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PDP-8 DIGITAL SOFTWARE NEWS

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The PDP-8 Digital Software News (a Bi-Monthly Publication) complements Reviews for COS-310, OS/8 and OS/78. It publishes new and revised Software Product Descriptions, programming notes, software problems and solutions, and documentation corrections. Much of the material is developed from answers to customer Software Performance Reports (SPRs) significant to the general audience, and is printed here to establish a reference notebook.

PRODUCTS SUPPORTED in the PDP-8 DIGITAL SOFTWARE NEWS

CAPS-8 V1
COS-310 V3 (V7.00)
COS-310/2780 RDCP V6.05, V7
DECnet-8 V1
FOCAL/MPS V1
OS/8 V3D
OS/8 FORTRAN IV V3D
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OS/8 FORTRAN IV PLOTTER V3C
OS/8 INDUSTRIAL BASIC V3
OS/8 MACREL/LINKER V1A
OS/78 V1, V2

DISTRIBUTION

The Digital Software News is directed to one software contact for each software product. No mailing will be made to addresses without a software contact name. Address changes should be sent to the nearest DIGITAL Field Office. Include the new address and mailing label from the most recently received publication.

Software binaries and sources are provided only under licenses. The standard Terms and Conditions, OEM Agreement, and/or Quantity Discount Agreement contain the licenses for all binaries other than for DECsystem-10.

Eleanor F.Hunter, Editor
Roxanne Alexander, Associate Editor

8 Digital Software News
CIRCULATION LIST UPDATE

Over 7500 copies of this PDP-8 DSN are sent for each issue. Since we probably have many incorrect addresses on our mailing list, we request that you complete the following by 1 DECEMBER 1978. If we don't hear from you, we will assume that you no longer wish to receive this publication.

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USER LETTER

Jan Fair, SPR Administration

Customers (and others) have brought to our attention the need for additional information regarding SPR service, particularly as it involves SPR Administration. The following represents our attempt to fulfill this need. Your comments and suggestions are most welcome.

HOW TO MAKE THE BEST USE OF SPR FORM

What WE Can Do for YOU

1. Blank SPR forms are available upon request in the desired quantities through SPR Administration (P.O.Box F) and your local office/SPR Center.

2. Copies of the SPR acknowledgment and answer are sent to the appropriate DIGITAL Office/SPR Center for their information.

3. SPRs marked *SOFTWARE ERROR or INQUIRY* will have a response for supported Category A and B products. These SPRs should refer to suspected deficiencies in the software.

4. SPRs marked *FYI or SUGGESTION* are forwarded to the pertinent software group for information purposes, and are responded to at their discretion.

5. SPRs marked *DOCUMENTATION ERROR* should report those problems dealing with software manuals or newsletters, and will be forwarded to the pertinent software group.

What YOU Can Do For US

1. Customer Name and Address and Problem Statement should always be typed or printed clearly.

2. SPRs should not be used for problems concerning software policy, software distribution, or hardware. Your local office should be contacted in these cases.

3. It would be most helpful to all concerned, if problems with patches are reported as soon as possible.

4. For security SPRs, it is imperative that the *DO NOT PUBLISH box* be marked.

5. It would be helpful if tapes submitted with SPRs are labeled (track and density), and have a directory attached.

6. Should you ever receive an unacceptable SPR response, please contact us or the appropriate SPR Center so that the response may be readdressed.

COS-31Ø V7.ØØB
MONITOR
(PATCH 6)

USING SOURCE FILES AS INPUT TO A DIBOL PROGRAM (MD)

When using seven source files as input to a DIBOL program, an ON ERROR statement preceding the INIT statement fails to work. The run-time system responds with "I/O ERROR ON RXØ; RETRY?"

The following patch to the COS-310 Monitor corrects this problem. It also changes the version number of the Monitor to V7.ØØC.

COS-31Ø V7.ØØB
MONITOR
(PATCH 6)

Seq 7 M
2 of 3

```
RUN PATCH
COS PATCH SYSTEM VERSION V7.ØØ
FILE NAME:/N
PATCHING MONITOR
BLOCK: 27
LOCATION: 156
OLD VALUE: 2143
NEW VALUE: 2127
LOCATION: END
RELATIVE CHECKSUM: 7764
NEW BLOCK PATCHED OK
BLOCK: 36
LOCATION: 303
OLD VALUE: 1031
NEW VALUE: 1167
LOCATION: END
RELATIVE CHECKSUM: 0136
NEW BLOCK PATCHED OK
BLOCK: 37
LOCATION: 10
OLD VALUE: 1631
NEW VALUE: 2370
LOCATION: 11
OLD VALUE: 7450
NEW VALUE: 1767
LOCATION: 12
OLD VALUE: 5600
NEW VALUE: 7450
LOCATION: 13
OLD VALUE: 2231
NEW VALUE: 5600
LOCATION: 14
OLD VALUE: 7112
NEW VALUE: 2367
LOCATION: 15
OLD VALUE: 7012
NEW VALUE: 7112
LOCATION: 16
OLD VALUE: 3451
NEW VALUE: 7012
LOCATION: 17
OLD VALUE: 1451
NEW VALUE: 3451
LOCATION: 20
OLD VALUE: 7010
NEW VALUE: 1451
LOCATION: 21
OLD VALUE: 0002
NEW VALUE: 7010
LOCATION: 22
OLD VALUE: 3453
NEW VALUE: 0002
LOCATION: 23
OLD VALUE: 1451
NEW VALUE: 3453
```

COS-31Ø V7.ØØB
MONITOR
(PATCH 6)

Seq 7 M
3 of 3

```
LOCATION: 24
OLD VALUE: 0174
NEW VALUE: 1451
LOCATION: 25
OLD VALUE: 3452
NEW VALUE: 0174
LOCATION: 26
OLD VALUE: 3451
NEW VALUE: 3452
LOCATION: 27
OLD VALUE: 2200
NEW VALUE: 3451
LOCATION: 30
OLD VALUE: 5600
NEW VALUE: 2200
LOCATION: 31
OLD VALUE: 6370
NEW VALUE: 5600
LOCATION: 167
OLD VALUE: 1014
NEW VALUE: 6370
LOCATION: 170
OLD VALUE: 3014
NEW VALUE: 7767
LOCATION: END
RELATIVE CHECKSUM: 6623
NEW BLOCK PATCHED OK
BLOCK: 27
LOCATION: 156
OLD VALUE: 2127
NEW VALUE: 2144
LOCATION: END
RELATIVE CHECKSUM: 0015
NEW BLOCK PATCHED OK
BLOCK: END
04 BLOCK(S) PATCHED IN THIS FILE
FILE NAME:/X
```

OS/8 EXTENSION KIT V3D
TECO V5.07

Seq 31.20.13 M
1 of 1

Supercedes Article dated Jun/Jul 78

UNSPECIFIED ITERATIONS AFTER INSERTS (SR)

Problem: If an iteration has no iteration count specified, and the previous command was "on insert, then the iteration is skipped. For example, the command IA$<L> will not work properly.

Diagnosis: The insert code destructively tests the number flag (NFLG) and if it was 0, set it to a 1. It is never reset to 0. The iteration code sees a 1 and thinks a number is present. Looking for one, it finds 0 and thinks the iteration count is 0 meaning skip this iteration.

Cure: The insert code should reset (zero) the number flag. This was not a problem in TECO V4 because 0<> was the same as <> then. Apply the following patch (which upgrades TECO to version 5.08):

```
.GET SYS:TECO
.ODT
2616/6032 5776;3167
2674/5565 5617
4573/0773 0774
^C
.SAVE SYS:TECO
```

OS/8 EXTENSION KIT V3D Seq 31.21.2 M
FUTIL V7B 1 of 1

Supercedes article dated Aug/Sep 78

PATCH TO FIX 'SHOW CCB' AND MAPPING OF 'LD' MODULES (JM)

The following contains the corrections to both of these problems.

```
.GET SYS:FUTIL
.ODT
12024/3242 5345
12025/1642 7650
12026/7450 5236
12027/5236 1642
12145/XXXX 3242
12146/XXXX 1242
12147/XXXX 1351
12150/XXXX 5225
12151/XXXX 1175
12075/7040 7000
12520/0200 0400
^C
.SAVE SYS:FUTIL
```

This patch upgrades Futil to V7D.

OS/8 FORTRAN IV V3D
FRTS V5

Seq 51.3.3 O
1 of 1

Supercedes article dated Aug/Sep 78

FORTRAN RUNTIME SYSTEM 2 PAGE HANDLER (JM)

The FORTRAN Run-Time System has worked with the TD8E 2 page system handler. To add it to work with other 2-page system handlers and, in particular the RL01, the following patch must be installed:

```
.GET SYS:FRTS
.ODT
12675/7001 0342
12742/XXXX 7770
17526/0000 0000
17527/3763 3307
17530/1763 1333
17531/3762 3363
17532/1763 5346
17533/7001 7635
17534/3761 1570
17535/5726 7710
17546/XXXX 1763
17547/XXXX 1334
17550/XXXX 7100
17551/XXXX 1335
17552/XXXX 7630
17553/XXXX 5360
17554/XXXX 1763
17555/XXXX 0341
17556/XXXX 1307
17557/XXXX 3763
17560/XXXX 2363
17561/7642 5346
17562/7727 5726
17563/7721 0
17576/XXXX 6220
^C
.SAVE SYS:FRTS
```

This patch is optional and does not change the patch level.

OS/78 V1 Seq 70.1.1 N
NOTES & DOCUMENTATION 1 of 1

OS/78 V1 SUPPORT (RJ)

OS/78, V1 support will continue for 90 days from the date of first customer ship of OS/78, V2. The first shipment of OS/78, V2 occured on 14-AUG-78. Software Performance Reports (SPR's) for OS/78, V1 will therefore be answered as long as they are submitted before 14-NOV-78.

OS/78 V2
MONITOR NOTES

Seq 71.1.1 N
1 of 1

BUILDING OS/78 V2 FROM SOURCE (RJ)

OS/78, V2 source kits are available on floppy disks only. A complete build of the OS/78, V2 binary kit from source requires the following: a PDP-8 with 16K words of core, OS/78 V3D (monitor kit, extension kit, FORTRAN 4 kit), a large mass storage device for SYS:, and floppy disk drives. The present kits were built on a PDP-8/A with 16K words of memory, an RKØ5 disk, a RXØ1 floppy disk drive, a VT-52 terminal, and a LA-18Ø printer.

The procedure is as follows:

1. Make sure your systems device has the following V3D CUSP's: ABSLDR, FOTP, SET, DIRECT, BOOT, RESORC, RALF, PAL8, RXCOPY, LIBRA, and CCL.

2. Copy BATCH.SV and OS78CP.BI from the first source floppy to SYS: and then "SUB OS78CP". This will copy the source floppies to your large mass storage device from the 12 source floppies.

3. Then start the file MASTER.BI, it is the batch file which creates the files required to build the binary kits. MASTER.BI contains comments which explain the rest of the build procedure.

Below are some additional notes related to the procedure.

1. OS/78, V2 could be built using only floppy disks, but it would be a long and complex operation.

2. A last minute problem with the handler RX78B.PA was resolved by also including the handler RX78B.VJ. Do a ".COPY RX78B.PA<RX78B.VJ" if you need support for a second set of floppy disks.

3. The tenth line of monitor build procedure (part of MASTER.BI) should read "/EXCEPT RX8E, RXAØ".

OS/78 V2
HANDLERS
LQP.BN VB

Seq 71.49.1 M
1 of 1

LQP PROBLEM WHEN USED WITH BASIC (RJ)

The LQP handler will malfunction if fed a buffer ending on (or wrapping around) a field boundry. This is usually a problem when using COMMERCIAL BASIC V6 since its first I/O buffer is located at 17400-17777.

The solution is to protect all"ISZ BUFPTR" instructions with NOP's. The following patch will alter the handler using SET. The patch is part of a batch stream because a mistake on a SET command is difficult to recover from. Create a small file with any name, PATCH.BI for example, and then "SUB PATCH/T".

```
$JOB          PATCH LQP HANDLER TO VERSION C.
.SET LQP: LOC 57=4312
.SET LQP: LOC 70=4312
.SET LQP: LOC 113=2201
.SET LQP: LOC 114=5712
.SET LQP: LOC 115=5712
.SET LQP: VERSION C
$END
```

The patch upgrades LQP to Version C, but is only required for users of the LQP78 printer. This problem does not exist for the LA78.

OS/78 V2
HANDLERS
RX78B VF

Seq 71.58.1 M
1 of 1

USE OF SECOND FLOPPY DRIVE (RXA2 & RXA3) SET (RJ)

OS/78, V2 as shipped will not access the second set of floppy disks which are available as a DECstation 78 option. This can be fixed as follows: OS/78, V2 disk 2 of 2; the FORTRAN 4 disk, now includes a file called BUILD2.SV. Run this file if you need to access RXA2 and RXA3, if not, leave it alone! The procedure is simple, but unnecessary unless quad floppy support is required.

Procedure for Disk 1 of 2 (The BASIC floppy)

Floppy #1 in Drive #1 and run OS/78
Floppy #2 in Drive #2
.RUN RXA1:BUILD2
$BOOT (all you type is BOOT)

Procedure for Disk 2 of 2 (The FORTRAN floppy)

Floppy #2 in Drive #1 and run OS/78
.R BUILD2
$BOOT (all you type is BOOT)

In both cases, the typeout "SYS BUILT" occurs and then a normal system bootstrap follows. RXA2 and RXA3 can now be used.

This procedure does effect the OS/78 system defaults. You should

.SET TTY PAUSE 3

.SET TTY WIDTH 80

after you run BUILD2.

NOTE - The version number of the handler (RX78B) which is installed by BUILD2 is "J". It's new group name is "RX0B".

OS/78 V2
BASIC V6A

Seq 71.70.2 M
1 of 1

COMMERCIAL BASIC NOT CLEARING COMMAND DECODER SWITCHES (JR)

The Commercial Basic editor V6 does not clear all the command decoder switches when run. This can cause problems if these switches happened to be set to random values. Specifically, Basic may use less core than it has.

The following patch to BASIC V6A will clear these switches and raise the editor to V6B:

```
.SET SYS OS8     /INCLUDE THIS COMMAND ONLY IF RUNNING
                 /UNDER OS78
.GET SYS BASIC
.ODT
4277/3777 5355
4355/XXXX 3777;3761;3762;5300;7645;7646
1350/6601 6602
^C
.SA SYS BASIC
.SET SYS OS78    /INCLUDE THIS COMMAND ONLY IF RUNNING
                 /UNDER OS78
```

OS/78 V2
BASIC
BLOAD V6B

Seq 71.72.2 M
1 of 1

UNDEFINED LINE NUMBERS IN COMMERCIAL BASIC(JR)

When the Commercial BASIC loader BLOAD V6 reports the undefined line number error message, it occasionaly drops zero digits within large line numbers. For example, 39001 prints as 391. This is because BLOAD is resetting a leading zero suppression switch on the third digit.

The following patch corrects this and raises the BLOAD to V6C:

```
.SET SYS OS8
.GET SYS:BLOAD
.ODT
3217/6201 5310
3261/3246 7000
3310/XXXX 3246;6201;5220
3035/6602 6603
^C
.SAVE SYS:BLOAD
.SET SYS OS78
```

OS/78 V2
BASIC
BRTS.SV V6A

Seq 71.73.1 N
1 of 1

BASIC CCL COMMAND USE (RJ)

OS/78 BASIC includes a feature which allows a CCL command to be initiated directly from the BASIC run time system (BRTS). The command is:

```
X = CCL ("AAAAA")
```

where X is a dummy variable and AAAAAA is any valid CCL input string. For example:

```
X = CCL ("SUB DOIT/H/T")
```

to start the batch stream DOIT. Note that control will not return to your BASIC program after the CCL operation is done.

However, several OS/78 commands are not processed by CCL and, therefore, cannot be invoked from BASIC. They are: GET, ODT, R, RUN, SAVE, and START. If you attempt to use them from BASIC, your system will hang and require a manual restart.

OS/78 V2
BASIC
BRTS V6A

Seq 71.73.2 M
1 of 1

LARGE BUFFERS IN COMMERCIAL BASIC(JR)

OS/8 Commercial BASIC V6 normally attempts to use all available memory when running a user program; if the program is very large BRTS will try to use its I/O buffer sapce to load it.

An unusual bug occurs if the program is so large that it just fits into the last I/O buffer. BRTS halts thinking there is a consistency error between it and BLOAD.

The following patch will correct this problem and raise BRTS to V6B:

```
.SET SYS OS8
.GET SYS:BRTS
.ODT
10445/7402 5340
10540/XXXX 1346;7141;1772;7620;7402;5255;4377
6/6601 6602
^C
.SA SYS:BRTS
.SET SYS OS78
```

Note that the above mentioned halt should never occur in practice. BLOAD normally prints a "TOO BIG" error message if the program cannot run. The halt was only there to catch problems (such as this) before they did any real harm.

OS/78 V2
SYMBIONT
SPOOLR.SM V1A

Seq 71.82.1 N
1 of 1

SPOOLR RESTRICTIONS (RJ)

The line printer spooler (SPOOLR) has a number of restrictions related to its use. Some are documented in the User's Manual Update, but this article will put them all in one list.

1. The spooler should not be used in conjunction with any FORTRAN 4 operation.

2. Do not queue a file for listing and then SQUISH the device containing the file.

3. Do not use any of the optional devices in conjunction with the symbiont except for, obviously, the line printer. That is, you cannot use SLU2:, SLU3:, RXA2:, or RXA3: when the spooler is in operation.

4. In general, the spooler was designed to run while typical OS/78 functions (except FORTRAN 4) are being executed. For example, create a file from BASIC, queue it for printout, and start running another BASIC program.

8 DIGITAL SOFTWARE NEWS
CUMULATIVE INDEX
OCTOBER/NOVEMBER 1978

This is a complete listing of all articles for current products supported in the 8 Digital Software News. Missing sequence numbers may pertain to problems unique to other versions of the same product.

IMPORTANT!

The following numerical system has been grouped in logical order.

Retracted articles are indicated: RETRACTION.

Flags are currently being installed for all articles. The flags and definitions are as follows.

M = Mandatory patch. These are critical patches which each customer is required to install.

O = Optional patch. These articles are applicable only if the reported problems have occurred at the customer site or if they are unique to his operation.

R = Restriction. These problems are not patchable in released software. Restrictions are reviewed and corrected when possible as part of the normal release cycle.

N = NOTE. This information may be helpful to the user.

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Component	Sequence	Mon/Yr

IMPORTANT!

Flags are currently being installed for all articles. The flags and definitions are as follows.

M = Mandatory patch. These are critical patches which each customer is required to install.

O = Optional patch. These articles are applicable only if the reported problems have occurred at the customer site or if they are unique to his operation.

R = Restriction. These problems are not patchable in released software. Restrictions are reviewed and corrected when possible as part of the normal release cycle.

N = NOTE. This information may be helpful to the user.

Component	Sequence	Mon/Yr
DECNET-8 V1		
DOCUMENTATION		
ERROR IN DECNET MANUAL	10.0.1 N	May 78
NSP		
BYTES LOST IN INTERRUPT MESSAGE	10.2.1 M	Sep 78
OS/8 V3C		
MONITOR		
CCL		
ERROR IN CCL (VERSION G) SOURCE PAPERTAPE	20.3.1 O	May 78
OS/8 V3D		
MONITOR		
NOTES & DOCUMENTATION		
USING THE PDP-8/A PARALLEL PORT FOR A LINEPRINTER	21.1.1 N	Mar 78
SOFTWARE REVIEW CORRECTION	21.1.2 N	May 78
PROBLEM WHEN YOU DESTROY BATCH	21.1.3 N	Aug/Sep 78
CCL		
DEFAULT EXTENSIONS TO TECO	21.3.1 O	May 78
UTILITIES		
CREF		
BUG WITH FIXTAB	21.15.1 M	May 78
EDIT		
EDIT PROBLEM WITH NO FORMFEED AT END OF THE INPUT FILE	21.17.1 M	Mar 78
FOTP		
INCORRECT DIRECTORY VALIDATION	21.19.1 M	Aug/Sep 78
MCPIP		
DATE-78 PATCH FOR MCPIP	21.21.1 M	Mar 78
PAL8		
INCORRECT CORE SIZE ROUTINE	21.22.1 M	Aug/Sep 78
ERRONEOUS LINK GENERATION NOTED ON PAGE DIRECTIVE	21.22.2 M	Aug/Sep 78
PIP		
PIP /Y OPTION DOES NOT WORK PROPERLY WHEN TRANSFERRING A SYSTEM HEAD FROM A DEVICE WHICH IS NOT CO-RESIDENT WITH SYS.	21.23.1 M	Aug/Sep 78
SET		
USING SET WITH 2-PAGE SYSTEM HANDLERS	21.26.1 M	May 78
SCOPE RUBOUTS FAIL IN SET	21.26.2 M	May 78
PARSING OF = IN TTY WIDTH OPTION	21.26.3 M	Aug/Sep 78

Component	Sequence	Mon/Yr
HANDLERS		
ASR33		
HOW TO WRITE TWO-PAGE SYSTEM HANDLERS	21.40.1 N	May 78
LPQ		
LPQ01 HANDLER FAILS TO RECOGNIZE TABS	21.49.1 M	Mar 78
OS/8 EXTENSION KIT V3C		
BASIC		
BRTS		
BASIC FAILS TO OUTPUT 132 CHARACTERS TO LA-36	30.11.1 O	Mar 78
OS/8 EXTENSION KIT V3D		
BASIC		
BASIC		
GOOD RANDOM NUMBERS FOR OS/8 BASIC	31.1.1 N	May 78
BASIC.UF		
BASIC.UF INCOMPATIBLE FROM OS/8 V3C	31.5.1 M	Aug/Sep 78
BRTS		
IOTABLE OVERFLOW	31.11.1 M	Mar 78
BASIC PNT FUNCTION	31.11.2 M	Jul 78
LINE SIZE ON OUTPUT OF BASIC	31.11.3 O	Jul 78
BASIC		
BASIC EDITOR HAS A FIELD BOUNDARY BUG	31.12.1 M	Aug/Sep 78
TECO		
CHANGING THE DEFAULT EU VALUE	31.20.1 O	Mar 78
CHANGING THE DEFAULT EH VALUE	31.20.2 O	Mar 78
REMOVING YANK PROTECTION	31.20.3 O	Mar 78
SCOPE SUPPORT FOR VT05 USERS	31.20.4 O	Mar 78
PROBLEM WITH AY COMMAND	31.20.5 M	Mar 78
CONDITIONALS INSIDE ITERATIONS	31.20.6 M	Mar 78
ECHOING OF WARNING BELLS	31.20.7 M	Mar 78
CTRL/U SOMETIMES FAILS AFTER *	31.20.8 M	May 78
MULTIPLYING BY 0 IN TECO	31.20.10 M	May 78
Q-REGISTERS DON'T WORK IN 8K	31.20.11 M	MAY 78
CAN'T SKIP OVER A "W"	31.20.12 M	May 78
UNSPECIFIED ITERATIONS AFTER INSERTS	31.20.13 M	Oct/Nov 78
NEW FEATURES IN TECO V5	31.20.14 N	Aug/Sep 78
FUTIL		
FUTIL PATCH	31.21.1 M	May 78
PATCH TO FIX 'SHOW CCB' AND MAPPING OF 'CD' MODULES	31.21.2 M	Oct/Nov 78
-237 PATCH	31.21.3 O	Aug/Sep 78
BATCH		
MANUAL INTERVENTION REQUIRED ERRONEOUSLY	31.23.1 M	Aug/Sep 78
OS/8 V3D MACREL/LINKER V1A		
USING FUTIL TO DEBUG OVERLAYS	40.0.1 N	May 78
LINK		
PATCH V1D TO LINK	40.2.1 M	May 78
PATCH V1E TO LINK	40.2.2 M	May 78
LINK CORRECTIONS	40.2.3 M	May 78
MACREL		
PATCH V1D TO MACREL	40.5.1 M	May 78
PATCH V1E TO MACREL	40.5.2 M	May 78
OVRDRV		
PATCH V1B TO OVRDRV.MA	40.6.1 M	May 78

Component	Sequence	Mon/Yr
OS/8 FORTRAN IV V3C		
F4		
FORTRAN COMPILER FAILS TO RECOGNIZE " AS AN ERROR	50.3.1 M	Mar 78
OS/8 FORTRAN IV V3D		
F4		
FORTRAN COMPILER FAILS TO RECOGNIZE " AS AN ERROR	51.3.1 M	Jul 78
FORTRAN COMPILER NOT RECOGNIZING SYNTAX ERROR	51.3.2 M	Jul 78
FORTRAN RUNTIME SYSTEM 2 PAGE HANDLER	51.3.3 O	Oct/Nov 78
RTS/8 V2B		
PARAM		
INCORRECT CLOCK VALUE IN PARAM FILE	61.2.1 N	Aug/Sep 78
OS8SUP		
OS/8 TASKS HANGS WITH TIME SHARE NOT ENABLED	61.3.2 O	Aug/Sep 78
CLOCK		
PROBLEM WITH DOUBLE PRECISION CLOCK REQUESTS	61.16.1 M	Aug/Sep 78
OS/78 V1		
NOTES & DOCUMENTATION		
OS/78 V1 SUPPORT	70.1.1 N	Oct/Nov 78
HANDLERS		
LPQ		
LPQ01 HANDLER FAILS TO RECOGNIZE TABS	70.49.1 M	May 78
BASIC		
GOOD RANDOM NUMBERS FOR OS/8 BASIC	70.70.1 N	Aug/Sep 78
F4.SV		
FORTRAN COMPILER FAILS TO RECOGNIZE " AS AN ERROR	70.93.1 M	Aug/Sep 78

Component	Sequence	Mon/Yr
OS/78 V2		
MONITOR NOTES		
BUILDING OS/78 V2 FROM SOURCE	71.1.1 N	Oct/Nov 78
UTILITIES		
BITMAP FAILS WITH SPOOLER RUNNING	71.12.1 M	Aug/Sep 78
HANDLERS		
LQP.BN VB		
LQP PROBLEM WHEN USED WITH BASIC	71.49.1 M	Oct/Nov 78
RX78B		
USE OF SECOND FLOPPY DRIVE (RXA2 7 RXA3) SET	71.58.1 M	Oct/Nov 78
BASIC		
COMMERCIAL BASIC NOT CLEARING COMMAND DECODER SWITCHES	71.70.2 M	Oct/Nov 78
BASIC		
BCOMP		
STRING ARRAY CONCATENATION	71.71.1 N	Aug/Sep 78
BLOAD.SV		
LARGE CORE IMAGE SAVE PROBLEM	71.72.1 M	Aug/Sep 78
UNDEFINED LINE NUMBERS IN COMMERCIAL BASIC	71.72.2 M	Oct/Nov 78
BASIC		
BRTS.SV		
BASIC CCL COMMAND USE	71.73.1 N	Oct/Nov 78
BRTS		
LARGE BUFFEFRS IN COMMERCIAL BASIC	71.73.2 M	Oct/Nov 78
SYMBIONT		
SPOOLR.SM		
SPOOLR RESTRICTIONS	71.82.1 N	Oct/Nov 78

digital

Software Product Description

PRODUCT NAME: COS-310, Version 8, Commercial Operating System-310 **SPD 5.98.6**

DESCRIPTION:

COS-310 is one of Digital Equipment Corporation's DATASYSTEM 300 Series Commercial Operating Systems. It is an applications development tool for EDP users who wish to implement data management functions for small-to-medium size commercial applications. The software provides a minicomputer system configuration with the DIBOL Business Oriented Language, system generation and maintenance programs, SORT/MERGE utility, and system monitor with device handlers.

These programs constitute a self-contained disk-resident operating system. System features include: direct data access capability, CRT cursor control, User File Directories, and a large library of error messages.

COS-310 Monitor — COS-310 provides program operation master control through the system monitor. For memory economy, the monitor resides in two segments: one memory-resident and the other residing on the system device. The monitor includes a comprehensive set of commands which control program loading, editing, and file directories.

The monitor contains handlers for all I/O devices supported by COS-310. The COS-310 monitor device options include line printers, CRT console terminals, and floppy disk storage devices.

Editor — The system's editor consists of a basic source language editor as part of the monitor. It is an interactive editor with line numbers followed by the information to be inserted, deleted, or changed. The COS-310 editor provides automatic sequencing and resequencing of line numbers by simple commands. Input for the editor can originate from the console keyboard. Output from the editor can be a listing of a file on the console display or the line printer.

In the program development stage, the user can save and quickly recall programs from the system device. In operational mode, the user can batch commands to the monitor into a file to be executed as a job stream.

DiBOL Language — Digital Equipment Corporation's Business Oriented Language (DIBOL) is translated by the system's compiler "COMP" into DS300 interpretive code. Translation is from English-like source coding statements into object program routines.

he language permits data manipulation, arithmetic expressions, subscripting, arrays, record overlay, memory clear, file initialization, branching and tracing, program chaining, and printing overlapped with processing.

The language syntax is divided into two sections: a data definition section and a procedure section. The procedure section of the language consists of procedural verbs, each with comprehensive arguments. Some of the verbs are: PROC, XMIT, READ, WRITE, GOTO, IF, CALL, RETURN, FORMS, STOP, CHAIN, ACCEPT, DISPLAY, TRAP, and INCR.

SORT — COS-310 SORT is a multiphase sort which can reorder a data file containing fixed length records into a specified sequence. The user can specify up to eight fields (with sub-fields) of a fixed length record as a sort key. A file can be sorted in either the ascending or descending sequence of the contents of the fields in each record.

The SORT has merge file capability. For a multivolume sort, each volume must be sorted and then merged. Both SORT and MERGE are parameterized by a "Sort Control Program."

PIP (Peripheral Interchange Program) — PIP is a utility program that transfers files from one device to another. It can replace an existing file with a new file and allow data files to be combined. It can accept inpu' from disk and produce output on terminal, disk, or the ; ne printer.

SYSGEN (SYStem GENeration) — SYSGEN is a conversational utility program that allows the user to configure or modify the current system using simple English statements. It provides the following optional features: specifies disk and line-printer I/O handlers in the system, takes new logical unit assignments from the operator's terminal, and prints a table of current unit assignments. The user can specify the number of columns used on the line printer, either 80 or 132 columns. SYSGEN can transfer the system to another device for installation startup.

DFU (Data File Utility) — DFU allows the user to designate and examine logical unit assignments. The use of logical unit assignments for data files provides data file device independence to the programs using COS-310. Logical unit assignments may be input to DFU from the operator's keyboard, from a command

file stored on the system device, or from the edit buffer. The current logical unit assignments can be displayed or printed.

PRINT — PRINT is a utility for the creation of report programs. Using a parameter file which describes the report, PRINT will generate a DIBOL program which will produce that report.

FLOW (FLOWchart generator) — FLOW is a utility program designed to assist in the program documentation process. FLOW will generate a printed flowchart from the DIBOL commands. The FLOW commands may optionally be included in the DIBOL source program.

Debugging Aids — COS-310 includes several features which facilitate DIBOL program debugging. The DIBOL language itself incorporates a TRACE/NO TRACE feature. When program tracing is enabled, each DIBOL statement executed causes a line to be printed containing the source file line number of the statement. This is useful and time-saving when tracking the order of statement execution. In addition to the TRACE feature, more complex program debugging techniques may be implemented using DDT (DIBOL Debugging Technique). The features of DDT include: breakpoint, variable examination, subroutine call traceback, and iteration. Data records may be edited with the use of DAFT (Dump and Fix techniques). DAFT provides the capability to search for, examine, list and change records. DAFT may also be used to make minor changes to a data file. The COS-310 program CREF (Cross Reference) is also an aid to program development. It provides an alphabetical listing of all symbols used in the DIBOL program, the line number where each symbol is defined, and all the line numbers where each symbol is used.

File Conversion Program — FILEX is a utility program that converts COS-300/310 formatted files stored on DECtape or RK05 disk into OS/8 formatted files and vice versa. In addition, FILEX can convert a COS-310 file stored on a flexible diskette or RK05 onto a flexible diskette in a format directly readable by the IBM 3740 series data entry terminal and the IBM System/32. IBM files on flexible diskettes can be converted to COS-310 format provided they are single volume and there are no bad tracks on the diskette media.

MINIMUM HARDWARE REQUIRED:

One of the following:

- DATASYSTEM 310
- DATASYSTEM 308
- DECstation 78/50, 78/70, 88/50, 88/70, or 88/80

OPTIONAL HARDWARE:

- Up to a system total of two dual drive floppy disk systems
- One LA180, LQP, or LA35 printer (LA35 on DS310 configuration only).
- Additional memory up to a system total of 64K bytes on DS310 configurations only
- RK8-E with up to four (4) RK05 disk drives on DS310 configuration only

PREREQUISITE SOFTWARE:

None

OPTIONAL SOFTWARE:

COS-310/2780 Communications Software (on DS310 configurations only)

TRAINING CREDITS:

TWO (2) — Applies only to options that include support services. Consult the latest Educational Services Catalog at your local office for the available courses, course requirements, and guidelines.

SUPPORT CATEGORY:

A — Software Support will be provided as stated in the Software Support Categories Addendum to this SPD.

UPDATE POLICY:

Software Updates, if any, released by DIGITAL during the one (1) year period following installation, will be provided to the customer for a media charge (includes no installation). After the first year, updates, if any, will be made available according to then prevailing DIGITAL policies.

ORDERING INFORMATION:

All binary licensed software, including any subsequent updates, is furnished under the licensing provisions of DIGITAL's Standard Terms and Conditions of Sale, which provide in part that the software and any part thereof may be used on only the single CPU on which the software is first installed, and may be copied, in whole or in part (with the proper inclusion of the DIGITAL copyright notice and any DIGITAL proprietary notices on the software) only for use on such CPU. All source licensed software is furnished only under the terms and conditions of a separate Software Program Sources Agreement between Purchaser and DIGITAL.

Standard options with no support services are only available after the purchase of one supported license. When a software license is ordered without support services, the category of support applicable to such software is Category C.

A single-use license only option is a license to copy the software previously obtained under license, and use such software in accordance with DIGITAL's Standard Terms and Conditions of Sale. The category of support applicable to such copied software is Category C.

The following key (X, Y) represents the distribution media for the product and must be specified at the end of the order number, e.g., QF310-HX = binaries on RX02 floppy disk.

X = RX02 Dual Density Floppy Diskette
Y = RX01 Floppy Diskette

Standard Options

This software is available only for the systems listed in the minimum hardware section of this SPD, and is offered with support services (includes hardware, sin-

gle-use license, binaries, documentation, and support services). Systems are also available which include a single-use license only (no binaries, no documentation, and no support services).

Update Options

Users of COS-310 whose specified Support Category warrant has expired may order the following software update at the then current charge for such update, for use under the existing license. Except where the media is designated as Z, the update is distributed in source or binary form on the appropriate medium. A software update where the media is designated as Z grants the user of COS-310 the right to copy the previously ordered QF310-H or QF310-W software update for use on an additional single CPU for which a COS-310 license has been obtained.

QF310 -H— Binaries, documentation (media: X, Y)

QF310 -H— Right to copy for single use (under existing license), no binaries, no documentation, no support services (media: Z)

Users of COS-310 whose specified Support Category warranty has not expired may order under license the following software update for the then current media charge. The update is distributed in binary form on the appropriate medium and includes no installation or other services unless specifically stated otherwise.

QF310 -W— Binaries, documentation (media: X, Y)

Miscellaneous Options:

QF310 -G— Pre-delivery kit (media: Z)

ADDITIONAL SERVICES:

None

ADDENDUM
SOFTWARE SUPPORT CATEGORIES

Each software product (hereinafter 'SOFTWARE') with a designated Support Category A or B in the applicable Software Product Description (SPD) existing at the time of order will be the current release at the time of delivery and will conform to the SPD. DIGITAL's sole obligation shall be to correct defects (nonconformance of the SOFTWARE to the SPD) as described below. Any SOFTWARE with a designated Support Category C will be furnished on an 'as is' basis.

For SOFTWARE with a designated Support Category A or B, DIGITAL will provide the services set forth below without additional charge.

CATEGORY A

1. Upon notification by customer to the nearest DIGITAL office that the computer system, including all required prerequisite hardware and software, is ready for the installation of the SOFTWARE, DIGITAL will install such SOFTWARE in any location within the contiguous forty-eight (48) United States, the District of Columbia, or a country in which DIGITAL or a subsidiary of DIGITAL has a software service facility. The notification must be received by DIGITAL and the system must be ready for installation within thirty (30) days after the delivery of the SOFTWARE to customer or DIGITAL will have no obligation to install. Installation will consist of: (1) verification that all components of the SOFTWARE have been received by customer, (2) loading the SOFTWARE, and (3) executing a DIGITAL sample procedure.
2. During the ninety (90) day period after installation, if the customer encounters a problem with the current unaltered release of the SOFTWARE which DIGITAL determines to be a defect in the SOFTWARE, DIGITAL will provide the following remedial service (on site where necessary): (1) if the SOFTWARE is inoperable, apply a temporary correction (TC) or make a reasonable attempt to develop an emergency by-pass, and (2) assist the customer to prepare a Software Performance Report (SPR) and submit it to DIGITAL.
3. During the one (1) year period following installation, if the customer encounters a problem with the SOFTWARE which his diagnosis indicates is caused by a SOFTWARE defect, the customer may submit an SPR to DIGITAL. DIGITAL will respond to problems reported in SPRs which are caused by defects in the current unaltered release of the SOFTWARE via the Maintenance Periodical for the SOFTWARE, which reports SPRs received, code corrections, temporary corrections, generally useful emergency by-passes and/or notice of the availability of corrected code. Software Updates, if any, released by DIGITAL during the one (1) year period, will be provided to the customer on DIGITAL's standard distribution media as specified in the applicable SPD. The customer will be charged only for the media on which such updates are provided, unless otherwise stated in the applicable SPD, at DIGITAL's then current media prices.

CATEGORY B

During the one (1) year period following delivery, the services provided to the customer will be the same as set forth in 3 above.

CATEGORY C

SOFTWARE is provided on an 'as is' basis. Any software services, if available, will be provided at the then current charges.

DIGITAL shall have the right to make additional charges for any additional effort required to provide services resulting from customer use of other than current unaltered release of the SOFTWARE operated in accordance with the SPD.

DECUS SPECIAL INTEREST GROUPS

A DECUS Special Interest Group (SIG) is an activity whereby members of the DIGITAL Equipment Computer Users Society who share common interests in a particular field, join together to promote the interchange of information. Specialization may be in application areas such as education or industry, specific software systems such as OS/8 and RSX-11, or a specific mainframe such as the DECsystem-10/20.

SIG members derive numerous benefits from communicating with others who share specialized interests and who may wish to share their experiences. SIG s sponsor business meetings, tutorials, and workshops at the various chapter symposia which fulfill the two-fold purpose of fostering communication among users and between users and DIGITAL. Channeled communication provides DIGITAL and the users with insight into the direction of future developments. SIG s provide direct feedback to DIGITAL's in-house activities and have thereby made substantial contributions to OS/8, RSX-11, RSTS and TOPS-10.

User submitted articles, minutes of local meetings, and letters comprise the major portion of the individual SIG newsletters. Suggestions, hints, bug fixes, program plans, or questions of a non-commercial nature are suitable material for SIG newsletters.

SIG members are encouraged to make presentations at the SIG sessions held during DECUS Symposia.

The semi annual U.S. Symposia sessions are organized by special interest areas. Submissions received from the user community are reviewed by symposia committee members from the special interest groups for appropriate placement on the agenda.

Special Interest Group participation in the review of programs submitted to the DECUS Program Library provides an opportunity to improve the quality and utility of programs available to you and to fellow users.

DIGITAL standards are issued to DECUS members for review and on the theory and philosophy of the standards. DECUS is a voting member of ANSI X3. Users are encouraged to register their areas of expertise with DECUS and assist with reviewing standards. SIG s often play a role in this process.

Below is a list of U.S. based Special Interest Groups within DECUS.

If you would like information regarding membership in any of the Special Interest Groups, contact DECUS U.S. Chapter, 129 Parker Street, PK3-1/E55, Maynard, Massachusetts 01754 or one of the other DECUS Chapter offices in Kanata, Sidney or Geneva.

NETSIG–Networks Special Interest Group
RSTS SIG–RSTS and RSTS/E Special Interest Group
SIGIG–Special Interest Group on Interactive Graphics
ESIG–Engineering Applications Special Interest Group
SIG-18–18-Bit Users Special Interest Group
12-Bit SIG–12-Bit User Special Interest Group
RSX-11/IAS SIG
RT-11 SIG
EDUSIG–Educational Users Special Interest Group
DEBUG–Digital Equipment Business Users Group
MUSIG–Mumps Special Interest Group
PASCAL SIG
DBMS SIG
TECO SIG
LSI 11 SIG
FOCAL SIG
STANDARDS SIG

DIGITAL EQUIPMENT COMPUTER USERS SOCIETY

12-BIT Special Interest Group

The 12-Bit Special Interest Group is an informal group of users interested in 12-Bit software and related subjects. The principle activities of the group are a newsletter and panel-workshop sessions at the DECUS Symposium. The only requirement for membership in the 12-Bit SIG is an interest in its goals and activities.

The goals of the 12-Bit SIG are:

1. Provide an informal means for quick dissemination of information and ideas about software developments and related topics.
2. Encourage users to write and make available useful programs.
3. Act as a forum for the development and communication of needs and ideas for future developments.
4. Serve as a communication channel between DEC and the user community.
5. Coordinate Special Interest Group sessions at the DECUS Symposia with the DECUS meetings committee and assist the DECUS librarian with 12-Bit submissions.

User generated software that the 12-Bit SIG has been involved with includes:

1. Extended and improved versions of the monitor systems.
2. Extensions to system programs such as the compilers, assemblers and loaders.
3. Many special device handlers.
4. New compilers and other language processors.
5. Routines to support special requirements such as a laboratory environment.
6. Adaption of many existing programs to the 12-Bit environment.

Correspondence or submissions to the newsletter should be sent to:

12-Bit Special Interest Group
c/o DECUS Office
One Iron Way - MR2-3/E55
Marlboro, MA 01752

If you wish to become a member of the 12-Bit SIG, please fill out the form below.

Are you a DECUS Member? _____ DECUS Membership Number _____

NAME _____

AFFILIATION _____

CITY _____ STATE _____ ZIP CODE _____

TELEPHONE NUMBER _____

SOFTWARE PROBLEMS OR ENHANCEMENTS

Questions, problems, and enhancements to DIGITAL software should be reported on a Software Performance Report (SPR) form and mailed to the SPR Center at one of the following DIGITAL Offices: (SPR forms are available from the SPR Center).

AREAS COVERED	SPR CENTER
United States, remainder of Far East, Middle East, Africa Latin America	Administrative Services Group, SWS P.O.Box F Maynard MA 01754
Canada	Digital Equipment Canada P.O.Box 11500 Kanata Canada K2H 8K8 Ontario
United Kingdom	Digital Equipment Corp., LTD Fountain House Butts Centre RG1 7QN Reading England
Australia-Melbourne	Digital Equipment Aust. Pty., LTD 60 Park Street South Melbourne Victoria Australia 3205
Australia-Sydney	Digital Equipment Aust. Pty., LTD 123 125 Willoughby Road P.O.Box 491 Crows Nest NSW Australia 2065
Brazil	Digital Equipment Comercio Ind Rua Batatais 429 Esq AL Campin 01423 Jardim Paulista Sao Paulo 0100 Brazil
Caribbean	De Latin America P.O.Box 11038 Fernando Juncos Sta. Santurce PR 00910
France	Digital Equipment Corp., LTD. Centre Silic Cidex L225 18 Rue Saarinen 94533 Rungis France

AREAS COVERED	SPR CENTER
Italy	Digital Equipment SPA Viale Fulvio Testi 117 20092 Cinisillo Balsamo Italy
Japan	Digital Equipment Corp., INTL 3rd Floor Kowa Building 8-7 Sanban Cho Chiyoda Ku Tokyo 102 Japan
New Zealand	Digital Equipment Corp., LTD Challenge House 3 Wolfe Street P.O.Box 2471 Auckland New Zealand 10010
Belgium, Holland	Digital Equipment BV Kaap Horndreef 38 3563 AV Utrecht Netherlands
Denmark, Finland, Norway, Sweden	Digital Equipment Corp., AB Englundavaegen 73 TR 171 41 Solna Sweden
Switzerland, Spain, Greece, Romania, Portugal, Bulgaria Yugoslavia	Digital Equipment Corp., SA 20 Quai Ernest Ansermet Boite Postale 23 CH 1211 Geneva Switzerland
Austria, Poland Hungary, Rumania East Germany, West Germany, Russia, Czechslovakia	Digital Equipment Corp., GMBH Wallsteinplatz 2 8000 Munchen 40 Germany 8000
Israel	DECSYS Computers, LTD 7 Habakuk Street Il-Tel Aviv 63505 Israel

DIGITAL EQUIPMENT CORPORATION, Corporate Headquarters: Maynard, Massachusetts 01754, Telephone: (617)897-5111—SALES AND SERVICE OFFICES: UNITED STATES—ALABAMA, Huntsville • ARIZONA, Phoenix and Tucson • CALIFORNIA, El Segundo, Los Angeles, Oakland, Ridgecrest, San Diego, San Francisco (Mountain View), Santa Ana, Santa Clara, Stanford, Sunnyvale and Woodland Hills • COLORADO, Englewood • CONNECTICUT, Fairfield and Meriden • DISTRICT OF COLUMBIA, Washington (Lanham, MD) • FLORIDA, Ft. Lauderdale and Orlando • GEORGIA, Atlanta • HAWAII, Honolulu • ILLINOIS, Chicago (Rolling Meadows) • INDIANA, Indianapolis • IOWA, Bettendorf • KENTUCKY, Louisville • LOUISIANA, New Orleans (Metairie) • MARYLAND, Odenton • MASSACHUSETTS, Marlborough, Waltham and Westfield • MICHIGAN, Detroit (Farmington Hills) • MINNESOTA, Minneapolis • MISSOURI, Kansas City (Independence) and St. Louis • NEW HAMPSHIRE, Manchester • NEW JERSEY, Cherry Hill, Fairfield, Metuchen and Princeton • NEW MEXICO, Albuquerque • NEW YORK, Albany, Buffalo (Cheektowaga), Long Island (Huntington Station), Manhattan, Rochester and Syracuse • NORTH CAROLINA, Durham/Chapel Hill • OHIO, Cleveland (Euclid), Columbus and Dayton • OKLAHOMA, Tulsa • OREGON, Eugene and Portland • PENNSYLVANIA, Allentown, Philadelphia (Bluebell) and Pittsburgh • SOUTH CAROLINA, Columbia • TENNESSEE, Knoxville and Nashville • TEXAS, Austin, Dallas and Houston • UTAH, Salt Lake City • VIRGINIA, Richmond • WASHINGTON, Bellevue • WISCONSIN, Milwaukee (Brookfield) • INTERNATIONAL—ARGENTINA, Buenos Aires • AUSTRALIA, Adelaide, Brisbane, Canberra, Melbourne, Perth and Sydney • AUSTRIA, Vienna • BELGIUM, Brussels • BOLIVIA, La Paz • BRAZIL, Rio de Janeiro and Sao Paulo • CANADA, Calgary, Edmonton, Halifax, London, Montreal, Ottawa, Toronto, Vancouver and Winnipeg • CHILE, Santiago • DENMARK, Copenhagen • FINLAND, Helsinki • FRANCE, Lyon, Grenoble and Paris • GERMAN FEDERAL REPUBLIC, Cologne, Frankfurt, Hamburg, Hannover, Munich, Nuremburg, Stuttgart and West Berlin • HONG KONG • INDIA, Bombay • INDONESIA, Djakarta • IRELAND, Dublin • ITALY, Milan, Rome and Turin • IRAN, Tehran • JAPAN, Osaka and Tokyo • MALAYSIA, Kuala Lumpur • MEXICO, Mexico City • NETHERLANDS, Utrecht • NEW ZEALAND, Auckland and Christchurch • NORWAY, Oslo • PUERTO RICO, Santurce • SINGAPORE • SPAIN, Madrid • SWEDEN, Gothenburg and Stockholm • SWITZERLAND, Geneva and Zurich • UNITED KINGDOM, Birmingham, Bristol, Epsom, Edinburgh, Leeds, Leicester, London, Manchester and Reading • VENEZUELA, Caracas •