

00010 \*\*\*\*  
 00020 \* OMNISTAR - JUNE 1984 \*  
 00030 \* (C) COPYRIGHT 1984 \*  
 00040 \* BY RICK ADAMS \*  
 00050 \*\*\*\*  
  
 0084 00060 TIMER EQU 180  
 0085 00070 ULROW EQU 181  
 0086 00080 ULCOL EQU 182  
 0087 00090 LRROW EQU 183  
 0088 00100 LRCOL EQU 184  
 0089 00110 CURROW EQU 185  
 008A 00120 CURCOL EQU 186  
 008B 00130 IRQTIM EQU 187  
 008C 00140 WINDOW EQU 188  
 008D 00150 NWINS EQU 189  
 008E 00160 NODE EQU 190  
 008F 00170 X1 EQU 191  
 00C0 00180 Y1 EQU 192  
 00C1 00190 X2 EQU 193  
 00C2 00200 Y2 EQU 194  
 00C3 00210 SCRN EQU 195  
 00220 \*UNUSED 197-199  
 00C8 00230 BUFPTR EQU 200  
 00CA 00240 COUNT EQU 202  
 00CB 00250 VERB EQU 203  
 00D0 00260 OBJECT EQU 208  
 00D5 00270 SLIST EQU 213  
 00280  
  
 3400 00290 ORG \$3400  
 3400 00300 WINTBL RMB 9\*10  
 345A 00310 QUETBL RMB 9\*32  
 357A 00320 BUFFER RMB 40  
 35A2 00330 RMB 1  
 35A3 00340 ULIST RMB 10  
 35AD 00350 SLISTS RMB 20\*11  
 00360  
  
 3C00 00370 ORG \$3C00  
 3C00 1A 50 00380 START ORCC #\$50  
 3C02 5F 00390 CLR B  
 3C03 1F 9B 00400 TFR B,DP  
 3C05 BD A9A2 00410 JSR \$A9A2  
 3C08 BD A976 00420 JSR \$A976  
 3C0B 86 F8 00430 LDA #\$F8  
 3C0D B7 FF22 00440 STA \$FF22  
 3C10 B7 FFC5 00450 STA \$FFC5  
 3C13 B7 FFC3 00460 STA \$FFC3  
 3C16 B7 FFC0 00470 STA \$FFC0  
 3C19 17 0EC9 00480 LBSR BLDMAP  
 3C1C 7F 35A2 00490 CLR ULIST-1  
 3C1F 86 14 00500 LDA #20  
 3C21 97 BE 00510 STA NODE  
 3C23 17 0B38 00520 LBSR ININIT  
 3C26 17 0049 00530 LBSR PCLS  
 3C29 17 0417 00540 LBSR WINIT  
 3C2C 9E D5 00550 LDX SLIST  
 3C2E 86 07 00560 LDA #7  
 3C30 17 081D 00570 LBSR LIST  
 3C33 86 01 00580 LDA #1  
 3C35 BA FF03 00590 ORA \$FF03  
 3C38 B7 FF03 00600 STA \$FF03  
 00610 \*SET UP TEXT WINDOW  
 3C3B 30 8D F93B 00620 LEAX BUFFER,PCR  
 707F 9F C8 00630 STX BUFPTR

3C41	0F	CH	00640	CLR	COUNT
3C43	86	05	00650	LDA	#5
3C45	97	BC	00660	STA	WINDOW
3C47	06	0A	00670	LDB	#10
3C49	3D		00680	MUL	
3C4A	33	8D F7B2	00690	LEAU	WINTBL,PCR
3C4E	33	CB	00700	LEAU	D,U
3C50	EC	C4	00710	LDD	,U
3C52	DD	B5	00720	STD	ULROW
3C54	EC	42	00730	LDD	2,U
3C56	DD	B7	00740	STD	LRROW
3C58	EC	44	00750	LDD	4,U
3C5A	DD	B9	00760	STD	CURROW
3C5C	17	06BC	00770	AGAIN	LBSR KEYIN
3C5F	81	03	00780	CMPA	#\$03
3C61	27	0C	00790	BEQ	QUIT
3C63	81	0D	00800	CMPA	#\$0D
3C65	26	F5	00810	BNE	AGAIN
3C67	17	0714	00820	LBSR	PARSE
3C6A	17	0750	00830	LBSR	DISP
3C6D	20	ED	00840	BRA	AGAIN
3C6F	1A	50	00850	QUIT	ORCC #\$50
3C71	3F		00860	SWI	
			00870		
			00880	*CLEAR ENTIRE SCREEN	
			00890	*	
3C72	DE	C3	00900	PCLS	LDU SCRN
3C74	34	20	00910	PSHS	Y
3C76	31	C9 1800	00920	LERY	6144,U
3C78	34	20	00930	PSHS	Y
3C7C	CC	FFFF	00940	LDD	#-1
3C7F	ED	C1	00950	PCLS1	STD ,U++
3C81	ED	C1	00960	STD	,U++
3C83	ED	C1	00970	STD	,U++
3C85	ED	C1	00980	STD	,U++
3C87	11A3	E4	00990	CMPU	,S
3C8A	26	F3	01000	BNE	PCLS1
3C8C	35	20	01010	PULS	Y
3C8E	35	20	01020	PULS	Y
3C90	39		01030	RTS	
			01040		
			01050	*OUTPUT TO WINDOW	
			01060	*	A=CHARACTER
			01070	*	
3C91	34	02	01080	OUT	PSHS A
3C93	96	BA	01090	LDA	CURCOL
3C95	91	B8	01100	CMPA	LRCOL
3C97	25	02	01110	BLO	OUTX
3C99	8D	06	01120	BSR	CR
3C9B	35	02	01130	OUTX	PULS A
3C9D	81	0D	01140	CMPA	#\$0D
3C9F	26	12	01150	BNE	OUT0
			01160	*CARRIAGE RETURN	
3CA1	96	B6	01170	CR	LDA ULCOL
3CA3	97	BA	01180	STA	CURCOL
3CA5	96	B9	01190	LDA	CURROW
3CA7	8B	08	01200	ADDA	#8
3CA9	97	B9	01210	STA	CURROW
3CAB	91	B7	01220	CMPA	LRROW
3CAD	23	03	01230	BLS	NOSCRL
3CAF	17	0264	01240	LBSR	WSCROL
3CB2	39		01250	NOSCRL	RTS
3CB3	81	09	01260	OUT0	CMPA #\$09
3CB5	26	11	01270	BNE	OUT1
			01280	*TAB	

3CB7	96	BR	01290	TAB	LDA	CURCOL
3CB9	88	40	01300		ADDA	##\$40
3CBB	84	C0	01310		ANDA	##\$C0
3CBD	97	BR	01320		STA	CURCOL
3CBF	91	88	01330		CMPA	LRCOL
3CC1	22	DE	01340		BHI	CR
3CC3	91	B6	01350		CMPA	ULCOL
3CC5	25	DA	01360		BLO	CR
3CC7	39		01370		RTS	
3CC8	81	08	01380	OUT1	CMPA	##\$08
3CCA	26	08	01390		BNE	OUT2
			01400	*BACKSPACE		
3CCC	96	BR	01410		LDA	CURCOL
3CCE	91	B6	01420		CMPA	ULCOL
3CD0	23	04	01430		BLS	NOBS
3CD2	80	07	01440		SUBA	#?
3CD4	97	BR	01450		STA	CURCOL
3CD6	39		01460	NOBS	RTS	
3CD7	81	0C	01470	OUT2	CMPA	##\$0C
3CD9	26	04	01480		BNE	OUT3
			01490	*CLEAR		
3CDB	17	05BF	01500		LBSR	WCLEAR
3CDE	39		01510		RTS	
3CDF	81	FF	01520	OUT3	CMPA	##\$FF
3CE1	26	04	01530		BNE	OUT4
			01540	*CENTER	STRING	
3CE3	17	0601	01550		LBSR	CENTER
3CE6	39		01560		RTS	
3CE7	33	8D 00EB	01570	OUT4	LEAU	ALPHA,PCR
3CEB	80	20	01580		SUBA	##\$20
3CED	C6	05	01590		LDB	#5
3CEF	34	04	01600		PSHS	B
3CF1	3D		01610		MUL	
3CF2	33	CB	01620		LEAU	D,U
3CF4	9E	89	01630	LOOP0	LDX	CURROW
3CF6	6A	E4	01640		DEC	,S
3CF8	2D	3A	01650		BLT	DONE
3CFA	1F	10	01660		TFR	X,D
3CFc	34	06	01670		PSHS	D
3CFE	44		01680		LSRA	
3CFF	56		01690		RORB	
3D00	44		01700		LSRA	
3D01	56		01710		RORB	
3D02	44		01720		LSRA	
3D03	56		01730		RORB	
3D04	D3	C3	01740		ADDD	SCRN
3D06	83	0020	01750		SUBD	#\$32
3D09	1F	01	01760		TFR	D,X
3D0B	31	8D 002E	01770		LEAY	BITBL,PCR
3D0F	EC	E4	01780		LDD	,S
3D11	C4	07	01790		ANDB	#?
3D13	E6	A5	01800		LDB	B,Y
3D15	53		01810		COMB	
3D16	34	04	01820		PSHS	B
3D18	A6	C0	01830		LDA	,U+
3D1A	44		01840		LSRA	
3D1B	48		01850	LOOP	LSLA	
3D1C	30	88 20	01860		LEAX	32,X
3D1F	4D		01870		TSTA	
3D20	2E	F9	01880		BGT	LOOP
3D22	27	08	01890		BEQ	DONE0
3D24	E6	84	01900		LDB	,X
3D26	E4	E4	01910		ANDB	,S
3D28	E7	84	01920		STB	,X
3D2A	20	EF	01930		BRA	LOOP
3D7C	35	04	01940	DONE0	PULS	B

3D2E	35	10	01950	PULS	X
3D30	0C	BA	01960	INC	CURCOL
3D32	20	C0	01970	BRA	LOOP0
3D34	35	02	01980	DONE	PULS A
3D36	96	BA	01990	LDA	CURCOL
3D38	88	02	02000	ADDA	#2
3D3A	97	BA	02010	STA	CURCOL
3D3C	39		02020	XOUT	RTS
			02030		
3D3D		8040	02040	BITBL	FDB \$0040
3D3F		2010	02050	FDB	\$2010
3D41		0804	02060	FDB	\$0804
3D43		0201	02070	FDB	\$0201
			02080		
			02090	*ERASE ONE CHARACTER	
			02100	*	
3D45	9E	B9	02110	ERASE	LDX CURROW
3D47	34	10	02120	PSHS	X
3D49	C6	05	02130	LDB	#5
3D4B	34	04	02140	PSHS	B
3D4D	31	8D FFEC	02150	LERY	BITBL,PCR
3D51	6A	E4	02160	ERAS0	DEC ,S
3D53	2D	26	02170	BLT	XERAS
3D55	1F	10	02180	TFR	X,D
3D57	C4	07	02190	ANDB	#7
3D59	E6	A5	02200	LDB	B,Y
3D5B	34	04	02210	PSHS	B
3D5D	1F	10	02220	TFR	X,D
3D5F	44		02230	LSRA	
3D60	56		02240	RORB	
3D61	44		02250	LSRA	
3D62	56		02260	RORB	
3D63	44		02270	LSRA	
3D64	56		02280	RORB	
3D65	D3	C3	02290	ADDD	SCRN
3D67	1F	03	02300	TFR	D,U
3D69	35	04	02310	PULS	B
3D6B	17	0012	02320	LBSR	ERAS1
3D6E	17	000F	02330	LBSR	ERAS1
3D71	17	000C	02340	LBSR	ERAS1
3D74	17	000B	02350	LBSR	ERAS2
3D77	30	01	02360	LEAX	1,X
3D79	20	D6	02370	BRA	ERAS0
3D7B	35	02	02380	XERAS	PULS A
3D7D	35	10	02390	PULS	X
3D7F	39		02400	RTS	
3D80	8D	00	02410	ERAS1	BSR ERAS2
3D82	1F	98	02420	ERAS2	TFR B,A
3D84	AA	C4	02430	ORA	,U
3D86	A7	C4	02440	STA	,U
3D88	33	C8 20	02450	LEAU	32,U
3D8B	39		02460	RTS	
			02470		
			02480	*DISPLAY CURSOR	
			02490	*	
3D8C	33	8D 0007	02500	CURSOR	LEAU CURS,PCR
3D90	C6	05	02510	LDB	#5
3D92	34	04	02520	PSHS	B
3D94	16	FF5D	02530	LBRA	LOOP0
			02540		
3D97		007C	02550	CURS	FDB \$007C
3D99		7C7C	02560	FDB	\$7C7C
3D9B		00	02570	FCB	\$00
			02580		
			02590	*SCROLL ENTIRE SCREEN	
			02600	*	

3D9C 7D	FF02	02610	PSCROL	TST	\$FF02
3D9F 7D	FF03	02620	W0	TST	\$FF03
3DA2 2C	FB	02630		BGE	W0
3DA4 DE	C3	02640		LDU	SCRN
3DA6 31	C9 0100	02650		LERY	256,U
3DAA EC	A1	02660	SCROL0	LDI	,Y++
3DAC ED	C1	02670		STD	,U++
3DAE EC	A1	02680		LDI	,Y++
3DB0 ED	C1	02690		STD	,U++
3DB2 EC	A1	02700		LDI	,Y++
3DB4 ED	C1	02710		STD	,U++
3DB6 EC	A1	02720		LDI	,Y++
3DB8 ED	C1	02730		STD	,U++
3DBA 108C	1C00	02740		CMPY	#\$1C00
3DBE 2D	EA	02750		BLT	SCROL0
3DC0 CC	FFFF	02760		LDI	#-1
3DC3 ED	A3	02770	SCROL1	STD	,--Y
3DC5 108C	1B00	02780		CMPY	#\$1B00
3DC9 2E	F8	02790		BGT	SCROL1
3DCB 96	B9	02800		LDA	CURROW
3DCD 80	08	02810		SUBA	#8
3DCF 97	B9	02820		STA	CURROW
3DD1 96	B6	02830		LDA	ULCOL
3DD3 97	BA	02840		STA	CURCOL
3DD5 39		02850		RTS	
		02860			
3DD6		02870	ALPHA		
3DD6	0000	02880		FDB	\$0000
3DD8	0000	02890		FDB	\$0000
3DDA	00	02900		FCB	\$00
3DDB	00FA	02910		FDB	\$00FA !
3DDD	FA00	02920		FDB	\$FA00
3DDF	00	02930		FCB	\$00
3DE0	00C0	02940		FDB	\$00C0 "
3DE2	00C0	02950		FDB	\$00C0
3DE4	00	02960		FCB	\$00
3DE5	28FE	02970		FDB	\$28FE #
3DE7	28FE	02980		FDB	\$28FE
3DE9	28	02990		FCB	\$28
3DEA	2454	03000		FDB	\$2454 \$
3DEC	FE54	03010		FDB	\$FE54
3DEE	48	03020		FCB	\$48
3DEF	4608	03030		FDB	\$4608 %
3DF1	1020	03040		FDB	\$1020
3DF3	C4	03050		FCB	\$C4
3DF4	046A	03060		FDB	\$046A &
3DF6	926C	03070		FDB	\$926C
3DF8	0A	03080		FCB	\$0A
3DF9	0000	03090		FDB	\$0000 '
3DFB	20C0	03100		FDB	\$20C0
3DFD	00	03110		FCB	\$00
3DFE	0038	03120		FDB	\$0038 <
3E00	4482	03130		FDB	\$4482
3E02	00	03140		FCB	\$00
3E03	0082	03150		FDB	\$0082 >
3E05	4438	03160		FDB	\$4438
3E07	00	03170		FCB	\$00
3E08	5438	03180		FDB	\$5438 *
3E0A	FE38	03190		FDB	\$FE38
3E0C	54	03200		FCB	\$54
3E0D	1010	03210		FDB	\$1010 +
3E0F	7C10	03220		FDB	\$7C10
3E11	10	03230		FCB	\$10
3E12	0000	03240		FDB	\$0000 ,
3E14	020C	03250		FDB	\$020C
3E16	00	03260		FCB	\$00

3E17	1010	03270	FDB	\$1010 -
3E19	1010	03280	FDB	\$1010
3E1B	10	03290	FCB	\$10
3E1C	0000	03300	FDB	\$0000 .
3E1E	0200	03310	FDB	\$0200
3E20	00	03320	FCB	\$00
3E21	0608	03330	FDB	\$0608 /
3E23	1020	03340	FDB	\$1020
3E25	C0	03350	FCB	\$C0
3E26	6C82	03360	FDB	\$6C82 0
3E28	8282	03370	FDB	\$8282
3E2A	6C	03380	FCB	\$6C
3E2B	0000	03390	FDB	\$0000 1
3E2D	0000	03400	FDB	\$0000
3E2F	EE	03410	FCB	\$EE
3E30	0C92	03420	FDB	\$0C92 2
3E32	9292	03430	FDB	\$9292
3E34	60	03440	FCB	\$60
3E35	0092	03450	FDB	\$0092 3
3E37	9292	03460	FDB	\$9292
3E39	6C	03470	FCB	\$6C
3E3A	E010	03480	FDB	\$E010 4
3E3C	1010	03490	FDB	\$1010
3E3E	EE	03500	FCB	\$EE
3E3F	6092	03510	FDB	\$6092 5
3E41	9292	03520	FDB	\$9292
3E43	0C	03530	FCB	\$0C
3E44	6C92	03540	FDB	\$6C92 6
3E46	9292	03550	FDB	\$9292
3E48	0C	03560	FCB	\$0C
3E49	0080	03570	FDB	\$0080 7
3E4B	8080	03580	FDB	\$8080
3E4D	6C	03590	FCB	\$6C
3E4E	6C92	03600	FDB	\$6C92
3E50	9292	03610	FDB	\$9292
3E52	6C	03620	FCB	\$6C
3E53	6092	03630	FDB	\$6092 9
3E55	9292	03640	FDB	\$9292
3E57	6C	03650	FCB	\$6C
3E58	0000	03660	FDB	\$0000 :
3E5A	2400	03670	FDB	\$2400
3E5C	00	03680	FCB	\$00
3E5D	0002	03690	FDB	\$0002 :
3E5F	2400	03700	FDB	\$2400
3E61	00	03710	FCB	\$00
3E62	0010	03720	FDB	\$0010 <
3E64	2844	03730	FDB	\$2844
3E66	00	03740	FCB	\$00
3E67	2828	03750	FDB	\$2828 =
3E69	2828	03760	FDB	\$2828
3E6B	28	03770	FCB	\$28
3E6C	0044	03780	FDB	\$0044 >
3E6E	2810	03790	FDB	\$2810
3E70	00	03800	FCB	\$00
3E71	4080	03810	FDB	\$4080 ?
3E73	8A90	03820	FDB	\$8A90
3E75	60	03830	FCB	\$60
3E76	7C82	03840	FDB	\$7C82 @
3E78	BAAA	03850	FDB	\$BAAA
3E7A	78	03860	FCB	\$78
3E7B	0EFE	03870	FDB	\$0EFE A
3E7D	9090	03880	FDB	\$9090
3E7F	FE	03890	FCB	\$FE
3E80	FE92	03900	FDB	\$FE92 B
3E82	92FE	03910	FDB	\$92FE
3F84	0E	03920	FCB	\$0E

3E85	FE82	03930	FDB	\$FE82 C
3E87	82E2	03940	FDB	\$82E2
3E89	E6	03950	FCB	\$E6
3E8A	FEFE	03960	FDB	\$FEFE D
3E8C	8282	03970	FDB	\$8282
3E8E	7C	03980	FCB	\$7C
3E8F	FE9E	03990	FDB	\$FE9E E
3E91	9292	04000	FDB	\$9292
3E93	92	04010	FCB	\$92
3E94	FEF0	04020	FDB	\$FEF0 F
3E96	9090	04030	FDB	\$9090
3E98	90	04040	FCB	\$90
3E99	FE82	04050	FDB	\$FE82 G
3E9B	82D2	04060	FDB	\$82D2
3E9D	DE	04070	FCB	\$DE
3E9E	FE10	04080	FDB	\$FE10 H
3EA0	10FE	04090	FDB	\$10FE
3EA2	0E	04100	FCB	\$0E
3EA3	000E	04110	FDB	\$000E I
3EA5	FE00	04120	FDB	\$FE00
3EA7	00	04130	FCB	\$00
3EA8	0C0E	04140	FDB	\$0C0E J
3EA9	0202	04150	FDB	\$0202
3EAC	FC	04160	FCB	\$FC
3EAD	FEFE	04170	FDB	\$FEFE K
3EAF	1028	04180	FDB	\$1028
3EB1	C6	04190	FCB	\$C6
3EB2	0EFE	04200	FDB	\$0EFE L
3EB4	0202	04210	FDB	\$0202
3EB6	02	04220	FCB	\$02
3EB7	FE40	04230	FDB	\$FE40 M
3EB9	2040	04240	FDB	\$2040
3EBB	FE	04250	FCB	\$FE
3EBC	FE40	04260	FDB	\$FE40 N
3EBE	2010	04270	FDB	\$2010
3EC0	FE	04280	FCB	\$FE
3EC1	FE82	04290	FDB	\$FE82 O
3EC3	828E	04300	FDB	\$828E
3EC5	FE	04310	FCB	\$FE
3EC6	FE9E	04320	FDB	\$FE9E P
3EC8	9090	04330	FDB	\$9090
3ECA	60	04340	FCB	\$60
3ECB	7C82	04350	FDB	\$7C82 Q
3ECD	8A84	04360	FDB	\$8A84
3ECF	7A	04370	FCB	\$7A
3ED0	FE90	04380	FDB	\$FE90 R
3ED2	90FE	04390	FDB	\$90FE
3ED4	0E	04400	FCB	\$0E
3ED5	F696	04410	FDB	\$F696 S
3ED7	9292	04420	FDB	\$9292
3ED9	DE	04430	FCB	\$DE
3EDA	8080	04440	FDB	\$8080 T
3EDC	FEFE	04450	FDB	\$FEFE
3EDE	80	04460	FCB	\$80
3EDF	FC02	04470	FDB	\$FC02 U
3EE1	02FE	04480	FDB	\$02FE
3EE3	FC	04490	FCB	\$FC
3EE4	F804	04500	FDB	\$F804 V
3EE6	02FC	04510	FDB	\$02FC
3EE8	F8	04520	FCB	\$F8
3EE9	FE04	04530	FDB	\$FE04 W
3EEB	0804	04540	FDB	\$0804
3EED	FE	04550	FCB	\$FE
3EEE	C628	04560	FDB	\$C628 X
3EF0	1028	04570	FDB	\$1028
3EED	C6	04580	FCB	\$C6

3EF3	E010	04590	FDB	\$E010
3EF5	0E10	04600	FDB	\$0E10
3EF7	E0	04610	FCB	\$E0
3EF8	868A	04620	FDB	\$868A Z
3EFA	92A2	04630	FDB	\$92A2
3EFC	C2	04640	FCB	\$C2
3EFD	00FE	04650	FDB	\$00FE □
3EFF	8282	04660	FDB	\$8282
3F01	00	04670	FCB	\$00
3F02	C020	04680	FDB	\$C020 ^
3F04	1008	04690	FDB	\$1008
3F06	06	04700	FCB	\$06
3F07	0082	04710	FDB	\$0082 ▢
3F09	82FE	04720	FDB	\$82FE
3F0B	00	04730	FCB	\$00
3F0C	2040	04740	FDB	\$2040 ^
3F0E	FE40	04750	FDB	\$FE40
3F10	20	04760	FCB	\$20
3F11	0202	04770	FDB	\$0202
3F13	0202	04780	FDB	\$0202
3F15	02	04790	FCB	\$02
		04800		

04810 \*SCROLL WINDOW

3F16	DC	B5	04820	WSCROL	LDD	ULROW
3F18	44		04840		LSRA	
3F19	56		04850		RORB	
3F1A	44		04860		LSRA	
3F1B	56		04870		RORB	
3F1C	44		04880		LSRA	
3F1D	56		04890		RORB	
3F1E	D3	C3	04900		ADDD	SCRN
3F20	1F	01	04910		TFR	D,X
3F22	30	89 0100	04920		LEAX	256,X
3F26	96	B5	04930		LDA	ULROW
3F28	D6	B8	04940		LDB	LRCOL
3F2A	44		04950		LSRA	
3F2B	56		04960		RORB	
3F2C	44		04970		LSRA	
3F2D	56		04980		RORB	
3F2E	44		04990		LSRA	
3F2F	56		05000		RORB	
3F30	D3	C3	05010		ADDD	SCRN
3F32	1F	02	05020		TFR	D,Y
3F34	31	A9 0100	05030		LEAY	256,Y
			05040	*FUDGE		

3F38	31	21	05050		LEAY	1,Y
3F3A	96	B7	05060		LDA	LLROW
3F3C	D6	B6	05070		LDB	ULCOL
3F3E	44		05080		LSRA	
3F3F	56		05090		RORB	
3F40	44		05100		LSRA	
3F41	56		05110		RORB	
3F42	44		05120		LSRA	
3F43	56		05130		RORB	
3F44	D3	C3	05140		ADDD	SCRN
3F46	1F	03	05150		TFR	D,U
3F48	33	C9 0100	05160		LEAU	256,U
3F4C	34	40	05170		PSHS	U
3F4E	34	20	05180 S1		PSHS	Y
3F50	1F	13	05190		TFR	X,U
3F52	EC	C1	05200 S2		LDD	,U++
3F54	ED	C9 FEFE	05210		STD	-258,U
3F58	11A3	E4	05220		CMPU	,S
3F5B	25	F5	05230		BLO	S2
3F5D	25	20	05240		PULS	Y

3F5F	30	88 20	05250	LEAX	32,X
3F62	31	A8 20	05260	LEAY	32,Y
3F65	AC	E4	05270	CMPX	,S
3F67	25	E5	05280	BLO	S1
3F69	30	89 FF00	05290	LEAX	-256,X
3F6D	31	A9 FF00	05300	LEAY	-256,Y
3F71	86	FF	05310	LDA	#-1
3F73	34	20	05320 S3	PSHS	Y
3F75	1F	13	05330	TFR	X,U
3F77	A7	C0	05340 S4	STA	,U+
3F79	11A3	E4	05350	CMPU	,S
3F7C	25	F9	05360	BLO	S4
3F7E	35	20	05370	PULS	Y
3F80	30	88 20	05380	LEAX	32,X
3F83	31	A8 20	05390	LEAY	32,Y
3F86	AC	E4	05400	CMPX	,S
3F88	25	E9	05410	BLO	S3
3F8A	35	40	05420	PULS	U
3F8C	96	B6	05430	LDA	ULCOL
3F8E	97	BA	05440	STA	CURCOL
3F90	96	B9	05450	LDA	CURROW
3F92	80	08	05460	SUBA	#8
3F94	97	B9	05470	STA	CURROW
3F96	39		05480	RTS	
			05490		

05500 \*PRINT MESSAGE  
05510 \* U=MESSAGE  
05520 \*

3F97	34	40	05530	MSG	PSHS	U
3F99	EE	E4	05540	MSG0	LDU	,S
3F9B	A6	C0	05550	LDA	,U+	
3F9D	27	0C	05560	BEQ	XMSG	
3F9F	EF	E4	05570	STU	,S	
3FA1	8E	2000	05580	LDX	#\$2000	
3FA4	30	1F	05590	DELAY	LEAX	-1,X
			05600	*	BME	DELAY
3FA6	17	FCE8	05610	LBSR	OUT	
3FA9	20	EE	05620	BRA	MSG0	
3FAB	35	40	05630	XMSG	PULS	U
3FAD	39		05640	RTS		
			05650			

05660 \*INTERRUPT SERVICER  
05670 \*

3FAE	B6	FF03	05680	IRQ	LDA	\$FF03
3FB1	2A	78	05690	BPL	XIRQ	
3FB3	B6	FF02	05700	LDA	\$FF02	
3FB6	0A	BB	05710	DEC	IRQTIM	
3FB8	26	71	05720	BNE	XIRQ	
3FBA	DC	B5	05730	LDD	ULROW	
3FBC	34	06	05740	PSHS	D	
3FBE	DC	B7	05750	LDD	LRROW	
3FC0	34	06	05760	PSHS	D	
3FC2	DC	B9	05770	LDD	CURROW	
3FC4	34	06	05780	PSHS	D	
3FC6	86	04	05790	LDA	#4	
3FC8	97	BB	05800	STA	IRQTIM	
3FCA	96	BD	05810	LDA	NWINS	
3FCC	34	02	05820	PSHS	A	
3FCE	CE	33F6	05830	LDU	#WINTBL-10	
3FD1	6A	E4	05840	IRQ0	DEC	,S
3FD3	2D	48	05850	BLT	XIRQ0	done?
3FD5	33	4A	05860	LEAU	10,U	
3FD7	AE	D8 06	05870	LDX	C6,U	
3FDA	27	F5	05880	BEQ	IRQ0	
			05890	*ESTABLISH CURRENT WINDOW		

save current window  
reset IRQ timer

SCAN WINTBL

BNE IRQ01  
IRQ01

3FDE DD BD 05910 STD ULRW  
3FE0 EC 42 05920 LDD 2,U  
3FE2 DD B7 05930 STD LRRW  
3FE4 EC 44 05940 LDD 4,U  
3FE6 DD B9 05950 STD CURROW  
3FE8 A6 80 05960 LDA ,X+  
3FER 27 13 05970 BEQ IRQ1  
  
3FEC AF D8 06 05980 \*OUTPUT CHARACTER  
3FEF 34 40 06000 STX E6,U  
3FF1 17 01CF 06010 PSHS U  
3FF4 17 FC9A 06020 LBSR BEEP  
3FF7 35 40 06030 LBSR OUT  
06040 \*UPDATE CURRENT WINDOW  
3FF9 DC B9 06050 LDD CURROW  
3FFB ED 44 06060 STD 4,U  
3FFD 20 D2 06070 BRA IRQ0  
06080 \*END OF MESSAGE  
3FFF EC 48 06090 IRQ1 LDD 8,U  
4001 83 0002 06100 SUBD #2  
4004 ED 48 06110 STD 8,U  
4006 108E 0008 06120 LDY #8  
400A AE 46 06130 LDX 6,U  
400C 31 3F 06140 IRQ2 LEAY -1,Y  
400E 27 06 06150 BEQ XIRQ2  
4010 EC 02 06160 LDD 2,X  
4012 ED 81 06170 STD ,X++  
4014 20 F6 06180 BRA IRQ2  
4016 CC 0000 06190 XIRQ2 LDD #0  
4019 ED 84 06200 STD ,X  
401B 20 B4 06210 BRA IRQ0  
401D 35 02 06220 XIRQ0 PULS R  
401F 35 06 06230 PULS D  
4021 DD B9 06240 STD CURROW  
4023 35 06 06250 PULS D  
4025 DD B7 06260 STD LRRW  
4027 35 06 06270 PULS D  
4029 DD B5 06280 STD ULRW  
402B 3B 06290 XIRQ RTI  
06300  
06310 \*PRINT INTO WINDOW  
06320 \* A=WINDOW (0-7)  
06330 \* X=MESSAGE  
402C CE 3400 06340 PRINT LDU #WINTBL  
402F C6 0A 06350 LDB #10  
4031 3D 06360 MUL  
4032 33 CB 06370 LEAU D,U  
4034 1A 10 06380 ORCC #\$10  
4036 AF D8 08 06390 STX E8,U  
4039 EC 48 06400 LDD 8,U  
403B C3 0002 06410 ADDD #2  
403E ED 48 06420 STD 8,U  
4040 1C EF 06430 ANDCC #\$EF  
4042 39 06440 RTS  
06450  
06460 \*INITIALIZE WINDOWS  
06470 \*  
4043 1A 10 06480 WINIT ORCC #\$10  
4045 0F BD 06490 CLR NWINS  
4047 86 04 06500 LDA #4  
4049 97 BB 06510 STA IRQTIM  
404B FC 40BA 06520 LDD HOOK  
404E FD 010C 06530 STD \$10C  
4051 B6 40BC 06540 LDA HOOK+2  
4054 B7 40BC 06550 STA HOOK+2  
4057 B7 010F 06560 STA \$10F

405H	30	8D 005F	06570	LEAX	WDATA, PCR
405E	108E	345A	06580	LDY	#QUETBL
4062	CE	3400	06590	LDU	#WINTBL
4065	A6	80	06600	WINITO	LDA ,X+
4067	2D	3B	06610	BLT	XWINIT
4069	0C	BD	06620	INC	NWINS
406B	C6	08	06630	LDB	#8
406D	3D		06640	MUL	
406E	E7	C4	06650	STB	,U
4070	E7	44	06660	STB	4,U
4072	D7	B5	06670	STB	ULROW
4074	A6	80	06680	LDA	,X+
4076	C6	07	06690	LDB	#7
4078	3D		06700	MUL	
4079	E7	41	06710	STB	1,U
407B	E7	45	06720	STB	5,U
407D	D7	B6	06730	STB	ULCOL
407F	A6	80	06740	LDA	,X+
4081	C6	08	06750	LDB	#8
4083	3D		06760	MUL	
4084	E7	42	06770	STB	2,U
4086	D7	B7	06780	STB	LRROW
4088	A6	80	06790	LDA	,X+
408A	C6	07	06800	LDB	#7
408C	3D		06810	MUL	
408D	E7	43	06820	STB	3,U
408F	D7	B8	06830	STB	LRCOL
4091	10AF	46	06840	STY	6,U
4094	10AF	48	06850	STY	8,U
4097	31	R8 10	06860	LEAY	16,Y
409A	33	4A	06870	LEAU	10,U
409C	17	0056	06880	LBSR	WBORDR
409F	17	003C	06890	LBSR	WCENTR
40A2	20	C1	06900	BRA	WINITO
40A4	CE	345A	06910	XWINIT	LDU #QUETBL
40A7	86	20	06920	LDA	#32
40A9	34	02	06930	PSHS	A
40AB	4F		06940	CLRA	
40AC	5F		06950	CLRB	
40AD	6A	E4	06960	WINIT2	DEC ,S
40AF	2D	06	06970	BLT	XXWINI
40B1	ED	C1	06980	STD	,U++
40B3	ED	C1	06990	STD	,U++
40B5	20	F6	07000	BRA	WINIT2
40B7	35	02	07010	XXWINI	PULS A
40B9	39		07020	RTS	
			07030		
40BA	7E	3FAE	07040	HOOK	JMP IRQ
			07050		
40BD			07060	WDATA	
			07070	*WINDOW	#0
40BD		01	07080	WDATA	FCB 1
40BE		02	07090		FCB 2
40BF		05	07100		FCB 5
40C0		08	07110		FCB 8
			07120		
40C1		01	07130	*WINDOW	#1 FCB 1
40C2		08	07140		FCB 11
40C3		05	07150		FCB 5
40C4		12	07160		FCB 18
			07170		
40C5		01	07180		
40C6		14	07190	*WINDOW	#2 FCB 20

40C7	05	07220	FCB	5
40C8	18	07230	FCB	27
		07240		
		07250	*WINDOW #3	
40C9	01	07260	FCB	1
40CA	1D	07270	FCB	29
40CB	05	07280	FCB	5
40CC	23	07290	FCB	35
		07300		
		07310	*WINDOW #4	
40CD	07	07320	FCB	7
40CE	02	07330	FCB	2
40CF	0D	07340	FCB	13
40D0	23	07350	FCB	35
		07360		
		07370	*WINDOW #5	
40D1	0F	07380	FCB	15
40D2	02	07390	FCB	2
40D3	10	07400	FCB	16
40D4	23	07410	FCB	35
		07420		
		07430	*WINDOW #6	
40D5	12	07440	FCB	18
40D6	02	07450	FCB	2
40D7	16	07460	FCB	22
40D8	12	07470	FCB	18
		07480		
		07490	*WINDOW #7	
40D9	12	07500	FCB	18
40DA	14	07510	FCB	20
40DB	16	07520	FCB	22
40DC	23	07530	FCB	35
		07540		
40DD	FF	07550	FCB	-1
		07560		
		07570	*COMPUTE WINDOW CENTER	
		07580	*	
40DE	34	07590	WCENTR	PSHS X,Y
40E0	DC	07600	LDD	ULROW
40E2	34	07610	PSHS	D
40E4	DC	07620	LDD	LRROW
40E6	A0	07630	SUBA	,S
40E8	E0	07640	SUBB	1,S
40EA	44	07650	LSRA	
40EB	54	07660	LSRB	
40EC	AB	07670	ADDA	,S+
40EE	EB	07680	ADDB	,S+
40F0	8B	07690	ADDA	#3
		07700	*CENTER X,Y ARE IN B,A	
40F2	35	07710	PULS	X,Y
40F4	39	07720	RTS	
		07730		
		07740	*DRAW WINDOW BORDER	
		07750	*	
40F5	34	07760	WBORDR	PSHS X,Y
40F7	DC	07770	LDD	ULROW
40F9	17	007A	07780	LBSR GENPTR
40FC	1F	01	07790	TFR D,X
40FE	30	1F	07800	LEAX -1,X
4100	30	88 A0	07810	LEAX -32*3,X
4103	96	85	07820	LDA ULROW
4105	D6	88	07830	LDB LRCOL
4107	17	006C	07840	LBSR GENPTR
410A	1F	02	07850	TFR D,Y
410C	31	21	07860	LEAY 1,Y
410E	31	A8 A0	07870	LEAY -32*3,Y
4111	FF	F87F	07880	LDD #\$F87F

4114	R4	04	07830	HNDH	X
4116	R7	84	07900	STA	X
4118	R4		07910	ANDA	,Y
411A	E7	R4	07920	STB	,Y
411C	34	30	07930	PSHS	X,Y
411E	96	87	07940	LDA	LRROW
4120	D6	B6	07950	LDB	ULCOL
4122	17	0051	07960	LBSR	GENPTR
4125	1F	01	07970	TFR	D,X
4127	30	1F	07980	LEAX	-1,X
4129	30	89 00C0	07990	LEAX	32*6,X
412D	30	88 60	08000	LEAX	32*3,X
4130	DC	B7	08010	LDD	LRROW
4132	17	0041	08020	LBSR	GENPTR
4135	1F	02	08030	TFR	D,Y
4137	31	21	08040	LEAY	1,Y
4139	31	A9 00C0	08050	LEAY	32*6,Y
413D	31	A8 60	08060	LEAY	32*3,Y
4140	CC	F81F	08070	LDD	#\$F81F
4143	R4	84	08080	ANDA	,X
4145	R7	84	08090	STA	,X
4147	E4	R4	08100	ANDB	,Y
4149	E7	R4	08110	STB	,Y
414B	E7	A8 20	08120	STB	32,Y
414E	34	30	08130	PSHS	X,Y
4150	17	0037	08140	LBSR	VLINE
4153	AE	E4	08150	LDX	,S
4155	10AE	62	08160	LDY	2,S
4158	17	0024	08170	LBSR	HLINE
415B	AE	64	08180	LDX	4,S
415D	10AE	66	08190	LDY	6,S
4160	17	001C	08200	LBSR	HLINE
4163	AE	E4	08210	LDX	,S
4165	10AE	62	08220	LDY	2,S
4168	30	88 20	08230	LEAX	32,X
416B	31	A8 20	08240	LEAY	32,Y
416E	17	000E	08250	LBSR	HLINE
4171	32	68	08260	LEAS	8,S
4173	35	30	08270	PULS	X,Y
4175	39		08280	RTS	
			08290		
			08300	*GENERATE BYTE POINTER	
			08310	*	
4176	44		08320	GENPTR	LSRA
4177	56		08330		RORB
4178	44		08340		LSRA
4179	56		08350		RORB
417A	44		08360		LSRA
417B	56		08370		RORB
417C	D3	C3	08380	ADDD	SCRN
417E	39		08390		RTS
			08400		
417F	30	01	08410	HLINE	LEAX 1,X
4181	6F	80	08420	HLINE0	CLR ,X+
4183	34	20	08430		PSHS Y
4185	AC	E1	08440		CMPX ,S++
4187	26	F8	08450		BNE HLINE0
4189	39		08460		RTS
			08470		
418A	AE	66	08480	VLINE	LDX 6,S
418C	10AE	68	08490		LDY 8,S
418F	30	88 20	08500	LEAX	32,X
4192	31	A8 20	08510	LEAY	32,Y
4195	A6	84	08520	VLINE0	LDA ,X
4197	24	FB	08530	ANDA	#\$FB

4199	A7	84	08540	STH	,X
419B	E6	A4	08550	LDB	,Y
419D	C4	1F	08560	ANDB	##\$1F
419F	E7	A4	08570	STB	,Y
41A1	30	88 20	08580	LEAX	32,X
41A4	31	A8 20	08590	LEAY	32,Y
41A7	AC	62	08600	CMPX	2,S
41A9	23	EA	08610	BLS	VLINE0
41AB	39		08620	RTS	
		08630			

08640 \*DRAW ONE PIXEL

41AC	34	04	08660	PSET	PSHS	B
41AE	17	FFC5	08670	LBSR	GENPTR	
41B1	1F	01	08680	TFR	D,X	
41B3	31	8D FB86	08690	LEAY	BITBL,PCR	
41B7	35	04	08700	PULS	B	
41B9	C4	07	08710	ANDB	#7	
41BB	A6	A5	08720	LDA	B,Y	
41BD	43		08730	COMA		
41BE	A4	84	08740	ANDA	,X	
41C0	A7	84	08750	STA	,X	
41C2	39		08760	RTS		
		08770				

08780 \*MAKE KEYBEEP SOUND

41C3	34	76	08800	BEEP	PSHS	D,X,Y,U
41C5	32	76	08810	LEAS	-10,S	
41C7	1F	89	08820	TFR	A,B	
41C9	C0	30	08830	SUBB	#'0	
41CB	4F		08840	CLRA		
41CC	33	8D 00BB	08850	LEAU	TONES,PCR	
41D0	58		08860	ASLB		
41D1	33	CB	08870	LEAU	D,U	
41D3	34	40	08880	PSHS	U	
41D5	5F		08890	CLRB		
41D6	BD	A9A2	08900	JSR	\$A9A2	
41D9	BD	A976	08910	JSR	\$A976	
41DC	35	40	08920	PULS	U	
41DE	4F		08930	CLRA		
41DF	5F		08940	CLRB		
41E0	ED	E4	08950	STD	,S	
41E2	ED	62	08960	STD	2,S	
41E4	86	02	08970	MULUP1	LDA	#2
41E6	A7	68	08980	STA	8,S	
41E8	31	8D 003D	08990	LEAY	NOTES,PCR	
41EC	A6	C0	09000	LDA	,U+	
41EE	EC	A6	09010	LDD	A,Y	
41F0	ED	64	09020	STD	4,S	
41F2	A6	C0	09030	LDA	,U+	
41F4	EC	A6	09040	LDD	A,Y	
41F6	ED	66	09050	STD	6,S	
41F8	108E	0028	09060	MULUP2	LDY	#40
41FC	8E	0000	09070	MULUP3	LDX	#0
41FF	E6	E4	09080	LDB	,S	
4201	2A	01	09090	BPL	MU1	
4203	53		09100	COMB		
4204	3A		09110	MU1	ABX	

4205	E6	62	09120	LDB	2,S	
4207	2A	01	09130	BPL	MU2	
4209	53		09140	COMB		
420A	3A		09150	MU2	ABX	
420B	1F	10	09160	TFR	X,D	
			09170	*	LSRA	
			09180	*	RORB	
420D	F7	FF20	09190	STB	\$FF20	
4210	EC	E4	09200	LDD	,S	

4212	E3	64	09210	ADDD	4,S
4214	ED	E4	09220	STD	,S
4216	EC	62	09230	LDD	2,S
4218	E3	66	09240	ADDD	6,S
421A	ED	62	09250	STD	2,S
421C	31	A2	09260	LEARY	,,-Y
421E	26	DC	09270	BNE	MULUP3
4220	6A	68	09280	DEC	8,S
4222	26	D4	09290	BNE	MULUP2
4224	32	6A	09300	MUDUN	LEAS 10,S
4226	35	76	09310	PULS	D,X,Y,U
4228	39		09320	RTS	
			09330		

4229		0000	09340	NOTES	FDB 0
422B		026F	09350		FDB \$26F
422D		0294	09360		FDB \$294
422F		02EB	09370		FDB \$2EB
4231		02E4	09380		FDB \$2E4
4233		0310	09390		FDB \$310
4235		033F	09400		FDB \$33F
4237		0371	09410		FDB \$371
4239		03A5	09420		FDB \$3A5
423B		03DC	09430		FDB \$3DC
423D		0417	09440		FDB \$417
423F		0456	09450		FDB \$456
4241		0498	09460		FDB \$498
4243		04DD	09470		FDB \$4DD
4245		0528	09480		FDB \$528
4247		0576	09490		FDB \$576
4249		05C9	09500		FDB \$5C9
424B		0621	09510		FDB \$621
424D		067F	09520		FDB \$67F
424F		06E2	09530		FDB \$6E2
4251		074A	09540		FDB \$74A
4253		07B9	09550		FDB \$7B9
4255		082F	09560		FDB \$82F
4257		08AC	09570		FDB \$8AC
4259		0930	09580		FDB \$930
425B		09BB	09590		FDB \$9BB
425D		0A50	09600		FDB \$A50
425F		0ARED	09610		FDB \$ARED
4261		0B93	09620		FDB \$B93
4263		0C43	09630		FDB \$C43
4265		0CFE	09640		FDB \$CFE
4267		0DC4	09650		FDB \$DC4
4269		0E95	09660		FDB \$E95
426B		0F73	09670		FDB \$F73
426D		105F	09680		FDB \$105F
426F		1158	09690		FDB \$1158
4271		1260	09700		FDB \$1260
4273		1377	09710		FDB \$1377
4275		14A0	09720		FDB \$14A0
4277		15DA	09730		FDB \$15DA
4279		1726	09740		FDB \$1726
427B		1887	09750		FDB \$1887
427D		19FC	09760		FDB \$19FC
427F		1B88	09770		FDB \$1B88
4281		1D2B	09780		FDB \$1D2B
4283		1EE7	09790		FDB \$1EE7
4285		20BE	09800		FDB \$20BE
4287		22B0	09810		FDB \$22B0
4289		24C0	09820		FDB \$24C0
			09830		
			09840		
428B		3A32	09850	TONES	FDB \$3A32
429B		3C22	09860		FDB \$3C32

428F 4032 09870 FDB \$4032  
4291 3B34 09880 FDB \$3B34  
4293 3C34 09890 FDB \$3C34  
4295 4034 09900 FDB \$4034  
4297 3B36 09910 FDB \$3B36  
4299 3C36 09920 FDB \$3C36  
429B 4036 09930 FDB \$4036  
09940  
09950 \*CLEAR CURRENT WINDOW  
09960 \*  
429D 96 B5 09970 WCLEAR LDA ULROW  
429F D6 B8 09980 LDB LRCOL  
42A1 17 FED2 09990 LBSR GENPTR  
42A4 83 0020 10000 SUBD #32  
42A7 34 06 10010 PSHS D  
42A9 DC B5 10020 LDD ULROW  
42AB 17 FEC8 10030 LBSR GENPTR  
42AE 83 0020 10040 SUBD #32  
42B1 34 06 10050 PSHS D  
42B3 DC B7 10060 LDD LRROW  
42B5 17 FEBE 10070 LBSR GENPTR  
42B8 C3 0100 10080 ADDD #256  
42BB 1F 03 10090 TFR D,U  
42BD AE E4 10100 WCLR1 LDX ,S  
42BF 30 88 20 10110 LEAX 32,X  
42C2 10AE 62 10120 LDY 2,S  
42C5 31 A8 20 10130 LEAY 32,Y  
42C8 34 40 10140 PSHS U  
42CA 10AC E1 10150 CMPY ,S++  
42CD 22 11 10160 BHI WCLR3  
42CF AF E4 10170 STX ,S  
42D1 10AF 62 10180 STY 2,S  
42D4 86 FF 10190 LDA #-1  
42D6 A7 80 10200 WCLR2 STA ,X+  
42D8 34 20 10210 PSHS Y  
42DA AC E1 10220 CMPX ,S++  
42DC 23 F8 10230 BLS WCLR2  
42DE 20 DD 10240 BRA WCLR1  
42E0 32 64 10250 WCLR3 LEAS 4,S  
42E2 DC B5 10260 LDD ULROW  
42E4 DD B9 10270 STD CURROW  
42E6 39 10280 RTS  
10290  
10300 \*CENTER LINE OF TEXT  
10310 \*  
42E7 34 36 10320 CENTER PSHS D,X,Y  
42E9 108E 0000 10330 LDY #0  
42ED 5F 10340 CLRB  
42EE A6 80 10350 CENTR1 LDA ,X+  
42F0 27 08 10360 BEQ CENTR2  
42F2 81 0D 10370 CMPA #\$0D  
42F4 27 04 10380 BEQ CENTR2  
42F6 31 39 10390 LEAY -7,Y  
42F8 20 F4 10400 BRA CENTR1  
42FA 4F 10410 CENTR2 CLRA  
42FB D6 B6 10420 LDB ULCOL  
42FD 34 06 10430 PSHS D  
42FF D6 B8 10440 LDB LRCOL  
4301 A3 E1 10450 SUBD ,S++  
4303 47 10460 ASRA  
4304 56 10470 RORB  
4305 DB B6 10480 ADDB ULCOL  
4307 4F 10490 CLRA  
4308 1E 02 10500 EXG D,Y  
430A 47 10510 ASRA  
430B 5E 10520 RORB

4300	34	20	10530	PSHS	Y
430E	E3	E1	10540	ADDD	,S++
4310	D1	B6	10550	CMPB	ULCOL
4312	24	02	10560	BHS	XCENTR
4314	D6	B6	10570	LDB	ULCOL
4316	D7	BA	10580	XCENTR	STB
4318	35	36	10590	PULS	CURCOL
431A	39		10600	RTS	D,X,Y
			10610		
			10620	*GET KEYBOARD INPUT	
			10630	*	
431B	0C	B4	10640	KEYIN	INC
431D	2D	05	10650	BLT	KEYIN1
431F	17	FA23	10660	LBSR	ERASE
4322	20	09	10670	BRA	KEYIN2
4324	17	FA65	10680	KEYIN1	LBSR
4327	96	BA	10690	LDA	CURCOL
4329	80	07	10700	SUBA	#7
432B	97	BA	10710	STA	CURCOL
432D	AD	9F A000	10720	KEYIN2	JSR [A000]
4331	34	02	10730	PSHS	A
4333	27	45	10740	BEQ	XKEYIN
4335	B7	FFCC	10750	STA	\$FFCC
4338	B7	FFCA	10760	STA	\$FFCA
433B	17	FE85	10770	LBSR	BEEP
433E	A6	E4	10780	LDA	,S
4340	81	0C	10790	CMPA	#\$0C
4342	26	05	10800	BNE	KEYIN3
4344	D6	CA	10810	LDB	COUNT
4346	50		10820	NEGB	
4347	20	13	10830	BRA	KEYIN6
4349	81	0D	10840	KEYIN3	CMPA #\$0D
434B	26	05	10850	BNE	KEYIN4
434D	D6	CA	10860	LDB	COUNT
434F	50		10870	NEGB	
4350	20	0A	10880	BRA	KEYIN6
4352	81	08	10890	KEYIN4	CMPA #\$08
4354	26	04	10900	BNE	KEYIN5
4356	C6	FF	10910	LDB	#\$FF
4358	20	02	10920	BRA	KEYIN6
435A	C6	01	10930	KEYIN5	LDB #1
435C	DB	CA	10940	KEYIN6	ADDB COUNT
435E	C1	20	10950	CMPB	#32
4360	22	18	10960	BHI	XKEYIN
4362	D7	CA	10970	STB	COUNT
4364	A6	E4	10980	LDA	,S
4366	A7	9F 00C8	10990	STA	[BUFPTR]
436A	30	8D F20C	11000	LEAX	BUFFER,PCR
436E	30	85	11010	LEAX	B,X
4370	9F	C8	11020	STX	BUFPTR
4372	17	F9D0	11030	LBSR	ERASE
4375	A6	E4	11040	LDA	,S
4377	17	F917	11050	LBSR	OUT
437A	35	02	11060	XKEYIN	PULS A
437C	4D		11070	TSTA	
437D	39		11080	RTS	
			11090		
			11100	*COMMAND PARSER	
			11110	*	
437E	CC	2020	11120	PARSE	LDD #\$2020
4381	DD	CB	11130	STD	VERB
4383	DD	CD	11140	STD	VERB+2
4385	97	CF	11150	STA	VERB+4
4387	DD	D0	11160	STD	OBJECT
4389	DD	D2	11170	STD	OBJECT+2
1000	07	D1	11180	STA	OBJECT+4

438D	8E	357A	11190	LDX	#BUFFER
4390	86	05	11200	LDA	#5
4392	CE	00CB	11210	LDU	#VERB
4395	E6	80	11220	PARSE0	LDB ,X+
4397	C1	0D	11230	CMPB	#\$0D
4399	27	21	11240	BEQ	XPARSE
439B	C1	20	11250	CMPB	#\$20
439D	27	07	11260	BEQ	PARSE1
439F	4A		11270	DECA	
43A0	2D	04	11280	BLT	PARSE1
43A2	E7	C0	11290	STB	,U+
43A4	20	EF	11300	BRA	PARSE0
43A6	CE	00D0	11310	PARSE1	LDU #OBJECT
43A9	86	05	11320	LDA	#5
43AB	E6	80	11330	PARSE2	LDB ,X+
43AD	C1	0D	11340	CMPB	#\$0D
43AF	27	0B	11350	BEQ	XPARSE
43B1	C1	20	11360	CMPB	#\$20
43B3	27	07	11370	BEQ	XPARSE
43B5	4A		11380	DECA	
43B6	2D	04	11390	BLT	XPARSE
43B8	E7	C0	11400	STB	,U+
43BA	20	EF	11410	BRA	PARSE2
43BC	39		11420	XPARSE	RTS
			11430		
			11440	*COMMAND DISPATCHER	
			11450	*	
43BD	B6	357A	11460	DISP	LDA BUFFER
43C0	81	0D	11470	CMPA	#\$0D
43C2	27	2B	11480	BEQ	XDISP
43C4	17	004D	11490	LBSR	GENKEY
43C7	33	8D 0025	11500	LEAU	TABLE,PCR
43CB	33	5C	11510	LEAU	-4,U
43CD	33	44	11520	DISP0	LEAU 4,U
43CF	6D	C4	11530	TST	,U
43D1	2D	15	11540	BLT	ERR
43D3	10A3	C4	11550	CMPD	,U
43D6	26	F5	11560	BNE	DISP0
43D8	33	42	11570	LEAU	2,II
43DA	EC	C4	11580	LDD	D4,U
43DC	33	CB	11590	LEAU	D,U
43DE	34	40	11600	PSHS	U
43E0	17	011E	11610	LBSR	LOOKUP
43E3	35	40	11620	PULS	U
43E5	AD	C4	11630	JSR	,U
43E7	39		11640	RTS	
43E8	33	8D 001A	11650	ERR	LEAU ERROR,PCR
43EC	17	FBA8	11660	LBSR	MSG
43EF	39		11670	XDISP	RTS
			11680		
43F0		11B3	11690	TABLE	FDB \$11B3
43F2		02DF	11700	FDB	ENT-.
43F4		468D	11710	FDB	\$468D
43F6		0042	11720	FDB	RUN-.
43F8		2D00	11730	FDB	\$2D00
43FA		0143	11740	FDB	LOH-.
43FC		4815	11750	FDB	\$4815
43FE		0216	11760	FDB	SAV-.
4400		300F	11770	FDB	\$300F
4402		0589	11780	FDB	MAP-.
4404		FFFF	11790	FDB	\$FFFF
			11800		
4406			11810	ERROR	
4406		53	11820	FCC /SYNTAX ERROR/	
		59			
		4E			



PORT 1  
PORT 2  
PORT 3  
PORT 4

ENTER  
EXIT  
LOAD  
SAVE  
MAP

ENMEG

			34		
			41		
			58		
			20		
			45		
			52		
			52		
			4F		
			52		
4412	0D00	11830		FDB	\$0D000
		11840			
4414	6F	E2	11850	GENKEY	CLR , -S
4416	6F	E2	11860		CLR , -S
4418	96	CB	11870		LDA VERB
441A	80	41	11880		SUBA #'A
441C	48		11890		LSLA
441D	48		11900		LSLA
441E	5F		11910		CLRB
441F	ED	E4	11920		STD , S
4421	D6	CC	11930		LDB VERB+1
4423	C0	41	11940		SUBB #'A
4425	86	20	11950		LDA #32
4427	3D		11960		MUL
4428	AA	E4	11970		ORA , S
442A	EA	61	11980		ORB 1,S
442C	ED	E4	11990		STD , S
442E	4F		12000		CLRA
442F	D6	CD	12010		LDB VERB+2
4431	C0	41	12020		SUBB #'A
4433	AA	E0	12030		ORA , S+
4435	EA	E0	12040		ORB , S+
4437	39		12050		RTS
			12060		
4438			12070	RUN	
4438	86	04	12080		LDA #4
443A	30	8D 0004	12090		LEAX M1,PCR
443E	17	FBEB	12100		LBSR PRINT
4441	39		12110		RTS
			12120		
4442		43	12130	M1 FCC /COMMAND OKAY/	
		4F			
		4D			
		4D			
		41			
		4E			
		44			
		20			
		4F			
		4B			
		41			
		59			
444E	0D00	12140		FDB	\$0D000
		12150			
		12160	*LIST INVENTORY CONTENTS		
		12170	*	A=WINDOW (0-7)	
		12180	*	X=DATA LIST	
		12190	*		
4450	1A	10	12200	LIST	ORCC #\$10
4452	CE	3400	12210		LDU #WINTBL
4455	C6	0A	12220		LDB #10
4457	3D		12230		MUL
4458	33	CB	12240		LEAU D,U
445A	DC	B5	12250		LDD ULROW
445C	34	06	12260		PSHS D
445E	DC	B7	12270		LDD LRROW
4460	04	0C	12280		PSHS D

ENMIN  
ENMAR  
~~ERASE~~  
SSTAT  

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NSTAT  
  
  
GOSAT  

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CRACK  
UNLOCK  
LOCK

LDX #LIST  
LBSR SEARCH  
BCT NOT FOUND

4462	DC	B9	12290	LDD	CURROW
4464	34	06	12300	PSHS	D
4466	EC	C4	12310	LDD	,U
4468	DD	B5	12320	STD	ULROW
446A	EC	42	12330	LDD	2,U
446C	DD	B7	12340	STD	LRROW
446E	EC	44	12350	LDD	4,U
4470	DD	B9	12360	STD	CURROW
4472	86	0C	12370	LDA	#\$0C
4474	34	10	12380	PSHS	X
4476	17	F818	12390	LBSR	OUT
4479	35	10	12400	PULS	X
447B	A6	1F	12410	LDA	-1,X
447D	34	02	12420	PSHS	A
447F	6A	E4	12430	LIST0	DEC ,S
4481	2D	2A	12440	BLT	XLIST
4483	E6	80	12450	LDB	,X+
4485	33	8D	0035	LEAU	WORDS,PCR
4489	86	05	12460	LDA	#5
448B	3D		12480	MUL	
448C	33	CB	12490	LEAU	D,U
448E	C6	05	12500	LDB	#5
4490	5A		12510	LIST1	DEC B
4491	2D	08	12520	BLT	XLIST1
4493	A6	C0	12530	LDA	,U+
4495	34	54	12540	PSHS	B,X,U
4497	17	F7F7	12550	LBSR	OUT
4499	35	54	12560	PULS	B,X,U
449C	20	F2	12570	BRA	LIST1
449E	6D	E4	12580	XLIST1	TST ,S
44A0	27	DD	12590	BEQ	LIST0
44A2	86	09	12600	LDA	#\$09
44A4	34	10	12610	PSHS	X
44A6	17	F7E8	12620	LBSR	OUT
44A9	35	10	12630	PULS	X
44AB	20	D2	12640	BRA	LIST0
44AD	35	02	12650	XLIST	PULS A
44AF	35	06	12660	PULS	D
44B1	DD	B9	12670	STD	CURROW
44B3	35	06	12680	PULS	D
44B5	DD	B7	12690	STD	LRROW
44B7	35	06	12700	PULS	D
44B9	DD	B5	12710	STD	ULROW
44BB	1C	EF	12720	ANDCC	#\$EF
44BD	39		12730	RTS	
			12740		
44BE			12750	WORDS	
44BE		50	12760	FCC /PORT1/	
		4F			
		52			
		54			
		31			
44C3		50	12770	FCC /PORT2/	
		4F			
		52			
		54			
		32			
44C8		50	12780	FCC /PORT3/	
		4F			
		52			
		54			
		33			
44CD		53	12790	FCC /SVZYD/	
		56			
		5A			
		59			

PORT4

ENTER

4

44D2 4E 12800 FCC /NQSLW/ ~~READY~~ EXIT 5  
 51  
 53  
 4C  
 57  
 40  
 58  
 4C  
 43  
 4D  
 44DC 43 12820 FCC /CLLTF/ SAVE  
 4C  
 4C  
 54  
 46  
 48  
 44E1 42 12830 FCC /BLNFJ/ MAP  
 4C  
 4E  
 46  
 48  
 44E6 54 12840 FCC /TTSLX/ ENMEG  
 54  
 53  
 4C  
 58  
 44EB 4C 12850 FCC /LNDVN/ ENMIN 10  
 4E  
 44  
 56  
 4E  
 48  
 43  
 59  
 52  
 48  
 44F0 48 12860 FCC /KCYRK/ ENMAX 11  
 43  
 48  
 44  
 44  
 48  
 44F5 44 12870 FCC /DXDJC/ ERASE MARK  
 58 SSTAT GMARK  
 44 NSTAT UNLOC  
 48  
 44  
 43  
 43  
 44FA 4C 12880 FCC /LYMGC/ GOSAT LOCK  
 59  
 4D  
 47  
 43  
 43  
 44FF FFFF 12890 FDB \$FFFF VLOOKUP  
 12900  
 12910 \*LOOK UP OBJECT 38900  
 12920 \* A=OBJECT CODE 39130  
 12930 \*  
 4501 33 8D FFB9 12940 LOOKUP LERU WORDS,PCR  
 4505 6F E2 12950 CLR , -S  
 4507 1F 32 12960 LOOKU0 TFR U,Y  
 4509 8E 00D0 12970 LDX #OBJECT  
 450C 86 05 12980 LDA #5  
 450E 34 02 12990 PSHS A  
 4510 6A E4 13000 LOOKU1 DEC ,S  
 4512 2D 1A 13010 BLT LOOKU2  
 4514 A6 80 13020 LDA ,X+  
 4516 A1 A0 13030 CMPA ,Y+  
 4518 27 F6 13040 BEQ LOOKU1  
 451A 35 02 13050 PULS A  
 451C 33 45 13060 LERU 5,U  
 451E 6C E4 13070 INC ,S  
 4520 FF C4 13080 LDD ,U

4522	1063	FFFF	13090	CMPD	#\$FFFF
4526	26	DF	13100	BNE	LOOKU0
4528	86	FF	13110	LDA	#\$FF
452A	A7	E4	13120	STA	,S
452C	20	02	13130	BRA	LOOKU3
452E	35	02	13140	LOOKU2	PULS A
4530	35	02	13150	LOOKU3	PULS A
4532	39		13160		RTS
			13170		
			13180	*SEARCH	LIST
			13190	*	X=LIST
			13200	*	A=ITEM
			13210	*	
4533	E6	1F	13220	SEARCH	LDB -1,X
4535	5A		13230	SEARC0	DEC B
4536	2D	04	13240	BLT	SEARC1
4538	A1	80	13250	CMPA	,X+
453A	26	F9	13260	BNE	SEARC0
453C	39		13270	SEARC1	RTS
			13280		
			13290	*LOAD PROGRAM FROM SYSTEM	
			13300	*	A=PROGRAM CODE
			13310	*	
453D	F6	35A2	13320	LOR	LDB ULIST-1
4540	C1	0A	13330	CMPB	#10
4542	2D	08	13340	BLT	LOAD
4544	33	8D 006E	13350	LEAU	FULL,PCR
4548	17	FA4C	13360	LBSR	MSG
454B	39		13370		RTS
454C	8E	35A3	13380	LOR0	LDX #ULIST
454F	17	FFE1	13390	LBSR	SEARCH
4552	2D	08	13400	BLT	LOR1
4554	33	8D 0076	13410	LEAU	LOAD,PCR
4558	17	FA3C	13420	LBSR	MSG
455B	39		13430		RTS
455C	9E	D5	13440	LOR1	LDX SLIST
455E	17	FFD2	13450	LBSR	SEARCH
4561	2C	08	13460	BGE	LOAD
4563	33	8D 007F	13470	LEAU	NOPRG,PCR
4567	17	FA2D	13480	LBSR	MSG
456A	39		13490		RTS
456B	F6	35A2	13500	LOR2	LDB ULIST-1
456E	8E	35A3	13510	LDX	#ULIST
4571	29	85	13520	LBX	BxX
4572	2C	35A2	13530	TNP	ULIST-1
4578	34	02	13550	PSRS	A
457A	86	06	13560	LDA	#6
457C	8E	35A3	13570	LDX	#ULIST
457F	17	FECE	13580	LBSR	LIST
4582	A6	E0	13590	LDA	,S+
4584	9E	D5	13600	LDX	SLIST
4586	17	0074	13610	LBSR	DELL
4589	9E	D5	13620	LDX	SLIST
4588	86	07	13630	LDA	#7
458D	17	FEC0	13640	LBSR	LIST
4590	86	04	13650	LDA	#4
4592	30	8D 0004	13660	LEAX	LOAD,PCR
4596	17	FA93	13670	LBSR	PRINT
4599	39		13680		RTS
			13690		
459A			13700	LOADOK	
459A		50	13710	FCC /PROGRAM LOADED	/
		52			
		4F			
		47			
		52			

41  
4D  
20  
4C  
4F  
41  
44  
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44  
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45A9 46 13720 FCC /FROM SYSTEM/  
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4F  
4D  
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4D  
45B4 0D00 13730 FDB \$0D00  
13740  
45B6 13750 FULL  
45B6 55 13760 FCC /USER PROGRAM AREA /  
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4F  
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45C8 46 13770 FCC /FULL/  
55  
4C  
4C  
45C0 0D00 13780 FDB \$0D00  
45CE 13790 LOADD  
45CE 50 13800 FCC /PROGRAM ALREADY /  
52  
4F  
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4D  
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4C  
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45DE 4C 13810 FCC /LOADED/  
4F

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45E4 0000 13820 FDB \$0D00  
45E6 13830 NOPRG  
45E6 50 13840 FCC /PROGRAM NOT IN /  
52  
4F  
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4D  
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4E  
4F  
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4E  
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45F5 53 13850 FCC /SYSTEM/  
59  
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4D  
45FB 0000 13860 FDB \$0D00  
13870  
13880 \*DELETE ITEM FROM LIST  
13890 \* X=LIST  
13900 \* A=ITEM  
13910 \*  
45FD 1F 12 13920 DELL TFR X,Y  
45FF E6 1F 13930 LDB -1,X  
4601 5A 13940 DELLO DECB  
4602 2D 0F 13950 BLT XDELL  
4604 A1 80 13960 CMPA ,X+  
4606 26 F9 13970 BNE DELLO  
4608 A6 84 13980 DELL1 LDA ,X  
460A A7 1F 13990 STA -1,X  
460C 30 01 14000 LEAK 1,X  
460E 5A 14010 DECB  
460F 2E F7 14020 BGT DELL1  
4611 6A 3F 14030 DEC -1,Y  
4613 39 14040 XDELL RTS  
14050  
14060 \*SAVE PROGRAM TO SYSTEM  
14070 \* A=PROGRAM CODE  
14080 \*  
4614 8E 35R3 14090 SAV LDX #ULIST  
4617 17 FF19 14100 LBSR SEARCH  
461A 2C 08 14110 BGE SAV0  
461C 33 8D 0062 14120 LEAU NOTIN,PCR  
4620 17 F974 14130 LBSR MSG  
4623 39 14140 RTS  
4624 9E D5 14150 SAV0 LDX SLIST  
4626 17 FF0A 14160 LBSR SEARCH  
4629 2D 08 14170 BLT SAV1  
462B 33 8D 006D 14180 LEAU INSYS,PCR  
462F 17 F965 14190 LBSR MSG  
4632 39 14200 RTS  
4633 9E D5 14210 SAV1 LDX SLIST  
4635 E6 1F 14220 LDB -1,X  
4637 C1 0A 14230 CMPB #10  
4639 2D 08 14240 BLT SAV2

4638 33 8D 0078 14250 LERO SFULL,PCR  
463F 17 F955 14260 LBSR MSG  
4642 39 14270 RTS  
4643 50 14280 SAV2 INCB  
4644 E7 1F 14290 STB -1,X  
4646 30 85 14300 LEAX B,X  
4648 A7 1F 14310 STA -1,X  
464A 8E 35A3 14320 LDX #ULIST  
464D 17 FFAD 14330 LBSR DELL  
4650 86 06 14340 LDA #6  
4652 8E 35A3 14350 LDX #ULIST  
4655 17 FDF8 14360 LBSR LIST  
4658 86 07 14370 LDA #7  
465A 9E D5 14380 LDX SLIST  
465C 17 FDF1 14390 LBSR LIST  
465F 30 8D 0006 14400 LEAX SAVOK,PCR  
4663 86 04 14410 LDA #4  
4665 17 F9C4 14420 LBSR PRINT  
4668 39 14430 RTS  
14440  
4669 14450 SAVOK  
4669 50 14460 FCC /PROGRAM SAVED/  
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4F  
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4677 54 14470 FCC /TO SYSTEM/  
4F  
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4D  
4680 0D00 14480 FDB \$0D00  
14490  
4682 14500 NOTIN  
4682 4E 14510 FCC /NOT IN USER/  
4F  
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4E  
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468E 50 14520 FCC /PROGRAM AREA/  
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4F  
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469A 0D00 14530 FDB \$0D00  
14540  
469C 14550 INSYS  
469C 50 14560 FCC /PROGRAM ALREADY /  
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46AC 49 14570 FCC /IN SYSTEM/  
4E  
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4685 0D00 14580 FDB \$0D00  
14590  
4687 14600 SFULL  
4687 53 14610 FCC /SYSTEM PROGRAM /  
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46C6 41 14620 FCC /AREA FULL/  
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4C  
4C  
46CF 0D00 14630 FDB \$0D00  
14640  
14650 \*ENTER NEW NODE  
14660 \* A=PORT (0-2)  
14670 \* 3  
46D1 81 02 14680 ENT CMRA #2  
46D3 23 08 14690 BLS ENTO  
46D5 00 0022 14700 LEAU BAD, PCR

46D9	17	F8BB	14710	LBSR	MSG1
46DC	39		14720	RTS	
46DD	33	SD 0041	14730	ENT0	TLIST,PCR
46E1	34	02	14740	PSHS	A
46E3	96	BE	14750	LDA	NODE
46E5	4A		14760	DECA	
46E6	C6	03	14770	LDB	#3
46E8	3D		14780	MUL	
46E9	33	CB	14790	LEAU	D,U
46EB	35	02	14800	PULS	A
46ED	A6	C6	14810	LDA	A,U
46EF	80	41	14820	SUBA	#'A
46F1	4C		14830	INCA	
46F2	97	BE	14840	STA	NODE
46F4	4A		14850	DECA	
46F5	C6	0B	14860	LDB	#11
46F7	3D		14870	MUL	
46F8	8E	35AD	14880	LDX	#SLISTS
46FB	30	8B	14890	LEAX	D,X
46FD	30	01	14900	LEAX	1,X
46FF	9F	D5	14910	STX	SLIST
4701	17	00C3	14920	LBSR	PRNAME
4704	9E	D5	14930	LDX	SLIST
4706	86	07	14940	LDA	#7
4708	17	FD45	14950	LBSR	LIST
470B	39		14960	RTS	
			14970		
470C			14980	BAD	
470C	42		14990	FCC /BAD PORT/	
	41				
	44				
	20				
	50				
	4F				
	52				
	54				
	20				
4715	44		15000	FCC /DESIGNATION/	
	45				
	53				
	49				
	47				
	4E				
	41				
	54				
	49				
	4F				
	4E				
4720	0D00		15010	FDB \$0D00	
			15020		
			15030	*TRANSITION LIST	
			15040	*	
4722			15050	TLIST	
4722	42		15060	FCC /BEHACJBOLCENADF/	
	45				
	48				
	41				
	43				
	4A				
	42				
	44				
	4C				
	43				
	45				
	4E				
	41				

STA  
 DECA  
 LDB  
 #11

} (NODE - 1) + 11

LDX #SLISTS  
 LEAX D,X  
 LEAX 1,X  
 STX SLIST

derive  
 SLIST  
 from  
 node

15000 FCC /DESIGNATION/

15010 FDB \$0D00

15020

15030 \*TRANSITION LIST

15040 \*

15050 TLIST

15060 FCC /BEHACJBOLCENADF/

4731 45 15070 FCC /EGOFHQAGIHJRBIIK/

4740 4R 15080 FCC /JLSCKMLNTDMOFNP/

475E	30	8D	0026	15130	ININIT	LEAX	IDATA,PCR
4762	108E	35AE		15140		LDY	#SLISTS+1
4766	86	14		15150		LDA	#20
4768	34	02		15160		PSHS	A
476A	6A	E4		15170	ININI0	DEC	,S
476C	2D	17		15180		BLT	ININI3
476E	6F	3F		15190		CLR	-1.Y
4770	109F	D5		15200		STY	SLIST
4773	5F			15210		CLRB	
4774	A6	80		15220	ININI1	LDA	,X+
4776	80	41		15230		SUBA	#'A
4778	2D	07		15240		BLT	ININI2
477A	A7	A5		15250		STA	B,Y
477C	5C			15260		INC B	
477D	E7	3F		15270		STB	-1.Y
477F	20	F3		15280		BRA	ININI1
4781	31	28		15290	ININI2	LEAY	11.Y
4783	20	E5		15300		BRA	ININI0
4785	35	02		15310	ININI3	PULS	A
4787	29			15320		RTS	

15330 \*INVENTORY DATA  
15340 \*  
15350 \*  
15360 IDATA  
15370 FCC /EFGH'M'D'HIJKLM'D'/

4788 45  
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4B  
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44 15380 FCC /DEFGHIJ'M'I'H'F'/  
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44 15390 FCC /D'E'F'G'H'/  
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44 15400 FCC /E'F'G'M'DEFGHIJKLM'/  
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			15410		
			15420	*PRINT SYSTEM NAME	
			15430	*	
47C7	30	8D 0019	15440	PRNAME	LEAX
47CB	86	04	15450		LDA #4
47CD	17	F85C	15460		LBSR PRINT
47D0	17	0013	15470		LBSR GENAME
47D3	86	04	15480		LDA #4
47D5	17	F854	15490		LBSR PRINT
47D8	30	8D 0006	15500		LEAX CRLF,PCR
47DC	86	04	15510		LDA #4
47DE	17	F84B	15520		LBSR PRINT
47E1	39		15530		RTS
			15540		
47E2		0D00	15550	CRLF	FDB \$0D00
47E4		0000	15560	CLR	FDB \$0C00
			15570		
			15580	*GENERATE SYSTEM NAME	
			15590	*	
47E6	30	8D 000C	15600	GENAME	LEAX NAMES,PCR
47EA	96	BE	15610		LDA NODE
47EC	4A		15620	GENAM0	DECA
47ED	27	06	15630		BEQ GENAM2
47EF	E6	80	15640	GENAM1	LDB ,X+
47F1	26	FC	15650		BNE GENAM1
47F3	20	F7	15660		BRA GENAM0
47F5	39		15670	GENAM2	RTS
			15680		
47F6			15690	NAMES	
47F6		53	15700	FCC /SECURITY CONTROL/	
		45			
		43			
		55			
		52			
		49			
		54			
		59			
		43			
		46			
		4E			
		54			
		43			
		4F			
		4E			
		47			
4806		00	15710	FCB 0	
4807		53	15720	FCC /SATELLITE NAVIGATION/	
		41			
		54			
		45			
		4C			
		4C			
		49			
		54			
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		4E			
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		4F			
		4E			
481B		00	15730	FCB 0	
		15	15740	FCC /NETWORK CONTROL/	

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482B 00 15750 FCB 0  
482C 4C 15760 FCC /LOGIC CONTROL/  
4F  
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4E  
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4F  
4C  
4839 00 15770 FCB 0  
483A 4D 15780 FCC /MAINTENANCE CONTROL/  
41  
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4E  
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4E  
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4C  
484D 00 15790 FCB 0  
484E 41 15800 FCC /AUX MAINTENANCE CONTROL/  
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4E  
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4865 00 15810 FCB 0  
4866 41 15820 FCC /AUX POWER CONTROL/  
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4877 00 15830 FCB 0  
4878 41 15840 FCC /AUX SECURITY CONTROL/  
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488C 00 15850 FCB 0  
488D 41 15860 FCC /AUX SATELLITE COMMUNICATIONS/  
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48F9 00 15870 FCB 0  
48FA 41 15880 FCC /AUX SATELLITE NAVIGATION/  
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48C2 00 15890 FCB 0  
48C3 41 15900 FCC /AUX ENVIRONMENT CONTROL/  
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48DA 00 15910 FCB 0  
48DB 41 15920 FCC /AUX NETWORK CONTROL/  
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4936 00 16010 FCB 0  
4937 50 16020 FCC /POWER CONTROL/  
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4944 00 16030 FCB 0  
4945 53 16040 FCC /SATELLITE COMMUNICATIONS/  
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4950 00 16050 FCB 0  
495E 45 16060 FCC /ENVIRONMENT CONTROL/  
4E  
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4971 00 16070 FCB 0  
4972 4F 16080 FCC /OMNISTAR ACCESS COMPUTER/  
4D  
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498A 00 16090 FCB 0  
16100  
16110 \*DISPLAY SYSTEM MAP  
16120 \*  
498B 1A 10 16130 MAP ORCC #\$10  
498D B7 FFCD 16140 STA \$FFCD  
4990 B7 FFCB 16150 STA \$FFCB  
4993 1C EF 16160 ANDCC #\$EF  
4995 39 16170 RTS  
16180  
16190 \*DRAW LINES  
16200 \*LINE DATA  
4996 86 A4 16210 DRAW LDA ,Y  
4997 4D 0D 16220 STA BEE DRAW1  
4998 26 04 16230 LDAA BY ,YY  
4999 38 06 16240 LDAA BY DRAW  
5000 40 08 16250 LDAA BY  
5001 42 0A 16260 LDAA BY  
5002 44 0C 16270 LDAA BY  
5003 46 0E 16280 LDAA BY  
5004 48 0F 16290 LDAA BY  
5005 4A 10 16300 LDAA BY  
4984 35 20 16310 LDAA BY  
4986 20 DE 16320 LDAA BY  
4988 39 16330 XDRAW RTS  
16400  
4989 EC A1 16410 GETXY LDD ,Y++  
498B 39 16420 RTS  
16430  
498C 16440 LINES  
16450 \*INNER RING  
498C 00 16460 FCB 0  
498D 6E70 16470 FDB \$6E70  
498F 634F 16480 FDB \$634F  
49C1 7F3A 16490 FDB \$7F3A  
49C3 9C4E 16500 FDB \$9C4E  
49C5 9170 16510 FDB \$9170  
49C7 6E70 16520 FDB \$6E70  
16530 \*MIDDLE RING  
49C9 00 16540 FCB 0  
49CA BC6C 16550 FDB \$BC6C  
49CC 7F97 16560 FDB \$7F97  
49CE 426B 16570 FDB \$426B  
49D0 5A23 16580 FDB \$5A23  
49D2 0E22 16590 FDB \$A623

49D4		BC6C	16600	FDB	\$BC6C
			16610	*OUTER RING	
49D6	00		16620	FCB	0
49D7	DD76		16630	FDB	\$DD76
49D9	7FB9		16640	FDB	\$7FB9
49DB	2276		16650	FDB	\$2276
49D0	4608		16660	FDB	\$4608
49DF	B908		16670	FDB	\$B908
49E1	DD76		16680	FDB	\$DD76
			16690	*MIDDLE TO OUTER	
49E3	00		16700	FCB	0
49E4	BC6C		16710	FDB	\$BC6C
49E6	DD76		16720	FDB	\$DD76
49E8	00		16730	FCB	0
49E9	7F97		16740	FDB	\$7F97
49EB	7FB9		16750	FDB	\$7FB9
49ED	00		16760	FCB	0
49EE	426B		16770	FDB	\$426B
49F0	2276		16780	FDB	\$2276
49F2	00		16790	FCB	0
49F3	5A23		16800	FDB	\$5A23
49F5	4608		16810	FDB	\$4608
49F7	00		16820	FCB	0
49F8	A623		16830	FDB	\$A623
49FA	B908		16840	FDB	\$B908
			16850	*INNER TO MIDDLE	
49FC	00		16860	FCB	0
49FD	6E70		16870	FDB	\$6E70
49FF	6181		16880	FDB	\$6181
4A01	00		16890	FCB	0
4A02	634F		16900	FDB	\$634F
4A04	4E47		16910	FDB	\$4E47
4A06	00		16920	FCB	0
4A07	7F3A		16930	FDB	\$7F3A
4A09	7F23		16940	FDB	\$7F23
4A0B	00		16950	FCB	0
4A0C	9C4E		16960	FDB	\$9C4E
4A0E	B148		16970	FDB	\$B148
4A10	00		16980	FCB	0
4A11	9170		16990	FDB	\$9170
4A13	9D82		17000	FDB	\$9D82
			17010	*MASTER	
4A15	00		17020	FCB	0
4A16	7F3A		17030	FDB	\$7F3A
4A18	7F58		17040	FDB	\$7F58
			17050		
4A1A	0000		17060	FDB	0
4A1C	0000		17070	FDB	0
			17080		
			17090	*DRAW LINE	
			17100	*	CO-ORDS IN
			17110	*	X1,Y1,X2,Y2
			17120	*	
4A1E	32	75	17130	LINE	LEAS -11,S
4A20	6F	61	17140	CLR	1,S
4A22	6F	64	17150	CLR	4,S
4A24	86	01	17160	LDA	#1
4A26	A7	62	17170	STA	2,S
4A28	A7	63	17180	STA	3,S
4A2A	4F		17190	CLRA	
4A2B	D6	C0	17200	LDB	Y1
4A2D	ED	67	17210	STD	7,S
4A2F	D6	C2	17220	LDB	Y2
4A31	A3	67	17230	SUBD	7,S
4A33	ED	67	17240	STD	7,S
4A3E	4C		17250	CLRA	

4A36	D6	BF	17260	LDB	X1
4A38	ED	65	17270	STD	5,S
4A3A	D6	C1	17280	LDB	X2
4A3C	A3	65	17290	SUBD	5,S
4A3E	ED	65	17300	STD	5,S
4A40	2C	0A	17310	BGE	L6090
4A42	86	FF	17320	LDA	#255
4A44	A7	63	17330	STA	3,S
4A46	4F		17340	CLRA	
4A47	5F		17350	CLRB	
4A48	A3	65	17360	SUBD	5,S
4A4A	ED	65	17370	STD	5,S
4A4C	EC	67	17380	L6090	LDD
4A4E	2C	0A	17390	BGE	L6120
4A50	4F		17400	CLRA	
4A51	5F		17410	CLRB	
4A52	A3	67	17420	SUBD	7,S
4A54	ED	67	17430	STD	7,S
4A56	86	FF	17440	LDA	#255
4A58	A7	62	17450	STA	2,S
4A5A	EC	65	17460	L6120	LDD
4A5C	10A3	67	17470	CMPD	7,S
4A5F	2C	16	17480	BGE	L6200
4A61	AE	65	17490	LDX	5,S
4A63	10AE	67	17500	LDY	7,S
4A66	AF	67	17510	STX	7,S
4A68	10AF	65	17520	STY	5,S
4A6B	A6	63	17530	LDA	3,S
4A6D	A7	61	17540	STA	1,S
4A6F	6F	63	17550	CLR	3,S
4A71	A6	62	17560	LDA	2,S
4A73	A7	64	17570	STA	4,S
4A75	6F	62	17580	CLR	2,S
4A77	EC	65	17590	L6200	LDD
4A79	E7	E4	17600	STB	,S
4A7B	44		17610	LSRA	
4A7C	56		17620	RORB	
4A7D	ED	69	17630	STD	9,S
4A7F	96	C0	17640	LLOOP	LDA
4A81	96	BF	17650	LBSR	X4ET
4A83	96	BF	17660	LBSR	X5BNE
4A85	96	BF	17670	LBSR	X6T
4A87	ED	69	17680	LBSR	X7C
4A8E	ED	69	17690	STD	9,S
4AA0	EC	61	17700	LDD	1,S
4AA2	98	BF	17710	ADDA	X1
4AA4	DB	C0	17720	ADDB	Y1
4AA6	97	BF	17730	STA	X1
4AA8	D7	C0	17740	STB	Y1
4AAA	20	D3	17750	BRA	LLOOP
4AAC	32	6B	17760	LDONE	LEAS
4AAE	39		17770	RTS	
			17780		
			17790	*DRAW NODE ON MAP	
			17900	*	
4AAF	DC	BF	17910	SQUARE	LDD
4AB1	C0	02	17920	SUBB	#2
4AB3	D7	C0	17930	STB	Y1
4AB5	8B	02	17940	ADDA	#2
4AB7	DD	C1	17950	STD	X2
4AB9	17	FF62	17960	LBSR	LINE
4ABC	DC	BF	17970	LDD	X1
4ABE	CB	04	17980	ADDB	#4
4AC0	DD	C1	17990	STD	X2
4AC2	17	FF59	18000	LBSR	LINE
4ACE	DC	DE	18010	LDD	X1

4AC7	80	04	18020	S0BH	#4
4AC9	DD	C1	18030	STD	X2
4ACB	17	FF50	18040	LBSR	LINE
4ACE	DC	BF	18050	LD	X1
4AD0	C0	04	18060	SUBB	#4
4AD2	DD	C1	18070	STD	X2
4AD4	17	FF47	18080	LBSR	LINE
4AD7	DC	BF	18090	LD	X1
4AD9	8B	02	18100	ADDA	#2
4ADB	DD	C1	18110	STD	X2
4ADD	17	FF3E	18120	LBSR	LINE
4AE0	0C	C0	18130	INC	Y1
4AE2	0C	C0	18140	INC	Y1
4AE4	39		18150	RTS	
			18160		
			18170	*BUILD SYSTEM MAP	
			18180	*	
4AE5	CC	1C00	18190	BLDMAP	LD
4AE8	DD	C3	18200	STD	SCRN
4AEA	17	F185	18210	LBSR	PCLS
4AED	31	8D FECB	18220	LEAY	LINE,PCR
4AF1	17	FEA2	18230	LBSR	DRAW
4AF4	CC	0400	18240	LD	##400
4AF7	DD	C3	18250	STD	SCRN
4AF9	39		18260	RTS	
			18270		
4AFA			18280	ZPROG	
		3C00	18290	END	START

00000 TOTAL ERRORS

AGAIN	3C5C
ALPHA	3DD6
BAD	470C
BEEP	41C3
BITBL	3D3D
BLDMAP	4AE5
BUFFER	357A
BUFPTR	00C8
CENTER	42E7
CENTR1	42EE
CENTR2	42FA
CLR	47E4
COUNT	00CA
CR	3CA1
CRLF	47E2
CURCOL	00BA
CURROW	00B9
CURS	3D97
CURSOR	3D8C
DELAY	3FA4
DELL	45FD
DELL0	4601
DELL1	4608
DISP	43BD
DISPO	43CD
DONE	3D34
DONE0	3D2C
DRAW	4996
DRAW1	49A8
ENT	46D1
ENT0	46DD
ERAS0	3D51
ERAS1	3D80
ERAS2	3D82
FRASF	3D45

ERR	43E0
ERROR	4406
FULL	45B6
GENAM0	47EC
GENAM1	47EF
GENAM2	47F5
GENAME	47E6
GENKEY	4414
GENPTR	4176
GETXY	49B9
HLINE	417F
HLINE0	4181
HOOK	40BA
IDATA	4788
ININI0	476A
ININI1	4774
ININI2	4781
ININI3	4785
ININIT	475E
INSYS	469C
IRQ	3FAE
IRQ0	3FD1
IRQ1	3FFF
IRQ2	400C
IRQTIM	00BB
KEYIN	431B
KEYIN1	4324
KEYIN2	432D
KEYIN3	4349
KEYIN4	4352
KEYIN5	435A
KEYIN6	435C
L6090	4A4C
L6120	4A5A
L6200	4A77
LDONE	4BAC
LINE	4B1E
LINES	49B6
LISTQ	4479
LOOP	4B79
MAPS	4479
MEEPS	41FB
NAMES	47F6
NOBS	3CD6
NODE	00BE
NOPRG	45E6
NOSCRL	3CB2
NOTES	4229
NOTIN	4682
NWINS	00BD
OBJECT	00D0
OUT	3C91
OUT0	3CB3
OUT1	3CC8
OUT2	3CD7
OUT3	3CDF
OUT4	3CE7
OUTX	3C9B
PARSE	437E
PARSE0	4395
PARSE1	43A6
PARSE2	43AB
PCI5	3C72

PCLS1 3C7F  
PRINT 402C  
PRNAME 47C7  
PSCROL 3D9C  
PSET 41AC  
QUETBL 345A  
QUIT 3C6F  
RUN 4438  
S1 3F4E  
S2 3F52  
S3 3F73  
S4 3F77  
SAV 4614  
SAV0 4624  
SAV1 4633  
SAV2 4643  
SAVOK 4669  
SCRN 00C3  
SCROL0 3DAA  
SCROL1 3DC3  
SEARC0 4535  
SEARC1 453C  
SEARCH 4533  
SFULL 46B7  
SLIST 00D5  
SLISTS 35AD  
SQUARE 4AAF  
START 3C00  
TAB 3CB7  
TABLE 43F0  
TIMER 00B4  
TLIST 4722  
TONES 428B  
ULCOL 00B6  
ULIST 35A3  
ULROW 00B5  
VERB 00CB  
VLINE 418A  
VLINE0 4195  
W0 3D9F  
WBORDR 40F5  
WCENTR 40DE  
WCLEAR 429D  
WCLR1 42BD  
WCLR2 42D6  
WCLR3 42E0  
WDATA 40BD  
WINDOW 00BC  
WINIT 4043  
WINITO 4065  
WINIT2 40AD  
WINTBL 3400  
WORDS 44BE  
WSCROL 3F16  
X1 00BF  
X2 00C1  
XCENTR 4316  
XDELL 4613  
XDISP 43EF  
XDRAW 49B8  
XERAS 3D7B  
XIRQ 402B  
XIRQ0 401D  
XIRQ2 4016  
XKEYIN 437A  
XLIST 44AD  
XLIST1 449E

XMSG 3F8B  
XOUT 3D3C  
XPARSE 43BC  
XWINIT 40A4  
XXWINI 40B7  
Y1 00C0  
Y2 00C2  
ZPROG 4AFA