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DECUS NO.	8-516
TITLE	SELF-STARTING PS/8 LOADER
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SOURCE LANGUAGE	PAL

A SELFSTARTING PS8-LOADER FOR THE PDP/8-E WITH TD8-E DECTAPE

DECUS Program Library Write-up | DECUS NO. 8-516

The program described here produces on papertape a selfstarting PS8-loader for the PDP/8-E with TD8-E Dectape. To start PS8 the following eight instructions have to be toggled in the beginning at location 30 (in field 0) if only a teletype is available.

```
30    6032
31    7402
32    6036
33    7012
34    7010
35    3030
36    2035
37    5031
```

The produced papertape must be inserted in the reader, with the first holes after the blank **piece** of leader exactly over the sensing pins of the reader. After mounting a PS8 Dectape the following has to be executed:

load address 30
start computer
start reader
press continue
press continue

After reading in of the papertape the monitor presents itself with a dot.

```
/PS3 -TD3E LOADER-PUNCH 33 PROGRAM

/F.J. MEIJER UNIVERSITY OF AMSTERDAM.
*200
        KCC
        TLS
        TAD M101
        DCA CTR
MORE,   JMS PUN
        ISZ CTR
        JMP MORE            /MORE BLANK
ACAI,   TAD I CON           /LOAD LOADER
        JMS PUN             /AND PUNCH
        ISZ CON
        ISZ TEL             /READY?
        JMP ACAI            /NO, ACAIN
        TAD M101            /YES, MAKE TRAILER
        DCA CTR
TRAI,   TAD K200
        JMS PUN
        ISZ CTR
        JMP TRAI            /MORE TRAILER
        HLT                 /FINISHED
PUN,    0                   /PUNCH SUBROUTINE
        TLS
        TSF
        JMP .-1             /BE SURE THE PUNCH IS ON!
        CLA
        JMP I PUN
CTR,    0
CON,    240
TEL,    -146
M101,   -101
K200,   200

*240
LS1,    317
        302
LS2,    367
127;107;41;00;00;20
LS3,    317
        102
LS4,    367
67;67;67;61
LS5,    317
        172
LS6,    367
64;231;71;55;106;46;102;34;07
HERE,   73;00;54;03;77;34
00;00;72;77;13;12;43;12;43;12;67;73;53;03;67;77
37;26;23;26;53;03;57;31;20;00;13;00;67;74;67;71
53;15;67;76;03;32;13;27;76;40;53;15;23;21;57;12
73;54;77;56;77;47;74;00;00;77;72;00;10;25;77;30
57;30;62;12
$

#
```

Those **possessing** a high-speed reader have to toggle in the following instructions:

30	6014
31	7402
32	6016
33	7012
34	7010
35	3030
36	2035
37	5031

In this case the following constants in the program have to be changed

ls1	into	117
ls2	"	167
ls3	"	117
ls4	"	167
ls5	"	117
ls6	"	167

This loader destroys the contents of locations 3 through 30 on page 0 of field 0.

Those **possessing** a TC 01 or TC 08 can use also one of the above described loaders, in which case the constants from "here" have to read:

06; 17; 54; 03; 77; 40; 00; 00; 05; 77; 67; 74; 12; 22; 67; 66; 67; 71; 52; 16; 12; 23; 52; 15; 06; 00; 02; 20; 77; 76; 76; 12; 76; 13; 77; 67; 77; 53; 75; 77; 22; 15; 12; 16; 36; 15; 22; 11; 52; 17; 12; 07; 32; 11; 22; 12; 16; 11; 36; 12; 22; 11; 22; 14; 52; 26; 56; 13

The contents of 'tel' has to be changed to - 140
This loader destroys the contents of loc 0 - 30 and 600 - 634

A brief description of the loader follows. The program at locations 30 through 37 makes it possible to read instructions and to deposit them on page zero. First locations 30 and 31 are changed to 6031 and 5027, then a loader is built at locations 10 through 26 which reads bin-format. With this loader locations 3 through 7 on page zero are filled and the PS 8 loader is deposited on page 35. Eventually a jump to 7300 starts the PS-8 loader.