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V.D.M. PART NO. 92L0107-001C

RELEASED 6-2-71

MAINTAIN II TEST EXECUTIVE

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- 0002
- 0003
- 0004
- 0005
- 0006
- 0007
- 0008
- 0009
- C000100010
- C000200011
- C000300012
- C000400013
- C000500014
- C000600015
- C000700016
- C000800017
- C000900018
- C001000019
- C001100020
- C001200021
- C001300022
- C001400023
- C001500024
- C001600025
- C001700026
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- C001900028
- C002000029
- C002100030
- C002200031
- C002300032
- C002400033
- C002500034
- C002600035
- C002700036
- C002800037
- C002900038
- C003000039
- C003100040
- C003200041
- C003300042
- C003400043

0003500044
 0003600045
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 0003900048
 0004000049
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 0006700076
 0006800077
 0006900078
 0007000079
 0007100080
 0007200081
 0007300082

*
 * AREAS RESERVED BY EXECUTIVE *

CRG 0
 JMP EXECUTIVE
 CRG 040
 JMPM POWER DOWN ROUTINE
 JMP POWER UP ROUTINE

NOTE: THE TEST EXECUTIVE ALSO RESERVES LOCATIONS 0400 TO 477 FOR A POINTER TABLE TO STANDARD ROUTINES, AND AS AN AREA FOR EXECUTIVE DATA. ALL TEST PROGRAMS WORKING WITH THE EXECUTIVE MUST PRESERVE THIS BLOCK. STANDARD ROUTINES WILL BE CALLED INDIRECTLY THRU THIS TABLE

THE STARTING ADDRESS OF THE EXECUTIVE IS 07000

000000
 000000 001000
 000001 006221 R
 000040
 000040 002000
 000041 006356 R
 000042 001000
 000043 006367 R

.CRG .0
 .JMP .ETCP 620/F CONSOLE INTERRUPT ENTRANCE

 .CRG .040
 .JMPM .PWLN POWER DOWN

 .JMP .PWRU POWER UP

000400

.CRG .0400

*
* PCINTER TABLE FOR EXEC STANDARD ROUTINES AND DATA
* TEST PROGRAMS USING EXECUTIVE ROUTINES WILL CALL THEM
* INDIRECTLY THRU THIS TABLE
*
*
*

000400	007334	R	EX00	.DATA	.GUTA	OUTPUT ONE CHAR ROUTINE	0007400083
000401	007371	R	EX01	.DATA	.OUTB	OUTPUT TWO CHAR ROUTINE	0007500084
000402	007404	R	EX02	.DATA	.OUTC	OUTPUT CR & LD ROUTINE	0007600085
000403	007445	R	EX03	.DATA	.OUTD	OUTPUT MESSAGE ROUTINE	0007700086
000404	007416	R	EX04	.DATA	.OUTE	OUTPUT OCTAL WORD ROUTINE	0007800087
000405	007456	R	EX05	.DATA	.OUTF	OUTPUT OCTAL ADDRESS ROUTINE	0007900088
000406	007475	R	EX06	.DATA	.OUTG	OUTPUT ERROR MSG ROUTINE	0008000089
000407	007522	R	EX07	.DATA	.OUTH	OUTPUT CONTROL CHAR TO TTY	0008100090
000410	006736	R	EX10	.DATA	.INPA	INPUT ONE CHAR ROUTINE	0008200091
000411	006752	R	EX11	.DATA	.INPB	INPUT AND PRINT ONE CHAR ROUTINE	0008300092
000412	007033	R	EX12	.DATA	.INPC	INPUT ONE CHAR EDITED ROUTINE	0008400093
000413	007067	R	EX13	.DATA	.INPD	INPUT ONE ALPHA CHAR ROUTINE	0008500094
000414	007130	R	EX14	.DATA	.INPE	INPUT TWO ALPHA CHAR ROUTINE	0008600095
000415	007170	R	EX15	.DATA	.INPF	INPUT COMMA/PERIOD TERMINATOR ROUTINE	0008700096
000416	007250	R	EX16	.DATA	.INPG	INPUT OCTAL NUMBER ROUTINE	0008800097
000417	007543	R	EX17	.DATA	.TOLT	TIME-OUT ROUTINE	0008900098
000420	007527	R	EX20	.DATA	.TDLY	TIME DELAY ROUTINE	0009000099
000421	006717	R	EX21	.DATA	.SSWT	STANDARD SENSE SWITCH ROUTINE	0009100100
000422	005100	R	EX26	.DATA	.ELCC	LOWEST CORE LOCATION USED BY THE EXEC	0009200101
000423	006161	R	EX27	.DATA	.ESZC	DETERMINE MEMORY SIZE	0009300102
000424	006446	R	EX30	.DATA	.MSG3	MEMORY SIZE IS ... MESSAGE	0009400103
000425	007317	R	EX31	.DATA	.INPH	SENSE TTY BFR RDY	0009500104
000426	007331	R	EX32	.DATA	.INPI	INIT TTY (INPUT CHAR W/CLT SENSE BFR RDY)	0009600105

000440

.CRG .0440

*
* EXECUTIVE DATA TABLE
*

000440	000000	SFLG	.DATA	.0	LOOP ON ERROR FLAG. 0=DON'T LCCF	1=L OF	0010000121
000441	000000	SMEP	.DATA	.0	MEMORY SIZE (HIGHEST AVAIL CORE)		0011000122
000442	000000	SCON	.DATA	.0	0=CONSOLE MODE	1=TTY MODE	0011200123

*

0011300124

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000443 000000 EAR1 .DATA .0
000444 000000 EBR1 .DATA .0
000445 000000 EXR1 .DATA .0
000446          ETS1 .BSS .6
000454 000240 EK00 .DATA .0240
000455 000215 EK01 .DATA .0215
000456 000212 EK02 .DATA .0212
000457 000040 K40 .DATA .040
000460 000100 K100 .DATA .0100
000461 000200 K200 .DATA .0200
000462          PRST .BSS .1
000463          LAST .BSS .1
000464 000000 CKSM .DATA .0
000465 000000 EXEC .DATA .0
000466 000224 TAPN .DATA .0224
000467 000222 TAPE .DATA .0222
000470 007630 LOAD .DATA .07630
000471 000000 TS04 .DATA .0

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PSEUDO A REG
PSEUDO B REG
PSEUDO X REG
TEMPORARY STORAGE
ASCII BLANK(SPACE)
ASCII CARRIAGE RETURN
ASCII LINE FEED

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INITIAL PUNCH ADDRESS
LAST PUNCH ADDRESS
CHECKSUM
EXECUTION ADDRESS
PUNCH OFF CODE
PUNCH ON CODE
ADDRS FOR BINARY LOADER
DIGIT COUNTER FOR INPG

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CC11400125
CC11500126
CC11600127
CC11700128
CC11800129
CC11900130
CC12000131
CC12100132
CC12200133
CC12300134
CC12400135
CC12500136
CC12600137
CC12700138
CC12800139
CC12900140
CC13000141
CC13100142
CC13200143
CC13300144
CC13400145
CC13500146
CC13600147
CC13700148
CC13800149
CC13900150
CC14000151
CC14100152
CC14200153
CC14300154
CC14400155
CC14500156
CC14600157
CC14700158
CC14800159
CC14900160
CC15000161
CC15100162
CC15200163
CC15300164
CC15400165
CC15500166

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005100          .CRG .05100

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005100 R ELOC .EGU . * LOWEST CORE LOCATION USED BY THE EXEC

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* EFUN--PUNCH A PROGRAM TAPE ON THE TTY PUNCH
* BEGINNING, ENDING, AND EXECUTION ADDRESSES
* ARE SPECIFIED BY USER

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007577 BLSA .SET .07577 BINARY LOADER START ADDR
007755 BLEA .SET .07755 BINARY LOADER END ADDR

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005100	005304	EPUN	.DECR	.04	PRESET EXEC ADDRS TO -1	CC15600167
005101	070450		.STX	.ETS1+2		CC15700168
005102	006020		.LEBI	.ETS1	ADDRS FOR STORING INPUT PARAMETERS	CC15800169
005103	000446	R				
005104	002000		.CALL	.INPG	INPUT OCTAL PARAMETER	CC15900170
005105	007250	R				
005106	001000		.JMP	.ETCP	TERMINATION EXIT VIA SS3	CC16000171
005107	006221	R				
005110	001000		.JMP	.ETCP	ABORT	CC16100172
005111	006221	R				
005112	001000		.JMP	.EPU1	COMMA EXIT--GET NEXT PARAMETER	CC16200173
005113	005125	R				
* NORMAL RETURN FROM INPG						
005114	056000		.STA	.0,2		CC16300174
005115	010446		.LDA	.ETS1	BEGINNING PUNCH ADDRESS	CC16400175
005116	020447		.LDB	.ETS1+1	ENDING PUNCH ADDRESS	CC16500176
005117	030450		.LDX	.ETS1+2	EXEC ADDRS	CC16600177
005120	007401		.SQF	.		CC16700178
005121	002000		.CALL	.DUMP		CC16800179
005122	005237	R				CC16900180
005123	001000		.JMP	.ETCP	RETURN TO EXEC SUPERVISOR	CC17000181
005124	006221	R				
* EPU1						
005125	056000	EPU1	.STA	.0,2		CC17100182
005126	005021		.TBA	.		CC17200183
005127	006140		.SUBI	.ETS1+2		CC17300184
005130	000450	R				CC17400185
005131	001010		.JAZ	.EXIT	ERROR--TOO MANY INPUTS	CC17500186
005132	006323	R				
005133	005122		.IBR	.		CC17600187
005134	001000		.JMP	.EPUN+4	GET NEXT PARAMETER	CC17700188
005135	005104	R				
* EBPN						
005136	006010	EBPN	.LEAI	.BLSA	FRST = BIN LOAD START ADDRS (PRESET)	CC17800189
005137	007577					CC17900190
005140	050446		.STA	.ETS1		CC18000191
005141	006010		.LEAI	.BLEA	LAST = BIN LOAD END ADDRS (PRESET)	CC18100192
005142	007755					
005143	050447		.STA	.ETS1+1		CC18200193
005144	006020		.LEBI	.ETS1	ADDRS FOR STORING INPUT PARAMETERS	CC18300194
005145	000446	R				
005146	002000		.CALL	.INPG	INPUT OCTAL PARAMETERS	CC18400195

005147	007250	R						
005150	001000		.JMP	.ETCP	SS3	EXIT		CC18500196
005151	006221	R						
005152	001000		.JMP	.ETCP	ABORT	EXIT		CC18600197
005153	006221	R						
005154	001000		.JMP	.EBP1	.	EXIT		CC18700198
005155	005172	R						
005156	005014		.TAX	.	SAVE INPUT	(. EXIT)		CC18800199
005157	010471		.LDA	.TS04	NUMBER INPUTED?			CC18900200
005160	001010		.JAZ	.*+3	NO			CC19000201
005161	005163	R						
005162	076000		.STX	.0.2	YES.	PUT INTO PARAMETER LIST		CC19100202
005163	010446		.LDA	.ETS1	BINARY START	ADDRS		CC19200203
005164	020447		.LDB	.ETS1+1	BINARY END	ADDRS		CC19300204
005165	007400		.RCF	.	SET BINARY DUMP	INDICATOR		CC19400205
005166	002000		.CALL	.DUMP	DUMP			CC19500206
005167	005237	R						
005170	001000		.JMP	.ETCP	RETURN TO EXEC	SUPERVISOR		CC19600207
005171	006221	R						
005172	056000		EBP1 .STA	.0.2	STORE PARAMETER			CC19700208
005173	005021		.TBA	.	TOO MANY ?			CC19800209
005174	006140		.SUBI	.ETS1+1				CC19900210
005175	000447	R						
005176	001010		.JAZ	.EXIT	YES			CC20000211
005177	006323	R						
005200	005122		.IBR	.	NO			CC20100212
005201	001000		.JMP	.EBPN+8	GET NEXT			CC20200213
005202	005146	R						
			*					CC20300214
			*					CC20400215
			*					CC20500216
			*	CONSOLE BOOTSTRAP DUMP DRIVER				CC20600217
			*					CC20700218
005203	007400		.RCF	.	SET BOOTSTRAP FLAG			CC20800219
005204	002000		.CALL	.DUMP	DUMP BOOTSTRAP			CC20900220
005205	005237	R						
			*					CC21000221
			*	CONSOLE PROGRAM DUMP DRIVER				CC21100222
			*					CC21200223
005206	000007		DHLT .HLT	.7	OPERATOR SETS	REGISTERS		CC21300224
005207	007401		.SCF	.	SET PROGRAM FLAG			CC21400225
005210	002000		.CALL	.DUMP	DUMP PRPGRAM TAPE			CC21500226

005211	005237	R						
005212	001000		.JMP	.DHLT	HALT FOR OPERATOR			0021600227
005213	005206	R						
			*					0021700228
			*	BINARY DUMP ROUTINE				0021800229
			*					0021900230
005214	010463		EOR	.LDA	.LAST	*END OF RCD		0022000231
005215	001010			.JAZ	.POFF-2	(BOOTSTRAP DUMP)		0022100232
005216	005224	R						
005217	010464			.LDA	.CKSM			0022200233
005220	002000			.CALL	.PWRD	PUNCH CHECKSUM		0022300234
005221	005342	R						
005222	001001			.JCF	.PRCD	(NOT EXEC RCD)		0022400235
005223	005270	R						
005224	002000			.CALL	.PLDR	PUNCH TRAILER		0022500236
005225	005370	R						
005226	002000		POFF	.CALL	.OUTH,0224	TURN PUNCH OFF		0022600237
005227	007522	R						
005230	000224							
005231	002000			.CALL	.OUTH,0201	PRINT ENABLE		0022700238
005232	007522	R						
005233	000201							
005234	010462			.LDA	.FRST	RESTORE REGISTERS		0022800239
005235	020463			.LDB	.LAST			0022900240
005236	001000			.JMP	*	RETURN		0023000241
005237	005236	R						
005237			DUMP	.BES	.0	*ENTRY POINT		0023100242
005240	050462			.STA	.FRST	SAVE REGISTERS		0023200243
005241	060463			.STB	.LAST			0023300244
005242	070465			.STX	.EXEC			0023400245
005243	005014			.TAX	.	SET LOAD ADDR		0023500246
005244	002000			.CALL	.OUTH,0203	PRINT OFF		0023600247
005245	007522	R						
005246	000203							
005247	002000			.CALL	.OUTH,0222	TURN PUNCH ON		0023700248
005250	007522	R						
005251	000222							
005252	002000			.CALL	.PLDR	PUNCH LEADER		0023800249
005253	005370	R						
005254	060464			.STB	.CKSM	RESET CHECKSUM		0023900250
005255	001001			.JCF	.PRCD	(PROGRAM DUMP)		0024000251
005256	005270	R						

005257	030462	.LDX	.FRST	SET BEGINNING	0024100252
005260	010463	.LDA	.LAST	AND ENDING	0024200253
005261	140462	.SUB	.FRST	ADDRS	0024300254
005262	005012	.TAB	.		0024400255
005263	005001	.TZA	.	SET BOOT FLAG	0024500256
005264	050463	.STA	.LAST		0024600257
005265	001000	.JMP	.PBOOT		0024700258
005266	005334	R			
005267	005000	.NCP	.		0024800259
005270	007401	PRCD	.SOF	.PUNCH A RCD	0024900260
005271	070446	.STX	.ETS1	CALC RECORD LENGTH	0025000261
005272	010463	.LDA	.LAST		0025100262
005273	140446	.SUB	.ETS1		0025200263
005274	005112	.INCR	.012		0025300264
005275	001002	.JAP	.DRCD	(DATA RECORD)	0025400265
005276	005305	R			
005277	030465	.LDX	.EXEC	SET EXEC ADDR	0025500266
005300	005041	.TXA	.		0025600267
005301	001004	.JAN	.POFF	(NO EXEC RCD)	0025700268
005302	005226	R			
005303	007400	.ROF	.		0025800269
005304	005001	.TZA	.	SET RCD LENGTH = 0	0025900270
005305	140460	DRCD	.SUB	.K100	0026000271
005306	001004	.JAN	..+3	(SHORT RCD)	0026100272
005307	005311	R			
005310	020460	.LDB	.K100	SET FOR MAX RCD	0026200273
005311	005301	.DECR	.1		0026300274
005312	002000	.CALL	.OUTA	OUTPUT ONE CHAR	0026400275
005313	007334	R			
005314	002000	.CALL	.OUTA	OUTPUT ONE CHAR	0026500276
005315	007334	R			
005316	002000	.CALL	.OUTA	OUTPUT ONE CHAR	0026600277
005317	007334	R			
005320	005001	.TZA	.		0026700278
005321	002000	.CALL	.OUTA	OUTPUT ONE CHAR	0026800279
005322	007334	R			
005323	005021	.TBA	.		0026900280
005324	002000	.CALL	.PWRD	PUNCH RCD LENGTH	0027000281
005325	005342	K			
005326	005041	.TXA	.		0027100282
005327	002000	PDATA	.CALL	.PWRD	0027200283
005330	005342	R			

005331	001020		.JBZ	.EOR	(END OF RCD)	0027300284
005332	005214	R				
005333	005322		.DBR	.	COUNT DOWN	0027400285
005334	015000	PBOCT	.LDA	.0.1	GET DATA	0027500286
005335	005144		.IXR	.	SET NEXT ADDR	0027600287
005336	001000		.JMP	.PDATA		0027700288
005337	005327	R				
* * CHECKSUM AND PUNCH BINARY WORD *						
005340	020446		PWR1	.LDB	.ETS1	0027800289
005341	001000			.JMP	.*	0027900290
005342	005341	R			RETURN	0028000291
	005342	R	PWRD	.EGU	.*-1	0028100292
005343	060446			.STB	.ETS1	0028200293
005344	005012			.TAB	.	0028300294
005345	130464			.ERA	.CKSM	0028400295
005346	050464			.STA	.CKSM	0028500296
005347	005021			.TBA	.	0028600297
005350	005302			.DECR	.2	0028700298
005351	004022			.ASLB	.18	0028800299
005352	004554			.LLSR	.12	0028900300
005353	130457		PWR2	.ERA	.K40	0029000301
005354	120457			.ADD	.K40	0029100302
005355	001400			.JSS3	.ETCP	0029200303
005356	006221	R			SS3 EXIT	0029300304
005357	002000			.CALL	.CUTA	0029400305
005360	007334	R			OUTPUT ONE CHAR	0029500306
005361	005001			.TZA	.	0029600307
005362	004446			.LLRL	.6	0029700308
005363	001020			.JBZ	.PWR1	0029800309
005364	005340	R			SHIFT IN NEXT SIX BITS	0029900310
005365	001000			.JMP	.PWR2	0030000311
005366	005353	R			ALL FINISHED	0030100312
005367	005000			.NOP	.	0030200313
* * PUNCH LEADER/TRAILER NULLS *						
005370	000000		PLDR	.ENTR	.0	0030300314
005371	020461			.LDB	.K200	0030400315
005372	010461			.LDA	.K200	0030500316
005373	002000		PLD1	.CALL	.CUTA	0030600317
					SET FOR APPROX 12 INCHES	0030700318
					ASCII NULL	0030800319
					PUNCH ONE CHAR	0030900320

005374 007334 R
 005375 001020
 005376 105370 R
 005377 005322
 005400 001400
 005401 006221 R
 005402 001000
 005403 005373 R

.JNZ* .PLIR

 .DBR .
 .JSS3 .ETCP

 .JMP .PLD1

COUNT
 SS3 EXIT

0030800319
 0030900320
 0031000321

 0031100322

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INIT--INITIALIZE MEMORY.
 X=START ADDRESS
 Y=FINAL ADDRESS
 Z=INITIALIZING VALUE

 FORMAT: IX,Y,Z.

0031200323
 0031300324
 0031400325
 0031500326
 0031600327
 0031700328
 0031800329
 0031900330
 0032000331
 0032100332
 0032200333
 0032300334
 0032400335

005404 006020
 005405 000446 R
 005406 002000
 005407 007250 R
 005410 001000
 005411 006221 R
 005412 001000
 005413 006221 R
 005414 001000
 005415 005444 R

INIT .LDBI .ETS1 ADDRESS FOR STORING INPUT PARAMETERS

 .CALL .INPG GET OCTAL PARAMETER

 .JMP .ETCP TERMINATION EXIT VIA SS3

 .JMP .ETCP ABORT

 .JMP .INI3 COMMA EXIT--GET NEXT PARAMETER

0032500336

 0032600337

 0032700338

 0032800339

* NORMAL RETURN FROM INPG--A REG CONTAINS THIRD PARAMETER

005416 030446
 005417 050452
 005420 005021
 005421 006140
 005422 000450 R
 005423 001010
 005424 005427 R
 005425 001000
 005426 006323 R
 005427 010447
 005430 140446

.LDX .ETS1 START ADDRESS
 .STA .ETS1+4 SAVE INITIALIZING VALUE
 .TBA . TEST NO. PARAMETERS
 .SLBI .ETS1+2 *

 .JAZ .++4 *

 .JMP .EXIT *

 .LDA .ETS1+1 TEST PARAMETER
 .SLB .ETS1 RANGE

0032900340
 0033000341
 0033100342
 0033200343
 0033300344

 0033400345

 0033500346

 0033600347
 0033700348

005431	001004		.JAN	.EXIT	***	0033800349
005432	006323	R				
005433	010452		INI2	.LDA	.ETS1+4	B 0033900350
005434	055000			.STA	.0.1	0034000351
005435	005041			.TXA	.	0034100352
005436	140447			.SUB	.ETS1+1	0034200353
005437	001010			.JAZ	.ETCP	0034300354
005440	006221	R				
005441	005144			.IXR	.	0034400355
005442	001000			.JMP	.INI2	B 0034500356
005443	005433	R				
005444	056000		INI3	.STA	.0.2	0034600357
005445	005122			.IBR	.	0034700358
005446	001000			.JMP	.INIT+2	0034800359
005447	005406	R				0034900360
			*			0035000361
			*			0035100362
			*			0035200363
			*			0035300364
			*			0035400365
			*	ETRP--TRAP TO LOCATION X STARTING FROM LOCATION Y.		0035500366
			*	IF LOCATION X IS REACHED: RESTORE LOCATIONS X & X+1, PRINT		0035600367
			*	THE CURRENT VALUES OF REGISTERS A,B,X, AND RETURN TO THE		0035700368
			*	EXEC SUPERVISOR		0035800369
			*			0035900370
			*	NOTE: CONTENTS OF LOCATIONS X AND X+1 MUST BE RESTORED BY		0036000371
			*	USER IF TRAP IS NOT REACHED BY THIS ROUTINE		0036100372
			*			0036200373
			*	FORMAT: TX,Y.		0036300374
			*			0036400375
			*			0036500376
005450	006020		ETRP	.LDBI	.ETS1	(B) POINTS TO PARAMETER TBL
005451	000446	R				
005452	010446			.LDA	.ETS1	X = PREVIOUS Y
005453	050447			.STA	.ETS1+1	
005454	002000			.CALL	.INPG	INPUT CCTL NUMBER
005455	007250	R				
005456	001000			.JMP	.ETCP	TERMINATION EXIT VIA SS3
005457	006221	R				
005460	001000			.JMP	.ETCP	ABORT
005461	006221	R				
005462	001000			.JMP	.ETR1	COMMA EXIT--GET SECCND PARAMETER

005463	005536	R	* NCRMAL RETURN FROM INPG		0037200383
005464	056000		.STA .0.2	STORE PARAMETER	0037300384
005465	006030		.LDXI .ETS1+2	TEMP STORE ADDRESS	0037400385
005466	000450	R			
005467	020446		.LDB .ETS1	X PARAMETER (TRAP LOCATION)	0037500386
005470	016000		.LDA .0.2		0037600387
005471	055000		.STA .0.1	SAVE CONTENTS OF LOCATION X AT TS02	0037700388
005472	016001		.LDA .1.2		0037800389
005473	055001		.STA .1.1	SAVE CONTENTS OF LOC. X+1 AT TS03	0037900390
005474	006010		.LDAI .02000	OP CODE FOR JMPM	0038000391
005475	002000				
005476	056000		.STA .0.2	STORE JMPM AT LOC X	0038100392
005477	006010		.LDAI .ETR2		0038200393
005500	005546	R			
005501	056001		.STA .1.2	STORE TRAP RETURN ADDRESS AT X+1	0038300394
005502	001000		.JMP .EGC1	LOAD PSEUDO REGISTERS AND GOTO LOC Y	0038400395
005503	005754	R			
005504	050443		* ETR3 .STA .EAR1	PUT A CONTENTS INTO PSEUDO A REG	0038500396
005505	060444		.STB .EBR1	PUT B CONTENTS INTO PSEUDO B REG	0038600397
005506	070445		.STX .EXR1	PUT X CONTENTS INTO PSEUDO X REG	0038700398
005507	034036		.LDX .ETR2		0038800399
005510	005344		.DXR .		0038900400
005511	005344		.DXR .	SET X REG TO TRAP LOCATION ADDRESS	0039000401
005512	010450		.LDA .ETS1+2		0039100402
005513	020451		.LDB .ETS1+3		0039200403
005514	055000		.STA .0.1	RESTORE CONTENTS OF LOC X	0039300404
005515	065001		.STB .1.1	RESTORE CONTENTS OF X+1	0039400405
005516	002000		.CALL .GUTC	OUTPUT CR & LF	0039500406
005517	007404	R			0039600407
005520	005041		.TXA .	OUTPUT ADDR OF TRAP RETURN	0039700408
005521	002000		.CALL .GUTF		0039800409
005522	007456	R			
005523	010443		.LDA .EAR1		0039900410
005524	002000		.CALL .CLTE	PRINT CONTENTS OF PSEUDO A	0040000411
005525	007416	R			
005526	010444		.LDA .EBR1		0040100412
005527	002000		.CALL .CLTE	PRINT CONTENTS OF PSEUDO B	0040200413
005530	007416	R			
005531	010445		.LDA .EXR1		0040300414
005532	002000		.CALL .CLTE	PRINT CONTENTS OF PSEUDO X	0040400415

005533	007416	R					
005534	001000		.JMP	.ETCP	RETURN TO EXEC SUPERVISOR		CC40500416
005535	006221	R					
			*				CC40600417
005536	056000		ETR1	.STA	.0,2	STORE PARAMETER X	CC40700418
005537	005123			.INCR	.023	INC PARAMETER PTR	CC40800419
005540	006140			.SUBI	.ETS1+1	MORE THAN 1 X PARAMETER ?	CC40900420
005541	000447	R					
005542	001010			.JAZ	.ETRP+4	NO CONTINUE	CC41000421
005543	005454	R					
005544	001000			.JMP	.EXIT	YES PRINT INVALID AND GO TO ETCF	CC41100422
005545	006323	R					
			*				CC41200423
005546	000000		ETR2	.ENTR	.0		CC41300424
005547	001000			.JMP	.ETR3	PROCESS TRAP RETURN	CC41400425
005550	005504	R					
			*				CC41500426
			*				CC41600427
			*				CC41700428
			*	ESRC	--SEARCH MEMORY FOR SPECIFIED VALUE.		CC41800429
			*		PRINT LOCATION AND CONTENTS WHERE MATCH IS FOUND		CC41900430
			*				CC42000431
			*		X=START ADDRESS		CC42100432
			*		Y=FINAL ADDRESS		CC42200433
			*		Z=SEARCH VALUE		CC42300434
			*		M=MASK WORD		CC42400435
			*				CC42500436
			*		FORMAT: SX.Y.Z.M.		CC42600437
			*				CC42700438
			*				CC42800439
			*	ESRC	.LDBI	.ETS1	CC42900440
005551	006020					ADDRESS FOR STORING INPUT PARAMETERS	
005552	000446	R					
005553	002000			.CALL	.INPG	GET OCTAL PARAMETER	CC43000441
005554	007250	R					
005555	001000			.JMP	.ETCP	TERMINATION EXIT VIA SS3	CC43100442
005556	006221	R					
005557	001000			.JMP	.ETCP	ABORT	CC43200443
005560	006221	R					
005561	001000			.JMP	.ESR5	COMMA EXIT--GET NEXT PARAMETER	CC43300444
005562	005632	R					
			*				CC43400445
005563	050451			.STA	.ETS1+3	NORMAL RETURN FROM INPG--A REG CONTAINS FOURTH PARAMETER SAVE MASK WORD	CC43500446

005564	150450		.ANA	.ETS1+2	MASK SEARCH VALUE	CC43600447
005565	050452		.STA	.ETS1+4	MASKED SEARCH VALUE	CC43700448
005566	005021		.TBA	.	TEST NO. OF PARAMETERS	CC43800449
005567	006140		.SUB1	.ETS1+3	*	CC43900450
005570	000451	R				
005571	001010		.JAZ	..+4	*	CC44000451
005572	005575	R				
005573	001000		.JMP	.EXIT	***	CC44100452
005574	006323	R				
005575	030446	ESR4	.LDX	.ETS1	START ADDRESS	CC44200453
005576	015000		.LDA	.0.1		CC44300454
005577	150451		.ANA	.ETS1+3	MASK IT	CC44400455
005600	140452		.SUB	.ETS1+4		CC44500456
005601	001010		.JAZ	.ESR2	GOOD COMPARE	CC44600457
005602	005614	R				
005603	040446	ESR1	.INR	.ETS1	START ADDRESS	CC44700458
005604	001400		.JSS3	.ETCP	RETURN TO SUPERVISOR	CC44800459
005605	006221	R				
005606	005041		.TXA	.		CC44900460
005607	140447		.SUB	.ETS1+1	END ADDRESS	CC45000461
005610	001002		.JAP	.ETCP	RETURN TO SUPERVISOR	CC45100462
005611	006221	R				
005612	001000		.JMP	.ESR4	GET NEXT WORD	CC45200463
005613	005575	R				
005614	002000	ESR2	.CALL	.CUTC	CR/LF	CC45300464
005615	007404	R				
005616	010446		.LDA	.ETS1	ADDRS OF WORD	CC45400465
005617	002000		.CALL	.OUTF	PRINT MEMORY ADDRESS	CC45500466
005620	007456	R				
005621	006010		.LEAI	..'	EQUAL SIGN	CC45600467
005622	000275					
005623	002000		.CALL	.OUTA		CC45700468
005624	007334	R				
005625	015000		.LDA	.0.1	CONTENTS OF ADDRESS	CC45800469
005626	002000		.CALL	.OUTE	PRINT CONTENTS	CC45900470
005627	007416	R				
005630	001000		.JMP	.ESR1	CONTINUE	CC46000471
005631	005603	R				
005632	056000	ESR5	.STA	.0.2		CC46100472
005633	005122		.IBR	.		CC46200473
005634	001000		.JMP	.ESR0+2	GET NEXT PARAMETER	CC46300474
005635	005553	R				

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*
*
*
*
*   DISPLAY/CHANGE THE PSEUDO A REGISTER
*
005636 006010 EARG .LDAI .0240 ASCII SPACE
005637 000240
005640 002000 .CALL .OUTA
005641 007334 R
005642 010443 .LDA .EAR1 LOAD PSEUDO A
005643 002000 .CALL .OUTE PRINT CONTENTS
005644 007416 R
005645 002000 .CALL .INPG INPUT OCTAL AND/OR PERIOD
005646 007250 R
005647 001000 .JMP .ETCP TERMINATION EXIT VIA SSI
005650 006221 R
005651 001000 .JMP .ETCP ABORT EXIT
005652 006221 R
005653 001000 .JMP .**2 COMMA EXIT--ACCEPT IT
005654 005655 R
*
*   NORMAL RETURN FROM INPG
005655 050446 .STA .ETS1 SAVE INPUT
005656 010471 .LDA .TS04 TS04=DIGIT COUNTER FOR INPG
005657 001010 .JAZ .ETCP 0=NO OCTAL INPUT,RETURN TO SUPERVISOR
005660 006221 R
005661 010446 .LDA .ETS1
005662 050443 .STA .EAR1 STORE NEW VALUE IN PSEUDO A
005663 001000 .JMP .ETCP RETURN TO SUPERVISOR
005664 006221 R
*
*
*   DISPLAY/CHANGE THE PSEUDO B REGISTER
*
005665 010454 EBRG .LDA .EK00 ASCII BLANK(SPACE)
005666 002000 .CALL .OUTA
005667 007334 R
005670 010444 .LDA .EBR1 LOAD PSEUDO B
005671 002000 .CALL .OUTE PRINT CONTENTS
005672 007416 R
005673 002000 .CALL .INPG INPUT OCTAL AND/OR PERIOD

```

0046400475
 0046500476
 0046600477
 0046700478
 0046800479
 0046900480
 0047000481

 0047100482

 0047200483
 0047300484

 0047400485

 0047500486

 0047600487

 0047700488

 0047800489
 0047900490
 0048000491
 0048100492

 0048200493
 0048300494
 0048400495

 0048500496
 0048600497
 0048700498
 0048800499
 0048900500
 0049000501
 0049100502

 0049200503
 0049300504

 0049400505

005674	007250	R						
005675	001000		.JMP	.ETCP	TERMINATION EXIT VIA 8S3			0049500506
005676	006221	R						
005677	001000		.JMP	.ETCP	ABORT EXIT			0049600507
005700	006221	R						
005701	001000		.JMP	..+2	COMMA EXIT--ACCEPT IT			0049700508
005702	005703	R						
			*	NORMAL RETURN FROM INPG				0049800509
005703	050446		.STA	.ETS1	SAVE INPUT			0049900510
005704	010471		.LDA	.TS04	TS04=DIGIT COUNTER FOR INPG			0050000511
005705	001010		.JAZ	.ETCP	0=NO OCTAL INPUT, RETURN TO SUPERVISOR			0050100512
005706	006221	R						
005707	010446		.LDA	.ETS1				0050200513
005710	050444		.STA	.EBR1	STORE NEW VALUE IN PSEUDO B			0050300514
005711	001000		.JMP	.ETCP	RETURN TO SUPERVISOR			0050400515
005712	006221	R						
			*					0050500516
			*					0050600517
			*	DISPLAY/CHANGE THE PSEUDO X REGISTER				0050700518
			*					0050800519
			*					0050900520
			*					0051000521
005713	010454		EXRG	.LDA	.EK00	ASCII BLANK(SPACE)		0051100522
005714	002000			.CALL	.OUTA			
005715	007334	R						
005716	010445		.LDA	.EXR1	LOAD PSEUDO X			0051200523
005717	002000		.CALL	.OUTE	PRINT CONTENTS			0051300524
005720	007416	R						
005721	002000		.CALL	.INPG	INPUT OCTAL AND/OR PERIOD			0051400525
005722	007250	R						
005723	001000		.JMP	.ETCP	TERMINATION EXIT VIA 8S3			0051500526
005724	006221	R						
005725	001000		.JMP	.ETCP	ABORT			0051600527
005726	006221	R						
005727	001000		.JMP	..+2	COMA EXIT--ACCEPT IT			0051700528
005730	005731	R						
			*	NORMAL RETURN FROM INPG				0051800529
005731	050446		.STA	.ETS1	SAVE INPUT			0051900530
005732	010471		.LDA	.TS04	TS04=DIGIT COUNTER FOR INPG			0052000531
005733	001010		.JAZ	.ETCP	0=NO OCTAL INPUT, RETURN TO SUPERVISOR			0052100532
005734	006221	R						
005735	010446		.LDA	.ETS1				0052200533
005736	050445		.STA	.EXR1	STORE NEW VALUE IN PSEUDO X			0052300534

005737	001000		.JMP	.ETCP	RETURN TO SUPERVISOR	0052400535
005740	006221	R				
			*			0052500536
			*			0052600537
			*			0052700538
			*			0052800539
			*			0052900540
			*		EGOT--LOAD PSEUDO REGISTERS INTO A,B,X AND TRANSFER TO	0053000541
			*		LOCATION SPECIFIED BY USER.	0053100542
			*		THE PSEUDO REGISTERS CAN BE PRESET WITH THE A,B,X	0053200543
			*		UTILITY FUNCTIONS.	0053300544
			*			0053400545
			*			0053500546
			*			0053600547
005741	002000		EGOT	.CALL	.INPG	INPUT OCTAL NUMBER
005742	007250	R				
005743	001000			.JMP	.ETCP	TERMINATION EXIT VIA SS3
005744	006221	R				0053700548
005745	001000			.JMP	.ETCP	ABORT
005746	006221	R				0053800549
005747	001000			.JMP	..+2	COMMA EXIT--ACCEPT IT
005750	005751	R				0053900550
			*		NORMAL RETURN FROM INPG	0054000551
005751	050447			.STA	.ETS1+1	
005752	002000			.CALL	.OUTC	DO A CR + LF
005753	007404	R				0054200553
005754	010443		EGO1	.LDA	.EAR1	LOAD PSEUDO A REG.
005755	020444			.LDB	.EBR1	LOAD PSEUDO B REG.
005756	030445			.LDX	.EXR1	LOAD PSEUDO X REG.
005757	001000			.JMP*	.ETS1+1	
005760	100447	R				0054600557
			*		DUMP CORE MEMORY TO TTY PRINTER	0054700558
			*			0054800559
005761	002000		EDUM	.CALL	.INPG	INPUT START LOCATION (OCTAL)
005762	007250	R				0054900560
005763	001000			.JMP	.ETCP	TERMINATION EXIT VIA SS3
005764	006221	R				0055000561
005765	001000			.JMP	.ETCP	ABORT
005766	006221	R				0055100562
005767	001000			.JMP	..+2	COMMA EXIT--ACCEPT IT
005770	005771	R				0055200563
			*		NORMAL RETURN FROM INPG	0055300564
005771	050446			.STA	.ETS1	
						0055400565

005772	002000		.CALL	.OUTC	OUTPUT CR & LF	0055500566
005773	007404	R				
005774	010446		.LDA	.ETS1		0055600567
005775	005014		.TAX	.		0055700568
005776	002000	EDU1	.CALL	.OUTF	OUTPUT MEMORY ADDRESS	0055800569
005777	007456	R				
006000	010454		.LDA	.EK00	ASCII BLANK(SPACE)	0055900570
006001	002000		.CALL	.OUTA		0056000571
006002	007334	R				
006003	015000	EDU2	.LDA	.0,1		0056100572
006004	002000		.CALL	.OUTE	PRINT LOCATION CONTENTS	0056200573
006005	007416	R				
006006	001400		.J9S3	.ETCP		0056300574
006007	006221	R				
006010	005145		.INCR	.045	INCREMENT X AND PUT INTO A&X	0056400575
006011	005002		.TZB	.		0056450576
006012	004543		.LLSR	.3	LINE LENGTH IS 8 LOCATIONS	0056500577
006013	001020		.J8Z	.EDU4	NEXT LINE	0056600578
006014	006017	R				
006015	001000		.JMP	.EDU2	NEXT WORD	0056700579
006016	006003	R				
		*				0056800580
006017	002000	EDU4	.CALL	.OUTC	OUTPUT CR & LF	0056900581
006020	007404	R				
006021	005041		.TXA	.		0057000582
006022	001000		.JMP	.EDU1		0057100583
006023	005776	R				
		*				0057200584
		*				0057300585
		*				0057400586
		*				0057500587
		*				0057600588
		*			PRINT/CHANGE CONTENTS OF MEMORY LOCATION SPECIFIED BY USER	0057700589
		*				0057800590
		*				0057900591
006024	002000	ECNG	.CALL	.INPG	INPUT OCTAL MEMORY ADDRESS	0058000592
006025	007250	R				
006026	001000		.JMP	.ETCP	TERMINATION EXIT VIA 9S3	0058100593
006027	006221	R				
006030	001000		.JMP	.ETCP	ABORT	0058200594
006031	006221	R				
006032	001000		.JMP	.*+2	COMMA EXIT--ACCEPT IT	0058300595

006033 006034 R

* NORMAL RETURN FROM INPG

0058400596
0058500597
0058600598

006034 005014

.TAX .

006035 006010

ECN3 .LDAI .

EQUAL SIGN

006036 000275

006037 002000

.CALL .OUTA

0058700599

006040 007334 R

.LDA .0.1

006041 015000

.CALL .OUTE

OUTPUT OCTAL WORD

0058800600
0058900601

006043 007416 R

.CALL .INPG

INPUT OCTAL WORD

0059000602

006044 002000

006045 007250 R

.JMP .ETCP

TERMINATION EXIT VIA SS3

0059100603

006046 001000

006047 006221 R

.JMP .ETCP

ABORT

0059200604

006050 001000

006051 006221 R

.JMP .ECN2

COMMA EXIT--PRINT NEXT LOCATION & CON ENTS

0059300605

006052 001000

006053 006064 R

* NORMAL RETURN FROM INPG WITH PERIOD

0059400606
0059500607
0059600608
0059700609

006054 050446

.STA .ETS1

SAVE INPUT

006055 010471

.LDA .TSC4

TS04=DIGIT COUNTER FOR INPG

006056 001010

.JAZ .**4

006057 006062 R

.LDA .ETS1

GET LAST INPUT

0059800610

006060 010446

.STA .0.1

0059900611

006061 055000

.JMP .ETCP

0060000612

006062 001000

006063 006221 R

* NORMAL RETURN FROM INPG WITH PERIOD

0060100613
0060200614
0060300615
0060400616

006064 050446

ECN2 .STA .ETS1

SAVE INPUT

006065 010471

.LDA .TSC4

TS04=DIGIT COUNTER FOR INPG

006066 001010

.JAZ .**4

006067 006072 R

.LDA .ETS1

GET LAST INPUT

0060500617

006070 010446

.STA .0.1

STORE NEW VALUE IN LOCATION

0060600618

006071 055000

.CALL .OUTC

CR & LF

0060700619

006072 002000

006073 007404 R

.INCR .045

INCREMENT X AND PUT INTO A AND X

0060800620

006074 005145

.CALL .OUTF

PRINT NEXT MEMORY ADDRESS

0060900621

006075 002000

006076 007456 R

.JMP .ECN3

PRINT CONTENTS

0061000622

006077 001000

006100 006035 R

*

0061100623

006150

006150 001000
 006151 006171 R
 006152 005001
 006153 050442
 006154 002000
 006155 006161 R
 006156 000000
 006157 001000
 006160 006156 R
 006161 000000
 006162 002000
 006163 006470 R
 006164 050441
 006165 002000
 006166 006521 R
 006167 001000
 006170 106161 R
 006171 005101
 006172 050442
 006173 002000
 006174 006161 R
 006175 005101
 006176 000000
 006177 006030
 006200 007370 R
 006201 055000
 006202 001004
 006203 006152
 006204 002000
 006205 007522 R
 006206 000201

```

*
*
*
*****
*
      .CRG      .06150
*
*****
*
EBG1 .JMP      .EBG1
*
      .TZA      .
      .STA      .SCCN
      .CALL     .ESZC
*
      .HLT      .
      .JMP      .*-1
*
ESZC .ENTR     .0
      .CALL     .ESZA
*
      .STA      .SMEM
      .CALL     .ESZB
*
      .JMP      .(ESZC)*
*
EBG1 .INCR     .01
      .STA      .SCCN
      .CALL     .ESZC
*
      .INCR     .01
      .HLT      .
      .LXI      .STTY
*
      .STA      .0.1
      .JAN      .06152
*
      USER MUST LOAD AND EXECUTE TESTS FROM CPL CONSOLE
EBG2 .CALL     .OUTH.0201
    
```

N&P

```

TTY ENTRY
CONSOLE ENTRY
* SCGN = 0
*
*
*****
DETERMINE MEMORY SIZE
*
*
***** EXIT
TTY MODE
* SCGN = 01
* STTY = 01, UNLESS SET
*
BY
OPERATOR
CONSOLE MODE IF TTY DA = -
PRINT ENABLE
    
```

0061200624
 0061300625
 0061400626
 0061500627
 0061600628
 0061700629
 0061800630
 0061900631
 0062000632
 0062100633
 0062200634
 0062300635
 0062400636
 0062500637
 0062600638
 0062700639
 0062800640
 0062900641
 0063000642
 0063100643
 0063200644
 0063300645
 0063400646
 0063500647
 0063600648
 0063700649
 0063800650
 0063900651
 0063910652
 0064000653
 0064100654

006207	002000		.CALL	.OUTC	OUTPUT CR&LF	CC64200655
006210	007404	R				
006211	006030		.LDXI	.MSG1	THIS IS THE 620 TEST EXECUTIVE	CC64300656
006212	006412	R				
006213	002000		.CALL	.OUTD	OUTPUT MESSAGE	CC64400657
006214	007445	R				
006215	006030		.LDXI	.MSG3	MESSAGE MEMORY SIZE IS --K	CC64500658
006216	006446	R				
006217	002000		.CALL	.OUTD	OUTPUT MESSAGE	CC64600659
006220	007445	R				

*
*
*
*
*

TEST EXECUTIVE SUPERVISOR

006221	006010		ETOP	.LDAI	.0207	TTY BELL	CC64700660
006222	000207						CC64800661
006223	002000		.CALL	.OUTA	OUTPUT	CC64900662	
006224	007334	R					CC65000663
006225	002000		.CALL	.OUTH	.0201	PRINT ENABLE	CC65100664
006226	007522	R					CC65200665
006227	000201						
006230	002000		.CALL	.INPI	INIT TTY	B	CC65500666
006231	007331	R					
006232	002000		.CALL	.OUTC			CC66000669
006233	007404	R					
006234	002000		.CALL	.INPB	INPUT ONE CHARACTER		CC66100670
006235	006752	R					
006236	001000		.JMP	.ETCP	ABORT EXIT		CC66200671
006237	006221	R					
006240	054011		.STA	.ETC4+1	SAVE INPUT		CC66300672
006241	006140		.SLBI	.0212	LINE FEED CODE		CC66400673
006242	000212						
006243	001010		.JAZ	.ETCP	YES		CC66500674
006244	006221	R					
006245	006140		.SLBI	.3	CARRIAGE RETURN(0215)		CC66600675
006246	000003						
006247	001010		.JAZ	.ETCP	YES		CC66700676
006250	006221	R					
006251	006010		ET04	.LDAI	.0	GET ORIGINAL INPUT	CC66800677
006252	000000						
006253	006140		.SLBI	.PA			CC66900678

006323	002000	*	EXIT	.CALL	.OUTG	PRINT INVALID & CR/LF	CC70700715
006324	007475	R					CC70800716
006325	001000			.JMP	.ETCP	RETURN TO TOP OF SUPERVISOR	CC70900717
006326	006221	R					
		*					CC71000718
		*					CC71100719
		*					CC71200720
		*					CC71300721
		*	ELCD	--LOAD	OBJECT TAPE AND TRANSFER TO TEST PROGRAM		CC71400722
		*					CC71500723
		*					CC71600724
		*					CC71700725
006327	002000		ELOC	.CALL	.INPF	INPUT PERIOD	
006330	007170	R					
006331	001000			.JMP	.ETCP	TERMINATE EXIT	CC71800726
006332	006221	R					
006333	001000			.JMP	.ETCP	ABORT EXIT	CC71900727
006334	006221	R					
006335	001000			.JMP	.ETCP	DELETE PREVIOUS CHAR EXIT	CC72000728
006336	006221	R					
006337	001000			.JMP	.**2	COMMA RETURN--ACCEPT IT	CC72100729
006340	006341	R					
		*	NCEMAL	RETURN	FROM INPF WITH PERIOD		CC72200730
006341	005101			.INCR	.01	SET A10 FOR LOAD AND EXECUTE	CC72300731
006342	002000			.JMPM*	.LOAD	GO TO BINARY LOADER	CC72400732
006343	100470	R					
006344	005042			.TXB	.	SAVE X	CC72500733
006345	006030			.LEXI	.MSG2	MESSAGE: CHECKSUM ERROR	CC72600734
006346	006433	R					
006347	002000			.CALL	.OUTD	PRINT MESSAGE	CC72700735
006350	007445	R					
006351	005021			.TBA	.	OUTPUT X	CC72800736
006352	002000			.CALL	.OUTE		CC72900737
006353	007416	R					
006354	001000			.JMP	.ETCP	EXEC SUPERVISOR	CC73000738
006355	006221	R					
		*					CC73100739
		*					CC73200740
		*					CC73300741
		*					CC73400742
		*					CC73500743
		*					CC73600744

TYPICAL POWER UP/DOWN SUBROUTINE

```

*          POWER DOWN INTERRUPT ADDRESS 040
*          POWER UP INTERRUPT ADDRESS 042
*
*          POWER DOWN PROCESSOR
*
006356 000000 PWDN  .ENTR  .0
006357 054025      .STA  .SAVA          SAVE A, B AND X REGISTERS
006360 064025      .STB  .SAVB
006361 074025      .STX  .SAVX
006362 005001      .TZA  .          CHECK AND SAVE OVER-FLOW CONDITION
006363 005511      .DATA  .006511      INCREMENT A IF OVERFLOW SET
006364 054023      .STA  .SAVO
006365 044023      .INR  .HLTF          SET POWER FAIL/RESTRT FLAG.
006366 000000 PHLT  .HLT  .
*
*          POWER UP PROCESSOR
*
006367 014021 PWRU  .LDA  .HLTF          CHECK IF POWERING UP FROM RUN CONDITI N
006370 001010      .JAZ  .PHLT
006371 006366 R      .TZA  .          CLEAR POWER FAIL/RESTRT FLAG
006372 005001      .STA  .HLTF
006373 054015
*
*          CODING TO REINSTATE 620/F OPTIONAL HARDWARE AFTER A
*          POWER FAILURE. MUST BE DEFINED HERE. THE TOTAL EXECUTION
*          TIME NOT TO EXCEED A SPECIFIED TIME PERIOD. SEE P 8
*          FOR TIMING CONSTRAINTS.
*
006374 014013      .LDA  .SAVO          SETUP OVERFLOW FLAG
006375 001010      .JAZ  .++3
006376 006400 R      .SCF  .
006377 007401      .LDA  .SAVA          RETURN A, B AND X REGISTERS
006400 014004      .LDB  .SAVB
006401 024004      .LDX  .SAVX
006402 034004      .JMP* .PWN          RETURN TO LOCATION INTERRUPTED FROM
006403 001000
006404 106356 R
*
006405 000000 SAVA .DATA .0
006406 000000 SAVB .DATA .0
006407 000000 SAVX .DATA .0
006410 000000 SAVC .DATA .0
006411 000000 HLTF .DATA .0

```

```

CC73700745
CC73800746
CC73900747
CC74000748
CC74100749
CC74200750
CC74300751
CC74400752
CC74500753
CC74600754
CC74700755
CC74800756
CC74900757
CC75000758
CC75100759
CC75200760
CC75300761
CC75400762
CC75500763
CC75600764
CC75700765
CC75800766
CC75900767
CC76000768
CC76100769
CC76200770
CC76300771
CC76400772
CC76500773
CC76600774
CC76700775
CC76800776
CC76900777
CC77000778
CC77100779
CC77200780
CC77300781
CC77400782
CC77500783

```


*
*
*
*
*
*
*
*
*

MESSAGE TABLE

MSG1 .DATA .THIS IS THE 620 TEST EXECUTIVE'0106612.0

0077600784
0077700785
0077800786
0077900787
0078000788
0078100789
0078200790
0078300791

006412 152310
006413 144723
006414 120311
006415 151640
006416 152310
006417 142640
006420 133262
006421 130240
006422 152305
006423 151724
006424 120305
006425 154305
006426 141725
006427 152311
006430 153305
006431 106612
006432 000000
006433 141710
006434 142703
006435 145723
006436 152715
006437 120305
006440 151322
006441 147722
006442 120240
006443 154240
006444 136640
006445 000000
006446 146705
006447 146717
006450 151331
006451 120323
006452 144732
006453 142640
006454 144723

MSG2 .DATA .CHECKSUM ERROR X = '0

0078400792

MSG3 .DATA .MEMORY SIZE IS '

0078500793

006455 120240
 006456 126655
 006457 145640
 006460 106612
 006461 000000
 006462 120240
 006463 144716
 006464 153301
 006465 146311
 006466 142240
 006467 000000

MSG4 .DATA .'-K',0106612.0

0078600794

MSG5 .DATA .' INVALID'.0

0078700795

*
 *
 *
 *

ROUTINE FOR DETERMINING CORE SIZE

006470 000000
 006471 100545
 006472 010000
 006473 050002
 006474 005001
 006475 050000
 006476 005311
 006477 006120
 006500 010000
 006501 005014
 006502 025001
 006503 055001
 006504 015001
 006505 130000
 006506 001010
 006507 006514 R
 006510 065001
 006511 005041
 006512 001000
 006513 006477 R
 006514 010002
 006515 050000
 006516 005041
 006517 001000
 006520 106470 R

ESZA .ENTR .0
 .EXC .0545
 .LDA .0
 .STA .2
 .TZA .
 .STA .0
 .DAR .
 ESZ1 .ADDI .4096
 .TAX .
 .LDB .1.1
 .STA .1.1
 .LDA .1.1
 .ERA .0
 .JAZ .ESZ2
 .STB .1.1
 .TXA .
 .JMP .ESZ1
 ESZ2 .LDA .2
 .STA .0
 .TXA .
 .JMP* .ESZA

DISABLE MEMORY PARITY INT.

0079500796
 0079600797
 0079700798
 0079800799
 0079900800
 B 0079950801

SAVE CONTENTS OF LOCATION ZERO

0080000802
 0080100803
 0080200804
 0080300805
 0080400806
 0080500807

A=-1
 NEXT 4K MEMORY ADDRESS

SAVE MEMORY CELL IN B REG

0080600808
 0080700809
 0080800810
 0080900811
 0081000812
 0081100813

JUMP IF END OF MEMORY

RESTORE MEMORY CELL

0081200814
 0081300815
 0081400816

RESTORE CONTENTS OF
 LOCATION ZERO

0081500817
 0081600818
 0081700819
 0081800820

0081900821

0082000822

*
 *

CONVERT MEMORY SIZE FOR ASCII PRINTOUT

006521 000000
 006522 010441
 006523 004354
 006524 006120
 006525 006535 R
 006526 005014
 006527 015000
 006530 006020
 006531 006456 R
 006532 056000
 006533 001000
 006534 106521 R
 006535 120264
 006536 120270
 006537 130662
 006540 130666
 006541 131260
 006542 131264
 006543 131270
 006544 131662

ESZB .ENTR .0
 .LDA .SMEM
 .LGRA .12
 .ADDI .ETAB
 .TAX .
 .LDA .0.1
 .LDBI .MSG4
 .STA .0.2
 .JMP* .ESZB
 ETAB .DATA .0120264
 .DATA .0120270
 .DATA .0130662
 .DATA .0130666
 .DATA .0131260
 .DATA .0131264
 .DATA .0131270
 .DATA .0131662

GET CORE SIZE(X7777)
 TRUNCATE 7777
 ADDRESS OF THE ASCII EQUIV TABLE
 GET ASCII EQUIV FROM TABLE ETAB
 SET MEMORY SIZE(04.08.ETC) INTC MSG4
 RETURN
 ASCII 04

0082100823
 0082200824
 0082300825
 0082400826
 0082500827
 0082600828
 0082700829
 0082800830
 0082900831
 0083000832
 0083100833
 0083200834
 0083300835
 0083400836
 0083500837
 0083600838
 0083700839
 0083800840
 0083900841
 0084000842
 0084100843
 0084200844
 0084300845
 0084400846
 0084500847
 0084600848
 0084700849
 0084800850
 0084900851
 0085000852
 0085100853
 0085200854
 0085300855
 0085400856
 0085500857
 0085600858
 0085700859
 0085800860
 0085900861

 SENSE SWITCH SUBROUTINE
 THIS SUBROUTINE PROVIDES A STANDARD SENSE SWITCH INTERFACE.
 THE CALLING SEQUENCE IS AS FOLLOWS
 THE A, B, AND X REGISTERS CONTAIN ERROR HALT VALUES
 CALL SSWT
 DATA (U REGISTER VALUE)
 DATA (ERROR MESSAGE ADDRESS) (IF NEG. ERROR SUB.
 DATA (TERMINATION EXIT)
 DATA (LOOP ON ERROR EXIT)
 * NORMAL EXIT RETURN

```

* STANDARD SENSE SWITCH SETTINGS
* SS1 - (SET) SUPPRESS ERROR PRINTOUT
* (RESET) ALLOW ERROR PRINTOUTS
* SS2 (SET) HALT ON ERROR
* (IF SET AFTER HALT - CONTINUE )
* (RESET) DO NOT HALT ON ERROR
* (IF HALT ON ERROR SET FIRST THEN RESET ON
* HALT CONDITION - LOOP UNTIL SET )
* SS3 (SET) TERMINATE TEST - RETURN TO BEGINING OF TEST
* (RESET) CONTINUE TEST

```

006545	054135	SSWP	.STA	.SSWS	SAVE VOLATILE REGISTERS	0086000862
006546	064135		.STB	.SSWS+1		0086100863
006547	074135		.STX	.SSWS+2		0086200864
006550	001400		.JSSJ	.SSWE	IF SS3 SET RETURN THROUGH TERMINATIC EXI	0086300865
006551	006706	R				0086400866
006552	010442		.LDA	.SCON	CHECK IF CONSOLE OR TTY MODE	0086500867
006553	001010		.JAZ	.SSWN		0086600868
006554	006641	R				0086700869
006555	001100		.JSS1	.SSW1	TELETYPE MODE - CHECK IF TTY SUPPR SSED	0086800870
006556	006600	R				0086900871
006557	024137		.LDB	.SSWT	GET 2ND PARAMETER	0087000872
006560	005122		.IBR	.		0087100873
006561	016000		.LDA	.0.2		0087200874
006562	001010		.JAZ	.SSW1		0087300875
006563	006600	R				0087400876
006564	005012		.TAB	.	CHECK IF BIT 15 SET	0087500877
006565	006150		.ANAI	.0100000		0087600878
006566	100000					0087700879
006567	005014		.TAX	.		0087800880
006570	005021		.TBA	.		0087900881
006571	001040		.JXZ	.++4		0088000882
006572	006575	R				0088100883
006573	001000		.JMP	.SSWR	CALL ERROR SUBROUTINE	0088200884
006574	006671	R				0088300885
006575	005014		.TAX	.	PRINT ERROR MESSAGE	0088400886
006576	002000		.CALL	.COUTD		0088500887
006577	007445	R				0088600888
006600	001400	SSW1	.JSSJ	.SSWE	IF SS3 SET - RETURN THROUGH TERMINATI N EXI	0088700889
006601	006706	R				0088800890
006602	010440		.LDA	.SFLG	CHECK IF LOOPING	0088900891



006603	001010		.JAZ	.SSW4		CC89300895
006604	006635	R				
006605	001200		SSW2	.JSS2	.SSW3	CC89400896
006606	006622	R				
006607	024107		SSWL	.LDB	.SSWT	CC89500897
006610	005122			.IBR	.	CC89600898
006611	005122			.IBR	.	CC89700899
006612	005122			.IBR	.	CC89800900
006613	016000			.LDA	.0,2	CC89900901
006614	054004			.STA	.*+5	CC90000902
006615	014065			.LDA	.SSWS	CC90100903
006616	024065			.LDB	.SSWS+1	CC90200904
006617	034065			.LDX	.SSWS+2	CC90300905
006620	001000			.JMP	.*	CC90400906
006621	006620	R				
006622	005001		SSW3	.TZA	.	CC90500907
006623	050440			.STA	.SFLG	CC90600908
006624	014072			.LDA	.SSWT	CC90700909
006625	006120			.ADDI	.4	CC90800910
006626	000004					
006627	054004			.STA	.*+5	CC90900911
006630	014052			.LDA	.SSWS	CC91000912
006631	024052			.LDB	.SSWS+1	CC91100913
006632	034052			.LDX	.SSWS+2	CC91200914
006633	001000			.JMP	.*	CC91300915
006634	006633	R				
006635	001200		SSW4	.JSS2	.SSW5	CC91400916
006636	006646	R				
006637	001000			.JMP	.SSW3	CC91500917
006640	006622	R				
006641	010440		SSWN	.LDA	.SFLG	CC91600918
006642	001010			.JAZ	.SSW4	CC91700919
006643	006635	R				
006644	001100			.JSS1	.SSW6	CC91800920
006645	006655	R				
006646	024050		SSW5	.LDB	.SSWT	CC91900921
006647	016000			.LDA	.0,2	CC92000922
006650	054003			.STA	.*+4	CC92100923
006651	014031			.LDA	.SSWS	CC92200924
006652	024031			.LDB	.SSWS+1	CC92300925
006653	034031			.LDX	.SSWS+2	CC92400926
006654	005000			.NCP	.	CC92500927

LOOPING - CHECK IF TERMINATE LOOPING.

RETURN THROUGH LOOP EXIT

RETURN VOLATILE REGISTERS.

RETURN TO NORMAL EXIT (CONTINUATION EXIT)
CLEAR LOOP FLAG.

RETURN VOLATILE REGISTERS.

CHECK IF HALT ON ERROR

RETURN TO NORMAL EXIT LOC.

CHECK IF LOOP FLAG ZERO

GET FIRST PARAMETER

RETURNED SAVED PARAMETERS.

1ST PARAMETER STORED HERE AND EXECUTE .

006655	001400	SSWE	.JSS3	.SSWE	IF SS3 SET RETURN THROUGH TERMINATIC EXIT	0092600928
006656	006706	R				
006657	010440		.LDA	.SFLG	CHECK IF LOOPING	0092700929
006660	001010		.JAZ	.*+4		0092800930
006661	006664	R				
006662	001000		.JMP	.SSW2		0092900931
006663	006605	R				
006664	001200		.JSS2	.SSW3	LOOP FLAG ZERO - CHECK IF LOOP REGL BT	0093000932
006665	006622	R				
006666	040440		.INR	.SFLG	INCREMENT LOOP FLAG	0093100933
006667	001000		.JMP	.SSWL	JUMP THROUGH LOOP EXIT	0093200934
006670	006607	R				
006671	006150	SSWR	.ANAI	.077777	ERROR SUBROUTINE MASK OUT BIT 15	0093300935
006672	077777					
006673	054004		.STA	.*+5		0093400936
006674	014006		.LDA	.SSWS		0093500937
006675	024006		.LDB	.SSWS+1		0093600938
006676	034006		.LDX	.SSWS+2		0093700939
006677	002000		.JMPM	.*	CALL ERROR SUBROUTINE	0093800940
006700	006677	R				
006701	001000		.JMP	.SSW1		0093900941
006702	006600	R				
006703		SSWS	.BSS	.3		0094000942
006706	005001	SSWE	.TZA	.	JUMP THROUGH TERMINATION EXIT.	0094100943
006707	050440		.STA	.SFLG	CLEAR LOOP FLAG.	0094200944
006710	024006		.LDB	.SSWT		0094300945
006711	005122		.IBR	.	SET UP TERMINATION EXIT	0094400946
006712	005122		.IBR	.		0094500947
006713	016000		.LDA	.0.2		0094600948
006714	054001		.STA	.*+2		0094700949
006715	001000		.JMP	.*		0094800950
006716	006715	R				
006717	000000	SSWT	.ENTR	.	SENSE SWITCH SUBROUTINE ENTRANCE	0094900951
006720	001000		.JMP	.SSWP		0095000952
006721	006545	R				
		*				0095100953
		*			INPUT ONE CHARACTER FROM TTY TO (A) REGISTER	0095200954
		*				0095300955
006722	002000	INA1	.CALL	.INPH. INA2	SENSE BFR RDY	0095400956
006723	007317	R				
006724	006731	R				
006725	001400		.JSS3*	.INPA		0095500957

006726	106736	R							
006727	001000			.JMP	.INA1				B 0066600958
006730	006722	R							
006731	002000		INA2	.CALL	.INPI	INPUT CHARACTER			B 0066700959
006732	007331	R							
006733	044002			.INR	.INPA	NORMAL EXIT			B 0066800960
006734	044001			.INR	.INPA				B 0066900961
006735	001000			.JMP	.0				B 0066000962
006736	000000								
006736			INPA	.BES	.0	ENTER			B 0066100963
006737	001000			.JMP	.INA1				B 0066200964
006740	006722	R							
			*						0066300965
			*			INPUT ONE CHARACTER + PRINT FROM TTY TO A REGISTER			0066400966
			*						0066500967
			*						0066600968
006741	002000		INB1	.CALL	.INPA	INPUT ONE CHARACTER			
006742	006736	R							
006743	001000			.JMP*	.INPB	TERMINATE EXIT			0066700969
006744	106752	R							
006745	002000			.CALL	.OUTA	OUTPUT ONE CHARACTER			0066800970
006746	007334	R							
006747	044002			.INR	.INPB				0066900971
006750	044001			.INR	.INPB				0066000972
006751	001000			.JMP*	.0	EXIT			0066100973
006752	100000								
006752			INPB	.BES	.0				0066200974
006753	001000			.JMP	.INB1				0066300975
006754	006741	R							
			*						B 0066310976
007000				.ORG	.07000				B 0066320977
007000	001000		EBGX	.JMP	.EEGN	COMMON ENTRY POINT (TTY). (CONSOLE IF A=-)			B 0066330978
007001	006150	R							
007002	001000			.JMP	.EBGN+2	(CONSOLE)			B 0066340979
007003	006152	R							
			*						B 0066350980
			*						0066400981
			*			INPUT ONE CHARACTER (EDITED)			0066500982
			*						0066600983
007004	002000		INCC	.CALL	.INPB				0066700984
007005	006752	R							
007006	001000			.JMP*	.INFC	TERMINATE EXIT			0066800985
007007	107033	R							

007010	006130		.ERAI	.'\'	BACKSLASH	0099900986	
007011	000334						
007012	001010		.JAZ	.INC2	ABORT INPUT EXIT	0100000987	
007013	007030	R					
007014	006130		.ERAI	.'\'	RESTORE A	0100100988	
007015	000334						
007016	006130		.ERAI	.0337	BACKARROW	0100200989	
007017	000337						
007020	001010		.JAZ	.INC1	DELETE ONE CHARACTER EXIT	0100300990	
007021	007026	R					
007022	006130		.ERAI	.0337	RESTORE A	0100400991	
007023	000337						
007024	044006		.INR	.INPC		0100500992	
007025	044005		.INR	.INPC		0100600993	
007026	044004	INC1	.INR	.INPC		0100700994	
007027	044003		.INR	.INPC		0100800995	
007030	044002	INC2	.INR	.INPC		0100900996	
007031	044001		.INR	.INPC		0101000997	
007032	001000		.JMP*	.0	EXIT	0101100998	
007033	100000						
007033		INPC	.BES	.0		0101200999	
007034	001000		.JMP	.INC3		0101301000	
007035	007004	R					
			*			0101401001	
			*	INPLY ONE ALPHA CHARACTER FROM TTY KEYBOARD TO A REG		0101501002	
			*			0101601003	
007036	002000		IND4	.CALL	.INPC	INPUT ONE CHAR	0101701004
007037	007033	R					
007040	001000		.JMP*	.INPD	TERMINATE EXIT	0101801005	
007041	107067	R					
007042	001000		.JMP	.IND2	ABORT INPUT EXIT	0101901006	
007043	007064	R					
007044	001000		.JMP	.IND1	DELETE PREVIOUS CHARACTER EXIT	0102001007	
007045	007062	R					
007046	006140		.SLBI	.0301	CHAR A	0102101008	
007047	000301						
007050	001004		.JAN	.IND3	INVALID INPUT	0102201009	
007051	007072	R					
007052	006140		.SLBI	.032	CHAR Z	0102301010	
007053	000032						
007054	001002		.JAP	.IND3	INVALID INPUT	0102401011	
007055	007072	R					

007056	006120		.ACDI	.0333	RESTORE A	G102501012
007057	000333					
007060	044006		.INR	.INPD	NORMAL EXIT	G102601013
007061	044005		.INR	.INPD		G102701014
007062	044004	IND1	.INR	.INPD	DELETE PREVIOUS CHARACTER EXIT	G102801015
007063	044003		.INR	.INPD		G102901016
007064	044002	IND2	.INR	.INPD	ABORT INPUT EXIT	G103001017
007065	044001		.INR	.INPD		G103101018
007066	001000		.JMP*	.0	EXIT	G103201019
007067	100000					
007067		INPD	.BES	.0		G103301020
007070	001000		.JMP	.IND4		G103401021
007071	007036	R				
007072	002000	IND3	.CALL	.OUTG	INVALID INPUT--PRINT MESSAGE	G103501022
007073	007475	R				
007074	001000		.JMP	.IND2	ABORT	G103601023
007075	007064	R				
		*				G103701024
		*				G103801025
		*	INFLT TWO LETTER CHARACTERS FROM TTY			G103901026
		*				G104001027
		*				G104101028
007076	002000	INE3	.CALL	.INPD	INPUT ALPHA CHAR	
007077	007067	R				
007100	001000		.JMP*	.INPE	TERMINATE EXIT	G104201029
007101	107130	R				
007102	001000		.JMP	.INE2	ABORT INPUT EXIT	G104301030
007103	007125	R				
007104	001000		.JMP	.INE1	DELETE PREVIOUS CHARACTER EXIT	G104401031
007105	007123	R				
007106	004250		.LRLA	.8		G104501032
007107	054441		.STA	.TSC2		G104601033
007110	002000		.CALL	.INPD	INPUT ALPHA CHAR	G104701034
007111	007067	R				
007112	001000		.JMP*	.INPE	TERMINATE EXIT	G104801035
007113	107130	R				
007114	001000		.JMP	.INE2	ABORT INPUT EXIT	G104901036
007115	007125	R				
007116	001000		.JMP	.INE3	DELETE PREVIOUS CHARACTER EXIT	G105001037
007117	007076	R				
007120	114430		.CRA	.TSC2		G105101038
007121	044006		.INR	.INPE	NORMAL EXIT	G105201039
007122	044005		.INR	.INPE		G105301040

007123	044004	INE1	.INR	.INPE	DELETE PREVIOUS CHARACTER EXIT	C105401041
007124	044003		.INR	.INPE		C105501042
007125	044002	INE2	.INR	.INPE	ABORT INPUT EXIT	C105601043
007126	044001		.INR	.INPE		C105701044
007127	001000		.JMP*	.0	EXIT	C105801045
007130	100000					
007130		INPE	.BES	.0		C105901046
007131	001000		.JMP	.INE3		C106001047
007132	007076	R				
		*				C106101048
		*	INPUT PERIOD	COMMA	FOR MESSAGE TERMINATOR	C106201049
		*				C106301050
007133	002000	INF5	.CALL	.INPC	INPUT ONE CHARACTER	C106401051
007134	007033	R				
007135	001000		.JMP*	.INPF	TERMINATE EXIT	C106501052
007136	107170	R				
007137	001000		.JMP	.INF2	ABORT INPUT EXIT	C106601053
007140	007165	R				
007141	001000		.JMP	.INF1	DELETE PREVIOUS CHARACTER EXIT	C106701054
007142	007163	R				
007143	006140		.SUBI	.0254	COMMA	C106801055
007144	000254					
007145	001010		.JAZ	.INF3	COMMA EXIT	C106901056
007146	007161	R				
007147	006140		.SUBI	.02	PERIOD	C107001057
007150	000002					
007151	001010		.JAZ	.INF4	PERIOD EXIT	C107101058
007152	007157	R				
007153	002000		.CALL	.OUTG	PRINT INVALID MESSAGE	C107201059
007154	007475	R				
007155	001000		.JMP	.INF2	ABORT	C107301060
007156	007165	R				
007157	044010	INF4	.INR	.INPF	NORMAL EXIT	C107401061
007160	044007		.INR	.INPF		C107501062
007161	044006	INF3	.INR	.INPF	COMMA EXIT	C107601063
007162	044005		.INR	.INPF		C107701064
007163	044004	INF1	.INR	.INPF	DELETE PREVIOUS CHARACTER EXIT	C107801065
007164	044003		.INR	.INPF		C107901066
007165	044002	INF2	.INR	.INPF	ABORT INPUT EXIT	C108001067
007166	044001		.INR	.INPF		C108101068
007167	001000		.JMP*	.0	EXIT	C108201069
007170	100000					

007170		INPF	.BES	.0		G108301070
007171	001000		.JMP	.INF5		G108401071
007172	007133	R				
		*				G108501072
		*			INPUT OCTAL NUMBER FROM TTY KEYBOARD	G108601073
		*			ASSEMBLE AS 16 BIT NUMBER IN A REG	G108701074
		*			ONLY OCTAL NUMBERS ACCEPTED	G108801075
		*				G108901076
007173	005001	ING7	.TZA	.		G109001077
007174	054354		.STA	.TS02	TEMP STORAGE FOR OCTAL NUMBER	G109101078
007175	050471		.STA	.TS04	TEMP STORAGE FOR DIGIT COUNTER	G109201079
007176	064356		.STB	.TS07		G109301080
007177	005002		.TZB	.		G109401081
007200	002000	ING5	.CALL	.INPC	INPUT ONE CHARACTER	G109501082
007201	007033	R				
007202	001000		.JMP*	.INPG	TERMINATE EXIT	G109601083
007203	107250	R				
007204	001000		.JMP	.ING2	ABORT INPUT EXIT	G109701084
007205	007243	R				
007206	001000		.JMP	.ING1	DELETE PREVIOUS CHARACTER EXIT	G109801085
007207	007272	R				
007210	054342		.STA	.TS05	SAVE INPUT	G109901086
007211	006140		.SUBI	.0260		G110001087
007212	000260					
007213	001004		.JAN	.ING6	INVALID IF NOT OCTAL NUMBER	G110101088
007214	007255	R				
007215	006140		.SUBI	.010		G110201089
007216	000010					
007217	001002		.JAP	.ING6	INVALID IF NOT OCTAL NUMBER	G110301090
007220	007255	R				
007221	006120		.ADDI	.010	RESTORE DIGIT	G110401091
007222	000010					
007223	054326		.STA	.TS03	SAVE CHARACTER	G110501092
007224	014324		.LDA	.TS02	INSERT CHARACTER	G110601093
007225	004443		.LLRL	.3	INTO	G110701094
007226	114323		.CRA	.TS03	OCTAL NUMBER	G110801095
007227	001020		.JNZ	..+4	TOO MANY BITS	G110901096
007230	007233	R				
007231	001000		.JMP	.ING8	YES	G111001097
007232	007266	R				
007233	054315		.STA	.TS02	NO	G111101098
007234	040471		.INR	.TS04	INCR * DIGITS	G111201099

007235	001000		.JMP	.ING5	GET NEXT DIGIT	C111301100
007236	007200	R				
007237	044010		ING3	.INR .INPG	NORMAL EXIT	C111401101
007240	044007			.INR .INPG		C111501102
007241	044006		ING4	.INR .INPG	COMMA EXIT	C111601103
007242	044005			.INR .INPG		C111701104
007243	044004		ING2	.INR .INPG	ABORT INPUT EXIT	C111801105
007244	044003			.INR .INPG		C111901106
007245	024307			.LDB .TS07		C112001107
007246	014302			.LDA .TS02	GET ASSEMBLED OCTAL NUMBER	C112101108
007247	001000			.JMP .0	EXIT	C112201109
007250	000000					
007250			INPG	.BES .0		C112301110
007251	002000			.CALL .INPI	INIT TTY BFR	B C112311111
007252	007331	R				
007253	001000			.JMP .ING7		C112401112
007254	007173	R				
007255	014275		ING6	.LDA .TS05	GET LAST INPUT	C112501113
007256	006140			.SUBI .0254	IS IT A COMMA	C112601114
007257	000254					
007260	001010			.JAZ .ING4	YES	C112701115
007261	007241	R				
007262	006140			.SUBI .02	IS IT A PERIOD	C112801116
007263	000002					
007264	001010			.JAZ .ING3	YES	C112901117
007265	007237	R				
007266	002000		ING8	.CALL .OUTG	PRINT INVALID MESSAGE	C113001118
007267	007475	R				
007270	001000			.JMP .ING2	ABORT	C113101119
007271	007243	R				
			*			
007272	014256		ING1	.LDA .TS02	DELETE LAST CHARACTER	C113201120
007273	004343			.LSRA .3		C113301121
007274	054254			.STA .TS02		C113401122
007275	010471			.LDA .TS04		C113501123
007276	005311			.DAR .	REDUCE DIGIT COUNT	C113601124
007277	001000			.JMP .ING5		C113701125
007300	007200	R				C113801126
			*			
			*	SENSE TTY BFR RLY		C113881127
			*			C113891128
			*			C113901129
007301	054020		INH1	.STA .INH2	SAVE A	C113911130

007302	014014		.LDA	.INPH	MODIFY RETURN			B	C113921131
007303	006110		.CRAI	.0100000				B	C113931132
007304	100000								
007305	054006		.STA	.INH3+1				B	C113941133
007306	014061		.LDA	.STTY	ADJ SBR			B	C113951134
007307	006110		.CRAI	.0101200				B	C113961135
007310	101200								
007311	054001		.STA	..+2				B	C113971136
007312	014007		.LDA	.INH2	RESTORE A			B	C113981137
007313	101000		.SEN	.0..				B	C113991138
007314	007313	R							
007315	044001		.IAR	.INPH				B	C114001139
007316	001000		.JMP	.0				B	C114011140
007317	000000								
007317			INPH	.EES	.0	ENTER		B	C114021141
007320	001000		.JMP	.INH1				B	C114031142
007321	007301	R							
007322	000000		INH2	.DATA	.0			B	C114041143
			*					B	C114051144
			*	INPUT CHARACTER FROM TTY W/OUT SENSING BFR RDY				B	C114061145
			*					B	C114071146
007323	014044		INI1	.LDA	.STTY	ADJ. CIA		B	C114081147
007324	006110		.CRAI	.0102500				B	C114091148
007325	102500								
007326	054000		.STA	..+1				B	C114101149
007327	102500		.CIA	.0	INPUT			B	C114111150
007330	001000		.JMP	.0				B	C114121151
007331	000000								
007331			INPI	.EES	.0	ENTER		B	C114131152
007332	001000		.JMP	.INI1				B	C114141153
007333	007323	R							
			*					B	C114151154
			*	OUTPUT ONE CHARACTER FROM A REG TO TTY				B	C114161155
			*						
007334	000000		OUTA	.ENTR	.0				
007335	074212		.STX	.TSC1	SAVE X				
007336	005014		.TAX	.					
007337	014030		.LDA	.STTY					
007340	006110		.CRAI	.0101100	ADJUST TTY DA				
007341	101100								
007342	054006		.STA	..+7					
007343	006120		.ADDI	.002000					

007344	002000								
007345	054013		.STA	.OUT1					C115001164
007346	005041		.TYA	.					C115101165
007347	006030		.LCXI	.12000		TIME-OUT CONSTANT			C115201166
007350	027340								
007351	101000		.SEN	.0.CUT1		WRITE REGISTER READY			C115301167
007352	007361	R							
007353	002000		.CALL	.TCUT					C115401168
007354	007543	R							
007355	005011		.MERC	.011					C115501169
007356	000115		.FLT	.77					C115601170
007357	001000		.JMP	.*-6					C115701171
007360	007351	R							
007361	103100		OUT1 .CAR	.0					C115801172
007362	034165		.LDX	.TS01		RESTORE X			C115901173
007363	001000		.JMP*	.OUTA		RETURN			C116001174
007364	107334	R							
			*						C116101175
			*						C116201176
007370			.CRG	.07370					C116251177
007370	000001		STTY .DATA	.01					C116301178
			*						C116401179
			*						C116501180
			*						C116601181
			*						C116701182
			*			OUTPUT TWO CHARACTERS FROM A REG TO TTY (HIGH ORDER FIRST)			C116801183
			*			ENTER WITH CHARACTERS IN A REG			C116901184
			*						C117001185
007371	000000		OUTB .ENTR	.0					C117101186
007372	064161		.STB	.TS06		SAVE B			C117201187
007373	004550		.LLSR	.8					C117301188
007374	002000		.CALL	.OUTA		OUTPUT FIRST CHAR			C117401189
007375	007334	R							C117501190
007376	004450		.LLRL	.8					C117601191
007377	002000		.CALL	.OUTA		OUTPUT SECOND CHAR			C117701192
007400	007334	R							
007401	024152		.LFB	.TS06		RESTORE B			C117801193
007402	001000		.JMP*	.OUTB		RETURN			C117901194
007403	107371	R							C118001195
			*						C118101196
			*						C118201197
			*			OUTPUT CARRIAGE RETURN AND LINE FEED TO TTY			C118301198
007404	000000		OUTC .ENTR	.0					C118401199

007405 054005
 007406 006010
 007407 106612
 007410 002000
 007411 007371 R
 007412 006010
 007413 000000
 007414 001000
 007415 107404 R

.STA .**+6 SAVE A
 .LDAI .0106612 CR AND LF
 .CALL .OUTB OUTPUT 2 CHAR
 .LDAI .0 RESTORE A
 .JMP* .CUTC RETURN

B C118111197
 C118201198
 C118301199
 B C118311200
 C118401201

*
 * OUTPUT OCTAL WORD AND A SPACE TO TTY
 *

007416 000000
 007417 064022
 007420 005002
 007421 004557
 007422 005122
 007423 006110
 007424 000260
 007425 002000
 007426 007334 R
 007427 005001
 007430 004443
 007431 001020
 007432 007435 R
 007433 001000
 007434 007423 R
 007435 006010
 007436 000240
 007437 002000
 007440 007334 R
 007441 006020
 007442 000000
 007443 001000
 007444 107416 R

OUTE .ENTR .0
 .STB .**+19 SAVE B
 .TIB .
 .LLSR .15
 .IBR .
 OUT2 .CRAI .'0' MAKE DIGIT
 .CALL .OUTA OUTPUT ONE DIGIT
 .TZA .
 .LLRL .3
 .J8Z .**+4 OCTAL OUTPUT COMPLETE
 .JMP .OUT2
 .LDAI .0240 ASCII BLANK CODE
 .CALL .OUTA OUTPUT SPACE
 .LEBI .0 RESTORE B
 .JMP* .OUTE RETURN

C118501202
 C118601203
 C118701204
 C118801205
 B C118811206
 C118901207
 C119001208
 C119101209
 C119201210
 C119301211
 C119401212
 C119501213
 C119601214
 C119701215
 C119801216
 C119901217
 B C119911218
 C120001219

*
 * CLTFLT MESSAGE TO TTY (X REG CONTAINS ADDRESS OF MESSAGE)
 *

007445 000000
 007446 015000
 007447 001010
 007450 107445 R

OUTE .ENTR .0
 .LCA .0.1
 .JAZ* .CLTD

C120101220
 C120201221
 C120301222
 C120401223
 C120501224
 C120601225

007451	002000	.CALL	.OUTB		0120701226
007452	007371	R			
007453	005144	.IXR	.		0120801227
007454	001000	.JMP	.OUTD+1		0120901228
007455	007446	R			
* * OUTPUT OCTAL MEMORY ADDRESS TO TTY PRINTER *					
007456	000000	OUTF	.ENTR	.0	0121001229
007457	054071		.STA	.TS02	0121101230
007460	006010		.LDAI	.(0121201231
007461	124240			SAVE WORD	0121301232
007462	002000			PAREN SPACE	0121401233
007463	007371	R	.CALL	.OUTB	0121501234
007464	014064			PRINT CHAR	
007465	002000		.LDA	.TS02	0121601235
007466	007416	R	.JMPM	.OUTE	0121701236
007467	006010			OUTPUT OCTAL WORD	0121801237
007470	124640		.LDAI	.))	0121901238
007471	002000			RIGHT PARENTHESIS AND SPACE	
007472	007371	R	.CALL	.OUTB	0122001239
007473	001000		.JMP*	.OUTF	0122101240
007474	107456	R			
* * INVALID INPUT--PRINT MESSAGE *					
007475	000000	OUTG	.ENTR	.0	0122201241
007476	006030		.LEXI	.MSG5	0122301242
007477	006462	R		INVALID MESSAGE	0122401243
007500	002000		.CALL	.OUTD	0122501244
007501	007445	R		OUTPUT MESSAGE	0122601245
007502	001000		.JMP*	.OUTG	
007503	107475	R			0122701246
* * OUTPUT CONTROL CHARACTER SUBROUTINE *					
007504	054020	OUT3	.STA	.OUTH+3	0122801247
007505	074020		.STX	.OUTH+4	0122901248
007506	034013		.LFX	.OUTH	0123001249
007507	015000		.LDA	.0,1	0123101250
007510	002000		.CALL	.OUTA	0123201251
007511	007334	R		SAVE A	0123301252
				SAVE X	0123401253
				A=CONTROL	0123501254
				CHARACTER	0123601255
				OUTPUT CHARACTER	

007512	006030	.LDXI	.077777	INIT	C123701256
007513	077777				
007514	002000	.CALL	.TDLY	TIME DELAY	C123801257
007515	007527 R				
007516	044003	.INR	.CUTH	SET RETURN	C123901258
007517	014005	.LIA	.CUTH+3	RESTORE A	C124001259
007520	034005	.LCX	.CUTH+4	RESTORE X	C124101260
007521	001000	.JMP	.0	RETURN	C124201261
007522	000000				
007522		OUTH	.BES .0	ENTRY	C124301262
007523	001000	.JMP	.OUT3	LOOP	C124401263
007524	007504 R				
007525		.BSS	.2	STORAGE FOR A + X	C124501264
		*			C124601265
		* TIME DELAY SUBROUTINE			C124701266
		*			C124801267
007527	000000	TDLY	.ENTR .0		C124901268
007530	005344	.EXR	.		C125001269
007531	001040	.JXZ*	.TDLY	RETURN	C125101270
007532	107527 R				
007533	001000	.JMP	.*-3		C125201271
007534	007530 R				
		*			C125301272
		* I/O TIME-OUT SUBROUTINE			C125401273
		*			C125501274
007535	005344	TOU1	.EXR .		C125601275
007536	001040	.JXZ*	.TOUT	TIME-OUT RETURN	C125701276
007537	107543 R				
007540	044002	.INR	.TCLT	SET UP FOR	C125801277
007541	044001	.INR	.TCLT	NORMAL EXIT	C125901278
007542	001000	.JMP	.0		C126001279
007543	000000				
007543		TOUT	.BES .0		C126101280
007544	001000	.JMP	.TCL1		C126201281
007545	007535 R				
		*			C126301282
		* DATA TABLE			C126401283
		*			C126501284
007546	000002	D2	.DATA .2		C126601285
007547	000254	D254	.DATA .0254		C126701286
		*			C126801287
007550	000000	TS01	.DATA .0	TEMPORARY STORAGE	C126901288

007551 000000
 007552 000000
 007553 000000
 007554 000000
 007555 000000

TS02 .DATA .0
 TS03 .DATA .0
 TS05 .DATA .0
 TS06 .DATA .0
 TS07 .DATA .0

TEMPORARY STORAGE
 TEMPORARY STORAGE
 TEMPORARY STORAGE
 TEMPORARY STORAGE
 TEMPORARY STORAGE

0127001289
 0127101290
 0127201291
 0127301292
 0127401293
 0127501294
 0127601295

007000 R

.END .EBGX

LITERALS

POINTERS

SYMBOLS

1 007555 R TS07
 1 007554 R TS06
 1 007553 R TS05
 1 007552 R TS03
 1 007551 R TS02
 1 007550 R TS01
 0 007547 R D254
 0 007546 R D2
 1 007543 R TOUT
 1 007535 R TOUT
 1 007527 R TDLY
 1 007522 R OUTH
 1 007504 R OUT3
 1 007475 R OUT6
 1 007456 R OUTF
 1 007445 R OUTD
 1 007423 R OUT2
 1 007416 R OUTE
 1 007404 R OUTC
 1 007371 R OUTE
 1 007370 R \$TTY
 1 007361 R OUT1
 1 007334 R OUTA
 1 007331 R INPI
 1 007323 R INI1
 1 007322 R INH2
 1 007317 R INPI

1	007313	R	INH3
1	007301	R	INH1
1	007272	R	ING1
1	007266	R	ING8
1	007255	R	ING6
1	007250	R	INPG
1	007243	R	ING2
1	007241	R	ING4
1	007237	R	ING3
1	007200	R	ING5
1	007173	R	ING7
1	007170	R	INPF
1	007165	R	INF2
1	007163	R	INF1
1	007161	R	INF3
1	007157	R	INF4
1	007133	R	INF5
1	007130	R	INPE
1	007125	R	INE2
1	007123	R	INE1
1	007076	R	INE3
1	007072	R	IND3
1	007067	R	INPD
1	007064	R	IND2
1	007062	R	IND1
1	007036	R	IND4
1	007033	R	INPC
1	007030	R	INCE
1	007026	R	INC1
1	007004	R	INC3
1	007000	R	EBGX
1	006752	R	INPB
1	006741	R	INB1
1	006736	R	INPA
1	006731	R	INAG
1	006722	R	INA1
1	006717	R	SSWT
1	006706	R	SSWF
1	006703	R	SSWS
1	006671	R	SSWF
1	006655	R	SSWF
1	006646	R	SSWF

1	006641	R	SSWN
1	006635	R	SSW4
1	006622	R	SSW3
1	006607	R	SSWL
1	006605	R	SSW2
1	006600	R	SSW1
1	006545	R	SSWF
1	006535	R	ETAG
1	006521	R	ESZ5
1	006514	R	ESZ2
1	006477	R	ESZ1
1	006470	R	ESZA
1	006462	R	MSG5
1	006456	R	MSG4
1	006446	R	MSG3
1	006433	R	MSG2
1	006412	R	MSG1
1	006411	R	HLTF
1	006410	R	SAVC
1	006407	R	SAVX
1	006406	R	SAV6
1	006405	R	SAVA
1	006367	R	PWRU
1	006366	R	PHLT
1	006356	R	PWDM
1	006327	R	ELOD
1	006323	R	EXIT
1	006271	R	ETBL
1	006251	R	ETO4
1	006221	R	ETOP
0	006204	R	EBG2
1	006171	R	EBG1
1	006161	R	ESZC
1	006150	R	EBGN
1	006064	R	ECN2
1	006035	R	ECN3
1	006024	R	ECNG
1	006017	R	EDU4
1	006003	R	EDU2
1	005776	R	EDU1
1	005761	R	EDUM
1	005754	R	EGO1

1	005741	R	EGOT
1	005713	R	EXRG
1	005665	R	EBRG
1	005636	R	EARG
1	005632	R	ESR5
1	005614	R	ESR2
1	005603	R	ESR1
1	005575	R	ESR4
1	005551	R	ESRC
1	005546	R	ETR2
1	005536	R	ETR1
1	005504	R	ETR3
1	005450	R	ETRP
1	005444	R	INI3
1	005433	R	INI2
1	005404	R	INIT
1	005373	R	PLD1
1	005370	R	PLDR
1	005353	R	PWR2
1	005342	R	PWR0
1	005340	R	PWR1
1	005334	R	PB00
1	005327	R	PDAT
1	005305	R	DRCD
1	005270	R	PRCD
1	005237	R	DUMP
1	005226	R	POFF
1	005214	R	EOR
1	005206	R	DHLT
1	005172	R	EBP1
1	005136	R	EBPN
1	005125	R	EPU1
1	005100	R	EPUN
1	007755		BLEA
1	007577		ELSA
1	005100	R	ELOC
1	000471	R	TS04
1	000470	R	LOAD
U	000467	R	TAPE
U	000466	R	TAPN
1	000465	R	EXEC
1	000464	R	CKSM

1	000463	R	LAST
1	000462	R	FRST
1	000461	R	K200
1	000460	R	K100
1	000457	R	K40
0	000456	R	EX02
0	000455	R	EX01
1	000454	R	EX00
1	000446	R	ETS1
1	000445	R	EXR1
1	000444	R	EBR1
1	000443	R	EAR1
1	000442	R	SCON
1	000441	R	\$MEM
1	000440	R	\$FLG
0	000426	R	EX32
0	000425	R	EX31
0	000424	R	EX30
0	000423	R	EX27
0	000422	R	EX26
0	000421	R	EX21
0	000420	R	EX20
0	000417	R	EX17
0	000416	R	EX16
0	000415	R	EX15
0	000414	R	EX14
0	000413	R	EX13
0	000412	R	EX12
0	000411	R	EX11
0	000410	R	EX10
0	000407	R	EX07
0	000406	R	EX06
0	000405	R	EX05
0	000404	R	EX04
0	000403	R	EX03
0	000402	R	EX02
0	000401	R	EX01
0	000400	R	EX00