

,TITLE ADD PROGRAMS TO DIRECTORY
 /7-27-71
 /DIGITAL EQUIPMENT CORPORATION; MAYNARD, MASS,
 /ED HILTON

01100

,ABS
 ,LOC 1100

000514 CRLF=514
 700312 KRB=700312
 000560 UPREFX=560
 000522 TYPONE=522
 000460 TSIXBT=460
 000253 WAIT=253
 000120 GETMON=120
 000565 DIRECT=565
 000756 SLINK=756
 000332 WRITE=332
 000314 READ=314
 000024 BLKNUM=24
 000533 LROT6=533
 000540 PSOD=540
 700144 RSB=700144
 700112 RRB=700112
 700101 RSF=700101
 707764 EBA=707764
 707702 EEM=707702

01100
 01101
 01102
 01103
 01104
 01105
 01106
 01107
 01110
 01111
 01112
 01113
 01114

100514
 100560
 707764
 707702
 202257
 100460
 100514
 202260
 100460
 777771
 042227
 142224
 142225

ADDER JMS
 JMS
 EBA
 EEM
 LAC
 ADD,1 JMS
 LAC
 JMS
 LAW
 DAC
 DZM
 DZM
 ,EJECT

CRLF
 UPREFX

 (ENTER=1
 TSIXBT
 CRLF
 (TITMSG=1+400000
 TSIXBT
 =7
 CARCNT#
 A#
 B#

/SET UP INPUT CHARACTER COUNTER

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01115 100253 ADDERA / JMS WAIT /WAIT FOR KEYBOARD INPUT
01116 542261 SAD (000203 /CONTROL C?
01117 600120 JMP GETMON /YES
01120 542262 SAD (000377 /NO
01121 741000 SKP /RUBOUT?
01122 601132 JMP ADDERB /NO
01123 102060 JMS DBPRSR /
01124 202227 LAC CARCNT
01125 541111 SAD ADDERĀ=4 /THIS JUST CHECKS THAT CHARACTER COUNT
01126 601115 JMP ADDERA /DOESN'T GO MORE NEGATIVE THAN MINUS 6,
01127 342263 TAD (=1
01130 042227 DAC CARCNT
01131 601115 JMP ADDERĀ
01132 542264 ADDERB SAD (000215 /TERMINATOR?
01133 741000 SKP /YES
01134 601137 JMP ,+3
01135 100514 JMS CR LF
01136 601147 JMP ADDERC
01137 502265 AND (000077
01140 101740 JMS DBPRSL
01141 442227 ISZ CARCNT
01142 601115 JMP ADDERĀ
01143 202266 LAC (WHAT=1
01144 100460 JMS TSIXBI
01145 700312 KRB
01146 601106 JMP ADD,1
01147 442227 ADDERC ISZ CARCNT /NOW LEFT JUSTIFY CHARACTERS TYPED
01150 751000 SKP!CLA /IN
01151 601160 JMP ADDERD=4
01152 101740 JMS DBPRSL
01153 442227 ISZ CARCNT
01154 601150 JMP ,=4
01155 202224 LAC A /CHARACTERS ARE LEFT JUSTIFIED
01156 741200 SNA
01157 601106 JMP ADD,1 /IF NOTHING THEN CR WAS INPUT, TRY AGAIN
01160 777742 LAW =36
01161 042231 DAC CNT# /SET UP TO INSERT INTO DIRECTORY
01162 202267 LAC (DIRECT /SEARCH FOR VACANT LOCATION AT END OF
01163 042246 DAC TEMP# /DIRECTORY
01164 222246 ADDERD LAC# TEMP /EMPTY YET?
01165 741200 SNA /NO
01166 601200 JMP ADDERE /YES
01167 202246 LAC TEMP
01170 342270 TAD (000004
01171 042246 DAC TEMP
01172 442231 ISZ CNT
01173 601164 JMP ADDERD
01174 202271 LAC (DIRFL=1+400000 /DIRECTORY FULL, TELL OPERATOR,
01175 100460 JMS TSIXBI
01176 700312 KRB
01177 600122 JMP GETMON+2
      .EJECT

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01200	202272	ADDERE	LAC	(000003	/SET UP TITLE WORD INDICATORS
01201	042242		DAC	PROSZ#	/AND PROGRAM SIZE INDICATORS
01202	042251		DAC	TMODE1#	
01203	042252		DAC	TMODE2#	
01204	442251		ISZ	TMODE1	
01205	442252		ISZ	TMODE2	
01206	442252		ISZ	TMODE2	
01207	142254		DZM	UPDTBK#	/UPDATE BLOCK # USED FOR > 4K FILES
01210	777777		LAW	=1	
01211	042254		DAC	EOF#	/SET UP END OF FILE INDICATOR
01212	042250		DAC	TITIND#	/TITLE INDICATOR
01213	703302		CAF		/TELL READER TO GO
01214	700144		RSB		
01215	202273		LAC	(007777	
01216	040015		DAC	15	
01217	770000		LAW	=10000	
01220	042253		DAC	TOTSZE#	/WORD COUNT
01221	142244		DZM	REDTIM#	/SETUP READER TIMER TO ALLOW UP
01222	142256		DZM	WRDCNT#	/TO FIVE FEET OF LEADER
01223	777777		LAW	=1	
01224	042240		DAC	MODE#	/READER MODE, USED TO DETERMINE FIRST
01225	142250		DZM	CHKSUM#	/WORD OF BLOCK
01226	101403	ADDERG	JMS	READPT	/GET A WORD
01227	442240		ISZ	MODE	/FIRST WORD OF BLOCK?
01230	601245		JMP	ADDERH	/NO
01231	202243		LAC	REDBUF#	/GET WORD
01232	502274		AND	(377000	/WORD PAIR RESIDES IN BITS 1-8,
01233	744000		CLL		/SET UP COUNTER,
01234	742020		RTR		
01235	101763		JMS	RR0T6	
01236	740001		CMA		
01237	342275		TAD	(2	
01240	042256		DAC	WRDCNT	/WORD COUNT FOR BLOCK
01241	202243		LAC	REDBUF	/GET WORD
01242	502276		AND	(7	
01243	542277		SAD	(5	
01244	142254		DZM	EOF	/END OF FILE?

.EJECT

ADDRESS	ADDER	SRC	OPERATION	MODE	COMMENT
01245	202240	ADDERH	LAC	MODE	/NO
01246	542242		SAD	PROSZ	
01247	101770		JMS	PRGSZE	
01250	542251		SAD	TMODE1	/TITLE?
01251	101300		JMS	TITLE	
01252	542252		SAD	TMODE2	/TITLE?
01253	101300		JMS	TITLE	
01254	202243		LAC	REDBUF	
01255	060015		DAC*	15	
01256	202234		LAC	EOF	
01257	741200		SNA		/END OF FILE?
01260	601271		JMP	,+11	
01261	442253		ISZ	TOTSZE	
01262	601226		JMP	ADDERG	
01263	101441		JMS	DTWRIT	
01264	202273		LAC	(7777	
01265	040015		DAC	15	
01266	770000		LAW	-10000	
01267	042253		DAC	TOTSZE	
01270	601226		JMP	ADDERG	
01271	442253		ISZ	TOTSZE	
01272	442253		ISZ	TOTSZE	
01273	740000		NOP		
01274	101403		JMS	READPT	
01275	202243		LAC	REDBUF	
01276	060015		DAC*	15	
01277	101441		JMS	DTWRIT	
			.EJECT		

01300	000000	TITLE	0		
01301	442250		ISZ	TITIND	/TITLE INDICATOR FOR FIRST OR SECOND WORD
01302	601315		JMP	TITLEA	/SECOND WORD
01303	202243		LAC	REDBUF	/FIRST WORD
01304	740100		SMA		
01305	101327		JMS	TITLEC	
01306	502300		AND	(377777	/MASK OFF BIT TO INDICATE TWO WORD TITLE
01307	102007		JMS	CNV6BT	
01310	542224		SAD	A	/DIFFERENT
01311	741000		SKP		/NO
01312	601337		JMP	TITERR	/YES, TITLE ERROR,
01313	202240	TITLEB	LAC	MODE	/GET ORIGINAL WORD
01314	621300		JMP*	TITLE	
01315	202243	TITLEA	LAC	REDBUF	/SAME AS ABOVE ONLY ON SECOND WORD
01316	102007		JMS	CNV6BT	
01317	542225		SAD	B	
01320	741000		SKP		
01321	601337		JMP	TITERR	/TITLE ERROR
01322	777771		LAW	=7	/NOW CHANGE TITLE MODE INDICATOR
01323	042251		DAC	TMODE1	/SO NO MORE WORDS WILL BE RECOGNIZED
01324	042252		DAC	TMODE2	/AS TITLES
01325	042242		DAC	PROSZ	/OR PROGRAM SIZES
01326	601313		JMP	TITLEB	
			/		
01327	000000	TITLEC	0		
01330	042226		DAC	C#	
01331	777771		LAW	=7	
01332	042251		DAC	TMODE1	
01333	042252		DAC	TMODE2	
01334	042242		DAC	PROSZ	
01335	202226		LAC	C	
01336	621327		JMP*	TITLEC	
			,EJECT		

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01337 202301 TITERR LAC (TITER=1+400000
01340 100460 JMS TSIXBT
01341 202250 LAC TITIND
01342 542302 SAD (000001
01343 601360 JMP TITERA
01344 202243 LAC REDBUF
01345 740100 SMA
01346 601354 JMP TITERB
01347 502300 AND (377777
01350 102007 JMS CNV6BT
01351 101371 JMS P6BIT
01352 101403 JMS READPT
01353 202243 LAC REDBUF
01354 102007 TITERB JMS CNV6BT
01355 101371 JMS P6BIT
01356 100514 JMS CRLF
01357 601106 JMP ADD,1
01360 777777 TITERA LAW =1 /GET FIRST WORD
01361 340015 TAD 15
01362 040015 DAC 15
01363 220015 LAC* 15
01364 502300 AND (377777
01365 102007 JMS CNV6BT
01366 101371 JMS P6BIT /PRINT IT
01367 202243 LAC REDBUF
01370 601354 JMP TITERB
01371 000000 P6BIT 0
01372 041376 DAC P6BIT1 /SET UP TO PRINT IN 6 BIT
01373 202303 LAC (P6BIT1=1 /ENTER WITH WORD IN AC
01374 100460 JMS TSIXBT
01375 621371 JMP* P6BIT
01376 000000 P6BIT1 0
01377 000000 0
01400 202304 REEDER LAC (READER=1+4000000 /PRINT !CHECK SUM ERROR!
01401 100460 JMS TSIXBT /AND START AGAIN
01402 601100 JMP ADDER
      .EJECT

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01403 000000      READPT 0
01404 700101            RSF
01405 601431            JMP      READAP            /TIMED WAIT LOOP FOR READER FLAG
01406 700314            IORS
01407 502305            AND      (001000            /CHECK FOR READER NO TAPE FLAG
01410 740200            SZA
01411 601436            JMP      RNOTPE            /ERROR
01412 700112            RRB
01413 042243            DAC      REDBUF            /PUT WORD AWAY
01414 342230            TAD      CHKSUM
01415 042230            DAC      CHKSUM            /UPDATE CHECKSUM
01416 442256            ISZ      WRDCNT
01417 601425            JMP      ,+6
01420 777776            LAW      =2
01421 042240            DAC      MODE
01422 202230            LAC      CHKSUM
01423 740200            SZA
01424 601400            JMP      REEDER
01425 202306            LAC      (747777
01426 042244            DAC      REDTIM            /SETUP NEW CONSTANT TIME ON READER FLAG
01427 700144            RSB            /DO IT AGAIN
01430 621403            JMP*     READPT
          /
01431 442244      READAP ISZ      REDTIM
01432 601404            JMP      READPT+1
01433 202307            LAC      (REDERR=1+400000 /TOO LATE WITH READER FLAG
01434 100460            JMS      TSIXBT            /READ TIMER ERROR, FLAG DIDN'T COME UP
01435 601100            JMP      ADDER            /FOR SOME REASON, START AGAIN,
01436 202310      RNOTPE LAC      (RNTPE=1+400000 /READER NO TAPE MESSAGE
01437 100460            JMS      TSIXBT
01440 601100            JMP      ADDER
          ,EJECT

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01441	000000	DTWRIT	0		
01442	442234		ISZ	EOF	/EOF INDICATOR
01443	601461		JMP	ADDERP	/YES
01444	777777		LAW	=1	/NOT END OF FILE
01445	042234		DAC	EOF	
01446	202254		LAC	UPDTBK	/UPDATE BLOCK NUMBER
01447	741200		SNA		
01450	601503		JMP	ADDERN	/FIRST PASS AND NOT EOF
01451	040024		DAC	BLKNUM	
01452	342311		TAD	(000020	
01453	042254		DAC	UPDTBK	
01454	770000		LAW	=10000	
01455	040334		DAC	WRITE+2	
01456	362246		TAD*	TEMP	/UPDATE WORD COUNT FOR NEW FILE BY
01457	062246		DAC*	TEMP	/4096
01460	601507		JMP	ADDERM	
			/		
01461	142234	ADDERP	DZM	EOF	/END OF FILE PASS COULD BE ANY NUMBER,
01462	202254		LAC	UPDTBK	
01463	741200		SNA		
01464	601501		JMP	ADDERR	/FIRST PASS
01465	040024		DAC	BLKNUM	/BOOTSTRAP BLOCK #
01466	202273	ADDERS	LAC	(007777	/CA,-1
01467	040335		DAC	WRITE+3	/BOOTSTRAP CA
01470	740001		CMA		
01471	342302		TAD	(000001	/COMPUTE WORD COUNT
01472	340015		TAD	15	/FOR PARTIAL BUFFER
01473	740001		CMA		
01474	342302		TAD	(1	
01475	040334		DAC	WRITE+2	/CALCULATE TOTAL WORD COUNT
01476	362246		TAD*	TEMP	/FOR THIS PROGRAM
01477	062246		DAC*	TEMP	
01500	601511		JMP	ADDERI	
			/		
01501	101516	ADDERR	JMS	ADDERU	
01502	601466		JMP	ADDERS	
			,EJECT		

01503	101516	ADDERN	JMS	ADDERU	/FIRST PASS, NOT EOF
01504	770000		LAW	=10000	
01505	062246		DAC*	TEMP	
01506	040334		DAC	WRITE+2	
01507	202273	ADDERM	LAC	(007777	
01510	040335		DAC	WRITE+3	
01511	100332	ADDERT	JMS	WRITE	
01512	202234		LAC	EOF	/EOF?
01513	740200		SZA		
01514	621441		JMP*	DTWRIT	
01515	601557		JMP	VERFYA	/YES NOW VERIFY DATA ON DECTAPE
			/		
01516	000000	ADDERU	0		
01517	202246		LAC	TEMP	
01520	740001		CMA		/CHECK TO SEE THAT THE ADDRESS POINTED
01521	342302		TAD	(1	/TO IN TEMP IS STILL IN THE DIRECTORY,
01522	342267		TAD	(DIRECT	/THE FIRST PROGRAM SHOULD START AT BLOCK
01523	741100		SPA		/NUMBER 40 (OCTAL)
01524	601527		JMP	,+3	
01525	202312		LAC	(40	
01526	601546		JMP	ADDERX	
01527	777776		LAW	=2	
01530	342246		TAD	TEMP	
01531	042246		DAC	TEMP	
01532	222246		LAC*	TEMP	/GET BLOCK NUMBER OF PRECEDING PROGRAM
01533	042241		DAC	PBLKNM#	
01534	442246		ISZ	TEMP	
01535	222246		LAC*	TEMP	/GET WORD COUNT OF PRECEDING PROGRAM
01536	442246		ISZ	TEMP	
01537	142232		DZM	CNTBLK#	/COMPUTE TOTAL BLOCKS REQUIRED FOR PRECEDING
01540	442232		ISZ	CNTBLK	/PROGRAM AND ADD TO HIS LOCATION ON
01541	342313		TAD	(000400	/TAPE AND INSERT INTO DIRECTORY,
01542	741100		SPA		
01543	601540		JMP	,=3	
01544	202232		LAC	CNTBLK	/# OF BLOCKS REQUIRED BY PRECEDING PROGRAM
01545	342241		TAD	PBLKNM	
01546	040024	ADDERX	DAC	BLKNUM	
01547	342311		TAD	(000020	
01550	042254		DAC	UPDTBK	
01551	442246		ISZ	TEMP	
01552	442246		ISZ	TEMP	
01553	200024		LAC	BLKNUM	/PUT STARTING BLOCK NUMBER OF NEW PROGRAM
01554	062246		DAC*	TEMP	/INTO DIRECTORY
01555	442246		ISZ	TEMP	
01556	621516		JMP*	ADDERU	
			,EJECT		

01557	142230	VERFYA	DZM	CHKSUM
01560	777777		LAW	=1
01561	342246		TAD	TEMP
01562	042246		DAC	TEMP
01563	222246		LAC*	TEMP
01564	042245		DAC	STBLK#
01565	442246		ISZ	TEMP
01566	222246		LAC*	TEMP
01567	342314	VERFYC	TAD	(010000
01570	740100		SMA	
01571	601617		JMP	VERFYB
01572	042255		DAC	WCLEFT#
01573	770000		LAW	=10000
01574	040316		DAC	READ+2
01575	202273		LAC	(007777
01576	040317		DAC	READ+3
01577	202245		LAC	STBLK
01600	040024		DAC	BLKNUM
01601	342311		TAD	(000020
01602	042245		DAC	STBLK
01603	100314		JMS	READ
01604	202273		LAC	(007777
01605	040016		DAC	16
01606	770000		LAW	=10000
01607	042231		DAC	CNT
01610	220016		LAC*	16
01611	342230		TAD	CHKSUM
01612	042230		DAC	CHKSUM
01613	442231		ISZ	CNT
01614	601610		JMP	,=4
01615	202255		LAC	WCLEFT
01616	601567		JMP	VERFYC
01617	342315	VERFYB	TAD	(=10000
01620	042255		DAC	WCLEFT
01621	040316		DAC	READ+2
01622	202273		LAC	(007777
01623	040317		DAC	READ+3
01624	202245		LAC	STBLK
01625	040024		DAC	BLKNUM
01626	100314		JMS	READ
01627	202273		LAC	(007777
01630	040016		DAC	16
01631	220016		LAC*	16
01632	342230		TAD	CHKSUM
01633	042230		DAC	CHKSUM
01634	442255		ISZ	WCLEFT
01635	601631		JMP	,=4
01636	202230		LAC	CHKSUM
01637	740200		SZA	
01640	601734		JMP	CKSMER

/THIS ROUTINE IS TO CHECK THAT DECTAPE
/CONTAINS ALL THE CORRECT DATA, THE SUM OF
/ALL THE WORDS SHOULD BE ZERO,

/GET STARTING BLOCK NUMBER

/CHECK SUM ERROR,

,EJECT

/NOW WRITE UPDATED DIRECTORY ON DECTAPE

01641	202316		LAC	(SLINK=1	/CLEAR LINK TABLE
01642	040017		DAC	17	
01643	777741		LAW	=37	
01644	042231		DAC	CNT	
01645	160017		DZM*	17	
01646	442231		ISZ	CNT	
01647	601645		JMP	=2	
/					
01650	777775		LAW	=3	
01651	342246		TAD	TEMP	
01652	042246		DAC	TEMP	
01653	202224		LAC	A	
01654	062246		DAC*	TEMP	
01655	442246		ISZ	TEMP	
01656	202225		LAC	B	
01657	062246		DAC*	TEMP	
01660	777775		LAW	=3	
01661	042233		DAC	CNTR#	
01662	202317	VERFYE	LAC	(477	
01663	040335		DAC	WRITE+3	
01664	777400		LAW	=400	
01665	040334		DAC	WRITE+2	
01666	202302		LAC	(1)	/WRITE THE DIRECTORY IN MONITOR
01667	040024		DAC	BLKNUM	
01670	100332		JMS	WRITE	
01671	202273		LAC	(007777	/NOW CHECK DIRECTORY BY READING
01672	040317		DAC	READ+3	/AND CHECKING AGAINST CORE
01673	777522		LAW	=256	
01674	040316		DAC	READ+2	
01675	100314		JMS	READ	
01676	777510		LAW	=170	
01677	042231		DAC	CNT	
01700	202320		LAC	(DIRECT=1	
01701	040016		DAC	16	
01702	202321		LAC	(10064	
01703	040017		DAC	17	
01704	220016		LAC*	16	
01705	560017		SAD*	17	
01706	741000		SKP		
01707	601726		JMP	DIRGER	/DIRECTORY COMPARE ERROR
01710	442231		ISZ	CNT	
01711	601704		JMP	=5	
			EJECT		

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01712 202322 VERFYD LAC (CONTIN=1+400000 /NOW QUESTION OPERATOR AS TO
01713 100460 JMS TSIXBT /WHETHER HE WANTS TO CONTINUE ADDING
01714 100253 JMS WAIT /PROGRAMS OR RETURN TO MONITOR
01715 542261 SAD (000203
01716 600120 JMP GETMON
01717 542323 SAD (000316
01720 600122 JMP GETMON+2
01721 542324 SAD (000331
01722 601106 JMP ADD,1
01723 760277 LAW 277
01724 100522 JMS TYPONE
01725 601714 JMP VERFYD+2
/
01726 442233 DIRCER ISZ CNTR
01727 601662 JMP VERFYE
01730 202325 LAC (DIRCER=1+400000
01731 100460 JMS TSIXBT
01732 700312 KRB
01733 600122 JMP GETMON+2
/
01734 202326 CKSMER LAC (ACSMER=1+400000
01735 100460 JMS TSIXBT
01736 700312 KRB
01737 600122 JMP GETMON+2
/
01740 000000 DBPRSL 0 /DOUBLE PRECISION SHIFT LEFT ROUTINE
01741 042246 DAC TEMP /FOR SIX 6 BIT CHOPPED ASCII CHARACTERS
01742 202225 LAC B
01743 740010 RAL
01744 100533 JMS LROT6
01745 042247 DAC TEMP1#
01746 740020 RAR
01747 502327 AND (777700
01750 242246 XOR TEMP
01751 042225 DAC B
01752 202247 LAC TEMP1
01753 502265 AND (000077
01754 042247 DAC TEMP1
01755 202224 LAC A
01756 100533 JMS LROT6
01757 502327 AND (777700
01760 242247 XOR TEMP1
01761 042224 DAC A
01762 621740 JMP# DBPRSL
/
01763 000000 RROT6 0 /SHIFT AC 6 PLACES TO RIGHT
01764 742020 RTR
01765 742020 RTR
01766 742020 RTR
01767 621763 JMP# RROT6
,EJECT

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01770 000000 PRGSZE 0
01771 202243 LAC REDBUF
01772 342315 TAD (=10000)
01773 740300 SZA!SMA
01774 601777 JMP +3
01775 202240 LAC MODE
01776 621770 JMP* PRGSZE
01777 342314 TAD (10000)
02000 042240 DAC MODE
02001 202330 LAC (PTBMSG=1+400000)
02002 100460 JMS TSIXBT
02003 202240 LAC MODE
02004 100540 JMS PSOD
02005 700312 KRB
02006 600122 JMP GETMON+2
/
/SUBROUTINE TO CONVERT MACRO 9 RADIX 50 SYMBOL TO ,SIXBIT,
/
02007 000000 CNV6BT 0 /ENTER WITH RADIX 50 NUMBER IN THE AC
02010 042237 DAC LTEMP3# /STORE AS MINUEND
02011 142235 DZM LTEMP#
02012 774700 LAW =3100
02013 102044 JMS SUBTRC /DETERMINE FIRST CHARACTER
02014 342331 TAD (=35 /RETURN WITH CHAR, IN LTEMP + AC
/
/CONVERT RADIX 50 CODE TO ASCII (IE:35=46 TO 60=71)
/
02015 750100 SMA!CLA
02016 202332 LAC (23
02017 342235 TAD LTEMP
02020 744000 CLL
02021 100533 JMS LROT6
02022 042235 DAC LTEMP
02023 777730 LAW =50
02024 102044 JMS SUBTRC /DETERMINE SECOND CHARACTER
02025 502265 AND (77 /MASK OUT FIRST CHARACTER
02026 342331 TAD (=35
02027 750100 SMA!CLA
02030 202332 LAC (23
02031 342235 TAD LTEMP
02032 744000 CLL
02033 100533 JMS LROT6 /POSITION FIRST & SECOND CHAR,
02034 042235 DAC LTEMP
02035 202237 LAC LTEMP3 /FETCH 3RD CHARACTER
02036 342331 TAD (=35
02037 750100 SMA!CLA
02040 202332 LAC (23
02041 342237 TAD LTEMP3
02042 342235 TAD LTEMP /AC CONTAINS 3 ,SIXBIT CHARACTERS
02043 622007 JMP* CNV6BT
,EJECT

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02044 000000      SUBTRC 0                    /ENTER WITH SUBTRAHEND IN THE AC
02045 042236            DAC        LTEMP2#
02046 202237            LAC        LTEMP3            /FETCH MINUEND
02047 744000            CLL
02050 342236            TAD        LTEMP2            /SUBTRACT
02051 740400            SNL                    /SKIP IF TRUE SUBTRACT
02052 602056            JMP        XSUBTR
02053 442235            ISZ        LTEMP            /INCREMENT TRUE SUBTRACT COUNTER
02054 042237            DAC        LTEMP3            /STORE RESULT AS NEW MINUEND
02055 602047            JMP        SUBTRC+3
                      /
                      /EXIT WITH PARTIAL CONVERSION IN LTEMP & AC
                      /
02056 202235      XSUBTR LAC        LTEMP
02057 622044            JMP*       SUBTRC
                      /
02060 000000      DBPRSR 0
02061 760334            LAW        000334            /REPLY WITH BACK SLASH AND PERFORM
02062 100522            JMS        TYPONE            /A DOUBLE PRECISION SHIFT RIGHT
02063 202225            LAC        B                /WITH THE SIX CHOPPED ASCII
02064 744000            CLL                    /BYTES, THEY ARE IN LOCATIONS "A" AND
02065 502327            AND        (777700            /"B", THE FORMAT IS A1,A2,A3;B1,B2,B3,
02066 101763            JMS        RROT6
02067 042225            DAC        B
02070 202224            LAC        A
02071 744020            RCR
02072 101763            JMS        RROT6
02073 042224            DAC        A
02074 502315            AND        (770000
02075 242225            XOR        B
02076 042225            DAC        B
02077 202224            LAC        A
02100 740010            RAL
02101 502273            AND        (007777
02102 042224            DAC        A
02103 622060            JMP*       DBPRSR
                      ,EJECT

```

ADDR SRC

ADD PROGRAMS TO DIRECTORY

02104	031005	READER	,SIXBT	!CHECK SUM ERROR PAPER TAPE@!
02105	031340			
02106	232515			
02107	400522			
02110	221722			
02111	402001			
02112	200522			
02113	402401			
02114	200500			
02115	404027	WHAT	,SIXBT	! WHAT?@!
02116	100124			
02117	770000			
02120	241124	TITMSG	,SIXBT	!TITLE? @!
02121	140577			
02122	404000			
02123	041122	DRGER	,SIXBT	!DIRECTORY COMPARE ERROR @!
02124	050324			
02125	172251			
02126	400317			
02127	152001			
02130	220540			
02131	052222			
02132	172240			
02133	000000			
02134	151722	CONTIN	,SIXBT	!MORE? (Y OR N) @!
02135	057740			
02136	503140			
02137	172240			
02140	165140			
02141	000000			
02142	031005	ACSMER	,SIXBT	!CHECK SUM ERROR DATA ON DT WRONG@!
02143	031340			
02144	232515			
02145	400522			
02146	221722			
02147	404004			
02150	012401			
02151	401716			
02152	400424			
02153	402722			
02154	171607			
02155	000000			

,EJECT

ADDR SRC

ADD PROGRAMS TO DIRECTORY

02156 010404 ENTER ,SIXBT !ADD TO FILE@!
 02157 402417
 02160 400611
 02161 140500
 02162 202217 PTBMSG ,SIXBT !PROGRAM TOO BIG, ASSEMBLED SIZE @!
 02163 072201
 02164 154024
 02165 171740
 02166 021107
 02167 564001
 02170 232305
 02171 150214
 02172 050440
 02173 231132
 02174 054000
 02175 041122 DIRFL ,SIXBT !DIRECTORY FULL@!
 02176 050324
 02177 172231
 02200 400625
 02201 141400
 02202 272217 TITLER ,SIXBT !WRONG TAPE PTR CONTAINS @!
 02203 160740
 02204 240120
 02205 054040
 02206 202422
 02207 400317
 02210 162401
 02211 111623
 02212 400000
 02213 161740 REDERR ,SIXBT !NO PTR FLAG@!
 02214 202422
 02215 400614
 02216 010700
 02217 220501 RNTPE ,SIXBT !READER NO TAPE@!
 02220 040522
 02221 401617
 02222 402401
 02223 200500
 ,EJECT

.END

02257	002155	#L
02260	402117	#L
02261	000203	#L
02262	000377	#L
02263	777777	#L
02264	000215	#L
02265	000077	#L
02266	002114	#L
02267	000565	#L
02270	000004	#L
02271	402174	#L
02272	000003	#L
02273	007777	#L
02274	377000	#L
02275	000002	#L
02276	000007	#L
02277	000005	#L
02300	377777	#L
02301	402201	#L
02302	000001	#L
02303	001375	#L
02304	402103	#L
02305	001000	#L
02306	747777	#L
02307	402212	#L
02310	402216	#L
02311	000020	#L
02312	000040	#L
02313	000400	#L
02314	010000	#L
02315	770000	#L
02316	000755	#L
02317	000477	#L
02320	000564	#L
02321	010064	#L
02322	402133	#L
02323	000316	#L
02324	000331	#L
02325	402122	#L
02326	402141	#L
02327	777700	#L
02330	402161	#L
02331	777743	#L
02332	000023	#L

SIZE=02333

NO ERROR LINES

A	02224	ACSMER	02142	ADDER	01100	ADDERA	01115
ADDERB	01132	ADDERC	01147	ADDERD	01164	ADDERE	01200
ADDERG	01226	ADDERH	01245	ADDERM	01507	ADDERN	01503
ADDERP	01461	ADDERR	01501	ADDESS	01466	ADDERT	01511
ADDERU	01516	ADDERX	01546	ADD,1	01106	B	02225
BLKNUM	000024	C	02226	CARCNT	02227	CHKSUM	02230
CKSMER	01734	CNT	02231	CNTBLK	02232	CNTR	02233
CNV6BT	02007	CONTIN	02134	CRLF	000514	DBPRSL	01740
DBPRSR	02060	DIRCER	01726	DIRECT	000565	DIRFL	02175
DKCER	02123	DTWRIT	01441	EBA	707764	EEM	707702
ENTER	02156	EOF	02234	GETMON	000120	KRB	700312
LROT6	000533	LTEMP	02235	LTEMP2	02236	LTEMP3	02237
MODE	02240	PBLKMN	02241	PRGSZE	01770	PROSZ	02242
PSOD	000540	PTBMSG	02162	P6BIT	01371	P6BIT1	01376
READ	000314	READAP	01431	READER	02104	READPT	01403
REDBUF	02243	REDERR	02213	REDTIM	02244	REEDER	01400
RNOTPE	01436	RNTPE	02217	RRB	700112	RROT6	01763
RSB	700144	RSF	700101	SLINK	000756	STBLK	02245
SUBTRC	02044	TEMP	02246	TEMP1	02247	TITERA	01360
TITERB	01354	TITERR	01337	TITIND	02250	TITLE	01300
TITLEA	01315	TITLEB	01313	TITLEC	01327	TITLER	02202
TITMSG	02120	TMODE1	02251	TMODE2	02252	TOTSZE	02253
TSIXBT	000460	TYPONE	000522	UPDTBK	02254	UPREFX	000560
VERFYA	01557	VERFYB	01617	VERFYC	01567	VERFYD	01712
VERFYE	01662	WAIT	000253	WGLEFT	02255	WHAT	02115
WRDCNT	02256	WRITE	000332	XSUBTR	02056		

BLKNUM	000024	GETMON	000120	WAIT	000253	READ	000314
WRITE	000332	TSIXBT	000460	CRLF	000514	TYPONE	000522
LROT6	000533	PSOD	000540	UPREFX	000560	DIRECT	000565
SLINK	000756	ADDER	01100	ADD,1	01106	ADDERA	01115
ADDERB	01132	ADDERC	01147	ADDERD	01164	ADDERE	01200
ADDERG	01226	ADDERH	01245	TITLE	01300	TITLEB	01313
TITLEA	01315	TITLEC	01327	TITERR	01337	TITERB	01354
TITERA	01360	P6BIT	01371	P6BIT1	01376	REEDER	01400
READPT	01403	READAP	01431	RNOTPE	01436	DTWRIT	01441
ADDERP	01461	ADDERS	01466	ADDERU	01501	ADDERN	01503
ADDERM	01507	ADDERT	01511	ADDERU	01516	ADDERX	01546
VERFYA	01557	VERFYC	01567	VERFYB	01617	VERFYE	01662
VERFYD	01712	DIRCER	01726	CKSMER	01734	DBPRSL	01740
RROT6	01763	PRGSZE	01770	CNV6BT	02007	SUBTRC	02044
XSUBTR	02056	DBPRSR	02060	READER	02104	WHAT	02115
TITMSG	02120	DR CER	02123	CONTIN	02134	ACSMER	02142
ENTER	02156	PTBMSG	02162	DIRFL	02175	TITLER	02202
REDERR	02213	RNTPE	02217	A	02224	B	02225
C	02226	CARCNT	02227	CHKSUM	02230	CNT	02231
CNTBLK	02232	CNTR	02233	EOF	02234	LTEMP	02235
LTEMP2	02236	LTEMP3	02237	MODE	02240	PBLKNM	02241
PROSZ	02242	REDBUF	02243	REDTIM	02244	STBLK	02245
TEMP	02246	TEMP1	02247	TITIND	02250	TMODE1	02251
TMODE2	02252	TOTSZE	02253	UPDTBK	02254	WCLEFT	02255
WRDCNT	02256	RSF	700101	RRB	700112	RSB	700144
KRB	700312	EEM	707702	EBA	707764		