APR/72

DIGITAL
SOFTWARE
NEWS

FOR THE

PDP-8 & PDP-12

DIGITAL EQUIPMENT CORPORATION □ MAYNARD, MASSACHUSETTS

PDP-8/12 DIGITAL SOFTWARE NEWS

APRIL 1972

TABLE OF CONTENTS

DIGITAL SOFTWARE NEWS

FOR THE PDP-8 AND THE PDP-12

Digital Software News for the PDP-8 & PDP-12 is designed to
provide users of PDP-8 and PDP-12 software with up to date
information on software problems, programming notes, and
new and revised software. Each article, other than announcements
and documentation corrections, is coded sequentially by system
program in the lower right corner for ease in maintaining a
quick reference file. The original material for such a file
is supplied in the Software Performance Summary for the PDP-8
& PDP-12. This publication which is placed in each basic
software kit, is a collection of all current information on
known software problems, patches, and programming notes. As
new versions correct software problems and obsolete patches,
and reprinted manuals include programming notes and manual
corrections, new articles in the Digital Software News will
announce the revised software and specify by code which article
should be removed from your Software Performance Summary file.
Articles may also be replaced when new information becomes
available; such as, procedure to circumvent a problem may
replace the original report of the problem. All articles in the
Digital Software News which should be added to your file will
be appropriately coded.

Any questions or problems on the articles contained in these
publications or concerning the use of Digital's software should
be reported to the Software Specialist or Sales Engineer at
your nearest Digital Office.

Additional copies of the current Software Performance Summary
and updated issues of the PDP-8 and PDP-12 software price
lists are available at no charge upon request from the Program
Library. As with usual orders for software, the Program
Library will accept orders received directly from U.S. customers.
All other customer orders must be routed through the nearest
Digital Representative.

In regard to the following, please note that all prices
are in U.S. dollars and apply to U.S. customers only.
Because currency and import considerations affect the prices
in all countries outside the U.S., all other users must check
with the nearest Digital office or representative to place
their orders.

U.S. customers may send orders with purchase order, check or
money order directly to:

> Program Library
> Digital Equipment Corporation
> 146 Main Street
> Maynard, Massachusetts   01754

KE-8E-EAE Extended Memory Exerciser

MAINDEC-8E-DØRA

The KE-8E Extended Memory Exerciser is a test of the KE-8E"B"
mode instructions which during the defer cycle use the word
following the instruction to obtain the operand. The capability
of every instruction to access every memory field **from** every
memory field through non Auto-Index and Auto-Index is tested.

The KE-8E Diagnostic is now available and may be ordered from
the Program Library for the applicable fee:

Paper Tape Binary	MAINDEC-8E-DØRA-PB	$5.00
Document	MAINDEC-8E-DØRA-D	$5.00

There is no field update.

Note — The source tape is not available.

PDP-8/12 NEW AND REVISED SOFTWARE (Continued)

MI8E BOOTSTRAP DIAGNOSTIC

MAINDEC-8E-D1IB

This program was revised because the "Starting Address", as specified throughout the documentation had to be changed to, and specified as the "Initial Address."

Customers may order this software for the applicable fee:

Paper Tape Binary	MAINDEC-8E-D1IB-PB1	$5.00
Paper Tape Binary	MAINDEC-8E-D1IB-PB2	$5.00
Document	MAINDEC-8E-D1IB-D	$5.00

MR8-EA READ ONLY MEMORY TEST

MAINDEC-8E-D1JB

Initially, this program was designed to be operated on an 8/E only.

The program has now been improved, and can be used on all PDP-8 models.

However, the user will encounter a problem if the ROM Contents Tape is loaded starting with the tape on other than level 8 code. The program may then indicate tape loaded or checksum error.

This problem can be remedied by always placing the ROM Contents Tape in the reader so that level 8 code will be read first.

Customers may order this software for the applicable fee:

Paper Tape Binary	MAINDEC-8E-D1JB-PB1	$5.00
Paper Tape Binary	MAINDEC-8E-D1JB-PB2	$5.00
Document	MAINDEC-8E-D1JB-D	$5.00

PDP-12

Problem with EAE

A software (hardware) problem has been reported with EAE (KE12).
The instructions CLA (7601) and NMI (7411) are defined as being
micro programmable, but due to a hardware problem they do not
function properly when mico programmed. Hence, the instructions
CLA and NMI should be used as two separate instructions.

No correction is planned for the hardware.

Patch to force Linctape to be the system device

There are a number of occasions when it is desirable that
DIAL-MS not use a disk as the system device, even though one
is present on the system. Among these instances are the
following cases:

1. Using the FPP Assembler on a system with one
    DF-32 disk: the Assembler requires DIAL-MA,
    but also requires that if DF-32's are used as
    the system device, at least two must be present.

2. Using Focal-12 under these same circumstances.

3. Initializing a tape on a system with an inoperable
    or malfunctioning disk.

4. Starting up DIAL-MS on a system in which the disk
    must not be overwritten, e.g., in a CL-12 or
    PS/12 situtaion.

The following patch to the DIAL-MS system tape solves this
problem by allowing sense switch Ø to affect the choice of a
system device. If SS Ø is in the Ø position, DIAL-MS is
initialized in the same manner as it currently is. If SS Ø
is in the 1 position at the time of initialization, however,
Linctape will be chosen as the system device regardless of what
disks are present on the system.

BLOCK	REL. LOCN.	OLD VALUE	NEW VALUE
310	Ø14	Ø	Ø44Ø
310	Ø15	Ø	6Ø36
310	Ø16	Ø	ØØØ2
310	Ø17	Ø	5766
310	Ø35	ØØ11	6Ø14

LINKING LOADER (PAPER TAPE VERSION)-DEC-Ø8-A2C3-PB

Failure to initialize low-speed reader on PDP-8/E

The current version of the paper tape LINKING LOADER does
not issue a KCC instruction to initialize the low-speed
reader. This fact does not effect users with a PDP-8, 8I,
or 8L, as the START key sets reader run. However, this is
not true on the 8E, and users trying to load via the low-speed
reader will not be able to do so. The following patch to the
LOADER will correct this problem. It should be made after
loading the LOADER.

LOC	OLD CONTENTS	NEW CONTENTS
62ØØ	(72ØØ)	6Ø32

SOURCE PATCH - CHANGE THE 'CLA' AT 62ØØ to A 'KCC'.

TC-58 Hardware Information

The following items may be informative to users with TC-58's as they are not included in the documentation.

a. To change the data field, execute MTGO with the field in bits 6-8 of the accumulator. The accumulator is not cleared.

    For example:

        TAD FIELD
        MTGO
        CLA

b. A bad tape is detected in all modes except Rewind, Write end of file (EOF), or Write.

c. When Write EOF is completed, the EOF bit is set. Prior to this, EOF marks are not detected.