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DECUS NO.	8-539
TITLE	TD8E 4K LOADER
AUTHOR	Mark G. Roberts
COMPANY	Digital Equipment Corporation Albuquerque, New Mexico
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SOURCE LANGUAGE	PAL III

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TD8E LOADER SYSTEM

I. USING THE SYSTEM

A. TO LOAD A PROGRAM

1. PUT 7777 IN SWR
2. PRESS LOAD ADDR
3. PUT BLOCK NO. OF PROGRAM IN SWR
4. PRESS CLEAR AND CONTINUE
5. COMPUTER WILL HALT WHEN PROGRAM IS LOADED
6. AC SHOULD BE ZERO IF NO ERRORS

B. TO PLACE ADDITIONAL PROGRAMS ON TAPE

1. BY PROCEDURE A, LOAD IN SYSTEM PROGRAM
2. PLACE TAPE TO BE LOADED IN READER AND PLACE READER AT START
3. PUT 6600 IN SWR
4. LOAD ADD ONLY!!
5. PUT BLOCK NUMBER WHERE YOU WANT TO PUT PROGRAM IN SWR
6. CLEAR AND CONTINUE
7. TAPE WILL READ IN - AT END THERE WILL BE A SMALL AMOUNT OF TAPE MOTION. COMPUTER WILL HALT WITH AC=0 IF NO ERRORS
8. PUT TAPE IN READER AGAIN AND READY READER FOR PASS 2
9. PRESS CONTINUE
10. THE SAME THING WILL HAPPEN AS IN STEP 7. THE PROGRAM IS NOW ON THE DECTAPE AND MAY BE LOADED BY PROCEDURE A.

II. IF YOU WIPE OUT THE DT LOADER

A. LOADING THE DT LOADER WITH RIM

1. LOAD RIM AS DESCRIBED IN DEC MANUALS EXCEPT START DEPOSITING AT 6756 INSTEAD OF 7756
2. PLACE "TD8E RIM BINARY LOADER" IN PAPER TAPE READER AND READY READER
3. PUT 6756 IN SWR
4. CLEAR AND CONTINUE
5. THE PAPER TAPE WILL BE READ IN THE SAME AS THE BINARY LOADER. IT WILL NOT HALT WHEN DONE (JUST LIKE THE BINARY LOADER),
6. WHEN THE TAPE STOPS READING, PRESS HALT. THE DT LOADER IS NOW IN CORE

III. IF YOU BLOW THE SYSTEM TAPE

A. LOAD CORE

1. TOGGLE IN RIM LOADER
2. READ IN BINARY LOADER
3. LOAD THE "CORE TO TD8E" PAPER TAPE
4. THERE IS NOW A SECOND BINARY LOADER IN CORE. ITS STARTING ADDRESS IS 7177.
5. USING THE LOADER AT 7177, LOAD THE "TD8E TO CORE" TAPE
6. THE SYSTEM LOADER IS NOW IN CORE

B. LOAD THE TAPE

1. PERFORM PROCEDURE A ABOVE
2. WHEN YOU HAVE COMPLETED THIS, KEY IN

6740/7604
6741/3345
6742/5750

6743/7703
6744/0
6745/0

6746/7402
6747/7402
6750/7200

3. MOUNT DECTAPE, WRITE ENABLED ON UNIT 0
4. PUT 7777 IN SWR
5. LOAD ADDR
6. PUT 0 IN SWR
7. CLEAR AND CONTINUE
8. SYSTEM FILE WILL THEN BE LOADED ON DECTAPE
AT BLOCK 0

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TD8E DECTAPE LOADER

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SDST=6772
SDSQ=6773
SDLC=6774
SDLD=6775
SDRC=6776
SDRD=6777
MWDSM1=M200

*7600

7600	7604	START,	LAS	/START BLOCK IN SWR
7601	3357		DCA BLOCK	
7602	1245		TAD MWDSM1	
7603	3360		DCA WCOUNT	
7604	3361		DCA BUFF	
7605	1362		TAD P36	/PAGE COUNT
7606	3363		DCA PGCT	
7607	7120		CLL CML	/INITIAL DIRECTION FWD
7610	7232	GO,	CLA CML RTR	/SET DIRECTION, SEARCH
7611	1355		TAD C1000	
7612	6774		SDLC	
7613	4317		JMS RDQUAD	
7614	4317		JMS RDQUAD	
7615	7600		7600	
7616	6771	SRCH,	SDSS	
7617	5216		JMP .-1	
7620	6776		SDRC	
7621	7106		CLL RTL	/PUT DIRECTION BIT IN LINK
7622	0364		AND C374	
7623	1241		TAD M110	/CHECK END ZONE
7624	7450		SNA	
7625	5243		JMP ENDZ	
7626	1365		TAD M20	
7627	7640		SZA CLA	
7630	5216		JMP SRCH	
7631	6777		SDRD	
7632	7430		SZL	
7633	1366		TAD M3	
7634	7040		CMA	
7635	1357		TAD BLOCK	
7636	7040		CMA	
7637	7450		SNA	
7640	5247		JMP FOUND	
7641	7670	M110,	SZL SNA CLA	
7642	5216		JMP SRCH	
7643	6776	ENDZ,	SDRC	
7644	7106		CLL RTL	
7645	7600	M200,	7600	/CLA!
7646	5210		JMP GO	
7647	7630	FOUND,	SZL CLA	
7650	5210		JMP GO	

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7651 6771 REVGRD, SDSS /FIND REVERSE GUARD
7652 5251 JMP .-1
7653 6776 SDRD
7654 0367 AND C77
7655 1370 TAD M32
7656 7640 SZA CLA
7657 5251 JMP REVGRD
7660 4317 READ, JMS RDQUAD
7661 4317 JMS RDQUAD
7662 4317 JMS RDQUAD
7663 0367 AND C77
7664 1356 TAD C7700
7665 3371 DCA CHKSUM
7666 4317 RDLP, JMS RDQUAD
7667 4324 JMS EQUFUN
7670 3761 DCA I BUFF
7671 2361 ISZ BUFF
7672 2360 ISZ WCOUNT
7673 5266 JMP RDLP
7674 4317 JMS RDQUAD
7675 4324 JMS EQUFUN
7676 4317 JMS RDQUAD
7677 0356 AND C7700
7700 4324 JMS EQUFUN
7701 4341 JMS GETCHK
7702 6772 SDST
7703 7440 SZA
7704 7402 HLT /***** CHECKSUM ERROR
7705 1363 TAD PGCT /I.E. -200
7706 1245 TAD MWDSM1
7707 7450 SNA
7710 7402 HLT /END - PROGRAM LOADED
7711 3363 DCA PGCT
7712 2357 ISZ BLOCK
7713 1245 TAD MWDSM1
7714 3360 DCA WCOUNT
7715 7120 CLL CML
7716 5210 JMP GO
7717 0000 RDQUAD, 0
7720 6773 SDSQ
7721 5320 JMP .-1
7722 6777 SDRD
7723 5717 JMP I RDQUAD
7724 0000 EQUFUN, 0
7725 7040 CMA
7726 3372 DCA EQU TMP
7727 1372 TAD EQU TMP
7730 0371 AND CHKSUM
7731 7041 CIA
7732 7104 CLL RAL
7733 1372 TAD EQU TMP
7734 1371 TAD CHKSUM
7735 3371 DCA CHKSUM
7736 1372 TAD EQU TMP
7737 7040 CMA
7740 5724 JMP I EQU FUN
7741 0000 GETCHK, 0

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7742	7200	CLA
7743	1371	TAD CHKSUM
7744	7040	CMA
7745	7106	CLL RTL
7746	7006	RTL
7747	7006	RTL
7750	4324	JMS EQUFUN
7751	7320	CLA CLL CML
7752	1371	TAD CHKSUM
7753	0356	AND C7700
7754	5741	JMP I GETCHK

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/

7755	1000	C1000,	1000	
7756	7700	C7700,	7700	
7757	0000	BLOCK,	0	
7760	0000	WCOUNT,	0	
7761	0000	BUFF,	0	
7762	7600	P36,	7600	/37 PAGES
7763	0000	PGCT,	0	
7764	0374	C374,	374	
7765	7760	M20,	-20	
7766	0003	M3,	3	
7767	0077	C77,	77	
7770	7746	M32,	-32	
7771	0000	CHKSUM,	0	
7772	0000	EQUIMP,	0	

/

7777	5200	*7777
		JMP START

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BLOCK	7757
BUFF	7761
CHKSUM	7771
C1000	7755
C374	7764
C77	7767
C7700	7756
ENDZ	7643
EQUFUN	7724
EQU TMP	7772
FOUND	7647
GETCHK	7741
GO	7610
MWDSM1	7645
M110	7641
M20	7765
M200	7645
M3	7766
M32	7770
PGCT	7763
P36	7762
RDLP	7666
RDQUAD	7717
READ	7660
REVGRD	7651
SDLC	6774
SDL D	6775
SDRC	6776
SDRD	6777
SDSQ	6773
SDSS	6771
SDST	6772
SRCH	7616
START	7600
WCOUNT	7760

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TD8E DECTAPE ROUTINE
DUMP CORE ONTO DECTAPE

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*6600
6600 7604 START, LAS /READ BLOCK NO IN SWR
6601 3223 DCA BLOCK
6602 1267 TAD K1 /SET UP RETURN IN BINARY LOADER
6603 3707 DCA I C7100
6604 1270 TAD K2 /SET JMS OUT
6605 3710 DCA I C7136
6606 1277 TAD K3 /SET SUBROUTINE ADDRESS
6607 3711 DCA I C7756
6610 1274 TAD K55
6611 3675 DCA I C7060
6612 1271 TAD K56
6613 3672 DCA I C7106
6614 1301 TAD K5
6615 3256 DCA SIGN
6616 3303 DCA K7
6617 4700 JMS I K4
6620 4712 JMS I C7200 /WRITE FIRST HALF OF TAPE
6621 6003 6003
6622 0000 0
6623 0000 BLOCK, 0
6624 7240 CLA CMA
6625 7402 HLT
6626 7440 SZA
6627 5225 JMP .-2
6630 1302 TAD K6
6631 3256 DCA SIGN
6632 7330 CLA CLL CML RAR /TAD 4000!
6633 3303 DCA K7
6634 4700 JMS I K4
6635 1223 TAD BLOCK
6636 1276 TAD C20
6637 3243 DCA BLK2
6640 4712 JMS I C7200 /WRITE SECOND HALF
6641 5703 5703
6642 0000 0
6643 0000 BLK2, 0
6644 7240 CLA CMA
6645 7402 HLT
6646 7440 SZA
6647 5245 JMP .-2
6650 5200 JMP START
6651 0000 HALF, 0 /ROUTINE TO LOAD HALF A TAPE
6652 3304 DCA TEMP
6653 1673 TAD I C7016
6654 3305 DCA ORGN
6655 1305 TAD ORGN
6656 0000 SIGN, 0
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6657	5261		JMP STORE
6660	5651		JMP I HALF
6661	1305	STORE,	TAD ORGN
6662	1303		TAD K7
6663	3305		DCA ORGN
6664	1304		TAD TEMP
6665	3705		DCA I ORGN
6666	5651		JMP I HALF
6667	5757	K1,	JMP I 6757
6670	4756	K2,	JMS I 6756
6671	7040	K56,	CMA
6672	7106	C7106,	7106
6673	7016	C7016,	7016
6674	5301	K55,	5301
6675	7060	C7060,	7060
6676	0020	C20,	20
6677	6651	K3,	HALF
6700	7157	K4,	7157
6701	7700	K5,	SMA CLA
6702	7710	K6,	SPA CLA
6703	0000	K7,	0
6704	0000	TEMP,	0
6705	0000	ORGN,	0
6706	7106	C7106,	7106
6707	7100	C7100,	7100
6710	7137	C7136,	7137
6711	7156	C7756,	7156
6712	7200	C7200,	7200

BLK2	6643
BLOCK	6623
C20	6676
C7016	6673
C7060	6675
C7100	6707
C7106	6672
C7136	6710
C7200	6712
C7756	6711
HALF	6651
K1	6667
K2	6670
K3	6677
K4	6700
K5	6701
K55	6674
K56	6671
K6	6702
K7	6703
ORGN	6705
SIGN	6656
START	6600
STORE	6661
TEMP	6704

