

.TITLE LOAD PROGRAMS FOR INTERACTIVE MODE,
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/DIGITAL EQUIPMENT CORPORATION; MAYNARD, MASS,
/ED HILTON
/7-27-71

01100

 /ABS
 /LOC 1100

000560 UPREFX=560
000271 UPAROW=271
000540 PSOD=540
000522 TYPONE=522
000460 TSIXBT=460
000514 CRLF=514
000253 WAIT=253
000533 LROT6=533
002526 ACTLST=DTBUF
000120 GETMON=120
000565 DIRECT=565
000024 BLKNUM=24
000314 READ=314
000756 SLINK=756
000247 CHAIN=247
700312 KRB=700312
700311 KSF=700311
707764 EBA=707764
707702 EEM=707702

 .EJECT

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01100 100514   LOADER JMS   CRLF
01101 100560   JMS   UPREFX
01102 707764   EBA
01103 707702   EEM
01104 777777   LAW   =1
01105 043246   DAC   CURMAP#
01106 140100   DZM   100           /CLEAR IS INTERACTIVE
01107 700312   KRB
01110 203267   LAC   (SLINK=1     /CLEAR LINK TABLE
01111 040010   DAC   10
01112 777753   LAW   =25
01113 043247   DAC   DMEMS#
01114 160010   DZM*  10
01115 443247   ISZ   DMEMS#
01116 601114   JMP   =2
01117 203270   LAC   (SYSLOD=1   /SYSLOD
01120 100460   JMS   TSIXBT
01121 100514   JMS   CRLF
01122 200452   LAC   452
01123 741200   SNA
01124 601134   JMP   LOAD,6
01125 200101   LAC   101
01126 503271   AND   (7777
01127 543271   SAD   (7777
01130 741000   SKP
01131 601134   JMP   LOAD,6
01132 200101   LAC   101
01133 601233   JMP   LOADRD
/
01134 777777   LOAD,6 LAW   =1
01135 040452   DAC   452
/
01136 203272   LAC   (TMEMSZ=1+400000 /MEMSIZE?;
01137 100460   JMS   TSIXBT
01140 143247   DZM   DMEMS#       /DESIRED MEMORY TO BE USED FOR PROGRAM
01141 744000   CLL
      .EJECT

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01142	100253	LOADRA	JMS	WAIT	/WAIT FOR KEYBOARD INPUT
01143	543273		SAD	(203	
01144	600120		JMP	GETMON	
01145	543274		SAD	(377	/RUBOUT?
01146	601160		JMP	LOADRB	/YES
01147	543275		SAD	(215	
01150	601170		JMP	LOADRC	/A CARRIAGE RETURN TERMINATES MEMORY SIZE
01151	503276		AND	(000077	/MASK OFF TO TRIMMED ASCII
01152	043256		DAC	TEMPA#	
01153	203247		LAC	DMEMSZ	
01154	100533		JMS	LROT6	
01155	243256		XOR	TEMPA	
01156	043247		DAC	DMEMSZ	
01157	601142		JMP	LOADRA	
			/		
01160	203247	LOADRB	LAC	DMEMSZ	/A RUBOUT BROUGHT US HERE
01161	503277		AND	(777700	/DELETE LAST CHARACTER TYPED
01162	744000		CLL		/AND ECHO A BACK SLASH \.
01163	102236		JMS	RROT6	
01164	043247		DAC	DMEMSZ	
01165	760334		LAW	334	
01166	100522		JMS	TYPONE	
01167	601142		JMP	LOADRA	/GO BACK AND LISTEN FOR NEXT CHARACTER
			.EJECT		

Address	Source	Operation	Destination	Comment
01170	203247	LOADRC	LAC	DMEMSZ
01171	741200		SNA	/DMEMSZ CONTAINS 6 BIT ASCII OF
01172	600122		JMP	/MEMORY SIZE TYPED IN,
01173	543300		SAD	
01174	601216		JMP	GETMON+2
01175	543301		SAD	(007013
01176	601220		JMP	ITS8K
01177	543302		SAD	(616213
01200	601222		JMP	ITS12K
01201	543303		SAD	(616613
01202	601224		JMP	ITS16K
01203	543304		SAD	(626013
01204	601226		JMP	ITS20K
01205	543305		SAD	(626413
01206	601230		JMP	ITS24K
01207	543306		SAD	(627013
01210	601232		JMP	ITS28K
01211	760212		LAW	(636213
01212	100522		JMS	ITS32K
01213	760277		LAW	212
01214	100522		JMS	TYPONE
01215	601135		JMP	277
01216	203307	ITS8K	LAC	LOADRA=5
01217	601233		JMP	(017777
01220	203310	ITS12K	LAC	LOADRD
01221	601233		JMP	(027777
01222	203311	ITS16K	LAC	LOADRD
01223	601233		JMP	(037777
01224	203312	ITS20K	LAC	LOADRD
01225	601233		JMP	(047777
01226	203313	ITS24K	LAC	LOADRD
01227	601233		JMP	(057777
01230	203314	ITS28K	LAC	LOADRD
01231	601233		JMP	(067777
01232	203315	ITS32K	LAC	LOADRD
				(077777
				,EJECT

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01233 043253 LOADRD DAC SLDADR# /STORE HIGHEST AVAILABLE MEMORY ADDRESS
01234 043241 DAC CLDADR#
01235 040101 DAC 101
01236 777727 LAW =51 /NOW CLEAR THE ACTLST AND INSERT
01237 043242 DAC CNTR# /THE PROGRAM TITLES IN ,SIXBT
01240 203316 LAC (ACTLST=1
01241 040010 DAC 10
01242 040011 DAC 11
01243 040013 DAC 13
01244 040016 DAC 16
01245 160010 DZM* 10
01246 443242 ISZ CNTR
01247 601245 JMP ,=2
01250 203317 LAC (1)
01251 043250 DAC NUM# /PROGRAM NUMBER
01252 143221 LOADRG DZM A /THESE ARE TEMPORARY STORAGE LOCATIONS
01253 143222 DZM B /FOR TITLES OF PROGRAMS TO BE INSERTED
01254 777771 LAW =7
01255 043237 DAC CARCNT# /CHARACTER COUNTER FOR PROGRAM TITLES
01256 203320 LAC (TITLE=1+400000 /THEY ARE LIMITED TO SIX CHARACTERS
01257 100460 JMS TSIXBT /PRINT TITLE
01260 203250 LAC NUM /TEST FOR PROGRAM NUMBER TO BE TYPED,
01261 102243 JMS PR2DD /THEY ARE 1-20(DECIMAL) TO BE TYPED
01262 760240 LAW 240 /AFTER THE DESIGNATION TITLE,
01263 100522 JMS TYPONE
/
01264 100253 LOADRF JMS WAIT /GO TO WAIT LOOP
01265 543273 SAD (203 /CONTROL C?
01266 600120 JMP GETMON /YES, GO TO MONITOR
01267 543274 SAD (377 /RUBOUT
01270 741000 SKP
01271 601274 JMP ,+3
01272 102273 JMS DBPRSR
01273 601264 JMP LOADRF
/
01274 543321 SAD (375) /ALTMODE?
01275 102050 JMS CORE
01276 543322 SAD (376)
01277 102050 JMS CORE
/
01300 543275 SAD (000215 /CR TERMINATOR?
01301 601313 JMP LOADRF
01302 503276 AND (000077 /VALID CHARACTER INSERT INTO WORD
01303 102213 JMS DBPRSL
01304 443237 ISZ CARCNT
01305 601264 JMP LOADRF
01306 100514 JMS CRLF
01307 203323 LAC (WHAT=1+400000
01310 100460 JMS TSIXBT
01311 700312 KRB
01312 601252 JMP LOADRG
,EJECT

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01313	443237	LOADRE	ISZ	CARCNT	/LEFT JUSTIFY ONE TO SIX ASCII CHARACTERS
01314	755000		SKP	CLAIQLL	/IN LOCATIONS A AND B
01315	601321		JMP	,+4	
01316	102213		JMS	DBPRSL	/LEFT JUSTIFY
01317	443237		ISZ	CARCNT	
01320	601314		JMP	,=4	
			/		
01321	203221		LAC	A	/ANY CHARACTER IN A? POSSIBILITY OF
01322	741200		SNA		/A CARRIAGE RETURN TYPED WITHOUT ANY
01323	601403		JMP	LOADRN	/TITLE TYPED, THAT IS A TERMINATOR,
01324	777742		LAW	=36	/NOW COMPARE TITLE WITH DIRECTORY
01325	043242		DAC	CNTR	/COUNTER
01326	203324		LAC	(DIRECT=1	/ADDRESS OF DIRECTORY =1,
01327	040012		DAC	12	
01330	203221	LOADRJ	LAC	A	
01331	560012		SAD*	12	/COMPARE FIRST THREE CHOPPED ASCII CHARACTERS
01332	601341		JMP	,+7	/YES
01333	200012		LAC	12	/NO, UPDATE TO LOOK AT FIRST PART
01334	343325		TAD	(000003	/OF NEXT TITLE IN DIRECTORY,
01335	040012		DAC	12	
			/		
01336	443242		ISZ	CNTR	/DONE
01337	601330		JMP	LOADRJ	/NO
01340	601400		JMP	NOTIND	/YES, NOT IN DIRECTORY, TELL OPERATOR
			/		
01341	203222		LAC	B	
01342	560012		SAD*	12	/SECOND PART OK?
01343	601347		JMP	LOADRK	/YES PUT HIM IN ACTLST
01344	440012		ISZ	12	/ADD TWO TO DIRECTORY POINTER TO
01345	440012		ISZ	12	/POINT AT FIRST PART OF NEXT TITLE
01346	601336		JMP	,=10	
			,EJECT		

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01347 203316 LOADRK LAC (ACTLST=1 /CHECK TO SEE THAT OPERATOR
01350 040010 DAC 10 /HAS NOT ALREADY ENTERED
01351 220010 LAC* 10 /THE PROGRAM IN THE ACTIVE LIST
01352 741200 SNA
01353 601367 JMP LOADRL=5
01354 543221 SAD A
01355 601360 JMP ,+3
01356 440010 ISZ 10
01357 601351 JMP LOADRK+2
/
01360 220010 LAC* 10
01361 543222 SAD B
01362 741000 SKP
01363 601351 JMP LOADRK+2
01364 203326 LAC (REDUN=1+400000
01365 100460 JMS TSIXBT
01366 601252 JMP LOADRG
/
01367 203221 LAC A
01370 060011 DAC* 11
01371 203222 LAC B
01372 060011 DAC* 11
01373 443250 ISZ NUM
01374 203250 LOADRL LAC NUM
01375 543327 SAD (000037 /LAST TITLE TYPED?
01376 601403 JMP LOADRN /YES
01377 601252 JMP LOADRG /NO
/
01400 203330 NOTIND LAC (NOTIN=1+400000 /GET ADDRESS =1 OF NOT IN DIRECTORY
01401 100460 JMS TSIXBT /MESSAGE
01402 601252 JMP LOADRG
/
01403 100514 LOADRN JMS CRLF
01404 777777 LAW =1
01405 343250 TAD NUM
01406 740001 CMA
01407 343317 TAD (1
01410 043252 DAC PROCNT# /PROGRAM COUNTER, AMOUNT OF PROGRAMS LISTED
01411 203331 LAC (BUFF=1 /IN ACTIVE LIST,
01412 040014 DAC 14 /BUFFER FOR BUBBLE SORT
01413 040010 DAC 10
01414 777602 LAW =176
01415 043242 DAC CNTR
01416 160010 DZM* 10 /CLEAR THE BUFFER
01417 443242 ISZ CNTR
01420 601416 JMP ,=2
,EJECT

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/EACH PROGRAM WILL TAKE 6 LOCATIONS IN BUFFER,
 /THE FIRST TWO WILL BE THE TITLE, THE THIRD WILL BE THE STARTING BLOCK NUMBER,
 /THE FOURTH IS THE PROGRAM SIZE, THE FIFTH WILL BE THE LOAD ADDRESS,
 /THE SIXTH WILL BE A LOAD INDICATOR,

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01421 220013          /
01422 741200          LAC*   13          /START OF ACTLST
01423 600247          SNA
01424 741000          JMP    CHAIN
01425 220013          LOADRP LAC*   13
01426 043260          DAC    TEMP1#          /TEMP1 AND TEMP2 CONTAIN THE TITLE
01427 060014          DAC*   14
01430 220013          LAC*   13          /OF THE PROGRAM WANTED BY THE OPERATOR
01431 043261          DAC    TEMP2#
01432 060014          DAC*   14
01433 203324          LAC    (DIRECT=1
01434 040010          LOADRR DAC    10          /NOW FIND THAT TITLE IN THE DIRECTORY
01435 220010          LAC*   10          /TO GET WORD COUNT AND THE STARTING
01436 543260          SAD    TEMP1          /BLOCK NUMBER,
01437 601443          JMP    ,+4
01440 200010          LAC    10
01441 343325          TAD    (000003
01442 601434          JMP    LOADRR
/
01443 220010          LAC*   10
01444 543261          SAD    TEMP2
01445 601451          JMP    ,+4
01446 203332          LAC    (2)
01447 340010          TAD    10
01450 601434          JMP    LOADRR
/
01451 220010          LAC*   10          /A MATCH OCCURRED, NOW GET BLOCK NUMBER
01452 060014          DAC*   14
01453 440014          ISZ   14
01454 440014          ISZ   14
01455 440014          ISZ   14
01456 443252          ISZ   PROCNT          /DONE WITH ALL PROGRAMS?
01457 601425          JMP    LOADRP          /NO
          ,EJECT

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/NOW GET ACTUAL PROGRAM SIZE FROM THE PROGRAM,
/IT SHOULD BE THE FOURTH WORD ON THE TAPE,

```

01460 203333      /
01461 043230    FIND,0  LAC      (BUFF+2
01462 223230    DAC      X1
01463 741200    LAC*     X1
01464 601501    SNA
01465 040024    JMP      LOAD,0      /DONE
01466 777774    DAC      BLKNUM
01467 040316    LAW      4
01470 203316    DAC      READ+2
01471 040317    LAC      (DTBUF=1
01472 100314    DAC      READ+3
                                /READ THE FIRST BLOCK OF THE PROGRAM
                                /
01473 202531    LAC      DTBUF+3
01474 443230    ISZ      X1
01475 063230    DAC*     X1
01476 203230    LAC      X1
01477 343334    TAD      (5
01500 601461    JMP      FIND,0      /GET NEXT PROGRAM

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/NOW SORT BUFFER ACCORDING TO PROGRAM SIZE

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01501 143236    LOAD,0  DZM      SWIND
01502 203335    LAC      (BUFF
01503 043230    LOAD,1  DAC      X1      /TITLE POINTER
01504 343325    TAD      (3
01505 043231    DAC      X2      /PROGRAM SIZE POINTER
01506 343325    TAD      (3
01507 043232    DAC      X3      /SECOND PROGRAM TITLE POINTER
01510 343325    TAD      (3
01511 043233    DAC      X4      /SECOND PROGRAM SIZE POINTER
                                .EJECT

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/CHECK FOR END OF BUFFER
/
01512 223252          LAC#    X3
01513 741200          SNA
01514 601546          JMP     LOAD,3      /DONE WITH BUFFER
01515 223231          LAC#    X2
01516 740001          CMA
01517 343317          TAD     (1
01520 363233          TAD#   X4
01521 740300          SMAISZA
01522 601526          JMP     SWITCH
/
/NEGATIVE RESULT SO JUST CHANGE POINTER AND TRY AGAIN,
/
01523 203336          LAC     (6
01524 343230          TAD     X1
01525 601503          JMP     LOAD,1
/
/SWAP BECAUSE LARGER PROGRAM IS LOWER IN BUFFER
/
01526 777777          SWITCH  LAW     =1
01527 043236          DAC     SWIND
01530 777772          LAW     =6
01531 043242          DAC     CNTR
01532 223230          LOAD,2  LAC#   X1
01533 043231          DAC     X2
01534 223232          LAC#   X3
01535 063230          DAC#   X1
01536 203231          LAC     X2
01537 063232          DAC#   X3
01540 443230          ISZ    X1
01541 443232          ISZ    X3
01542 443242          ISZ    CNTR
01543 601532          JMP     LOAD,2
/
01544 203230          LAC     X1
01545 601503          JMP     LOAD,1      /SWITCH DONE, TRY NEXT PROGRAMS
/
/CHECK FOR REVERSALS MADE IN SORT,
/
01546 443236          LOAD,3  ISZ    SWIND
01547 741000          SKP
01550 601501          JMP     LOAD,0      /REVERSAL MADE DO BUFFER AGAIN,
          .EJECT

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01551 777770      LAW      =10
01552 043225      DAC      IIRCNT      /SET UP FOR ITERATIONS THROUGH LIST,
/
/EACH PROGRAM WILL BE TESTED TO SEE IF IT CAN FIT IN THE REMAINING
/ROOM BETWEEN A POINTER SOMEWHERE IN A 4K FIELD AND THE BOTTOM
/OF THAT 4K FIELD, IF NO PROGRAM CAN FIT IN THE REMAINING SPACE
/THEN THE POINTER IS MOVED TO THE TOP OF THE NEXT LOWER 4K FIELD,
/EACH PROGRAM IS THEN TRIED AGAIN UNTIL ALL PROGRAMS ARE LOADED,
/OR THE TOP OF THE OPERATING SYSTEM IS REACHED, THEN NO MORE PROGRAMS CAN
/BE LOADED,
/
01553 203335      /
01554 043230      COMP,0  LAC      (BUFF
01555 343325      DAC      X1      /X1 CONTAINS ADDRESS OF TITLE WORD
01556 043233      TAD      (3
01557 343317      DAC      X4      /X4 CONTAINS THE ADDRESS OF THE PROGRAM SIZE
01560 043234      TAD      (1
01561 343317      DAC      X5      /X5 CONTAINS THE ADDRESS OF THE LOAD ADDRESS
01562 043235      TAD      (1
01563 223230      DAC      X6      /X6 CONTAINS THE ADDRESS OF THE LOAD INDICATOR
01564 741200      LAC*     X1      /ANYTHING LEFT IN LIST?
01565 601623      SNA
01566 223235      JMP      ENDLST  /DONE WITH END OF LIST
01567 740200      LAC*     X6      /CHECK FOR ALREADY LOADED,
01570 601604      SZA
01571 203241      JMP      COMP,1  /LOADED
01572 503337      LAC      CLDADR
01573 043226      AND      (070000
01574 223233      DAC      LOW4K
01575 740001      LAC*     X4
01576 343332      CMA
01577 343241      TAD      (2
01600 043227      TAD      CLDADR  /SUBTRACT PROGRAM SIZE FROM VOID
01601 503337      DAC      TLAD   /TEMP LOAD ADDRESS
01602 543226      AND      (070000
01603 601607      SAD      LOW4K
01604 203336      JMP      ,+4   /DID NOT CROSS 4K BOUNDARY
/
01605 343230      COMP,1  LAC      (6
01606 601554      TAD      X1      /WON'T LOAD, GET NEXT PROGRAM
01607 203227      JMP      COMP,0
/
01610 343340      LAC      TLAD   /CHECK TO SEE IF IT WILL FIT ABOVE MONITOR,
01611 741100      TAD      (=3400
01612 601604      SPA
01613 343341      JMP      COMP,1  /WON'T FIT
01614 043241      TAD      (3400
01615 063234      DAC      CLDADR
01616 777777      LAC*     X5      /THIS IS THE LOADING ADDRESS FOR THIS PROGRAM,
01617 063235      DAC*     X6      /SET LOAD INDICATOR
01620 343241      TAD      CLDADR
01621 043241      DAC      CLDADR
01622 601604      JMP      COMP,1

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LOADER SRC

LOAD PROGRAMS FOR INTERACTIVE MODE,

,EJECT

/END OF LIST, MOVE TO TOP OF NEXT 4K BANK,

```

01623 203241 ENDLST / LAC CLDADR
01624 503337 AND (070000)
01625 741200 SNA
01626 601633 JMP CLOD,1=2
01627 343342 TAD (=1)
01630 043241 DAC CLDADR
01631 443225 ISZ ITRCNT
01632 601553 JMP COMP,0=1 /ALL DONE

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/LAST ITERATION, SEE IF EVERY PROGRAM IS LOADED,

```

01633 143224 DZM ALLDFG /ALL LOADED FLAG
01634 203335 LAC (BUFF /SET UP POINTERS,
01635 043230 CLOD,1 DAC X1
01636 343317 TAD (1
01637 043231 DAC X2
01640 343343 TAD (4
01641 043235 DAC X6
/
01642 223230 LAC# X1
01643 741200 SNA
01644 601665 JMP LOADPG /DONE WITH LIST
01645 223235 LAC# X6
01646 741200 SNA
01647 101653 JMS NOLOAD /SOME PROGRAM CAN NOT BE LOADED,
01650 203230 LAC X1
01651 343336 TAD (6
01652 601635 JMP CLOD,1 /CHECK NEXT PROGRAM

```

/PRINT PROGRAM NAME THAT WAS NOT LOADED,

```

01653 000000 NOLOAD /
01654 223230 LAC# X1
01655 043221 DAC A
01656 223231 LAC# X2
01657 043222 DAC A+1
01660 203344 LAC (A=1+400000)
01661 100460 JMS TSIXBT
01662 777777 LAW =1
01663 043224 DAC ALLDFG /SET FLAG TO INDICATE THAT SOME PROGRAM WAS NOT LOADED
01664 621653 JMP# NOLOAD
,EJECT

```

/LOAD PROGRAMS NOW

01665	443224	LOADPG	ISZ	ALLDFG
01666	601672		JMP	,+4
01667	203345		LAC	(NOFITM=1+400000
01670	100460		JMS	TSIXBT
01671	601100		JMP	LOADER

01672	203335		/	
01673	043230	LOAD,4	LAC	(BUFF
01674	343317		DAC	X1
01675	043231		TAD	(1
01676	343317		DAC	X2
01677	043232		TAD	(1
01700	343332		DAC	X3
01701	043234		TAD	(2
01702	343317		DAC	X5
01703	043235		TAD	(1
			DAC	X6

01704	223230		/	
01705	741200		LAC*	X1
01706	601715		SNA	
01707	223235		JMP	CHKCOR
01710	740200		LAC*	X6
01711	601747		SZA	
01712	203230	NXTPRG	JMP	LOAD,3
01713	343336		LAC	X1
01714	601673		TAD	(6
			JMP	LOAD,4
			,EJECT	

/ALL DONE, CHECK FOR PRINT LINK TABLE,

/PROGRAM WAS LOADED,

/GET NEXT PROGRAM

01715	443246	CHKCOR	ISZ	CORMAP	/SWITCH SET?
01716	601721		JMP	,+3	/YES
01717	700312	CHKR,2	KRB		
01720	600122		JMP	GETMON+2	/NO RETURN TO MONITOR
			/		
01721	203346		LAC	(SLINK)	
01722	043230		DAC	X1	
01723	100514	CHKR,1	JMS	CRLF	
01724	223230		LAC*	X1	
01725	741200		SNA		
01726	601717		JMP	CHKR,2	/DONE EXIT,
			/		
01727	343334		TAD	(5)	
01730	040013		DAC	13	
01731	203347		LAC	(A=1)	
01732	040014		DAC	14	
01733	220013		LAC*	13	
01734	060014		DAC*	14	
01735	220013		LAC*	13	
01736	060014		DAC*	14	
01737	203347		LAC	(A=1)	
01740	100460		JMS	TSIXBT	
01741	760240		LAW	240	
01742	100522		JMS	TYPONE	
01743	223230		LAC*	X1	
01744	100540		JMS	PSOD	
01745	443230		ISZ	X1	
01746	601723		JMP	CHKR,1	
			,EJECT		

01747	223234	LOAD,5	LAC*	X5
01750	043241		DAC	CLDADR
01751	043253		DAC	SLDADR
01752	203271		LAC	(7777
01753	043251		DAC	PGORBK#
01754	223232		LAC*	X3
01755	040024		DAC	BLKNUM
01756	043264		DAC	UPDTBK#
01757	102007		JMS	READBK
01760	143240		DZM	CHKSUM#
01761	102036	LOADRW	JMS	GETWRD
01762	102062		JMS	WDPAIR
01763	102036		JMS	GETWRD
01764	043243		DAC	CNTWD1#
01765	503276		AND	(77
01766	043245		DAC	CNTWD3#
01767	203243		LAC	CNTWD1
01770	102236		JMS	RROT6
01771	043243		DAC	CNTWD1
01772	503276		AND	(77
01773	043244		DAC	CNTWD2#
01774	203243		LAC	CNTWD1
01775	102236		JMS	RROT6
01776	503276		AND	(77
01777	102122		JMS	INTPRT
02000	203244		LAC	CNTWD2
02001	102122		JMS	INTPRT
02002	203245		LAC	CNTWD3
02003	102122		JMS	INTPRT
02004	443266		ISZ	WQCNT#
02005	601763		JMP	LOADRW+2
02006	601761		JMP	LOADRW

/SET TO PAGE MODE

/UP DATED BLOCK NUMBER
 /READ A BLOCK OF TAPE INTO MEMORY
 /CLEAR CHECKSUM
 /GET FIRST WORD
 /IT HAS TO BE A WORD PAIR, INTERPRET IT

,EJECT

02007	000000	READBK	0		
02010	700311		KSF		
02011	602017		JMP	+6	
02012	700312		KRB		
02013	543273		SAD	(203)	
02014	600120		JMP	GETMON	
			/		
02015	543350		SAD	(220)	
02016	602032		JMP	READB1	
			/		
02017	203264		LAC	UPDTBK	/READ A BLOCK FROM DECTAPE
02020	040024		DAC	BLKNUM	/DEC TAPE HANDLER
02021	443264		ISZ	UPDTBK	
02022	777400		LAW	=400	
02023	043265		DAC	WDCNTR#	
02024	040316		DAC	READ+2	
02025	203316		LAC	(DTBUF=1	
02026	040317		DAC	READ+3	
02027	040017		DAC	17	
02030	100314		JMS	READ	
02031	622007		JMP*	READBK	
			/		
02032	100271	READB1	JMS	UPAROW	
02033	203351		LAC	(320)	
02034	100522		JMS	TYPONE	
02035	601100		JMP	LOADER	
			/		
02036	000000	GETWRD	0		
02037	220017		LAC#	17	
02040	043254		DAC	STRG#	
02041	343240		TAD	CHKSUM	
02042	043240		DAC	CHKSUM	
02043	443265		ISZ	WDCNTR	
02044	741000		SKP		
02045	102007		JMS	READBK	
02046	203254		LAC	STRG	
02047	622036		JMP*	GETWRD	
			/		
			/		
02050	000000	CORE	0		
02051	143246		DZM	CORMAP	
02052	203275		LAC	(215)	
02053	622050		JMP*	CORE	
			/		
02054	203307	BKMODE	LAC	(1777)	
02055	741000		SKP		
02056	203271	PGMODE	LAC	(777)	
02057	043251		DAC	PGORBK	
02060	102036		JMS	GETWRD	
02061	622122		JMP*	INTPRI	
			.EJECT		

```

02062 000000 WDPAIR 0
02063 503352 AND (377000 /MASK OFF ALL BITS EXCEPT WORD PAIR COUNT
02064 744000 CLL
02065 742020 RTR
02066 742020 RTR
02067 102236 JMS RROT6
02070 740001 CMA
02071 343317 TAD (000001
02072 043266 DAC WQCNTN
02073 203254 LAC STRG /NOW CHECK FOR END OF FILE
02074 503353 AND (000007
02075 543334 SAD (000005
02076 602101 JMP ,+3
02077 102036 JMS GETWRD
02100 622062 JMP* WDPAIR
02101 102036 JMS GETWRD /END OF FILE, GET NEXT WORD WHICH
02102 203240 LAC CHKSUM /WILL BE PARITY AND CHECK OVERALL PARITY
02103 741200 SNA
02104 601712 JMP NXTPRG /GET NEXT PROGRAM
02105 203354 LAC (CHKSR1=1*400000 /CHECK SUM ERROR
02106 100460 JMS TSIXBT
02107 223230 LAC* X1 /GET TITLE
02110 043221 DAC A
02111 223231 LAC* X2
02112 043222 DAC A+1
02113 203347 LAC (A=1
02114 100460 JMS TSIXBT
02115 700312 KRB
02116 600122 JMP GETMON+2
/
02117 000000 PBUFF 0
02120 000000 0
02121 000000 0
/
02122 000000 INTPRT 0
02123 543332 SAD (000002
02124 602143 JMP LQADD /LOAD ADDRESS IN ,REL FORMAT
02125 543325 SAD (000003
02126 602163 JMP RLOINS /RELOCATABLE INSTRUCTION
02127 543343 SAD (000004
02130 602173 JMP CONST /CONSTANT
02131 543334 SAD (000005
02132 602175 JMP ADPNTR /ADDRESS POINTER
02133 543355 SAD (000027
02134 602200 JMP SA /STARTING ADDRESS
02135 543356 SAD (000031
02136 602054 JMP BKMODE /SET TO BANK MODE RELOCATABLE
02137 543357 SAD (000032
02140 602056 JMP PGMODE /SET TO PAGE MODE RELOCATABLE
02141 102036 JMS GETWRD
02142 622122 JMP* INTPRT /DON'T LOAD ANYTHING
,EJECT

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02143 102036 LDADD JMS GETWRD
02144 741100 SPA
02145 602151 JMP LOADDE /ERROR
02146 343241 TAD CLDADR /ADD TO POINTER
02147 043253 DAC SLDADR
02150 622122 JMP# INTPRT
/
02151 203360 LDADDE LAC (LCMSG=1+400000 /ERROR
02152 100460 JMS TSIXBT
02153 223230 LAC# X1
02154 043221 DAC A
02155 223231 LAC# X2
02156 043222 DAC A+1
02157 203347 LAC (A=1
02160 100460 JMS TSIXBT
02161 700312 KRB
02162 600122 JMP GETMON+2
/
02163 102036 RLOINS JMS GETWRD /GET THE INSTUCTION
02164 043257 DAC TEMPE# /THAT HAS TO HAVE
02165 203241 LAC CLDADR /THE ADDRESS PORTION
02166 503251 AND PGORBK /MODIFIED,
02167 343257 TAD TEMPE
02170 063253 DAC# SLDADR
02171 443253 ISZ SLDADR
02172 622122 JMP# INTPRT
/
02173 102036 CONST JMS GETWRD /CONSTANT SO JUST
02174 602170 JMP ,=4 /PLACE IN MEMORY
/
02175 102036 ADPNTR JMS GETWRD /ADDRESS POINTER
02176 343241 TAD CLDADR
02177 602170 JMP ,=7
/
02200 203346 SA LAC (SLINK /PUT THE STARTING ADDRESS
02201 043257 DAC TEMPE /OF THE PROGRAM IN AN
02202 223257 LAC# TEMPE /EMPTY SLOT OF SYSTEM
02203 741200 SNA /LINK TABLE
02204 602207 JMP ,+3
02205 443257 ISZ TEMPE
02206 602202 JMP ,=4
02207 102036 JMS GETWRD
02210 343241 TAD CLDADR
02211 063257 DAC# TEMPE
02212 622122 JMP# INTPRT
,EJECT

```

02213	000000	DBPRSL	0		/DOUBLE PRECISION SHIFT LEFT ROUTINE
02214	043255		DAC	TEMP#	/FOR SIX 6 BIT CHOPPED ASCII CHARACTERS
02215	203222		LAC	B	
02216	744010		RCL		
02217	100533		JMS	LROT6	
02220	043260		DAC	TEMP1#	
02221	740020		RAR		
02222	503277		AND	(777700)	
02223	243255		XOR	TEMP	
02224	043222		DAC	B	
02225	203260		LAC	TEMP1	
02226	503276		AND	(77	
02227	043260		DAC	TEMP1	
02230	203221		LAC	A	
02231	100533		JMS	LROT6	
02232	503277		AND	(777700)	
02233	243260		XOR	TEMP1	
02234	043221		DAC	A	
02235	622213		JMP*	DBPRSL	
			/		
02236	000000	RR0T6	0		/SHIFT AC 6 PLACES TO RIGHT
02237	742020		RTR		
02240	742020		RTR		
02241	742020		RTR		
02242	622236		JMP*	RR0T6	
			/		
02243	000000	PR2DD	0		/PRINT TWO DECIMAL DIGITS UP TO 64
02244	143262		DZM	TENS#	
02245	503276		AND	(000077)	
02246	740200		SZA		
02247	602255		JMP	,+6	
02250	760260		LAW	260	
02251	100522		JMS	TYPONE	
02252	760260		LAW	260	
02253	100522		JMS	TYPONE	
02254	622243		JMP*	PR2DD	
02255	343361		TAD	(-12	
02256	741100		SPA		
02257	602262		JMP	,+3	
02260	443262		ISZ	TENS	
02261	602255		JMP	,=4	
02262	043263		DAC	UNITS#	
02263	203262		LAC	TENS	
02264	343362		TAD	(260	
02265	100522		JMS	TYPONE	
02266	203263		LAC	UNITS	
02267	343363		TAD	(12	
02270	343362		TAD	(260	
02271	100522		JMS	TYPONE	
02272	622243		JMP*	PR2DD	
			,EJECT		

02273	000000	DBPRSR	0		
02274	760334	LAW	000334		/REPLY WITH BACK SLASH AND PERFORM
02275	100522	JMS	TYPONE		/A DOUBLE PRECISION SHIFT RIGHT
02276	203222	LAC	B		/WITH THE SIX CHOPPED ASCII
02277	745200	SNA!CLL			/BYTES, THEY ARE IN LOCATIONS "A" AND
02300	602321	JMP	LOADRM		/"B", THE FORMAT IS A1,A2,A3;B1,B2,B3,
02301	503277	AND	(777700		
02302	102236	JMS	RR0T6		
02303	043222	DAC	B		
02304	203221	LAC	A		
02305	741200	SNA			
02306	602321	JMP	LOADRM		
02307	744020	RCR			
02310	102236	JMS	RR0T6		
02311	043221	DAC	A		
02312	503364	AND	(770000		
02313	243222	XOR	B		
02314	043222	DAC	B		
02315	203221	LAC	A		
02316	740010	RAL			
02317	503271	AND	(007777		
02320	043221	DAC	A		
02321	203237	LOADRM	LAC	CARCNT	
02322	543365	SAD	(=7		
02323	602327	JMP	,+4		
02324	777777	LAW	=1		
02325	343237	TAD	CARCNT		
02326	043237	DAC	CARCNT		
02327	622273	JMP*	DBPRSR		
			,EJECT		

02414	000000	*R
02415	000000	*R
02416	000000	*R
02417	000000	*R
02420	000000	*R
02421	000000	*R
02422	000000	*R
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02424	000000	*R
02425	000000	*R
02426	000000	*R
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02477	000000	*R
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02502	000000	*R
02503	000000	*R
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02525	000000	*R

,EJECT

02526	000000	DTBUF	0
			REPT 377
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02527	000000		
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03112	000000	#R
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03117	000000	#R
03120	000000	#R
03121	000000	#R
03122	000000	#R
03123	000000	#R
03124	000000	#R
03125	000000	#R

EJECT

03126	233123	TSYSLD	,SIXBT	!SYSTEM LOADER V28@!
03127	240515			
03130	401417			
03131	010405			
03132	224026			
03133	620200			
03134	150515	TMEMSZ	,SIXBT	!MEMSIZE TYPE 8K,12K,16K,20K,24K,28K,OR 32K; @!
03135	231132			
03136	054040			
03137	243120			
03140	054070			
03141	135461			
03142	621354			
03143	616613			
03144	546260			
03145	135462			
03146	641354			
03147	627013			
03150	541722			
03151	406362			
03152	137240			
03153	400000			
03154	271001	WHAT	,SIXBT	!WHAT?@!
03155	247700			
03156	161724	NOTIN	,SIXBT	!NOT IN DIRECTORY@!
03157	401116			
03160	400411			
03161	220503			
03162	241722			
03163	310000			
03164	051624	REDUN	,SIXBT	!ENTERED@!
03165	052205			
03166	040000			
03167	161724	NOFITM	,SIXBT	!NOT LOADED@!
03170	401417			
03171	010405			
03172	040000			
03173	241124	TITLE	,SIXBT	!TITLE @!
03174	140540			
03175	000000			
				,EJECT

03176	031005	CHKSR1 ,SIXBT 'CHECK SUM ERROR ON LOADING @'
03177	031340	
03200	232515	
03201	400522	
03202	221722	
03203	401716	
03204	401417	
03205	010411	
03206	160740	
03207	000000	
03210	111414	LCMSG ,SIXBT 'ILLEGAL ,LOC STATEMENT IN @'
03211	050701	
03212	144056	
03213	141703	
03214	402324	
03215	012405	
03216	150516	
03217	244011	
03220	164000	

,EJECT

03221	000000	A	0
03222	000000	B	0
03223	000000		0
03224	000000	ALLDFG	0
03225	000000	ITRCNT	0
03226	000000	LOW4K	0
03227	000000	TLAD	0
03230	000000	X1	0
03231	000000	X2	0
03232	000000	X3	0
03233	000000	X4	0
03234	000000	X5	0
03235	000000	X6	0
03236	000000	SWIND	0

,EJECT

.END

03267	000755	#L
03270	003125	#L
03271	007777	#L
03272	403163	#L
03273	000203	#L
03274	000377	#L
03275	000215	#L
03276	000077	#L
03277	777700	#L
03300	007013	#L
03301	616213	#L
03302	616613	#L
03303	626013	#L
03304	626413	#L
03305	627013	#L
03306	636213	#L
03307	017777	#L
03310	027777	#L
03311	037777	#L
03312	047777	#L
03313	057777	#L
03314	067777	#L
03315	077777	#L
03316	002525	#L
03317	000001	#L
03320	403172	#L
03321	000375	#L
03322	000376	#L
03323	403153	#L
03324	000564	#L
03325	000003	#L
03326	403163	#L
03327	000037	#L
03330	403155	#L
03331	002327	#L
03332	000002	#L
03333	002332	#L
03334	000005	#L
03335	002330	#L
03336	000006	#L
03337	070000	#L
03340	774400	#L
03341	003400	#L
03342	777777	#L
03343	000004	#L
03344	403220	#L
03345	403166	#L
03346	000756	#L
03347	003220	#L
03350	000220	#L
03351	000320	#L
03352	377000	#L

03353	000007	*L
03354	403175	*L
03355	000027	*L
03356	000031	*L
03357	000032	*L
03360	403207	*L
03361	777766	*L
03362	000260	*L
03363	000012	*L
03364	770000	*L
03365	777771	*L

SIZE=03377

NO ERROR LINES

A	03221	ACTLST	002526	ADPNTR	02175	ALLDFG	03224
B	03222	BKMODE	02054	BLKNUM	000024	BUFF	02330
CARCNT	03237	CHAIN	000247	CHKCOR	01715	CHKR,1	01723
CHKR,2	01717	CHKSR1	03176	CHKSUM	03240	CLDADR	03241
CLOD,1	01635	CNTR	03242	CNTWD1	03243	CNTWD2	03244
CNTWD3	03245	COMP,0	01554	COMP,1	01604	CONST	02173
CORE	02050	CORMAP	03246	CRLF	000514	DBPRSL	02213
DBPRSR	02273	DIRECT	000565	DMEMSZ	03247	DTBUF	02526
EBA	707764	EEM	707702	ENDLST	01623	FIND,0	01461
GETMON	000120	GETWRD	02036	INTPRT	02122	ITRCNT	03225
ITS12K	01220	ITS16K	01222	ITS20K	01224	ITS24K	01226
ITS28K	01230	ITS32K	01232	ITS8K	01216	KRB	700312
KSF	700311	LCMSG	03210	LDADD	02143	LDADDE	02151
LOADER	01100	LOADPG	01665	LOADRA	01142	LOADRB	01160
LOADRC	01170	LOADRD	01233	LOADRE	01313	LOADRF	01264
LOADRG	01252	LOADRJ	01330	LOADRK	01347	LOADRL	01374
LOADRM	02321	LOADRN	01403	LOADRP	01425	LOADRR	01434
LOADRW	01761	LOAD,0	01501	LOAD,1	01503	LOAD,2	01532
LOAD,3	01546	LOAD,4	01673	LOAD,5	01747	LOAD,6	01134
LOW4K	03226	LROT6	000533	NOFITM	03167	NOLOAD	01653
NOTIN	03156	NOTIND	01400	NUM	03250	NXTPRG	01712
PBUFF	02117	PGMODE	02056	PGORBK	03251	PROCNT	03252
PR2DD	02243	PSOD	000540	READ	000314	READBK	02007
READB1	02032	REDUN	03164	RLOINS	02163	RRQT6	02236
SA	02200	SLDADR	03253	SLINK	000756	STRG	03254
SWIND	03236	SWITCH	01526	TEMP	03255	TEMPA	03256
TEMPE	03257	TEMP1	03260	TEMP2	03261	TENS	03262
TITLE	03173	TLAD	03227	TMEMSZ	03134	TSIXBT	000460
TSYSLD	03126	TYPONE	000522	UNITS	03263	UPAROW	000271
UPDTBK	03264	UPREFX	000560	WAIT	000253	WDCNTR	03265
WDPAIR	02062	WHAT	03154	WQCNTN	03266	X1	03230
X2	03231	X3	03232	X4	03233	X5	03234
X6	03235						

BLKNUM	000024	GETMON	000120	CHAIN	000247	WAIT	000253
UPAROW	000271	READ	000314	TSIXBT	000460	CRLF	000514
TYPONE	000522	LROT6	000533	PSOD	000540	UPREFX	000560
DIRECT	000565	SLINK	000756	LOADER	01100	LOAD,6	01134
LOADRA	01142	LOADRB	01160	LOADRC	01170	ITS8K	01216
ITS12K	01220	ITS16K	01222	ITS20K	01224	ITS24K	01226
ITS28K	01230	ITS32K	01232	LOADRD	01233	LOADRG	01252
LOADRF	01264	LOADRE	01313	LOADRJ	01330	LOADRK	01347
LOADRL	01374	NOTIND	01400	LOADRN	01403	LOADRP	01425
LOADRR	01434	FIND,0	01461	LOAD,0	01501	LOAD,1	01503
SWITCH	01526	LOAD,2	01532	LOAD,3	01546	COMP,0	01554
COMP,1	01604	ENDLST	01623	CLOAD,1	01635	NLOAD	01653
LOADPG	01665	LOAD,4	01673	NXTPRG	01712	CHKCOR	01715
CHKR,2	01717	CHKR,1	01723	LOAD,5	01747	LOADRW	01761
READBK	02007	READB1	02032	GETWRD	02036	CORE	02050
BKMODE	02054	PGMODE	02056	WDPAIR	02062	PBUFF	02117
INTPRT	02122	LDADD	02143	LDADDE	02151	RLOINS	02163
CONST	02173	ADPNTR	02175	SA	02200	DBPRSL	02213
RROT6	02236	PR2DD	02243	DBPRSR	02273	LOADRM	02321
BUFF	02330	ACTLST	022526	DTBUF	02526	TSYSLD	03126
TMEMSZ	03134	WHAT	03154	NOTIN	03156	REDUN	03164
NOFITM	03167	TITLE	03173	CHKSR1	03176	LCMSG	03210
A	03221	B	03222	ALLOFG	03224	ITRCNT	03225
LOW4K	03226	TLAD	03227	X1	03230	X2	03231
X3	03232	X4	03233	X5	03234	X6	03235
SWIND	03236	CARCNT	03237	CHKSUM	03240	CLDADR	03241
CNTR	03242	CNTWD1	03243	CNTWD2	03244	CNTWD3	03245
CORMAP	03246	DMEMSZ	03247	NUM	03250	PGORBK	03251
PROCNT	03252	SLOADR	03253	STRG	03254	TEMP	03255
TEMPA	03256	TEMPE	03257	TEMP1	03260	TEMP2	03261
TENS	03262	UNITS	03263	UPDTBK	03264	WDCNTR	03265
WQCNTN	03266	KSF	700311	KRB	700312	EEM	707702
EBA	707764						