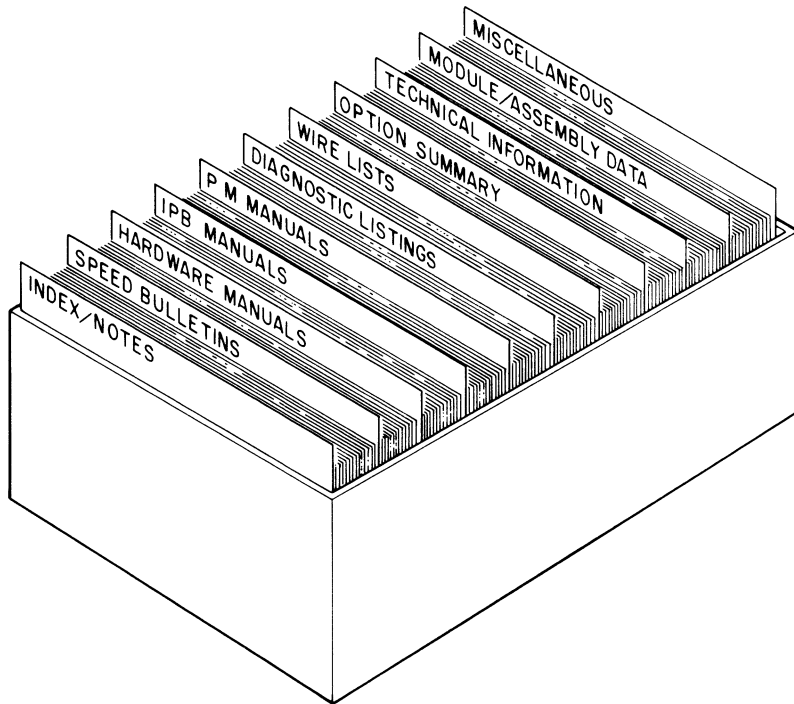
Figure 2-1   Typical Library

CHAPTER 2
LIBRARY ORGANIZATION

2.1   SECTIONS

The Libraries are separated into major sections and subsections by divider cards (Figure 2-1). Each major section has its own title strip color:

Red/Black – SPEED BULLETIN

Brown – INDEX

Red – HARDWARE MANUALS, IPB's and PM MANUALS

Orange – DIAGNOSTIC PROGRAM LISTINGS (DPL)

Yellow – WIRE LISTS (WL)

White – OPTION SUMMARY

Green – TECHNICAL INFORMATION - Option Level - (TI)

Blue – MODULE/ASSEMBLY DATA (MA)
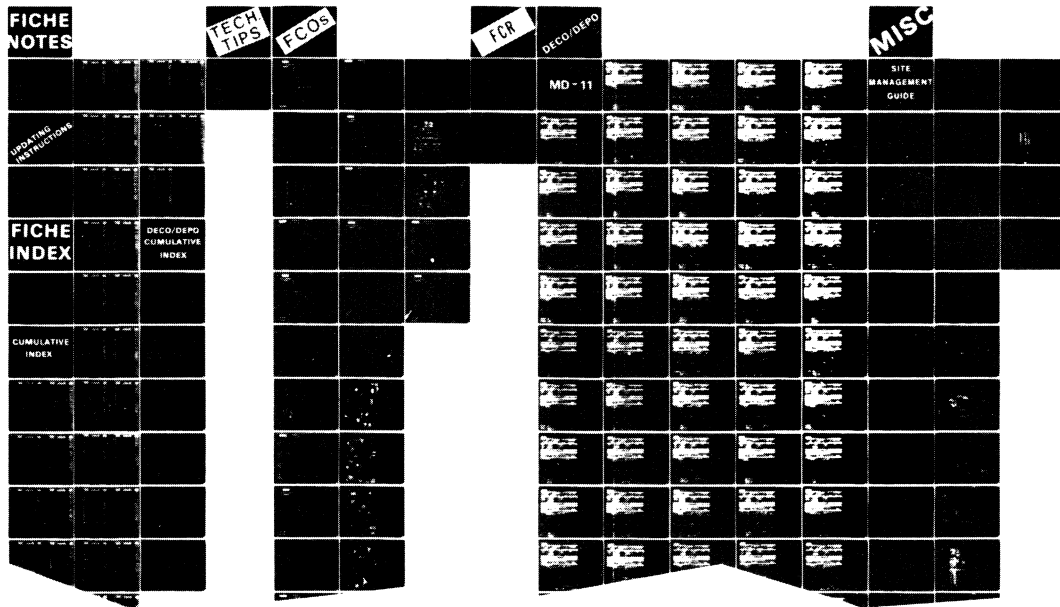
Purple – MISCELLANEOUS

Figure 2-2   Speed Bulletin Fiche

2.2 INTRA-SECTION ORGANIZATION

Within each section of the library, fiche are filed by the device designator or diagnostic Package Identifier (PI) located at the left of the title strip. Diagnostic Listings may, at the user's option, be filed by the MAINDEC/PI number, which is located in the center of the title strip. Filing by MAINDEC/PI number became standard for all new Minicomputer and Large Computer libraries shipped after January, 1979.

Since libraries are provided for use within a cost center, reorganization of the libraries to meet the needs of the cost center is acceptable.

2.3 SPEED BULLETIN

Speed Bulletins have red and black title strips and are marked Company Confidential. They are numbered sequentially and are distributed weekly to Minicomputer, Large Computer, and KS10 library users. VAX libraries are designed for use in conjunction with the PDP-8, PDP-11 or Minicomputer Libraries; therefore, Speed Bulletins are not distributed to VAX Library users since this would be unnecessary duplication.

The intent of the Speed Bulletin is to provide documents to the field as quickly as possible (typically two weeks maximum). Two months or more may be required to complete the publication and distribution process by which a given document reaches its ultimate location in the library. When all documents covered by a particular Speed Bulletin have been published, that Speed Bulletin can be purged.

VAX INDEX 80-01	HARDWARE DOCUMENTATION	EP-VAX11 IX 01	
	LIBRARY INDEX UPDATING AND	COPYRIGHT©1979	MADE IN USA
	USER INFORMATION	FICHE 1 OF 1	

Figure 2-3   Index Title Strip (80-01, First Update of FY80)

VAX INDEX 80-02	HARDWARE DOCUMENTATION	EP-VAX11 IX 02	
	LIBRARY INDEX UPDATING AND	COPYRIGHT©1979	MADE IN USA
	USER INFORMATION	FICHE 1 OF 1	

Figure 2-4   Index Title Strip (80-02, Second Update of FY80)

The INDEX fiche contains the following information:

- Fiche notes – Instructions for using the library and procedures for ordering new libraries, changing update quantities, changing address and ordering replacements for missing or damaged fiche.

- Instructions for adding the accompanying fiche to the library. This information is located below the eye-readable frame titled 'UPDATING INSTRUCTIONS'.

- An index for each section of the library. The section index lists all available fiche and information for ordering fiche that are no longer shipped in new libraries. Eye-readable frames are used to identify the index for each section and subsection.

The Speed Bulletin (Figure 2-2), which is published weekly, contains the newly released FCO's, D-O-L's, FCR's, TECH TIPS, DECO/DEPO's, RPP cover sheets, Option Summmary Changes, and Miscellaneous information. These documents will be incorporated into the Technical Information, Option Summary, and Module/Assembly fiche in subsequent updates; the DECO/DEPO's will be included in subsequent COM-generated fiche updates.

A fiche INDEX is located in the left column and is identified by an eye-readable frame. By checking the Fiche Index you can quickly determine the contents of the Speed Bulletin.

A CUMULATIVE INDEX of documents published on previous Speed Bulletins is updated and included on each new Speed Bulletin. This listing of FCO's, D-O-L's, FCR's, TECH TIPS, Option Summary changes, RPP Cover Sheets, and DECO/DEPO's is purged of documents which have been published on the appropriate Technical Information, Module/Assembly, Option Summary or DECO/DEPO microfiche.

Hardware Manuals and other fiche may be distributed with the Speed Bulletin. Instructions for adding these fiche to the libraries are provided under the eye-readable frame, 'UPDATING IN-STRUCTIONS', in the left column of the Speed Bulletin.

2.4 INDEX

The INDEX fiche has a brown title strip. This fiche is revised and distributed every two months with new Technical Information, Module/Assembly, and Wire List fiche. The type of library (i.e., MINI, KS10, etc.) and update sequence number is indicated on the title strip as shown in Figures 2-3 and 2-4

IPB-01	BA8-C,BA11-F,BA11-K,BA11-L,	EP-00001-IP-F	NOV 1978
	BA11-M,BA11-N,BA11-P,	COPYRIGHT © 76-78	〓〓〓
	BA11-U,CL8	FICHE 1 OF 1	MADE IN USA
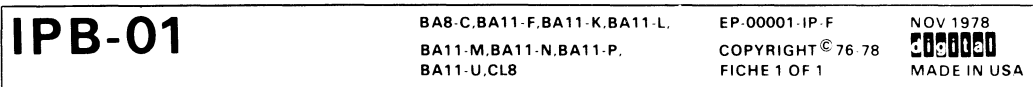
Figure 2-6   IPB Title Strip

PM-PROC-01	BD03,BD04,BD05,BM792-YA,	EP-00001-PM-C	DEC 1978
	BM792-YJ,BM873,	COPYRIGHT © 75-78	〓〓〓
	CR04-A/B/C/D,CTS11,DA11-B	FICHE 1 OF 1	MADE IN USA
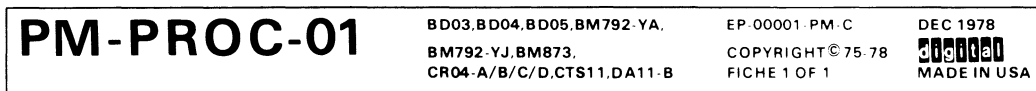
Figure 2-7   PM Title Strip

Hardware Manuals, IPB's and PM fiche are distributed with Speed Bulletins and bimonthly updates.

Some manuals on older products are no longer included in new libraries. These manuals are identi-
fied on the INDEX and can be ordered from Document Control and Micropublishing.

Most photographs do not reproduce well on microfiche; therefore, new manuals have few photo-
graphs or no photographs at all. Line drawings with larger print are replacing photographs whenever
possible to make the new and revised hardware manuals more usable on microfiche. Some of the
more important older manuals are being upgraded (photographs replaced by line drawings) and will
be republished when the upgrading is complete.

2.5 HARDWARE MANUALS, MICRO CODE AND ROM LISTS, IPB'S, AND PM MANUALS

All Hardware Manuals, Micro Code and ROM Lists, IPB's, and PM Manual fiche have red title strips. The title strip, as shown in Figure 2-5, lists the device at the left, manual title in the center, and fiche part number at the right. Hardware Manuals are filed by the device number.

MS780	MEMORY SYSTEM TECHNICAL DESCRIPTION	EP-MS780-TD-001 COPYRIGHT ©1978 FICHE 1 OF 1	SEP 1978 ▉▉▉▉▉▉ MADE IN USA
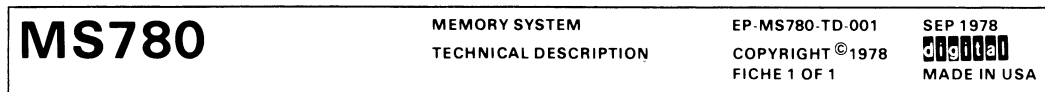
Figure 2-5   Hardware Manual Title Strip

Hardware Manual fiche produced since September, 1977, have part numbers that are similar to the part number on the hard copy version of the manual. For example, the MS780 fiche title strip in Figure 2-5 has a part number EP-MS780-TD-001; the hard copy manual is part number EK-MS780-TD-001.

The IPB's and PM Manuals are each grouped on a series of sequentially numbered fiche. The devices included on the fiche are listed in the center of the title strip as shown in Figures 2-6 and 2-7. Also, eye-readable frames are provided to help the user locate a particular IPB or PM Manual on the fiche.

11 INDEX	PDP-11 MAINDEC INDEX **CZQAFQO** RELEASE NO. 79-02	AH-9026Q-MC COPYRIGHT© 76–78 FICHE 1 OF 2	AUG 1978 digital MADE IN USA

Figure 2-8   PDP11 MAINDEC Index Title Strip
(79-02, Second Update of FY79)

11 INDEX	PDP11 MAINDEC INDEX **CZQAFRO** RELEASE # 79-03	AH-9026O-MC COPYRIGHT ©1979 FICHE 1 OF 2	DEC 1978 digital MADE IN USA

Figure 2-9   PDP11 MAINDEC Index Title Strip
(79-03, Third Update of FY79)

DPL's are identified by DEVICE and MAINDEC Number/Package Identifier. Diagnostics produced or revised after September, 1977, use the new Package Identifier. Figure 2-10 shows the relationship between the MAINDEC Number and Package Identifier. Figures 2-11 and 2-12, the title strips for the CB11 logic test diagnostics, illustrate how the MAINDEC Number and Package Identifier are indicated on the fiche.

2.6 DIAGNOSTIC PROGRAM LISTINGS (DPL)

ALL DPL'S and DECO/DEPO fiche have orange title strips. The Diagnostic Listing fiche provide the following types of information:

> Abstract
> Equipment Requirements
> Loading and Starting Procedures
> Operating Procedures
> Error Information
> Program Description and Listing

Each COM-produced diagnostic fiche has an index in the lower right frame. Fiche index information is extracted from a selected line of each frame. This may be helpful in locating a test routine or information referenced by the computer program counter (PC) when running a Diagnostic Program.

The library INDEX (brown title strip) list all available DPL's and procedures for ordering fiche that are not part of the standard library configuration. The Minicomputer Library includes a separate index fiche for PDP-9, PDP-12, PDP-14, and PDP-15 diagnostics.

Each computer family has its own DPL's. An index for each family of diagnostics is produced by Diagnostic Engineering and is included with each release. These indexes are called MAINDEC Indexes and the title strip indicates the computer family, revision level, and release number, as shown in Figures 2-8 and 2-9. The release numbers are sequential within a fiscal year and computer family.

| CB11 | LOGIC TEST
MD-11-DZCBA-B | EP-DZCBA-B-DL-A
COPYRIGHT © 1976
FICHE 1 OF 1 | OCT 1976
█0█0█0█0█
MADE IN USA |

Figure 2-11   Title Strip with MAINDEC Number "B" Revision

| CB11 | LOGIC TEST
CZCBAC0 | AH-8395C-MC
COPYRIGHT © 72-78
FICHE 1 OF 1 | JUL 1978
█0█0█0█0█
MADE IN USA |

Figure 2-12   Title Strip with Package Identifier "C" Revision

DPL's in the Minicomputer and Large Computer libraries may be filed by the DEVICE, then the MAINDEC Number/Package Identifier, or by the MAINDEC Number/Package Identifier only. Filing by MAINDEC Number/Package Identifier is the most accurate method because the DEVICE designations are frequently changed when new products are announced. For example, the following DPL's all have the same MAINDEC Number/Package Identifier, but have different DEVICES.

Other filing examples are shown in Section 3.3, UPDATING THE LIBRARY.

```
MAINDEC Number ──────▶ MD - 11 - D Z R P A - A ◀──┐
                                                   │
Package Identifier ──────────▶ C Z R P A B O       │
                              ╱      └─┬─┘ │ │      │
CPU Identifier ──────────────╱      Patch Level     │
                                    ╲               │
Four Characters Obtained ───────────╲──────┘ │      │
From MAINDEC Number                  Revision Level ┘
```

CPU Identifiers: A-- PDP–8   E-- VAX (PDP--11/780)
                   C-- PDP–11   J-- PDP--9/15/XVM
                   D-- DECSYSTEM 10 & 20

Figure 2-10   Relationship between MAINDEC Number
and Package Identifier

Distribution of new DPL's will occur on or before the release of the media by the SDC. Since all revisions of DPL microfiche are normally retained in the library, updating instructions usually do not accompany a DPL microfiche update package.

DECO/DEPO's

A DECO is the document which announces either the initial release or a revised version of a diagnostic program. A DEPO documents specific "patching" which may be field-implemented to correct or enhance a diagnostic program. DECO/DEPO's are produced for the PDP-8, DEC 10/20, PDP-11 and VAX computer families. The DECO/DEPO fiche provides the following information on each diagnostic program:

- Component Part Number and Description

- ECO Purpose
  — patch, change or new diagnostic package identifier and description, patch level, product date, and copyright date.

- Product Components Affected
  — documents, fiche, and types of media.

- Products Obsoleted

All DPL's for the VAX11/780 and KS10-based systems are filed by the Package Identifier at the left of the title strip. Figures 2-13 and 2-14 illustrate the title strips used on the VAX and KS10 diagnostic fiche. DPL's for the VAX and KS10-based systems are identified only by the Package Identifiers, and at the left of the title strip, and are filed by these numbers.

EVKAA-3.0	VAX HRDCR INSTRTN TST	EP-EVKAA-DL-3.0	NOV 1978
		COPYRIGHT©1978	digital
	TEST 1 THRU TEST 12	FICHE 1 OF 2	MADE IN USA

Figure 2-13   VAX Diagnostic Title Strip

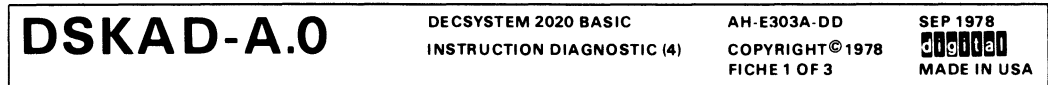| DSKAD-A.0	DECSYSTEM 2020 BASIC	AH-E303A-DD	SEP 1978
	INSTRUCTION DIAGNOSTIC (4)	COPYRIGHT©1978	digital
		FICHE 1 OF 3	MADE IN USA

Figure 2-14   KS10-Based System Diagnostic Title Strip

The fiche part numbers with an 'AH' prefix, as shown in Figures 2-12 and 2-14, are assigned by the Software Distribution Center (SDC) and indicate a new or revised diagnostic program. The SDC PDP-8 and PDP-11 Diagnostic Software Components Catalogs (in the MISCELLANEOUS section of the PDP-8, PDP-11 and Minicomputer Libraries) provide the part numbers of the diagnostic media available from the SDC.

2.7 WIRE LISTS

All Wire List fiche title strips are yellow. The Wire List revision is specified in parenthesis as a suffix to the Device Designator at the left of the title strips, as shown in Figure 2-16. There are two common types of Wire Lists – Name and Pin Sorts – for the backplanes produced by DIGITAL.

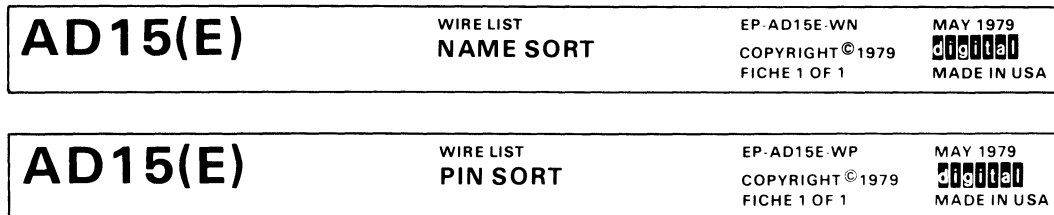| AD15(E) | WIRE LIST
NAME SORT | EP-AD15E-WN
COPYRIGHT©1979
FICHE 1 OF 1 | MAY 1979
d0g00a0
MADE IN USA |
| AD15(E) | WIRE LIST
PIN SORT | EP-AD15E-WP
COPYRIGHT©1979
FICHE 1 OF 1 | MAY 1979
d0g00a0
MADE IN USA |

Figure 2-16   Wire List Title Strips

Special application Wire Lists are also included when required. Most Wire List fiche are COM-produced and include an index in the lower right frame. The INDEX indicate which Wire Lists are available for each library type. In some cases the Wire List fiche must be ordered separately. Ordering information is provided under the eye-readable frame, 'WIRE LISTS', on the INDEX fiche.

- Problem/Description

- Solution/Correction

- DEPO Patch Area — location, from-to information.

- Product Characteristics — type of processor, operational environment, services affected, etc.

The first and last diagnostic for which there is a DECO or DEPO is indicated in the center of the fiche title strips, as shown in Figure 2-15.

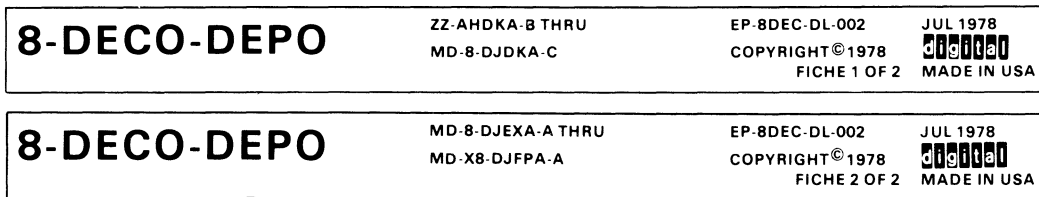| 8-DECO-DEPO | ZZ-AHDKA-B THRU
MD-8-DJDKA-C | EP-8DEC-DL-002
COPYRIGHT©1978
FICHE 1 OF 2 | JUL 1978
digital
MADE IN USA |
| 8-DECO-DEPO | MD-8-DJEXA-A THRU
MD-X8-DJFPA-A | EP-8DEC-DL-002
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FICHE 2 OF 2 | JUL 1978
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Figure 2-15 DECO/DEPO Title Strips

DECO/DEPO's are first published from hard copy documents on the Speed Bulletin. A consolidated and updated set of COM-generated DECO/DEPO fiche is produced and distributed every two to three months. When an update is received, the previous revision DECO/DEPO fiche should be destroyed.

Option Summary fiche provide the following information concerning options

- Option Parts Breakdown

- ECO/FCO/REV History

- DECO/DEPO History

- Documentation and Media Reference

- "Watch Out" flags, i.e., compatibility criteria

- TECH TIP Reference

- ECO/FCO Detail Summary

Additional information regarding the use of this section is located on the OPSUM-01 fiche.

Option Summary fiche are marked 'COMPANY CONFIDENTIAL' and must be destroyed when replaced by an update.

2.8 OPTION SUMMARY

Option Summary fiche title strips are white. The Option Summary is included in all the libraries except VAX. It replaces the ECO Quick Check's, FCR's, and DOL's on the Technical Information and Module/Assembly fiche (*see* Figure 2-17).
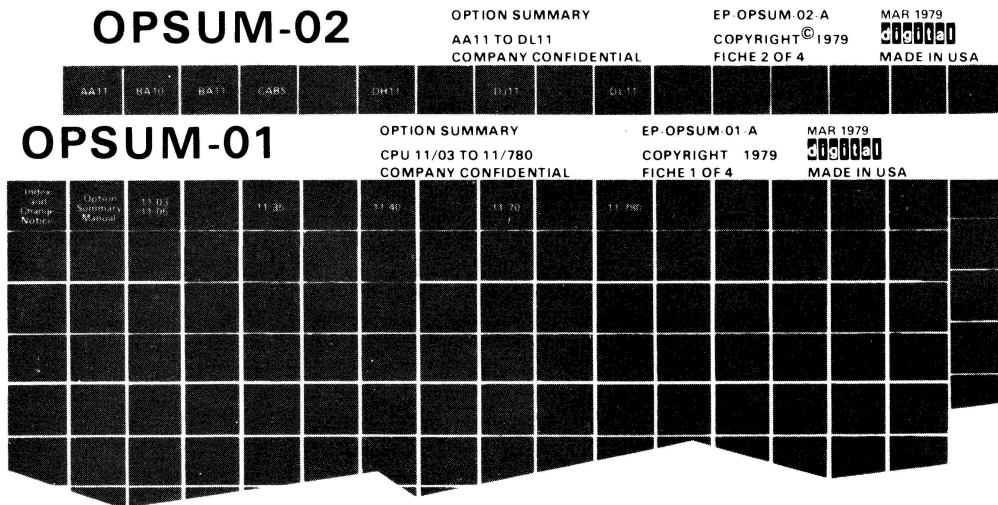

Figure 2-17   Option Summary Fiche Example

This section also includes a series of fiche titled 'TECH TIP Miscellaneous'. These fiche contain general Tech Tips and are not for a specific hardware option or module. The TECH TIP Administration Document, which explains how to write a TECH TIP and the approval cycle required, is included on the first fiche of this series.

Technical Information fiche marked 'COMPANY CONFIDENTIAL' must be destroyed when replaced by an update.

2.10 MODULE/ASSEMBLY DATA (MA)

Module/Assembly information fiche title strips are blue and are filed by the Module/Assembly designation listed on the left of the header, as shown in Figure 2-19. When more than six devices are on one fiche, the first and last modules are listed, e.g., M8928 thru M8938. Eye readable frames are used to identify each module.

M8928	M8929	M8931	MODULE/ASSEMBLY	EP-M8928-MA-C	DEC 1978
M8932	M8933	M8934	INFORMATION	COPYRIGHT©1978	
			COMPANY CONFIDENTIAL	FICHE 1 OF 1	MADE IN USA

Figure 2-19   Module Assembly Title Strip

2.9 TECHNICAL INFORMATION (TI)

Technical Information fiche title strips are green and are filed by the device(s) listed on the left of the title strip, as shown in Figure 2-18. When more than six devices are on one fiche, the first and last devices are listed, e.g., DR11 through DT01. Eye readable frames are used to identify each device

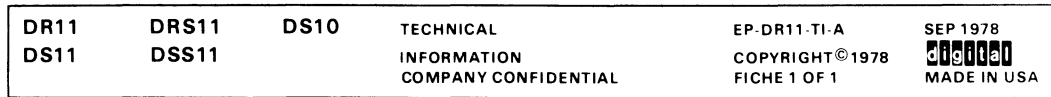| DR11 | DRS11 | DS10 | TECHNICAL | EP-DR11-TI-A | SEP 1978 |
| DS11 | DSS11 | | INFORMATION | COPYRIGHT©1978 | ▉▉▉▉▉▉ |
| | | | COMPANY CONFIDENTIAL | FICHE 1 OF 1 | MADE IN USA |

Figure 2-18   Technical Information Title Strip

The Technical Information fiche provide all available documents in the following categories for one or more devices:

- DEC-O-LOG (DOL)

- Field Change Orders (FCO)

- Field Change Order Cross Reference (FCR)

- Tech Tips

- ECO Quick Check

The Miscellaneous section contains information which is of general interest but which cannot be designated for a specific option or device. Examples of these documents are Handbooks, Site Prep Guide, Diagnostic Components Catalogs, and Revision Level Status.

Each Module/Assembly fiche provides all available documents in the following categories for one or more modules/assemblies:

- Circuit Schematic Drawings (CS)
- Unit Assembly Drawings (UA)
- DEC-O-LOG (DOL)
- Field Change Orders (FCO)
- Field Change Order Cross Reference (FCR)
- Tech Tips

Module/assembly fiche that are marked 'COMPANY CONFIDENTIAL' must be destroyed when replaced by an update.

2.11 MISCELLANEOUS

Miscellaneous fiche title strips are purple and are filed by the designation at the left of the title strip, as shown in Figure 2-20.

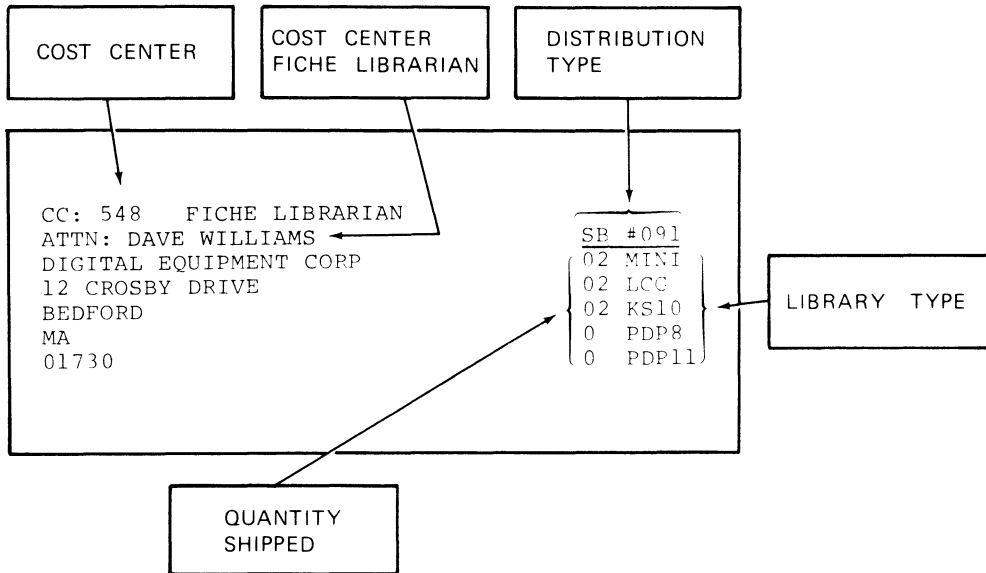| SITE PREP	DIGITAL SITE PREPARATION GUIDE	EP-OCORP-SP-002 COPYRIGHT©77-78 FICHE 1 OF 2	DEC 1978 digital MADE IN USA

Figure 2-20   Miscellaneous Title Strip

Figure 3-1 Shipping Label Example

3.1   COST CENTER MICROFICHE LIBRARY

The Microfiche Librarian is designated by the cost center's management to coordinate the Micro-fiche Library distribution with Document Control and Micropublishing. All requests for new libraries, changes in update quantities, or requests for additional or replacement fiche, should be made by the Microfiche Librarian. With the exception of remote locations to which shipments are made directly, all new libraries and updates are shipped to the Microfiche Librarian for distribution within the cost center.

3.2   TYPES OF UPDATES

The information printed on the shipping labels makes it possible for the Microfiche Librarian to monitor and verify requested changes in the distribution data base. Package contents may be con-firmed using the "QUANTITY SHIPPED" and "DISTRIBUTION CODE" specified. The significant data fields are indicated in the label example, Figure 3-1.

3.3 UPDATING THE LIBRARY

When new microfiche are received, the library should be updated promptly to ensure that it remains current and that the latest information is accessible.

- SPEED BULLETIN AND BIMONTHLY UPDATES

    1. "Updating Instructions" are provided in the left column of the Speed Bulletin and Index fiche.

    2. The "Updating Instructions" list the new fiche, fiche to be removed, and reason for publication of the new fiche. Insert new fiche and remove old fiche from your library as indicated.

    3. The new INDEX is intended to replace the previous INDEX fiche. The Speed Bulletin should be retained until it is indicated to be "obsolete" in the Speed Bulletin Cumulative Index.

    NOTE
    Fiche purged from your library marked **COMPANY CON-FIDENTIAL or DEC CONFIDENTIAL** must be destroyed.

Updates are distributed as follows:

1. SPEED BULLETIN and accompanying fiche – Normally published and distributed weekly to the PDP-8, PDP-11, Minicomputer, Large Computer, and KS10-based system libraries. Each SPEED BULLETIN is numbered sequentially and contains identical information for all libraries. The update fiche that accompany SPEED BULLETIN are intended for a specific library type. The SPEED BULLETIN provides library specific instructions under the eye-readable frame, "Updating Instructions", for incorporating those fiche into the intended library.

2. Diagnostic Program Listing Releases – Distributed on or before the distribution of the media by the Software Distribution Center. Releases normally occur every six to eight weeks for the PDP-8, KL10-based systems, KS10-based systems, PDP-11, and VAX. Each release for a computer family has a MAINDEC INDEX and the release number is indicated in the center of the fiche title strip.

3. Bimonthly Updates – The INDEX fiche and the updates to the Wire List, Technical Information, Module/Assembly, Option Summary, and Miscellaneous sections of the library are distributed every two months. The INDEX fiche has a sequential number and indicates the library type. Instructions for incorporating the new fiche are provided on the INDEX fiche under the eye-readable frame, "Updating Instructions."

The "MAINDEC" number is a group of four alphabetical characters, such as FKTH, VDLA, etc.

The "MAINDEC" number is always followed by a one or two character "REVISION" number, such as A, B, C, C0, E1, etc.

b. Every library is organized in one of two possible ways, either by "DEVICE" or by "MAINDEC" number.

    – DEVICE sort.   File first by "DEVICE", then by "MAINDEC" number, then by "REVISION". The Minicomputer and Large Computer libraries have been configured from the beginning using this scheme. Since this filing scheme is no longer recommended, no specified filing instructions are included here; when the "MAINDEC" number filing scheme is understood, the "DEVICE" scheme will cause no difficulty.

    – MAINDEC sort.   File first by "MAINDEC" number, then by "REVISION" (with "DEVICE" not considered). (NOTE: This is the recommended filing sequence which has become the standard for new libraries produced since January, 1979.)

- DIAGNOSTIC PROGRAM LISTINGS (DPL)

  No other section of the library is more likely to cause confusion than the Diagnostic Program Listings. The instructions which follow are intended to assist the non-technical person who maintains the libraries. The detailed explanation of the diagnostic numbering schemes can be found in Section 2.6.

  BASIC FILING PROCEDURE (OVERSIMPLIFIED)

  This (oversimplified) filing procedure is as easy as 1,2,3.

  1. Understand the three basic "numbers".

  2. Determine which filing scheme has been used for the library being updated.

  3. File the fiche just as in any alphanumeric scheme. (Refer to the INDEX fiche, read the listing under the eye-readable frame "Diagnostic" if there is uncertainty about sequence.)

      a. The basic "numbers" are as follows: (Note that exceptions exist, but will not be considered in this explanation.)

          The "DEVICE" number on diagnostic fiche is one or more DEC option or module designation(s), such as DH11, TM02, etc.

The INDEX has been "formatted" to emphasize the compatibility which exists between the two numbering systems, an old and a new system, and to make filing as simple as possible.

NOTE
In the LCG library there is a group of PDP-11 diagnostics which are indexed and filed at the end of the diagnostics section of the library.

3.4   ORDERING REPLACEMENT FICHE

If a complete update was missed, or a single fiche is missing, check with the Cost Center Microfiche Librarian to determine if it is available at your location. If not available, the Microfiche Librarian should send the request on an order form or memo to Document Control and Micropublishing.

For updates	– List the library type, update number, and quantity required.
For individual fiche	– List the device, fiche part number (EP- or AH-), fiche number (1 of 5, 3 of 5, etc.) and quantity required for each fiche. The library INDEX fiche lists all fiche available.
Shipping Instructions	– Should include cost center, location, and microfiche librarian's name.

c. The filing procedure, when using the "MAINDEC" number sort, is apparent in the INDEX excerpt of Figure 3-2.

DEVICE NUMBER   MAINDEC NUMBER

```
                    KD11-E          MD 11   D   FKTH   AO †
                    PDP-11/34               C   FKTH   BO* ††
                    DLV11-J                 C   VDLA   AO
                                            C       VDLA   BO*
                    DRV11-B         MD 11   D   VDRA   AO*
                    DRV11-B         MD 11   D   VDRB   AO
                    DRV11-B                 C   VDRB   BO*
                    DLV11-E         MD 11   D   VDVA   AO
                                            C   VDVA   BO*
                    DLC11-F         MD 11   D   VDVC   AO
                                            C   VDVC   BO
                    DLV11-F                 C   VDVC   CO*
```

LIBRARY type--11's and C's indicate that these are PDP-11 diagnostics.

These four characters are the "MAINDEC" numbers.

"DEVICE" number-- Note that these are NOT in file order.

These two characters are the "REVISION" number

* Asterisks indicate latest (or only) rev. level of each MAINDEC. Libraries shipped prior to Jan. 1979 contain all rev. levels of each MAINDEC; libraries shipped since Jan. 1979 contain latest (or only) revision MAINDEC.

† This number is shown in the center of the fiche title strip as MD 11-DFKTH-A.

†† This number is shown in the center of the fiche title strip as CFKTHBO.

Figure 3-2   Simplified Diagnostic Filing Scheme

POLICIES AND PROCEDURES UNIQUE TO EACH LIBRARY

- **PDP-8, PDP-11 AND MINICOMPUTER LIBRARIES**

  - A brown striped fiche titled PDP-9,12,14,15 DIAG INDEX provides a list of available diagnostic fiche for the PDP-9, PDP-12, PDP-14, and PDP-15 computer families. This fiche should be filed with the INDEX fiche.

  - Only the latest revision of the PDP-8 and PDP-11 DPL's are included in new libraries. Previous revisions may be ordered from Document Control and Micropublishing.

  - Wire Lists (Name Sorts); PDP-9, -12, -14, and -15 Diagnostics and PDP-9/15 Hardware Manuals are not shipped in the basic library. These fiche may be ordered from Document Control and Micropublishing.

  - A limited number of Wire List (WL) Name Sort updates are distributed to Field Service cost center fiche librarians:

        1 to 5 libraries – 1 set of WL updates
        6 or more libraries – 3 sets of WL updates

    Additional WL updates may be ordered from Document Control and Micropublishing.

3.5 TRANSFERRING OF LIBRARIES/CHANGE OF ADDRESS

Libraries are assigned to cost centers. The Cost Center Microfiche Librarian must inform Document Control and Micropublishing about library transfers and address changes to ensure uninterrupted service.

- **KS10 BASED SYSTEM LIBRARY**

  - This library does not include the complete sequence of IPB and PM fiche. Only the IPB and PM fiche which document options that are used on the KS10-based system are included in this library.

- Additional microfiche boxes are not supplied by Document Control and Micro-publishing. Most commercial office supply stores stock microfiche containers; therefore, you should attempt to purchase them locally. Maynard Purchasing will also handle your requests.

• VAX LIBRARY

- New libraries only contain the latest diagnostic revisions.

- Does not contain cross product line information. This library is intended for use with the PDP-11 or Minicomputer Library.

- Selected LSI-11 Diagnostics are part of this library.

• LARGE COMPUTER LIBRARY (CMF AND DMF)

- KA Hardware Manuals and Diagnostic Program Listings are not shipped in the basic library. They must be ordered from Document Control and Micropublishing

- Large Computer libraries are shipped in a locking metal box so they can be left on-site

MAINTENANCE DOCUMENTATION SERVICE (MDS)

The MDS microfiche libraries are available to DIGITAL customers through the Accessories and Supplies Group, Nashua, N.H. MDS libraries are family or device oriented and contain many of the same fiche as the libraries used by DIGITAL employees. The main differences are in the Technical Information and Module/Assembly fiche which do not contain COMPANY CONFIDENTIAL documentation such as TECH TIPS, FCR's, and ECO Quick Checks. These MDS fiche are identified by an 'ES' part number instead of the 'EP' number.

MDS libraries are updated monthly and the customer receives a monthly bulletin of FCO's, DOL's, and DECO/DEPO's similar to the Speed Bulletin.

APPENDIX B
OTHER MICROFICHE PUBLISHED BY
DOCUMENT CONTROL AND MICROPUBLISHING

NEW PRODUCT INFORMATION (Branch Starter Kit)

The New Product fiche have gray title strips. They are distributed monthly and are not normally updated. The New Product fiche contain Maintenance Plans, Recommended Spares Lists, User Manuals, Print Sets (24X reduction), and any other information provided by Product Support.

The 'COMPANY CONFIDENTIAL' New Product Information (NPI) fiche are available to Field Service Managers and Supervisors. Ordering information may be obtained from Document Control and Micropublishing.

OEM MICROFICHE

The OEM Product Lines are shipping a product-specific microfiche package of Hardware Manuals. Diagnostic Listings and Wire Lists with each 11/70, 11/60, 11/34, 11/03, 11/04, PDP-8 and KS10-based system. OEM fiche are current when shipped and will not be updated. All OEM fiche have white title strips.