

,TITLE CHAIN MODE OPERATION SYSTEM EXERCISER
 /7-27-71
 /DIGITAL EQUIPMENT CORPORATION; MAYNARD, MASS,
 /ED HILTON

01400

,ABS
 ,LOC 1400

000560 UPREFX=560
 000460 TSIXBT=460
 700312 KR0=700312
 700301 KSF=700301
 700402 TCF=700402
 700401 TSF=700401
 705512 RPL=705512
 000514 CRLF=514
 000565 DIRECT=565
 707545 DTLA=707545
 707544 DTXA=707544
 707561 DTEF=707561
 707552 DTRA=707552
 707572 DTRB=707572
 707601 DTDF=707601
 700004 CLOF=700004
 000522 TYPONE=522
 000253 WAIT=253
 000120 GETMON=120
 000533 LROT6=533
 000004 SAVAC=4
 000540 PSOD=540
 707702 EEM=707702
 707764 EBA=707764
 735000 CLX=735000
 736000 CLLR=736000
 724000 PXA=724000
 730000 PLA=730000
 722000 PAL=722000
 721000 PAX=721000

01400
 01401
 01402
 01403
 01404
 01405
 01406
 01407
 01410
 01411
 01412
 01413
 01414
 01415
 01416

703302 BEGIN CAF
 741000 SKP
 602333 JMP
 707764 EBA
 707702 EEM
 203627 LAC
 040003 DAC
 777777 LAW
 040100 DAC
 735000 CLX
 736000 CLLR
 100514 JMS
 100560 JMS
 203630 LAC
 100460 JMS
 ,EJECT

TYPEI

/INTERFACE BETWEEN RESIDENT TTY ROUTINE

(JMP SYSINT

3

=1

100

/SET CHAIN MODE INDICATOR

CRLF

UPREFX

(STMSG=1

TSIXBT

/CHAIN MODE OPERATION MESSAGE

```

01417 203631 BEGIN1 LAC (MEMSZ2=1+400000
01420 100460 JMS TSIXBT
01421 100253 JMS WAIT /WAIT FOR BANK CHARACTER
/
01422 543632 SAD (203 /1=7 VALID
01423 600120 JMP GETMON
01424 543633 SAD (215 /CHECK FOR TERMINATOR
01425 601430 JMP ,+3
01426 042110 DAC PRTER
01427 601421 JMP BEGIN1+2
/
01430 100514 JMS CRLF
01431 202110 LAC PRTER
01432 343634 TAD (=261
01433 741100 SPA
01434 601417 JMP BEGIN1 /LESS THAN 261 ASCII
01435 343635 TAD (=7
01436 740100 SMA
01437 601417 JMP BEGIN1 /GREATER THAN 267 ASCII
01440 343636 TAD (10
01441 100533 JMS LROT6
01442 100533 JMS LROT6
01443 043055 DAC CLDADR
01444 043045 DAC SLDADR /SYSTEM LOAD ADDRESS
01445 243637 XOR (7777
01446 040101 DAC 101
/
/NOW CHECK FOR API WANTED AND PRESENT
/
01447 750004 LAS
01450 503640 AND (400000
01451 740100 SMA
01452 601463 JMP CONTINU
01453 705504 ISA
01454 705501 SPI
01455 601462 JMP ,+5
01456 705514 ISA+10
01457 203640 LAC (400000
01460 043063 DAC APION
01461 601463 JMP CONTINU
01462 101742 JMS APINON
,EJECT

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/NOW GET THE PROGRAMS AND LOAD THEM ONE AT A TIME

```

01463 203641  CONTINU  /
01464 040011  DAC      11
01465 220011  LAC*    11          /GET THE TITLE
01466 741200  SNA
01467 602500  JMP     NOTHIN
01470 777777  LAW     -1
01471 340011  TAD     11
01472 040011  DAC     11
01473 220011  NXTPRG LAC*    11
01474 741200  SNA
01475 602474  JMP     EDMSG
01476 043040  DAC     A
01477 220011  LAC*    11
01500 043041  DAC     B
01501 220011  LAC*    11
01502 043043  DAC     STBLK
01503 220011  LAC*    11
01504 043044  DAC     TOTWC
01505 102361  JMS     LOAD
/
01506 203061  LAC     SLINK
01507 343636  TAD     (10
01510 043626  DAC     SWMASK#
01511 223626  LAC*    SWMASK          /GET CONSOLE SWITCH MASK
01512 043626  DAC     SWMASK
01513 750004  LAS
01514 503626  AND     SWMASK
01515 740200  SZA
01516 601473  JMP     NXTPRG          /ABORT?
/                          /YES
01517 203642  LAC     (BGNMSG=1+400000 /RUN
01520 100460  JMS     TSIXBT
01521 203643  LAC     (A=1
01522 100460  JMS     TSIXBT
01523 100514  JMS     CRLF
01524 143034  DZM     TEXTIT
, EJECT

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/AFTER PROGRAM IS LOADED, GET UODSW AND DETERMINE IF
 /TEST IS A CP TEST OR AN I.O TEST, IF IT IS AN I.O, TEST
 /CHECK FOR AN API TRAP ADDRESS AND SET UP THE ENTRY

01525	223061	LAC*	SLINK	
01526	043057	DAC	UODSW	
01527	740100	SMA		
01530	601603	JMP	PION	/C,P, TEST
01531	740010	RAL		/I,O, TEST
01532	740100	SMA		
01533	601603	JMP	PION	/NO API, USES PROGRAM INTERRUPT
01534	102573	JMS	SUAPIR	/USES API, SET UP API ERROR TRAP
01535	203063	LAC	APION	
01536	740100	SMA		
01537	601603	JMP	PION	/USES API BUT OPERATOR DOESN'T WANT IT,
01540	203057	LAC	UODSW	/DESIRE API
01541	503644	AND	(37	
01542	343645	TAD	(40	
01543	043060	DAC	ENTRY	/STORE API ENTRY PORT
01544	203646	LAC	(4	
01545	343061	TAD	SLINK	
01546	043062	DAC	LTEMP	/LTEMP CONTAINS ADDRESS OF SERVICE ADDRESS
01547	223062	LAC*	LTEMP	
01550	043065	DAC	APISRV	
01551	203647	LAC	(APISRV	
01552	343066	TAD	APIGO	/GET JMS* 0
01553	063060	DAC*	ENTRY	/THE ENTRY ADDRESS NOW CONTAINS JMS* APISRV
01554	203057	LAC	UODSW	
01555	503650	AND	(4000)	
01556	741200	SNA		
01557	601603	JMP	PION	
01560	203651	LAC	(1)	
01561	043621	DAC	APIPTR#	
01562	203061	LAC	SLINK	
01563	343621	TAD	APIPTR	
01564	043057	DAC	UODSW	
01565	223057	LAC*	UODSW	
01566	503644	AND	(37	
01567	741200	SNA		
01570	601603	JMP	PION	
01571	343645	TAD	(40)	
01572	043060	DAC	ENTRY	
01573	203647	LAC	(APISRV	
01574	343652	TAD	(APIGO	
01575	063060	DAC*	ENTRY	
01576	443621	ISZ	APIPTR	
01577	203621	LAC	APIPTR	
01600	543646	SAD	(4)	
01601	601603	JMP	PION	
01602	601562	JMP	API,1	

API,1

,EJECT

/INITIALIZE TEST AND GO TO IDLE LOOP, THE IDLE LOOP WILL
/TEST FOR ERRORS AND FIND OUT WHEN TO EXIT THE TEST AND
/LOAD THE NEXT TEST,

01603 203653
01604 343061
01605 043035
01606 223035
01607 043035
01610 777777
01611 043625
01612 754000
01613 123035
01614 203063
01615 740100
01616 741000
01617 705504
01620 700042

PION /
LAC (5
TAD SLINK
DAC LTEMP2
LAC* LTEMP2
DAC LTEMP2
LAW =1
DAC PIIND#
CLAICLL
JMS* LTEMP2
LAC APION
SMA
SKP
ISA
ION
.EJECT

/FLAG FOR ENTRY TO PI SUBROUTINE

/GO TO INITIALIZATION OF TEST

/NOW TEST FOR ERRORS AND SEE WHEN TO LOAD NEXT TEST

01621	203001	/	
01622	343654	LAC	SLINK
01623	043035	TAD	(20
01624	143623	DAC	LTEMP2
01625	443623	INITA DZM	MEMLOC# /THIS IS A BACKGROUND TEST TO RUN DURING I/O
01626	203623	ISZ	MEMLOC
01627	543651	LAC	MEMLOC
01630	741000	SAD	(1
01631	740040	SKP	
01632	750000	HLT	
01633	740200	CLA	
01634	740040	SZA	
01635	740001	HLT	
01636	543655	CMA	
01637	741000	SAD	(777777
01640	740040	SKP	
01641	243656	HLT	
01642	543655	XOR	(0
01643	741000	SAD	(777777
01644	740040	SKP	
01645	343651	HLT	
01646	740200	TAD	(1
01647	740040	SZA	
01650	744000	HLT	
01651	741400	CLL	
01652	740040	SZL	
01653	740002	HLT	
01654	740400	CML	
01655	740040	SNL	
01656	777777	HLT	
01657	543655	LAW	=1
01660	741000	SAD	(=1
01661	740040	SKP	
01662	343651	HLT	
01663	740200	TAD	(1
01664	740040	SZA	
01665	741400	HLT	
01666	740040	SZL	
01667	223035	HLT	
01670	741200	LAC*	LTEMP2
01671	601624	SNA	
		JMP	INITA
		.EJECT	

01672	043622	DAC	ERNUMB#	
01673	543657	SAD	(=6	
01674	602041	JMP	PRTDUN	
01675	543635	SAD	(=7	
01676	602015	JMP	REINII+1	
01677	543660	SAD	(=5	
01700	601771	JMP	CHECKA	
01701	543661	SAD	(=4	
01702	602041	JMP	PRTDUN	
01703	750004	LAS		/ERROR CHECK FOR HLT ON ERROR
01704	740010	RAL		
01705	740100	SMA		
01706	601751	JMP	CHECK	
		/		
01707	703302	CAF		/STOP THE WORLD SW01=1
01710	700004	CLOF		
01711	700002	IOF		
01712	203061	LAC	SLINK	
01713	343662	TAD	(21	
01714	043036	DAC	LTEMP3	
01715	223036	LAC*	LTEMP3	
01716	740200	SZA		
01717	102110	JMS	PRTERR	
01720	203061	LAC	SLINK	
01721	343653	TAD	(5	
01722	040011	DAC	11	
01723	220011	LAC*	11	
01724	043040	DAC	A	
01725	220011	LAC*	11	
01726	043041	DAC	A+1	
01727	777774	LAW	=4	/SET UP COUNTER FOR UODSW
01730	042110	DAC	PRTERR	/TO UODSW+3
01731	203663	LAC	(A=1+400000	
01732	100460	JMS	TSIXBT	
01733	102275	JMS	SPACE2	
01734	223061	LAC*	SLINK	/PRINT UODSW
01735	100540	JMS	PSOD	
01736	443061	ISZ	SLINK	
01737	442110	ISZ	PRTERR	
01740	601733	JMP	,=5	
01741	600122	JMP	GETMON+2	
		,EJECT		

01742	000000	APINON	0		
01743	203651		LAC	(1)	
01744	043104		DAC	ERRNUM	
01745	143105		DZM	ERRNUM+1	
01746	143063		DZM	APION	
01747	102255		JMS	ERCALL	
01750	621742		JMP*	APINON	
			/		
01751	700002	CHECK	IOF		
01752	705514		ISA+10		
01753	203622		LAC	ERNUMB	
01754	543655		SAD	(=1	
01755	601773		JMP	RPTERR	/ERROR AND I.O, INITIATED
01756	203063		LAC	APION	/TEST API WANTED FLAG
01757	740100		SMA		
01760	601762		JMP	,+2	
01761	705504		ISA		
01762	700042		ION		
01763	203622		LAC	ERNUMB	
01764	543664		SAD	(=2	
01765	601775		JMP	RESERV	/ERROR WITH NO I.O, STARTED ,ENTER THROUGH
01766	543665		SAD	(=3	/SERVICE ENTRANCE
01767	602014		JMP	REINIT	/ERROR WITH NO I.O, STARTED, ENTER THROUGH
					/INITIALIZATION ADDRESS
01770	602017		JMP	BADERR	
			/		
01771	163035	CHECKA	DZM*	LTEMP2	/JUST RE=ENTER
01772	601776		JMP	RESERV+1	/NO ERROR
			/		
			,EJECT		

01773	102110	RPERR	JMS	PRERR
01774	601624		JMP	INITA
			/	
01775	102110	RESERV	JMS	PRERR
01776	203646		LAC	(4
01777	343061		TAD	SLINK
02000	043036		DAC	LTEMP3
02001	223036		LAC*	LTEMP3
02002	043036		DAC	LTEMP3
02003	700002		IOF	
02004	705514		ISA+10	
02005	123036		JMS*	LTEMP3
02006	203063		LAC	APION
02007	740100		SMA	
02010	602012		JMP	+2
02011	705504		ISA	
02012	700042		ION	
02013	601624		JMP	INITA
			/	
02014	102110	REINIT	JMS	PRERR
02015	203653		LAC	(5
02016	601777		JMP	RESERV+2
			/	
02017	703302	BADERR	CAF	
02020	700002		IOF	
02021	203666		LAC	(BADR=1+400000
02022	100460		JMS	TSIXBI
02023	203653		LAC	(5
02024	343061		TAD	SLINK
02025	040012		DAC	12
02026	220012		LAC*	12
02027	043040		DAC	A
02030	220012		LAC*	12
02031	043041		DAC	A+1
02032	203643		LAC	(A=1
02033	100460		JMS	TSIXBT
02034	102275		JMS	SPACE2
02035	203622		LAC	ERNUMB
02036	100540		JMS	PSOD
02037	100514		JMS	CRLF
02040	601473		JMP	NXTPRG
			.EJECT	

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02041 700002 PRTDUN IOF
02042 703302 CAF
02043 700004 CLOF
02044 203061 LAC SLINK /CHECK FOR ERRORS FIRST
02045 343662 TAD (21
02046 043036 DAC LTEMP3
02047 223036 LAC# LTEMP3
02050 740200 SZA /ANY ERROR?
02051 102110 JMS PRTERR /YES
02052 700002 IOF
02053 705514 ISA+10
02054 750004 LAS /CHECK TO SEE IF OPERATOR WANTS DONE MESSAGE
02055 742010 RTL
02056 741100 SPA
02057 601473 JMP NXTPRG /DON'T PRINT DONE
02060 203061 LAC SLINK
02061 343653 TAD (5
02062 040012 DAC 12
02063 220012 LAC# 12
02064 043101 DAC TITA
02065 220012 LAC# 12
02066 043102 DAC TITA+1
02067 203667 LAC (TITA=1+400000
02070 100460 JMS TSIXBT
02071 102275 JMS SPACE2
02072 203670 LAC (DUN=1
02073 100460 JMS TSIXBT
02074 100514 JMS CRLF
02075 601473 JMP NXTPRG

02076 042301 ILWCCD DAC LOAD /ILLEGAL WORD COUNT CODE
02077 203671 LAC (ILWCMS=1+400000
02100 100460 JMS TSIXBT
02101 203672 LAC (TITA=1
02102 100460 JMS TSIXBT
02103 102275 JMS SPACE2
02104 202361 LAC LOAD
02105 100540 JMS PSOD
02106 777770 LAW =10
02107 602151 JMP STCNT
      .EJECT

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02110 000000 PRTErr 0
02111 750004 LAS
02112 503673 AND (040000
02113 741200 SNA
02114 602123 JMP PRTERA
02115 203063 LAC APION /OPERATOR DOESN'T WANT USER ERROR MESSAGE
02116 740100 SMA
02117 602121 JMP ,+2
02120 705504 ISA
02121 700042 ION
02122 622110 JMP# PRTErr
02123 203674 PRTERA LAC (C-1
02124 040013 DAC 13
02125 040014 DAC 14
02126 203653 LAC (5
02127 343061 TAD SLINK
02130 040012 DAC 12
02131 220012 LAC# 12
02132 043101 DAC TITA
02133 220012 LAC# 12
02134 043102 DAC TITA+1
02135 203654 LAC (20
02136 343061 TAD SLINK
02137 040012 DAC 12
02140 220012 LAC# 12
02141 740100 SMA
02142 602076 JMP ILWCCD
02143 343636 TAD (10
02144 740100 SMA
02145 602150 JMP ,+3
02146 343675 TAD (=10
02147 602076 JMP ILWCCD
02150 343675 TAD (=10
,EJECT

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02151	043067	STCNT	DAC	CNT
02152	043070		DAC	CNT1
02153	220012		LAC*	12
02154	060013		DAC*	13
02155	443067		ISZ	CNT
02156	602153		JMP	,=3
02157	163035		DZM*	LTEMP2
02160	203063		LAC	APION
02161	740100		SMA	
02162	602165		JMP	,+3
02163	203640		LAC	(400000)
02164	705504		ISA	
02165	700042		ION	
02166	203667		LAC	(TITA=1+400000
02167	100460		JMS	TSIXBT
02170	102275		JMS	SPACE2
02171	220014		LAC*	14
02172	100540		JMS	PSOD
02173	443070		ISZ	CNT1
02174	602170		JMP	,=4
02175	100514		JMS	CRLF
02176	622110		JMP*	PRERR
			,EJECT	

/SYSTEM PROGRAM INTERRUPT ROUTINE

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02177 707764  SYSINT  /
02200 707702  EEM
02201 724000  PXA
02202 043107  DAC      INDEXR
02203 730000  PLA
02204 043110  DAC      LIMITR
02205 700314  IORS
02206 043105  DAC      ERRNUM+1
02207 203625  LAC      PIIND
02210 543655  SAD      (-1
02211 741000  SKP
02212 740040  HLT
02213 143625  DZM      PIIND
02214 203105  LAC      ERRNUM+1
02215 741100  SPA
02216 740040  HLT
02217 742010  RTL
02220 740010  RAL
02221 741110  SPA,RAL
02222 602303  JMP      CHKYBD
02223 741100  SPA
02224 602316  JMP      CHTYPE
02225 223061  SYSIO   LAC*   SLINK
02226 740100  SMA
02227 602240  JMP      SYSIOB
02230 203061  LAC      SLINK
02231 343646  TAD      (4
02232 043037  DAC      LTEMP4
02233 223037  LAC*    LTEMP4
02234 043037  DAC      LTEMP4
02235 123037  JMS*    LTEMP4
02236 741200  SNA
02237 602243  JMP      SIOEX
02240 203676  SYSIOB  LAC      (2)
02241 043104  DAC      ERRNUM
02242 602273  JMP      MONERR
      ,EJECT

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/SECOND ENTRY TO PI SUBROUTINE, BAD NEWS!
/CLEAR FLAG BEHIND ME

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/PI ENABLE SHOULD BE CLEARED IN A PI ROUTINE

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/UNIDENTIFIED INTERRUPT

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02243	777777	SIOEX	LAW	=1	
02244	043625		DAC	PIIND	/RESET FLAG
02245	203110		LAC	LIMITR	
02246	722000		PAL		
02247	203107		LAC	INDEXR	
02250	721000		PAX		
02251	200004		LAC	SAVAC	
02252	703344		DBR		
02253	700042		ION		
02254	620000		JMP*	0	
			/		
02255	000000	ERCALL	0		/SYSTEM ERROR
02256	703302		CAF		
02257	700002		IOF		
02260	203677		LAC	(SYSERR=1+400000	
02261	100460		JMS	TSIXBT	
02262	102275		JMS	SPACE2	
02263	203104		LAC	ERRNUM	
02264	100540		JMS	PSOD	
02265	102275		JMS	SPACE2	
02266	203105		LAC	ERRNUM+1	
02267	100540		JMS	PSOD	
02270	143105		DZM	ERRNUM+1	
02271	100514		JMS	CRLF	
02272	622255		JMP*	ERCALL	
			/		
02273	102255	MONERR	JMS	ERCALL	
02274	602243		JMP	SIOEX	
			/		
02275	000000	SPACE2	0		
02276	760240		LAW	240	
02277	100522		JMS	TYPONE	
02300	760240		LAW	240	
02301	100522		JMS	TYPONE	
02302	622275		JMP*	SPACE2	
			/		
02303	700301	CHKYBD	KSF		
02304	740040		HLT		/THIS IS BECAUSE STATUS BIT HIGH BUT NO SKIP
02305	700312		KRB		
02306	543632		SAD	(203	
02307	602311		JMP	,+2	
02310	602243		JMP	SIOEX	
			/		
02311	707552		DTRA		
02312	503700		AND	(020000	
02313	707544		DTXA		
02314	700004		CLOF		
02315	600120		JMP	GETMON	
			.EJECT		

02316	700401	CHTYPE	TSF	
02317	740040		HLT	/STATUS BIT HIGH BUT NO SKIP
02320	700402		TCF	
02321	203034		LAC	TEXT
02322	543655		SAD	(=1
02323	602331		JMP	CHT,1
02324	740200		SZA	
02325	740040		HLT	
02326	777776		LAW	=2
02327	043034		DAC	TEXT
02330	602243		JMP	SIOEX
			/	
02331	143034	CHT,1	DZM	TEXT
02332	602243		JMP	SIOEX
			/	
02333	700002	TYPEI	IOF	
02334	203034		LAC	TEXT
02335	543664		SAD	(=2)
02336	602356		JMP	TYPE,1
02337	740200		SZA	
02340	740040		HLT	
02341	777777		LAW	=1
02342	043034		DAC	TEXT
02343	700042		ION	
02344	202334		LAC	TYPEI*1
02345	043067		DAC	CNT
02346	203034		LAC	TEXT
02347	741200		SNA	
02350	620522		JMP*	TYPONE
02351	443067		ISZ	CNT
02352	602346		JMP	,=4
02353	700401		TSF	
02354	740040		HLT	
02355	620522		JMP*	TYPONE
02356	143034	TYPE,1	DZM	TEXT
02357	700042		ION	
02360	620522		JMP*	TYPONE
			,EJECT	

/THIS IS THE LOADER PROGRAM, IT LOADS A PROGRAM INTO
/THE BANK SPECIFIED BY THE OPERATOR

02361	000000	LOAD	/		
02362	203637		LAC	(7777)	
02363	043624		DAC	PGORBK#	
02364	102510		JMS	READBK	
02365	143046		DZM	CHKSUM	
02366	102527		JMS	GETWRD	/GET THE FIRST WORD OF THE PROGRAM
02367	102541		JMS	WDPAIR	/IT HAS TO BE A WORD PAIR COUNTER
02370	102527	LOADA	JMS	GETWRD	
02371	043047		DAC	CNTWD1	
02372	503701		AND	(77	
02373	043051		DAC	CNTWD3	
02374	203047		LAC	CNTWD1	
02375	102503		JMS	RROT6	
02376	043047		DAC	CNTWD1	
02377	503701		AND	(77	
02400	043050		DAC	CNTWD2	
02401	203047		LAC	CNTWD1	
02402	102503		JMS	RROT6	
02403	503701		AND	(77	
02404	102414		JMS	INTPRT	/INTERPRET THE CONTROL WORD
02405	203050		LAC	CNTWD2	
02406	102414		JMS	INTPRT	/INTERPRET THE SECOND WORD
02407	203051		LAC	CNTWD3	
02410	102414		JMS	INTPRT	/INTERPRET THE THIRD WORD
02411	443052		ISZ	WQCNTN	
02412	602370		JMP	LOADA	/GET A NEW CONTROL WORD
02413	602366		JMP	LOADA+2	
			.EJECT		

/INTERPRET THE INDIVIDUAL WORDS AND SEE HOW TO HANDLE THE
/ASSOCIATED DATA WORD;

```

02414 000000  /
02415 543676  INTPRT  /
02416 602435  SAD      (2)
02417 543702  JMP      LDADD      /LOAD ADDRESS
02420 602441  SAD      (3)
02421 543646  JMP      RLOINS     /RELOCATABLE INSTRUCTION
02422 602452  SAD      (4)
02423 543653  JMP      CONST     /A CONSTANT
02424 602454  SAD      (5)
02425 543703  JMP      ADPNTR    /ADDRESS POINTER
02426 602462  SAD      (27)
02427 543704  JMP      SA        /STARTING ADDRESS
02430 602466  SAD      (31)
02431 543705  JMP      BKMODE    /SET TO BANK RELOCATABLE
02432 602470  SAD      (32)
02433 102527  JMP      PGMODE    /SET TO PAGE RELOCATABLE
02434 622414  JMS*     INTPRT
/
02435 102527  LDADD    JMS      GETWRD
02436 343055  TAD      CLDADR
02437 043045  DAC      SLDADR
02440 622414  JMP*     INTPRT
/
02441 102527  RLOINS   JMS      GETWRD
02442 043056  DAC      INST
02443 203055  LAC      CLDADR
02444 503624  AND      PGORBK
02445 503706  AND      (010000)
02446 343056  TAD      INST
02447 063045  DAC*     SLDADR
02450 443045  ISZ      SLDADR
02451 622414  JMP*     INTPRT
02452 102527  CONST    JMS      GETWRD
02453 602447  JMP      CONST=3
/
02454 102527  ADPNTR   JMS      GETWRD
02455 043056  DAC      INST
02456 203055  LAC      CLDADR
02457 503707  AND      (070000)
02460 343056  TAD      INST
02461 602447  JMP      CONST=3
/
/STARTING ADDRESS DEFINED BY END STATEMENT
/IT IS THE ADDRESS OF UODSW TO BE USED BY THE MONITOR,
/
02462 102527  SA       JMS      GETWRD
02463 343055  TAD      CLDADR
02464 043061  DAC      SLINK
02465 622361  JMP*     LOAD
          .EJECT

```

```

02466 203710 BKMODE LAC (17777)
02467 741000 SKP
02470 203637 PGMODE LAC (7777)
02471 043624 DAC PGORBK
02472 102527 JMS GETWRD
02473 622414 JMP# INTPRI
/
02474 203711 EDMSG LAC (ENDMSG=1+400000)
02475 100460 JMS TSIXBT
02476 100514 JMS CRLF
02477 601463 JMP CONTINU
/
02500 203712 NOTIN LAC (NOTIN=1+400000)
02501 100460 JMS TSIXBT
02502 600120 JMP GETMON
/
02503 000000 RROT6 0
02504 742020 RTR
02505 742020 RTR
02506 742020 RTR
02507 622503 JMP# RROT6
/
02510 000000 READBK 0 /READ A BLOCK OF TAPE INTO BUFFER
02511 700301 KSF
02512 602516 JMP ,+4
02513 700312 KRB
02514 543632 SAD (203
02515 600120 JMP GETMON
/
02516 203043 LAC STBLK
02517 042613 DAC BLKNUM
02520 443043 ISZ STBLK
02521 203713 LAC (OTBUF=1
02522 040017 DAC 17
02523 777400 LAW =400
02524 043053 DAC WOCNTR
02525 102607 JMS READ
02526 622510 JMP# READBK
/
02527 000000 GETWRD 0
02530 220017 LAC# 17
02531 043054 DAC STRG
02532 343046 TAD CHKSUM
02533 043046 DAC CHKSUM
02534 443053 ISZ WOCNTR /NEW BLOCK?
02535 741000 SKP /NO
02536 102510 JMS READBK /YES
02537 203054 LAC STRG
02540 622527 JMP# GETWRD
,EJECT

```

```

02541 000000 WOPAIR 0 /WORD PAIR COUNTER, INTERPRET FIRST
02542 503714 AND (377000 /WORD OF BLOCK
02543 744000 CLL
02544 742020 RTR
02545 742020 RTR
02546 102503 JMS RROT6
02547 740001 CMA
02550 343651 TAD (1
02551 043052 DAC WQCNTN
02552 203054 LAC STRG
02553 503715 AND (7
02554 543653 SAD (5)
02555 602560 JMP ,+3
02556 102527 JMS GETWRD /WASTE PARITY WORD
02557 622541 JMP# WOPAIR
02560 102527 JMS GETWRD
02561 203046 LAC CHKSUM
02562 741200 SNA
02563 622361 JMP# LOAD /EXIT BECAUSE EOF AND NO PARITY ERROR
02564 203716 LAC (LDERM1=1+400000
02565 100460 JMS TSIXBT
02566 203643 LAC (A=1
02567 100460 JMS TSIXBT
02570 203717 LAC (LDERM2=1
02571 100460 JMS TSIXBT
02572 601473 JMP NXTPRG

```

```

/
/SET UP ALL API TRAPS TO ERROR ENTRY
/

```

```

02573 000000 SUAPIR 0
02574 777740 LAW =40
02575 043067 DAC CNT
02576 203645 LAC (40
02577 043062 DAC LTEMP
02600 203720 LAC (JMP ER40
02601 063062 DAC# LTEMP
02602 443062 ISZ LTEMP
02603 343676 TAD (2)
02604 443067 ISZ CNT
02605 602601 JMP ,=4
02606 622573 JMP# SUAPIR
,EJECT

```

/DECTAPE READ ROUTINE, LOAD BLKNUM WITH DESIRED
 /BLOCK NUMBER, READ+2 IS WORD COUNT, READ+3 IS
 /CURRENT ADDRESS-1, A READ WITHOUT ERRORS WILL BE
 /TRIED THREE TIMES, THEN EXIT THE PROGRAM

02607	000000	READ	/		
02610	602616		JMP	,+6	
02611	777400		LAW	=400	/WORD COUNT
02612	003110		,DSA	DTBUF=1	/CURRENT ADDRESS =1
02613	000000	BLKNUM	0		/BLOCK NUMBER
02614	000000	SRCH	0		
02615	000000	DTERRCT	0		
02616	777774		LAW	=4	
02617	042615		DAC	DTERRCT	/MAKE ERROR COUNTER
02620	707555		DTLA+10		
02621	140030		DZM	30	
02622	203721		LAC	(SRCH	
02623	040031		DAC	31	
02624	203722		LAC	(061000	/SEARCH REVERSE, NORMAL
02625	102670	SRCHA	JMS	GO	
02626	741100		SPA		
02627	602663		JMP	SRCHB	/END ZONE?
02630	202614		LAC	SRCH	
02631	503723		AND	(1777)	
02632	740001		CMA		
02633	342613		TAD	BLKNUM	
02634	343664		TAD	(=2	
02635	751100		SPA!CLA		
02636	602625		JMP	SRCHA	
02637	203673		LAC	(040000	/CHANGE DIRECTION BIT
02640	102670	SRCHC	JMS	GO	
02641	741100		SPA		
02642	602700		JMP	DTERR	
02643	202614		LAC	SRCH	
02644	503723		AND	(1777)	
02645	542613		SAD	BLKNUM	/SEARCH FORWARD UNTIL
02646	602651		JMP	,+3	/CORRECT BLOCK NUMBER APPEARS
02647	750000		CLA		
02650	602640		JMP	SRCHC	
			,EJECT		

/SEARCH FORWARD COMPLETE NOW START READING

02651 202611
 02652 040030
 02653 202612
 02654 040031
 02655 203724
 02656 102670
 02657 741100
 02660 602700
 02661 707555
 02662 622607

/
 LAC READ+2
 DAC 30
 LAC READ+3
 DAC 31
 LAC (003000
 JMS GO
 SPA
 JMP DTERR
 DTLA+10
 JMP* READ

/CHANGE FROM SEARCH TO READ

02663 503725
 02664 741200
 02665 602700
 02666 203726
 02667 602640

SRCHB

/
 AND (100000
 SNA
 JMP DTERR
 LAC (060000
 JMP SRCHC

/END ZONE ERROR GOING BACKWARD /TURN AROUND.

02670 000000
 02671 707544
 02672 707573
 02673 751000
 02674 622670
 02675 707601
 02676 602672
 02677 622670

GO

/
 DTXA
 DTEF!DTRB
 SKP!CLA
 JMP* GO
 DTDF
 JMP ,=4
 JMP* GO
 ,EJECT

```

02700 442615 DTERR ISZ DTERCT
02701 602620 JMP DTERCT+3 /TRY AGAIN
02702 600421 JMP 421 /RESIDENT MONITOR ERROR ROUTINE
/
/ENTERED BY INCORRECT API ENTRY FROM A DEVICE,
/
02703 040004 APIERR DAC SAVAC
02704 700002 IOF
02705 705514 ISA+10
02706 705512 RPL
02707 043106 DAC ERRNUM+2
02710 700314 IORS
02711 043105 DAC ERRNUM+1
02712 703302 CAF
02713 203702 LAC (3)
02714 043104 DAC ERRNUM
02715 203677 LAC (SYSEHR=1+400000)
02716 100460 JMS TSIXBT
02717 203104 LAC ERRNUM
02720 100540 JMS PSOD
02721 102275 JMS SPACE2
02722 203105 LAC ERRNUM+1
02723 100540 JMS PSOD
02724 102275 JMS SPACE2
02725 203106 LAC ERRNUM+2
02726 100540 JMS PSOD
02727 102275 JMS SPACE2
02730 200004 LAC SAVAC
02731 503701 AND (77)
02732 100540 JMS PSOD
02733 601473 JMP NXTPRG
,EJECT

```

02734	760040	ER40	LAW	40
02735	602703		JMP	APIERR
02736	760041	ER41	LAW	41
02737	602703		JMP	APIERR
02740	760042	ER42	LAW	42
02741	602703		JMP	APIERR
02742	760043	ER43	LAW	43
02743	602703		JMP	APIERR
02744	760044	ER44	LAW	44
02745	602703		JMP	APIERR
02746	760045	ER45	LAW	45
02747	602703		JMP	APIERR
02750	760046	ER46	LAW	46
02751	602703		JMP	APIERR
02752	760047	ER47	LAW	47
02753	602703		JMP	APIERR
02754	760050	ER50	LAW	50
02755	602703		JMP	APIERR
02756	760051	ER51	LAW	51
02757	602703		JMP	APIERR
02760	760052	ER52	LAW	52
02761	602703		JMP	APIERR
02762	760053	ER53	LAW	53
02763	602703		JMP	APIERR
02764	760054	ER54	LAW	54
02765	602703		JMP	APIERR
02766	760055	ER55	LAW	55
02767	602703		JMP	APIERR
02770	760056	ER56	LAW	56
02771	602703		JMP	APIERR
02772	760057	ER57	LAW	57
02773	602703		JMP	APIERR

EJECT

02774	760060	ER60	LAW	60
02775	602703		JMP	APIERR
02776	760061	ER61	LAW	61
02777	602703		JMP	APIERR
03000	760062	ER62	LAW	62
03001	602703		JMP	APIERR
03002	760063	ER63	LAW	63
03003	602703		JMP	APIERR
03004	760064	ER64	LAW	64
03005	602703		JMP	APIERR
03006	760065	ER65	LAW	65
03007	602703		JMP	APIERR
03010	760066	ER66	LAW	66
03011	602703		JMP	APIERR
03012	760067	ER67	LAW	67
03013	602703		JMP	APIERR
03014	760070	ER70	LAW	70
03015	602703		JMP	APIERR
03016	760071	ER71	LAW	71
03017	602703		JMP	APIERR
03020	760072	ER72	LAW	72
03021	602703		JMP	APIERR
03022	760073	ER73	LAW	73
03023	602703		JMP	APIERR
03024	760074	ER74	LAW	74
03025	602703		JMP	APIERR
03026	760075	ER75	LAW	75
03027	602703		JMP	APIERR
03030	760076	ER76	LAW	76
03031	602703		JMP	APIERR
03032	760077	ER77	LAW	77
03033	602703		JMP	APIERR

!EJECT

03034	000000	TEXT	0	
03035	000000	LTEMP2	0	
03036	000000	LTEMP3	0	
03037	000000	LTEMP4	0	
03040	000000	A	0	
03041	000000	B	0	
03042	000000		0	
03043	000000	STBLK	0	
03044	000000	TOTWC	0	
03045	000000	SLDADR	0	
03046	000000	CHKSUM	0	
03047	000000	CNTWD1	0	
03050	000000	CNTWD2	0	
03051	000000	CNTWD3	0	
03052	000000	WQCNT	0	
03053	000000	WDCNT	0	
03054	000000	STRG	0	
03055	000000	CLDADR	0	
03056	000000	INST	0	
03057	000000	UODSW	0	
03060	000000	ENTRY	0	
03061	000000	SLINK	0	
03062	000000	LTEMP	0	
03063	000000	APION	0	
03064	000000	APIERF	0	
03065	000000	APISRV	0	
03066	120000	APIGO	JMS*	0
03067	000000	CNT	0	
03070	000000	CNT1	0	
03071	000000	C	0	
03072	000000		0	
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03074	000000		0	
03075	000000		0	
03076	000000		0	
03077	000000		0	
03100	000000		0	
03101	000000	TITA	0	
03102	000000		0	
03103	000000		0	
03104	000000	ERRNUM	0	
03105	000000		0	
03106	000000		0	
03107	000000	INDEXR	0	
03110	000000	LIMITR	0	

.EJECT

03111	000000	DTBUF	0
			REPT 377
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03112	000000		
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03507	000000	*R
03510	000000	*R

EJECT

03511	031001	STMSG	,SIXBT	!CHAIN MODE OPERATION V3B@!
03512	111640			
03513	151704			
03514	054017			
03515	200522			
03516	012411			
03517	171640			
03520	266302			
03521	000000			
03522	232401	BGNMSG	,SIXBT	!START @!
03523	222440			
03524	000000			
03525	031715	ENDMSG	,SIXBT	!COMPLETED ONE PASS THROUGH DIRECTORY@!
03526	201405			
03527	240504			
03530	401716			
03531	054020			
03532	012323			
03533	402410			
03534	221725			
03535	071040			
03536	041122			
03537	050324			
03540	172231			
03541	000000			
03542	150515	MEMSZ2	,SIXBT	!MEMORY FIELD? @!
03543	172231			
03544	400611			
03545	051404			
03546	774000			
03547	111414	BAOR	,SIXBT	!ILLEGAL ERROR CODE @!
03550	050701			
03551	144005			
03552	222217			
03553	224003			
03554	170405			
03555	400000			
03556	111414	ILWCMS	,SIXBT	!ILLEGAL WORD COUNT CODE @!
03557	050701			
03560	144027			
03561	172204			
03562	400317			
03563	251624			
03564	400317			
03565	040540			
03566	400000			

,EJECT

03567	041122	NOTIN	,SIXBT	'DIRECTORY EMPTY@'
03570	050324			
03571	172231			
03572	400515			
03573	202431			
03574	000000			
03575	141701	LDERM1	,SIXBT	'LOAD ERROR IN PROGRAM @'
03576	044005			
03577	222217			
03600	224011			
03601	164020			
03602	221707			
03603	220115			
03604	400000			
03605	041104	LDERM2	,SIXBT	'DID NOT RUN THIS ONE@'
03606	401617			
03607	244022			
03610	251640			
03611	241011			
03612	234017			
03613	160500			
03614	233123	SYSERR	,SIXBT	'SYSERR @'
03615	052222			
03616	404000			
03617	041716	DUN	,SIXBT	'DONE@'
03620	050000			
			,EJECT	

,END

	000000	
03627	602177	#L
03630	003510	#L
03631	403541	#L
03632	000203	#L
03633	000215	#L
03634	777517	#L
03635	777771	#L
03636	000010	#L
03637	007777	#L
03640	400000	#L
03641	000564	#L
03642	403521	#L
03643	003037	#L
03644	000037	#L
03645	000040	#L
03646	000004	#L
03647	003065	#L
03650	004000	#L
03651	000001	#L
03652	003066	#L
03653	000005	#L
03654	000020	#L
03655	777777	#L
03656	000000	#L
03657	777772	#L
03660	777773	#L
03661	777774	#L
03662	000021	#L
03663	403037	#L
03664	777776	#L
03665	777775	#L
03666	403546	#L
03667	403100	#L
03670	003616	#L
03671	403555	#L
03672	003100	#L
03673	040000	#L
03674	003070	#L
03675	777770	#L
03676	000002	#L
03677	403613	#L
03700	020000	#L
03701	000077	#L
03702	000003	#L
03703	000027	#L
03704	000031	#L
03705	000032	#L
03706	010000	#L
03707	070000	#L
03710	017777	#L
03711	403524	#L
03712	403566	#L

03713	003110	*L
03714	377000	*L
03715	000007	*L
03716	403574	*L
03717	003604	*L
03720	602734	*L
03721	002614	*L
03722	061000	*L
03723	001777	*L
03724	003000	*L
03725	100000	*L
03726	060000	*L

SIZE=03734

NO ERROR LINES

A	03040	ADPNTR	02454	APIERF	03064	APIERR	02703
APIGO	03066	APINON	01742	APION	03063	APIPTR	03621
APISRV	03065	API,1	01562	B	03041	BADERR	02017
BADR	03547	BEGIN	01400	BEGIN1	01417	BGNMSG	03522
BKMODE	02466	BLKNUM	02613	C	03071	CHECK	01751
CHECKA	01771	CHKSUM	03046	CHKYBD	02303	CHTYPE	02316
CHT,1	02331	CLDADR	03055	CLLR	736000	CLOF	700004
CLX	735000	CNT	03067	CNTINU	01463	CNTWD1	03047
CNTWD2	03050	CNTWD3	03051	CNT1	03070	CONST	02452
CRLF	000514	DIRECT	000565	DTBUF	03111	DTDF	707601
DTEF	707561	DIRCT	02615	DTERR	02700	DTLA	707545
DTRA	707552	DTRB	707572	DTXA	707544	DUN	03617
EBA	707764	EDMSG	02474	EEM	707702	ENDMSG	03525
ENTRY	03060	ERCALL	02255	ERNUMB	03622	ERRNUM	03104
ER40	02734	ER41	02736	ER42	02740	ER43	02742
ER44	02744	ER45	02746	ER46	02750	ER47	02752
ER50	02754	ER51	02756	ER52	02760	ER53	02762
ER54	02764	ER55	02766	ER56	02770	ER57	02772
ER60	02774	ER61	02776	ER62	03000	ER63	03002
ER64	03004	ER65	03006	ER66	03010	ER67	03012
ER70	03014	ER71	03016	ER72	03020	ER73	03022
ER74	03024	ER75	03026	ER76	03030	ER77	03032
GETMON	000120	GETWRD	02527	GO	02670	ILWCCD	02076
ILWCMS	03556	INDEXR	03107	INITA	01624	INST	03056
INTPRT	02414	KRB	700312	KSF	700301	LDADD	02435
LDERM1	03575	LDERM2	03605	LIMITR	03110	LOAD	02361
LOADA	02370	LROT6	000533	LTEMP	03062	LTEMP2	03035
LTEMP3	03036	LTEMP4	03037	MEMLOC	03623	MEMSZ2	03542
MONERR	02273	NOTHIN	02500	NOTIN	03567	NXTPRG	01473
PAL	722000	PAX	721000	PGMODE	02470	PGORBK	03624
PIIND	03625	PION	01603	PLA	730000	PRTDUN	02041
PRTERA	02123	PRTERR	02110	PSOD	000540	PXA	724000
READ	02607	READBK	02510	REINIT	02014	RESERV	01775
RLOINS	02441	RPL	705512	RPTERR	01773	RROT6	02503
SA	02462	SAVAC	000004	SIOEX	02243	SLDADR	03045
SLINK	03061	SPACE2	02275	SRCH	02614	SRCHA	02625
SRCHB	02663	SRCHC	02640	STBLK	03043	STCNT	02151
STMSG	03511	STRG	03054	SUAPIR	02573	SWMASK	03626
SYSERR	03614	SYSINT	02177	SYSIO	02225	SYSIOB	02240
TCF	700402	TEXT	03034	TITA	03101	TOTWC	03044
TSF	700401	TSIXBT	000460	TYPEI	02333	TYPE,1	02356
TYPONE	000522	UODSW	03057	UPREFX	000560	WAIT	000253
WDCNTR	03053	WPAIR	02541	WQCNT	03052		

SAVAC	000004	GETMON	000120	WAIT	000253	TSIXBT	000460
CRLF	000514	TYPONE	000522	LROT6	000533	PSOD	000540
UPREFX	000560	DIRECT	000565	BEGIN	01400	BEGIN1	01417
CNTINU	01463	NXTPRG	01473	API,1	01562	PION	01603
INITA	01624	APINON	01742	CHECK	01751	CHECKA	01771
RPTERR	01773	RESERV	01775	REINIT	02014	BADERR	02017
PRTDUN	02041	ILWCCD	02076	PRTERR	02110	PRTERA	02123
STCNT	02151	SYSINT	02177	SYSIO	02225	SYSIOB	02240
SIOEX	02243	ERCALL	02255	MONERR	02273	SPACE2	02275
CHKYBD	02303	CHTYPE	02316	CHT,1	02331	TYPEI	02333
TYPE,1	02356	LOAD	02361	LOADA	02370	INTPRT	02414
LDADD	02435	RLOINS	02441	CONST	02452	ADPNTR	02454
SA	02462	BKMODE	02466	PGMODE	02470	EDMSG	02474
NOTHIN	02500	RROT6	02503	READBK	02510	GETWRD	02527
WDPAIR	02541	SUAPIR	02573	READ	02607	BLKNUM	02613
SRCH	02614	DTERCT	02615	SRCHA	02625	SRCHC	02640
SRCHB	02663	GO	02670	DTERR	02700	APIERR	02703
ER40	02734	ER41	02736	ER42	02740	ER43	02742
ER44	02744	ER45	02746	ER46	02750	ER47	02752
ER50	02754	ER51	02756	ER52	02760	ER53	02762
ER54	02764	ER55	02766	ER56	02770	ER57	02772
ER60	02774	ER61	02776	ER62	03000	ER63	03002
ER64	03004	ER65	03006	ER66	03010	ER67	03012
ER70	03014	ER71	03016	ER72	03020	ER73	03022
ER74	03024	ER75	03026	ER76	03030	ER77	03032
TEXTIT	03034	LTEMP2	03035	LTEMP3	03036	LTEMP4	03037
A	03040	B	03041	STBLK	03043	TOTWC	03044
SLDADR	03045	CHKSUM	03046	CNTWD1	03047	CNTWD2	03050
CNTWD3	03051	WQCNTN	03052	WDCNTR	03053	STRG	03054
CLDADR	03055	INST	03056	UODSW	03057	ENTRY	03060
SLINK	03061	LTEMP	03062	APIQN	03063	APIERF	03064
APISRV	03065	APIGO	03066	CNT	03067	CNT1	03070
C	03071	TITA	03101	ERRNUM	03104	INDEXR	03107
LIMITR	03110	DTBUF	03111	STMSG	03511	BGNMSG	03522
ENDMSG	03525	MEMSZ2	03542	BADR	03547	ILWCMS	03556
NOTIN	03567	LDERM1	03575	LDERM2	03605	SYSERR	03614
DUN	03617	APIPTR	03621	ERNUMB	03622	MEMLOC	03623
PGORBK	03624	PIIND	03625	SWMASK	03626	CLOF	700004
KSF	700301	KRB	700312	TSF	700401	TCF	700402
RPL	705512	DTXA	707544	DTLA	707545	DTRA	707552
DTEF	707561	DTRB	707572	DTDF	707601	EEM	707702
EBA	707764	PAX	721000	PAL	722000	PXA	724000
PLA	730000	CLX	735000	CLLR	736000		