

ADDRESS	LENGTH	BINARY CONTROL CARDS.
0	4325	IDENT DSD,0
4325	(706)	END

IDENT
PERIPH DSD,0

10	DSPCHN	EQU	10B
6	MUXCHN	EQU	6
7774	MUXRD	EQU	7774B
7763	MUXWBT	EQU	7763B
	*		
5	KTPYS	EQU	5
2	OUTIME	EQU	2
	*		
22	I.POINTS	EQU	22B
3	MSMPNT	EQU	3
0	FLASH	EQU	0
55	CTLCHAP	EQU	55B
400	MUXWBIT	EQU	400B

NUMBER OF INPUTS TO SKIP
COUNTS BEFORE SENDING OUTPUT READY

0			ORG	0
0	0077		VFD	12/START-1
20			OPG	20B
20		X1	BSSZ	1
21		X2	BSSZ	1
22	0653	LINE	VFD	12/LINES
23	0000	WORD	DATA	0
100			OPG	100B
		100	EOU	*
100	1417		LDN	15
101	1701		SRN	1
102	0576		NJN	*-1
103	0200 0117	MLOOP	RJM	DISPLAY
105	0200 0216		RJM	KEYBRD
107	0200 0253		RJM	CHKPPU
111	0200 0375		RJM	COUNTOUT
113	0200 0325		RJM	SETCONT
115	0365		UJN	MLOOP

```

*
*
*
116      0100 0000      117  DISPLAY LIM      0
120      1400      EQU      *-1
121      0574      LCN      FLASH
122      7710 7000      NJN      DISPLAY-1
124      7410      FNC      7000B,DSPCHN
125      6000 0201      ACN      DSPCHN
127      3420      LCN      OUTLINE
130      1601      STD      X1
131      5400 0135      ANN      1
133      4020      STM      DISPLAY1+1
134      7310 0000      LNI      X1
136      4022      OAM      0,DSPCHN
137      1703      LNI      LINE
140      1004      SRN      3
141      2100 6000      SHN      4
143      7210      ANC      4000B
144      2000 7000      OAN      DSPCHN
146      7210      LNC      7000B
147      4022      OAN      DSPCHN
150      3122      LNI      LINE
151      3420      AND      LINE
152      4020      STD      X1
153      0505      LNI      X1
154      2000 3455      NJN      SECOND
156      7210      LNC      2R1
157      0304      OAN      DSPCHN
160      2000 5534      UJN      CURSDONE
162      7210      LNC      2R 1
163      7510      OAN      DSPCHN
164      2000 0065      DGN      DSPCHN
166      5500 0201      LNC      53
170      2177 3751      RAM      OUTLINE
172      0705      ANC      -LIMIT
173      2000 0653      NJN      RTNDSP
175      5400 0201      LNC      LINES
177      0100 0116      STM      OUTLINE
201      0653      LJM      DISPLAY=1
*
*
*
201      0653      RTNDSP
*
*
*
201      0653      OUTLINE VFD      12/LINES

```

Address	Hex Data	Disassembly	Comments
202	5020 4026	CONTRL LDM	INCHARS,X1
204	2177 7677	ANDC	=100B
206	5400 0250	STM	INCHR
210	5000 0251	SETSPCL LDM	FLAG
212	1101	LDM	1 SWITCH TUGGLE
213	5400 0251	STM	FLAG
215	0100 0000	LDM	0
216		KEYBRD EQU	=1
217	5700 0247	SPM	KEYBRDC
221	0673	P.IN	KEYBRD-1
222	1405	LDM	KTRYS
223	5400 0247	STM	KEYBRDC
225	7710 7020	ENC	7020B,DSPCHN READ KEYBOARD
227	7410	ACN	DSPCHN
230	7410	IAN	DSPCHN
231	7510	DCN	DSPCHN
232	0462	Z.IN	KEYBRD-1
233	3420	STD	X1
234	5000 0251	LDM	FLAG
236	0543	NJN	CONTRL SENSE SPECIAL MODE
237	3420	LDD	X1
240	1755	SPN	CTLCHAR
241	0446	Z.IN	SETSPCL SENSE SPECIAL MODE INDICATOR
242	5020 4026	LDM	INCHARS,X1
244	5400 0250	STM	INCHR
246	0346	U.IN	KEYBRD-1
247	0000	KEYBRDC	DATA 0
250	0000	INCHR	DATA 0
251	0000	FLAG	DATA 0 SPECIAL CHARACTER MODE

```

      *
      *
      *
252      0100 0000      253  CHKPPU  LIM  0
254      6506 0252      EQU  *-1
256      6706 0252      EJM  CHKPPU=1,MUXCHN
260      7006          IAN  CHKPPU=1,MUXCHN
261      2300 7774      LMC  MUXCHN
263      0403          ZJN  MUXRD
264      0100 0300      LJM  *-3
      *
266      7506          CHKPPUR DON  MUXCHN      MUST HAVE BEEN A WRITE REQUEST
267      6506 0252      IJM  *-MUXCHN      READ REQUEST
271      1403          LON  3
272      7306 0321      OAM  MUXCONT,MUXCHN
274      6555          NJN  CHKPPU=1
275      5400 0321      STM  MUXCONT
277      0352          UJN  CHKPPU=1
      *
300      2300 7774      CHKPPUR LMC  MUXRD
302      2300 7763      LMC  MUXWRT
304      0345          NJN  CHKPPU=1      DONT RECOGNIZE REQUEST
      *
305      7506          DON  MUXCHN      WRITE REQUEST
306      6506 0306      IJM  *-MUXCHN
310      6706 0310      EJM  *-MUXCHN
312      1402          LON  2
313      7106 0406      IAM  MUXGET,MUXCHN
315      0200 0413      RJM  NEWCHR      GOT A NEW CHARACTER FOR OUTPUT
317      0100 0252      LJM  CHKPPU=1
      *
      *
321      0000          MUXCONT DATA  0
322      0001          DATA  1
323      0000          DATA  0

```

```

*
*
*
324      0100 0000      325  SETCONT  LJM      0
326      5000 0321      325  SETCONT  EQU      *-1
330      0573           325  SETCONT  LDM      MUXCONT
331      5000 0250      325  SETCONT  LDM      SETCONT-1
333      0517           325  SETCONT  LDM      INCHR
334      5000 0411      325  SETCONT  LDM      SETCONTR
336      0465           325  SETCONT  LDM      WFLAG
337      2000 0401      325  SETCONT  ZJN      SETCONT-1
341      5400 0322      325  SETCONT  LDC      MUXWRBIT+1
343      1401           325  SETCONT  STM      MUXCONT+1
344      5400 0321      325  SETCONT  LNN      1
346      1400           325  SETCONT  STM      MUXCONT
347      5400 0411      325  SETCONT  LNN      0
351      0352           325  SETCONT  STM      WFLAG
352      2000 0001      325  SETCONTR LDC      10
354      5400 0322      325  SETCONTR STM      MUXCONT+1
356      1401           325  SETCONTR LNN      1
357      5400 0321      325  SETCONTR STM      MUXCONT
361      5000 0250      325  SETCONTR LDM      INCHR
363      2300 0377      325  SETCONTR LMC      377B
365      5400 0323      325  SETCONTR STM      MUXCONT+2
367      1400           325  SETCONTR LNN      0
370      5400 0250      325  SETCONTR STM      INCHR
372      0100 0324      325  SETCONTR LJM      SETCONT-1

```



```

      *
      *
      *
374      0100 0000      375      COUNTOUT      LJM      0
376      5000 0410      COUNTOUT      EQU      *-1
400      0473      LHM      OUTCNT
401      5700 0410      ZJN      COUNTOUT-1
403      0570      SJM      OUTCNT
404      1401      NJN      COUNTOUT-1
405      5400 0411      LHM      1
407      0364      STM      WFLAG
      *
410      0000      UJN      COUNTOUT-1
411      0000      OUTCNT      DATA      0
      WFLAG      DATA      0

```

```

*
*
*
NEW CHARACTER OUTPUT FROM MUX PPU
*
412      0100 0000      413  NEWCHR  LJM      0
414      2000 0002      LNU      *-1
416      5400 0410      LNC      OHTTIME
420      5000 0601      STM      OHTCNT
422      2300 1774      LNM      MUXGET+1
424      5400 0601      LMC      1774B
426      5000 0601      STM      MUXGET+1
430      1075          LNM      MUXGET+1
431      2200 0177      SHN      -2
433      3420          LDC      177B
434      5020 4125      STD      X1
436      5400 0577      LNM      OHTCHARS,X1
440      1400          STM      STCHAR
441      0403          LNM      FLASH
442      0100 0602      ZJN      *-3
444      5000 0577      LJM      FLASH1
446      1377          LNM      STCHAR
447      0417          SCN      77B
450      5000 0577      ZJN      NEWCHR2
452      1203          LNM      STCHAR
453      3420          LBN      3B
454      5020 0461      STD      X1
456      3420          LNM      NEWCHR1,X1
457      0120 0000      STD      X1
461      0412          LJM      0,X1
462      0516          NEWCHR1 VFD      12/NEWCHR-1
463      0523          VFD      12/CR
464      0412          VFD      12/LF
465      0412          VFD      12/NEWCHR-1
466      3022          VFD      12/NEWCHR-1
467      4122          *
470      3423          NEWCHR2 LND      LINE
471      4023          ANI      LINE
472      0507          STD      WORD
473      5000 0577      LNI      WORD
475      1006          NJN      ADDBYTE
476      4423          LNM      STCHAR
477      0100 0412      SHN      6
501      5000 0577      STI      WORD
503      4523          LJM      NEWCHR-1
504      3623          LNM      STCHAR
505      4622          RAI      WORD
506      1742          AND      WORD
507      0703          ANI      LINE
510      4722          SRN      2+32
511      3723          MJN      *-3
512      1400          SNI      LINE
          SNL      WORD
          LNN      0

```

513	4423		STI	WORD	
514	0100 0412		LJM	NEWCHR-1	
		*			
516	1402	CR	LNN	2	
517	5400 0576		STM	STPOS	
521	0100 0412		LJM	NEWCHR-1	
		*			
		*			
523	3422	LF	LND	LINE	
524	1665		ANN	53	
525	3422		STN	LINE	
526	2177 3751		ANC	-LIMIT	
530	0704		MJN	LF1	
531	2000 0653		LNC	LINES	
533	3422		STD	LINE	
534	1403	LF1	LNN	3	
535	4422		STI	LINE	
536	2122		AND	LINE	
537	3423		STD	WORD	
540	1400		LNN	0	
541	4423		STI	WORD	
542	3422		LND	LINE	
543	1601		ANN	1	
544	3423		STD	WORD	
545	2000 7020		LNC	7020B	
547	3420		STN	X1	
550	3020	SETCOOR	LND	X1	
551	4423		STI	WORD	** SET Y COOR
552	1620		ANN	16	
553	3420		STD	X1	
554	1063		SNN	-12	
555	0514		NJN	RTN	
556	3023		LND	WORD	
557	1665		ANN	53	
560	3423		STD	WORD	
561	2177 3751		ANC	-LIMIT	
563	0764		MJN	SETCOOR	
564	2000 0654		LNC	LINES+1	
566	3423		STD	WORD	
567	0100 0550		LJM	SETCOOR	
571	0100 0412	RTN	LJM	NEWCHR-1	
573	0100 0412		LJM	NEWCHR-1	
		*			
575	0653	STLINE	VFD	12/LINES	
576	0002	STPOS	DATA	2	
577		STCHAR	BSSZ	1	
		*			
		*			
600		MUXGET	BSSZ	2	
		*			
		*			
602	5000 0577	FLASH1	LNM	STCHAR	

604	1377		SCN	77B
605	0412		ZJN	FLASH2
606	5000 0577		LDM	STCHAR
610	1203		LDN	3B
611	3420		STD	X1
612	5020 0637		LDM	SPCHR,X1
614	5400 0652		STM	VIEW
616	0310		UJN	FLASH3
617	5000 0577	FLASH2	LDM	STCHAR
621	1277		LDN	77B
622	2100 5500		ADC	5500B
624	5400 0652		STM	VIEW
626	7710 7000	FLASH3	FNC	7000B,DSPCHN
630	7410		ACN	DSPCHN
631	1407		LDN	7
632	7310 0644		OAN	FLASHX,DSPCHN
634	7510		DCN	DSPCHN
635	0100 0412		LJM	NEWCHR=1
		*		
		*		
637	5555	SPCHR	DATA	H* CRLF *
		*		
644	7400	FLASHX	DATA	7400B,6500B,5555B,0000B,6500B,5555B
652	0000	VIEW	DATA	0

653

760
000037*
*
LINES
POSBSS
SET 760B
DIMP 31
DATA 3
VFD 12/7000B+POS
VFD 12/6000B
BSSZ 50
POS SET POS-20B
END
EQU *

4026

LIMIT

DISPLAY TO ASCII CODE CONVERSION

ADDRESS	HEX	ASCII	DATA
4026	0000	INCHARS	0
4027	0101		DATA 101B,102B,103B,104B,105B,106B,107B
4036	0110		DATA 110B,111B,112B,113B,114B,115B,116B,117B
4046	0120		DATA 120B,121B,122B,123B,124B,125B,126B,127B,130B
4057	0131		DATA 131B,132B
4061	0060		DATA 60B,61B,62B,63B,64B,65B,66B,67B,70B,71B
4073	0053		DATA 53B,55B,52B,57B,50B,51B,12B,75B,0,54B,56B
4106	0015	DATA 15B,2000B,40B,0,0,0,0	
4115	0000	DATA 0,0,0,0,0,0,0,0,0	

*
*
* ASCII TO DISPLAY CODE CONVERSION

	4125	OUTCHARS	END	*	
	000012		DIP	10,1	
			DATA	0	
4137	1002		DATA	1002B	LINE FEED
4140	0000		DATA	0,0	
4142	1001		DATA	1001B	CARRIAGE RETURN
4143	0000		DATA	0,0	
	000020		DIP	16,1	
			DATA	0	
4165	0055		DATA	55B	
	000007		DIP	7,1	
			DATA	0	
4175	0051		DATA	51B,52B,47B,45B,56B,46B,57B,50B	
4205	0033		DATA	33B,34B,35B,36B,37B,40B,41B,42B,43B,44B	
4217	0000		DATA	0,0,0,54B,0,0	
4225	0000		DATA	0,1,2,3,4,5,6,7,10B,11B,12B,13B,14B,15B,16B,17B	
4245	0020		DATA	20B,21B,22B,23B,24B,25B,26B,27B,30B,31B,32B	
4260	0000		DATA	0,0,0,0,0	
	000020		DIP	16,1	
			DATA	0	
	000020		DIP	16,1	
			DATA	0	

*
*
* END

4325

35154

STORAGE USED
6600 ASSEMBLY611 STATEMENTS
3.454 SECONDS62 SYMBOLS
347 REFERENCES

ADDBYTE	501	10/40	10/45 L						
CHKPRU	253	4/15	7/05 D	7/06	7/07	7/17	7/19	7/23	7/31
CHKPRUR	266	7/13 L							
CHKPRUR	300	7/11	7/21 L						
CONTRL	202	6/04 L	6/23						
COUNTOUT	375	4/16	9/05 D	9/07	9/09	9/12			
CP	516	10/31	11/04 L						
CTLCHAR	55	3/14 D	6/25						
CURSDONE	163	5/30	5/33 L						
DISPLAY	117	4/13	5/05 D	5/07	5/40				
DSPCHN	10	3/01 D	5/15	5/29	6/16	6/19	12/16		
		5/08	5/20	5/32	6/17	12/13	12/17		
		5/09	5/22	5/33	6/18	12/14			
DSPLAY1	134	5/13	5/15 L						
FLAG	251	6/07	6/09	6/22	6/34 L				
FLASH	0	3/13 D	5/06	10/17					
FLASHx	644	12/16	12/23 L						
FLASH1	602	10/19	11/53 L						
FLASH2	617	12/02	12/09 L						
FLASH3	626	12/08	12/13 L						
INCHARS	4026	6/04	6/27	14/04 L					
INCHR	250	6/06	6/28	6/33 L	8/08	8/25	8/29		
I.POINTS	22	3/11 D							
KEYBRD	216	4/14	6/11 D	6/13	6/20	6/29			
KEYBRDC	247	6/12	6/15	6/32 L					
KTRYS	5	3/07 D	6/14						
LF	523	10/32	11/09 L						
LF1	524	11/13	11/16 L						
LIMIT	4026	5/36	11/12	11/36	13/12 D				
LINE	22	4/06 L	5/23	10/36	10/48	11/09	11/15	11/18	
		5/16	5/24	10/37	10/51	11/11	11/17	11/22	
		4/06	5/38	5/42	11/14	11/38	11/44	13/03 L	
LINES	653	4/13 L	4/18						
MLOOP	103	3/12 D							
MMPNT	3	3/02 D	7/07	7/13	7/16	7/26	7/29		
MUXCHN	6	7/06	7/08	7/14	7/25	7/27			
MUXCONT	321	7/16	7/34 L	8/14	8/22	8/27			
		7/18	8/06	8/16	8/24				
MUXGET	600	7/29	10/08	10/10	10/11	11/49 L			
MUXRD	7774	3/03 D	7/09	7/21					
MUXRBIT	400	3/15 D	8/13						
MUXWRT	7763	3/04 D	7/22						
NEWCHR	413	7/30	10/30	10/34	11/02	11/41	12/18		
		10/05 D	10/33	10/44	11/06	11/42			
NEWCHR1	461	10/26	10/30 L						
NEWCHR2	466	10/22	10/36 L						
OUTCHARS	4125	10/15	15/04 D						
OUTCNT	410	9/06	9/08	9/14 L	10/07				
OUTLINE	201	5/10	5/35	5/39	5/42 L				
OUTTIME	2	2/08 D	10/06						

POS	0	13/04 D	13/12	13/12	13/12	13/12	13/12	13/12	13/12
		13/12	13/12	13/12	13/12	13/12	13/12	13/12	13/12
		13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D
		13/12	13/12	13/12	13/12	13/12	13/12	13/12	13/12
		13/12	13/12	13/12	13/12	13/12	13/12	13/12	13/12
		13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D
		13/12	13/12	13/12	13/12	13/12	13/12	13/12	13/12
		13/12	13/12	13/12	13/12	13/12	13/12	13/12	13/12
		13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D
		13/12	13/12	13/12	13/12	13/12	13/12	13/12	13/12
		13/12	13/12	13/12	13/12	13/12	13/12	13/12	13/12
		13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D	13/12 D
RTN	571	11/32	11/41 L						
RTNDSP	177	5/37	5/40 L						
SECOND	169	5/27	5/31 L						
SETCONT	325	4/17	8/05 D	8/07	8/11	8/19	8/30		
SETCONTR	352	8/29	8/21 L						
SETCOOR	550	11/27 L	11/37	11/40					
SETSPCL	219	6/07 L	6/26						
SPCHR	637	12/06	12/21 L						
START	100	4/02	4/09 D						
STCHAP	577	10/16	10/23	10/45	11/53	12/09			
		10/20	10/41	11/46 L	12/03				
STLINE	575	11/44 L							
STPOS	576	11/05	11/45 L						
VIEW	652	12/07	12/12	12/24 L					
WFLAG	411	8/10	8/18	9/11	9/15 L				
WORD	23	4/27 L	10/39	10/46	10/52	11/19	11/24	11/33	11/39
		10/38	10/43	10/47	11/01	11/21	11/28	11/35	
x1	20	4/04 L	5/25	5/21	10/14	10/26	11/26	12/05	
		5/11	5/25	6/24	10/15	10/27	11/27	12/06	
		5/14	6/04	6/27	10/25	10/28	11/30		
x2	21	4/25 L							

10.48.07. 12/29/70 TSS SCORE 3.0
10.48.09. CPU = 000 SEC : CM = 050000
10.48.14. NOPASS, T=MSM, S=0
10.48.16. ASSEMBLING OSD
10.48.17. ASSEMBLING OSD
10.48.20. ASSEMBLY COMPLETE.
10.48.23. END
10.48.23. FIN
10.48.23. CPU TIME: 004.060 SECONDS
10.48.23. SYS TIME: 002.014 SECONDS
10.48.23. SYSTEXT : 531 LINES

END OF FILE