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SOURCE FILE: TONEGEN.SC0
SOURCE FILE: TONEGEN.SC1
0000:      1 ; MOCKINGBOARD MIDI TONE GENERATOR FROM THE 1990'S
0000:      2 ; SOURCE RECONSTRUCTED FROM MACHINE CODE IN 2022
0000:      3 ;
0000:      4 ; SLOT DEPENDENT ADDRESSES
C0A8:      5 PPMIDICR EQU $C0A8      ;PASSPORT MIDI IN SLOT 2
C0A9:      6 PPMIDIDR EQU $C0A9
C400:      7 MOCKBASE EQU $C400      ;MOCKINGBOARD IN SLOT 4
0000:      8 ;
0000:      9 ; APPLE ADDRESSES
C000:     10 APPLEKBD EQU $C000
C010:     11 KBDSTROB EQU $C010
FCA8:     12 MONWAIT      EQU      $FCA8
0000:     13 ;
0000:     14 ; DATA SECTIONS TO BE LOADED FROM BASIC
0D00:     15 MIDISCRL EQU $0D00      ;SCREEN ADDRESS LO OF EACH MIDI NOTE N
UMBER
0D80:     16 MIDISCRH EQU $0D80      ;SCREEN ADDRESS HI OF EACH MIDI NOTE N
UMBER
0E00:     17 NUMDBYTS EQU $0E00      ;NUMBER OF DATA BYTES PER MIDI STATUS
MESSAGE ($980-$9FF)
0E80:     18 MOUSETXT EQU $0E80      ;MOUSETXT CHARACTER FOR EACH MIDI NOTE
(00-7F)
0F00:     19 MIDMOCKL EQU $0F00      ;LO BYTES FOR MKB TUNINGS BY MIDI NOTE
#
0F80:     20 MIDMOCKH EQU $0F80      ;HI BYTES FOR MKB TUNINGS BY MIDI NOTE
#
0000:     21 ;
0000:     22 ; ZERO PAGE USAGE
0000:     23 ZPTEXTL      EQU      $00      ;USED FOR POKING TEXT SCREEN
0001:     24 ZPTEXTH      EQU      $01
0006:     25 SONGL        EQU $06      ;POINT TO START O
F SONG SEQUENCE (MFF0 TRACK)
0007:     26 SONGH        EQU $07
0008:     27 SONGENDL EQU $08      ;POINT TO END OF SONG SEQU
ENCE
0009:     28 SONGENDH EQU $09
00FA:     29 MIDISTSB EQU $FA      ;CURRENT MIDI STATUS BYTE
00FB:     30 SONGBYTL EQU $FB      ;SONG POINTER
00FC:     31 SONGBYTH EQU $FC
00FD:     32 DELTAL      EQU $FD      ;DELTA TIME COUNT E
R
00FE:     33 DELTAH      EQU $FE
00FF:     34 SPEED      EQU $FF      ;CONTROLS SPEED O
F MIDI PLAYBACK
0000:     35 ;
0008:     36 KEYCTRLH EQU $08      ;LEFT ARROW MAKES SONG PLA
Y FASTER
0015:     37 KEYCTRLU EQU $15      ;RIGHT ARROW MAKES SONG PL
AY SLOWER
0000:     38 ;
----- NEXT OBJECT FILE NAME IS TONEGEN.OBJ
0900:     39      ORG $0900      ;ALLOWS SMAL
L BASIC PROGRAM AT $0800
0900:     40 ;
0900:4C 98 0B 41      JMP TONEGEN      ;PLAY MIDI I
N ON MOCKINGBOARD WITH PIANO DISPLAY
0903:4C E4 09 42      JMP PLAYSONG      ;PLAY MIDI S
EQUENCE (6,7) THRU (8,9)
0906:4C 2D 09 43      JMP INITPSPT      ;INIT PASSPO
RT CARD
0909:4C 60 09 44      JMP INITMOCK      ;INIT MOCKIN
GBOARD

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090C:4C 41 09	45			JMP TESTMIDI		;TEST SENDIN
G ONE BYTE THRU MIDI OUT ROUTINE						
090F:4C A5 09	46			JMP MOCKPOKE		;TEST POKING
ONE MOCKINGBOARD REGISTER						
0912:4C D2 09	47			JMP PANIC		;TURN ALL SO
UNDS OFF						
0915:	48					
0915:00	49	INBYTE		DFB \$00		;MIDI BYTE TO SEND
0916:01	50	PIANOON	DFB	\$01		;SET TO 0 TO TURN OFF
TEXT PIANO DISPLAY						
0917:00	51	SPEAKER	DFB	\$00		;MOCKINGBOARD SPEAKER:
0=LEFT, \$80=RIGHT						
0918:00	52	MOCKREG	DFB	\$00		;MOCKINGBOARD REGISTER
: 0-13						
0919:00	53	MOCKBYTE	DFB	\$00		;BYTE TO POKE IN MOCKINGBO
ARD REGISTER						
091A:5D	54	BRITISH	DFB	\$5D		;MOUSETEXT CHARACTER F
OR NOTE ON						
091B:00	55	PHASE		DFB \$00		
091C:00	56	DATA1		DFB \$00		
091D:00	57	DATA2		DFB \$00		
091E:00	58	XSAVE		DFB \$00		
091F:00	59	YSAVE		DFB \$00		
0920:00	60	TEXTL		DFB \$00		
0921:00	61	TEXTH		DFB \$00		
0922:00	62	TEXTNOTE	DFB	\$00		
0923:0F	63	MAXVOL		DFB \$0F		
0924:00	64	VOICENUM	DFB	\$00		
0925:00	65	NOTESAVE	DFB	\$00		
0926:00	66	VELSAVE	DFB	\$00		
0927:00 00 00	67	VOICEVOL	DFB	\$00,\$00,\$00,\$00,\$00,\$00		
092A:00 00 00						
092D:	68					
092D:A9 13	69	INITPSPT	LDA	#\$13		
092F:8D A8 C0	70			STA	PPMIDICR	
0932:A9 11	71			LDA	#\$11	
0934:8D A8 C0	72			STA	PPMIDICR	
0937:60	73			RTS		
0938:	74					
0938:8D 15 09	75	MIDIOUT	STA	INBYTE		
093B:8E 1E 09	76			STX	XSAVE	
093E:8C 1F 09	77			STY	YSAVE	
0941:AD 15 09	78	TESTMIDI	LDA	INBYTE		
0944:8D A9 C0	79			STA	PPMIDIDR	
0947:AD A8 C0	80	MOUTTDRE	LDA	PPMIDICR		
094A:29 02	81			AND	#\$02	
094C:F0 F9	82			BEQ	MOUTTDRE	
094E:AD 16 09	83			LDA	PIANOON	
0951:F0 03	84			BEQ	MIDIOEX	
0953:20 03 0B	85			JSR	PHASPRCS	
0956:AD 15 09	86	MIDIOEX	LDA	INBYTE		
0959:AE 1E 09	87			LDX	XSAVE	
095C:AC 1F 09	88			LDY	YSAVE	
095F:60	89			RTS		
0960:	90					
0960:A9 FF	91	INITMOCK	LDA	#\$FF		;SEE MOCKINGBOARD MANUA
L FOR PRIMARY ROUTINES						
0962:8D 03 C4	92			STA	MOCKBASE+\$03	
0965:8D 83 C4	93			STA	MOCKBASE+\$83	
0968:A9 07	94			LDA	#\$07	
096A:8D 02 C4	95			STA	MOCKBASE+\$02	
096D:8D 82 C4	96			STA	MOCKBASE+\$82	
0970:A9 00	97			LDA	#\$00	;RESET
0972:8D 00 C4	98			STA	MOCKBASE	
0975:8D 80 C4	99			STA	MOCKBASE+\$80	
0978:A9 04	100			LDA	#\$04	

097A:8D	00	C4	101		STA	MOCKBASE	
097D:8D	80	C4	102		STA	MOCKBASE+\$80	
0980:A9	00		103		LDA	#\$00	
0982:8D	17	09	104		STA	SPEAKER	
0985:A9	07		105		LDA	#\$07	;ENABLE TONE
ON ALL 3 CHANNELS							
0987:8D	18	09	106		STA	MOCKREG	
098A:A9	38		107		LDA	#\$38	
098C:8D	19	09	108		STA	MOCKBYTE	
098F:20	A5	09	109		JSR	MOCKPOKE	
0992:A9	80		110		LDA	#\$80	;SAME ON RIG
HT SPEAKER							
0994:8D	17	09	111		STA	SPEAKER	
0997:20	A5	09	112		JSR	MOCKPOKE	
099A:A2	06		113		LDX	#\$06	;RESET SILEN
CED ALL CHANNELS, SO ZERO OUT							
099C:A9	00		114		LDA	#\$00	;OUR TRACKIN
G FOR VOLUME OF EACH CHANNEL							
099E:9D	26	09	115	PLUGVOL	STA	VOICEVOL-1,X	
09A1:CA			116		DEX		
09A2:D0	FA		117		BNE	PLUGVOL	
09A4:60			118		RTS		
09A5:			119				
09A5:AD	17	09	120	MOCKPOKE	LDA	SPEAKER	
09A8:29	80		121		AND	#\$80	
09AA:A8			122		TAY		
09AB:AD	18	09	123		LDA	MOCKREG	
09AE:29	0F		124		AND	#\$0F	
09B0:C8			125		INY		
09B1:99	00	C4	126		STA	MOCKBASE,Y	
09B4:88			127		DEY		
09B5:A9	07		128		LDA	#\$07	;LATCH
09B7:99	00	C4	129		STA	MOCKBASE,Y	
09BA:A9	04		130		LDA	#\$04	
09BC:99	00	C4	131		STA	MOCKBASE,Y	
09BF:AD	19	09	132		LDA	MOCKBYTE	
09C2:C8			133		INY		
09C3:99	00	C4	134		STA	MOCKBASE,Y	
09C6:88			135		DEY		
09C7:A9	06		136		LDA	#\$06	;WRITE
09C9:99	00	C4	137		STA	MOCKBASE,Y	
09CC:A9	04		138		LDA	#\$04	
09CE:99	00	C4	139		STA	MOCKBASE,Y	
09D1:60			140		RTS		
09D2:			141				
09D2:A9	B0		142	PANIC	LDA	#\$B0	;MIDI MESSAGE: AL
L NOTES OFF							
09D4:20	38	09	143		JSR	MIDIOUT	
09D7:A9	7D		144		LDA	#\$7D	
09D9:20	38	09	145		JSR	MIDIOUT	
09DC:A9	00		146		LDA	#\$00	
09DE:20	38	09	147		JSR	MIDIOUT	
09E1:4C	60	09	148		JMP	INITMOCK	
09E4:			149				
09E4:			150				
CHN TONEGEN.SC1							
09E4:	1				; MOCKINGBOARD MIDI TONE GENERATOR FROM THE 1990'S - SOURCE 1		
09E4:	2				; SOURCE RECONSTRUCTED FROM MACHINE CODE IN 2022		
09E4:	3				;		
09E4:20	2D	09	4	PLAYSONG	JSR	INITPSPT	
09E7:A5	06		5	SONGPLAY	LDA	SONGL	
09E9:85	FB		6		STA	SONGBYTL	
09EB:A5	07		7		LDA	SONGH	
09ED:85	FC		8		STA	SONGBYTH	
09EF:A0	00		9	TOPLOOP	LDY	#\$00	
09F1:84	FD		10		STY	DELTAL	
09F3:84	FE		11		STY	DELTAH	

09F5:B1	FB	12		LDA	(SONGBYTL),Y	
09F7:85	FD	13		STA	DELTAL	
09F9:10	16	14		BPL	ENDDELTA	;DELTA TIME
HAS HI BIT SET UNTIL LAST BYTE						
09FB:29	7F	15		AND	#\$7F	;IF HI BIT S
ET, REMOVE HIGH BIT AND SHIFT RIGHT						
09FD:4A		16		LSR	A	;THIS PUTS T
HE LOW BIT INTO THE CARRY						
09FE:85	FE	17		STA	DELTAH	
0A00:A9	00	18		LDA	#\$00	;ROTATE CARR
Y INTO HI BIT OF LOW BYTE						
0A02:6A		19		ROR	A	
0A03:A0	01	20		LDY	#\$01	
0A05:11	FB	21		ORA	(SONGBYTL),Y	
0A07:85	FD	22		STA	DELTAL	;DELTA TIME
NOW HAS CORRECT COUNTER						
0A09:A0	00	23		LDY	#\$00	
0A0B:E6	FB	24		INC	SONGBYTL	
0A0D:D0	02	25		BNE	ENDDELTA	
0A0F:E6	FC	26		INC	SONGBYTH	
0A11:E6	FB	27	ENDDELTA INC	SONGBYTL		
0A13:D0	02	28		BNE	WAITDLTA	
0A15:E6	FC	29		INC	SONGBYTH	;NOW POINTIN
G AT A MIDI MESSAGE						
0A17:A6	FD	30	WAITDLTA LDX	DELTAL		
0A19:F0	0A	31		BEQ	CHKDLTAH	;CHECK IF DE
LTA TIME = 0						
0A1B:C6	FD	32		DEC	DELTAL	
0A1D:A5	FF	33		LDA	SPEED	
0A1F:20	A8 FC	34		JSR	MONWAIT	;APPLE DELAY
UNTIL DELTA TIME = 0						
0A22:B8		35		CLV		
0A23:50	F2	36		BVC	WAITDLTA	
0A25:		37	;			
0A25:A6	FE	38	CHKDLTAH LDX	DELTAH		
0A27:F0	0C	39		BEQ	DELTZERO	
0A29:C6	FE	40		DEC	DELTAH	
0A2B:A5	FF	41		LDA	SPEED	
0A2D:20	A8 FC	42		JSR	MONWAIT	
0A30:C6	FD	43		DEC	DELTAL	
0A32:B8		44		CLV		
0A33:50	E2	45		BVC	WAITDLTA	
0A35:		46	;			
0A35:A0	00	47	DELTZERO LDY	#\$00		
0A37:B1	FB	48		LDA	(SONGBYTL),Y	
0A39:10	03	49		BPL	RUNNING	
0A3B:85	FA	50		STA	MIDISTSB	
0A3D:C8		51		INY		
0A3E:B8		52	RUNNING	CLV		
0A3F:50	4D	53		BVC	MIDIMSG	
0A41:		54	;			
0A41:20	38 09	55	L0864	JSR	MIDIOUT	
0A44:B1	FB	56		LDA	(SONGBYTL),Y	
0A46:20	38 09	57	L086A	JSR	MIDIOUT	
0A49:C8		58		INY		
0A4A:B1	FB	59		LDA	(SONGBYTL),Y	
0A4C:20	38 09	60		JSR	MIDIOUT	
0A4F:C8		61		INY		
0A50:18		62	L0874	CLC		
0A51:98		63		TYA		
0A52:65	FB	64		ADC	SONGBYTL	
0A54:85	FB	65		STA	SONGBYTL	
0A56:A5	FC	66		LDA	SONGBYTH	
0A58:69	00	67		ADC	#\$00	
0A5A:85	FC	68		STA	SONGBYTH	
0A5C:AD	00 C0	69	L0880	LDA	APPLEKBD	

0A5F:10	06	70			BPL	LOOPBACK	
0A61:AD	10 C0	71			LDA	KBDSTROB	
0A64:4C	E9 0A	72			JMP	KEYPRESS	
0A67:		73					
0A67:A5	FC	74	LOOPBACK	LDA	SONGBYTH		
0A69:C5	09	75			CMP	SONGENDH	
0A6B:B0	03	76			BCS	CHKLOWB	
0A6D:4C	EF 09	77	BOOST		JMP	TOPLOOP	
0A70:A5	FB	78	CHKLOWB	LDA	SONGBYTL		
0A72:C5	08	79			CMP	SONGENDL	
0A74:90	F7	80			BCC	BOOST	
0A76:4C	D2 09	81	L08C0		JMP	PANIC	;END OF SONG - ST
OP ALL SOUNDS							
0A79:		82					
0A79:20	38 09	83	L08C3		JSR	MIDIOUT	
0A7C:20	03 0B	84			JSR	PHASPRCS	
0A7F:60		85			RTS		
0A80:		86					
0A80:60		87	L08CA		RTS		
0A81:		88					
0A81:50	D9	89	L08CE		BVC	L0880	
0A83:		90					
0A83:50	CB	91	ZEROBYTES	BVC	L0874		
0A85:		92					
0A85:A5	FA	93	ONEBYTE	LDA	MIDISTSB		
0A87:88		94			DEY		
0A88:50	BC	95			BVC	L086A	
0A8A:		96					
0A8A:A5	FA	97	TWOBYTES	LDA	MIDISTSB		
0A8C:50	B3	98			BVC	L0864	
0A8E:		99					
0A8E:A6	FA	100	MIDIMSG	LDX	MIDISTSB		
0A90:BD	00 0E	101			LDA	NUMDBYTS,X	
0A93:C9	03	102			CMP	#\$03	
0A95:B0	0A	103			BCS	SKIPMSG	
0A97:C9	00	104			CMP	#\$00	
0A99:F0	E8	105			BEQ	ZEROBYTES	
0A9B:C9	01	106			CMP	#\$01	
0A9D:F0	E6	107			BEQ	ONEBYTE	
0A9F:D0	E9	108			BNE	TWOBYTES	
0AA1:		109					
0AA1:C9	FF	110	SKIPMSG	CMP	#\$FF		
0AA3:D0	DE	111			BNE	ZEROBYTES	
0AA5:A5	FA	112			LDA	MIDISTSB	
0AA7:C9	F0	113			CMP	#\$F0	
0AA9:D0	15	114			BNE	L0918	
0AAB:20	76 0A	115	L0902		JSR	L08C0	
0AAE:A0	00	116			LDY	#\$00	
0AB0:E6	FB	117			INC	SONGBYTL	
0AB2:D0	02	118			BNE	L090D	
0AB4:E6	FC	119			INC	SONGBYTH	
0AB6:B1	FB	120	L090D		LDA	(SONGBYTL),Y	
0AB8:C9	F7	121			CMP	#\$F7	;END OF SYST
EM EXCLUSIVE							
0ABA:D0	EF	122			BNE	L0902	
0ABC:A0	01	123			LDY	#\$01	
0ABE:D0	C3	124			BNE	ZEROBYTES	;ALWAYS TAKE
N							
0AC0:		125					
0AC0:C9	FF	126	L0918		CMP	#\$FF	
0AC2:D0	BF	127			BNE	ZEROBYTES	;REALTIME ME
SSAGE, NOT META MESSAGE							
0AC4:E6	FB	128			INC	SONGBYTL	
0AC6:D0	02	129			BNE	L0922	
0AC8:E6	FC	130			INC	SONGBYTH	
0ACA:A0	00	131	L0922		LDY	#\$00	

0ACC:B1 FB	132			LDA	(SONGBYTL),Y	
0ACE:C9 2F	133			CMP	#\$2F	;END OF TRAC
K META MESSAGE FF 2F 00						
0AD0:D0 01	134			BNE	L092B	
0AD2:60	135			RTS		
0AD3:	136					
0AD3:E6 FB	137	L092B		INC	SONGBYTL	
0AD5:D0 02	138			BNE	L0931	
0AD7:E6 FC	139			INC	SONGBYTH	
0AD9:B1 FB	140	L0931		LDA	(SONGBYTL),Y	;GET META MSG LEN
AND SKIP OVER IT						
0ADB:38	141			SEC		
0ADC:65 FB	142			ADC	SONGBYTL	
0ADE:85 FB	143			STA	SONGBYTL	
0AE0:A9 00	144			LDA	#\$00	
0AE2:65 FC	145			ADC	SONGBYTH	
0AE4:85 FC	146			STA	SONGBYTH	
0AE6:B8	147			CLV		
0AE7:50 98	148			BVC	L08CE	
0AE9:	149					
0AE9:29 7F	150	KEYPRESS AND		#\$7F		
0AEB:C9 08	151			CMP	#KEYCTRLH	
0AED:D0 05	152			BNE	L094D	
0AEF:C6 FF	153			DEC	SPEED	
0AF1:4C 67 0A	154			JMP	LOOPBACK	
0AF4:C9 15	155	L094D		CMP	#KEYCTRLU	
0AF6:D0 05	156			BNE	L0956	
0AF8:E6 FF	157			INC	SPEED	
0AFA:4C 67 0A	158			JMP	LOOPBACK	
0AFD:4C D2 09	159	L0956		JMP	PANIC	;ANY OTHER KEY ST
OPS SOUND AND EXITS						
0B00:	160					
0B00:8D 15 09	161	PHASCHK	STA	INBYTE		
0B03:AD 1B 09	162	PHASPRCS	LDA	PHASE		
0B06:D0 2A	163			BNE	PHNOT00	
0B08:AD 15 09	164			LDA	INBYTE	
0B0B:29 F0	165			AND	#\$F0	
0B0D:C9 90	166			CMP	#\$90	
0B0F:D0 0E	167			BNE	NOTNOTE	
0B11:A9 01	168			LDA	#\$01	
0B13:8D 1B 09	169			STA	PHASE	
0B16:A9 00	170			LDA	#\$00	
0B18:8D 1C 09	171			STA	DATA1	
0B1B:8D 1D 09	172			STA	DATA2	
0B1E:60	173			RTS		
0B1F:	174					
0B1F:C9 80	175	NOTNOTE	CMP	#\$80		
0B21:F0 01	176			BEQ	L0B35	
0B23:60	177			RTS		
0B24:	178					
0B24:A9 01	179	L0B35		LDA	#\$01	
0B26:8D 1B 09	180			STA	PHASE	
0B29:8D 1D 09	181			STA	DATA2	;IS THIS A B
UG?						
0B2C:A9 00	182			LDA	#\$00	
0B2E:8D 1C 09	183			STA	DATA1	
0B31:60	184			RTS		
0B32:	185					
0B32:AD 1C 09	186	PHNOT00	LDA	DATA1		
0B35:D0 1B	187			BNE	L0B64	
0B37:AE 15 09	188			LDX	INBYTE	
0B3A:BD 00 0D	189			LDA	MIDISCRL,X	
0B3D:8D 20 09	190			STA	TEXTL	
0B40:BD 80 0D	191			LDA	MIDISCRH,X	
0B43:8D 21 09	192			STA	TEXTH	
0B46:A9 01	193			LDA	#\$01	

0B48:8D	1B	09	194		STA	PHASE
0B4B:8D	1C	09	195		STA	DATA1
0B4E:8E	22	09	196		STX	TEXTNOTE
0B51:60			197		RTS	
0B52:			198			
0B52:AD	1D	09	199	L0B64	LDA	DATA2
0B55:F0	17		200		BEQ	NOTEDOWN
0B57:AD	20	09	201	L0B69	LDA	TEXTL
0B5A:85	00		202		STA	ZPTEXTL
0B5C:AD	21	09	203		LDA	TEXTH
0B5F:85	01		204		STA	ZPTEXTH
0B61:AE	22	09	205		LDX	TEXTNOTE
0B64:BD	80	0E	206		LDA	MOUSETXT,X
0B67:20	8E	0B	207		JSR	POKETEXT
0B6A:20	30	0C	208		JSR	FINDVOIC
0B6D:60			209		RTS	
0B6E:			210			
0B6E:AD	15	09	211	NOTEDOWN	LDA	
0B71:F0	E4		212		INBYTE	
0B73:AD	20	09	213		BEQ	L0B69
0B76:85	00		214		LDA	TEXTL
0B78:AD	21	09	215		STA	ZPTEXTL
0B7B:85	01		216		LDA	TEXTH
0B7D:A0	00		217		STA	ZPTEXTH
0B7F:B1	00		218		LDY	#\$00
0B81:AE	22	09	219		LDA	(ZPTEXTL),Y
0B84:AD	1A	09	220		LDX	TEXTNOTE
0B87:20	8E	0B	221		LDA	BRITISH
0B8A:20	0B	0C	222		JSR	POKETEXT
0B8D:60			223		JSR	PRCSVOIC
0B8E:			224		RTS	
0B8E:A0	00		225	POKETEXT	LDY	
0B90:91	00		226		#\$00	
0B92:A9	00		227		STA	(ZPTEXTL),Y
0B94:8D	1B	09	228		LDA	#\$00
0B97:60			229		STA	PHASE
0B98:			230		RTS	
0B98:20	2D	09	231	TONEGEN	JSR	
0B9B:20	60	09	232		INITPSPT	
0B9E:AD	A8	C0	233	MIDIIN	JSR	INITMOCK
0BA1:29	01		234		LDA	PPMIDICR
0BA3:F0	F9		235		AND	#\$01
0BA5:AD	A9	C0	236		BEQ	MIDIIN
0BA8:20	00	0B	237		LDA	PPMIDIDR
0BAB:AD	00	C0	238		JSR	PHASCHK
0BAE:10	EE		239		LDA	APPLEKBD
0BB0:AD	10	C0	240		BPL	MIDIIN
0BB3:60			241		LDA	KBDSTROB
0BB4:			242		RTS	
0BB4:A0	00		243	LOOKVOIC	LDY	
0BB6:8C	17	09	244		#\$00	
0BB9:AD	24	09	245		STY	SPEAKER
0BBC:29	07		246		LDA	VOICENUM
0BBE:C9	06		247		AND	#\$07
0BC0:90	01		248		CMP	#\$06
0BC2:60			249		BCC	GOODVOIC
0BC3:C9	03		250	GOODVOIC	CMP	
0BC5:90	08		251		#\$03	
0BC7:38			252		BCC	VOICADRS
0BC8:E9	03		253		SEC	
0BCA:A0	80		254		SBC	#\$03
0BCC:8C	17	09	255		LDY	#\$80
0BCF:0A			256	VOICADRS	STY	SPEAKER
0BD0:8D	18	09	257		A	;REGISTER 0, 2, OR 4
0BD3:AE	25	09	258		STA	MOCKREG
0BD6:BD	00	0F	259		LDX	NOTESAVE
					LDA	MIDMOCKL,X

0BD9:8D	19	09	260		STA	MOCKBYTE	
0BDC:20	A5	09	261		JSR	MOCKPOKE	
0BDF:AD	18	09	262		LDA	MOCKREG	
0BE2:18			263		CLC		
0BE3:69	01		264		ADC	#\$01	;REGISTER 1,
3, OR 5							
0BE5:8D	18	09	265		STA	MOCKREG	
0BE8:AE	25	09	266		LDX	NOTESAVE	
0BEB:BD	80	0F	267		LDA	MIDMOCKH,X	
0BEE:8D	19	09	268		STA	MOCKBYTE	
0BF1:20	A5	09	269		JSR	MOCKPOKE	
0BF4:AD	18	09	270		LDA	MOCKREG	
0BF7:38			271		SEC		
0BF8:E9	01		272		SBC	#\$01	
0BFA:4A			273		LSR	A	
0BFB:18			274		CLC		
0BFC:69	08		275		ADC	#\$08	;REGISTER 8,
9, OR A							
0BFE:8D	18	09	276		STA	MOCKREG	
0C01:AD	26	09	277		LDA	VELSAVE	
0C04:8D	19	09	278		STA	MOCKBYTE	
0C07:20	A5	09	279		JSR	MOCKPOKE	
0C0A:60			280		RTS		
0C0B:			281				
0C0B:A2	01		282	PRCSVOIC	LDX	#\$01	
0C0D:BD	26	09	283	CHKVOICE	LDA	VOICEVOL-1,X	
0C10:10	03		284		BPL	CHKTEXT	
0C12:4C	52	0C	285		JMP	NEXTVOIC	
0C15:			286				
0C15:AD	22	09	287	CHKTEXT	LDA	TEXTNOTE	
0C18:F0	15		288		BEQ	TEXTEXIT	
0C1A:8D	25	09	289		STA	NOTESAVE	
0C1D:09	80		290		ORA	#\$80	;SIGNAL NOTE
IS ON							
0C1F:9D	26	09	291		STA	VELSAVE,X	
0C22:CA			292		DEX		
0C23:8E	24	09	293		STX	VOICENUM	
0C26:AD	23	09	294		LDA	MAXVOL	
0C29:8D	26	09	295		STA	VELSAVE	
0C2C:20	B4	0B	296		JSR	LOOKVOIC	
0C2F:60			297	TEXTEXIT	RTS		
0C30:			298				
0C30:A2	06		299	FINDVOIC	LDX	#\$06	
0C32:BD	26	09	300	FINDVLOO	LDA	VOICEVOL-1,X	
0C35:29	7F		301		AND	#\$7F	
0C37:CD	22	09	302		CMP	TEXTNOTE	
0C3A:F0	04		303		BEQ	FNDVOICE	
0C3C:CA			304		DEX		
0C3D:D0	F3		305		BNE	FINDVLOO	
0C3F:60			306		RTS		
0C40:			307				
0C40:A9	00		308	FNDVOICE	LDA	#\$00	
0C42:9D	26	09	309		STA	VOICEVOL-1,X	
0C45:CA			310		DEX		
0C46:8E	24	09	311		STX	VOICENUM	
0C49:A9	00		312		LDA	#\$00	
0C4B:8D	26	09	313		STA	VELSAVE	
0C4E:20	B4	0B	314		JSR	LOOKVOIC	
0C51:60			315		RTS		
0C52:			316				
0C52:E8			317	NEXTVOIC	INX		
0C53:E0	07		318		CPX	#\$07	
0C55:D0	B6		319		BNE	CHKVOICE	
0C57:60			320		RTS		
0C58:			321				

*** SUCCESSFUL ASSEMBLY: NO ERRORS

C000	APPLEKBD	0A6D	BOOST	091A	BRITISH	0A25	CHKDLTAH
0A70	CHKLOWB	0C15	CHKTEXT	0C0D	CHKVOICE	091C	DATA1
091D	DATA2	FE	DELTAH	FD	DELTAL	0A35	DELTZERO
0A11	ENDDELTA	0C32	FINDVLOO	0C30	FINDVOIC	0C40	FNDVOICE
0BC3	GOODVOIC	0915	INBYTE	0960	INITMOCK	092D	INITPSPT
C010	KBDSTROB	08	KEYCTRLH	15	KEYCTRLU	0AE9	KEYPRESS
0A41	L0864	0A46	L086A	0A50	L0874	0A5C	L0880
0A76	L08C0	?0A79	L08C3	?0A80	L08CA	0A81	L08CE
0AAB	L0902	0AB6	L090D	0AC0	L0918	0ACA	L0922
0AD3	L092B	0AD9	L0931	0AF4	L094D	0AFD	L0956
0B24	L0B35	0B52	L0B64	0B57	L0B69	0BB4	LOOKVOIC
0A67	LOOPBACK	0923	MAXVOL	0B9E	MIDIIN	0A8E	MIDIMSG
0956	MIDIOEX	0938	MIDIOUT	0D80	MIDISCRH	0D00	MIDISCRL
FA	MIDISTSB	0F80	MIDMOCKH	0F00	MIDMOCKL	C400	MOCKBASE
0919	MOCKBYTE	09A5	MOCKPOKE	0918	MOCKREG	FCA8	MONWAIT
0E80	MOUSETXT	0947	MOUTTDRE	0C52	NEXTVOIC	0B6E	NOTEDOWN
0925	NOTESAVE	0B1F	NOTNOTE	0E00	NUMDBYTS	0A85	ONEBYTE
09D2	PANIC	0B00	PHASCHK	091B	PHASE	0B03	PHASPRCS
0B32	PHNOT00	0916	PIANOON	09E4	PLAYSONG	099E	PLUGVOL
0B8E	POKETEXT	C0A8	PPMIDICR	C0A9	PPMIDIDR	0C0B	PRCSVOIC
0A3E	RUNNING	0AA1	SKIPMSG	FC	SONGBYTH	FB	SONGBYTL
09	SONGENDH	08	SONGENDL	07	SONGH	06	SONGL
?09E7	SONGPLAY	0917	SPEAKER	FF	SPEED	0941	TESTMIDI
0C2F	TEXTEXIT	0921	TEXTH	0920	TEXTL	0922	TEXTNOTE
0B98	TONEGEN	09EF	TOPLOOP	0A8A	TWOBYTES	0926	VELSAVE
0BCF	VOICADRS	0924	VOICENUM	0927	VOICEVOL	0A17	WAITDLTA
091E	XSAVE	091F	YSAVE	0A83	ZEROBYTS	01	ZPTEXTH
00	ZPTEXTL						

07 SONGH	00 ZPTEXTL	01 ZPTEXTH	06 SONGL
08 KEYCTRLH	08 SONGENDL	09 SONGENDH	15 KEYCTRLU
FA MIDISTSB	FB SONGBYTL	FC SONGBYTH	FD DELTAL
FE DELTAH	FF SPEED	0915 INBYTE	0916 PIANOON
0917 SPEAKER	0918 MOCKREG	0919 MOCKBYTE	091A BRITISH
091B PHASE	091C DATA1	091D DATA2	091E XSAVE
091F YSAVE	0920 TEXTL	0921 TEXTH	0922 TEXTNOTE
0923 MAXVOL	0924 VOICENUM	0925 NOTESAVE	0926 VELSAVE
0927 VOICEVOL	092D INITPSPT	0938 MIDIOUT	0941 TESTMIDI
0947 MOUTTDRE	0956 MIDIOEX	0960 INITMOCK	099E PLUGVOL
09A5 MOCKPOKE	09D2 PANIC	09E4 PLAYSONG	?09E7 SONGPLAY
09EF TOPLOOP	0A11 ENDDDELTA	0A17 WAITDLTA	0A25 CHKDLTAH
0A35 DELTZERO	0A3E RUNNING	0A41 L0864	0A46 L086A
0A50 L0874	0A5C L0880	0A67 LOOPBACK	0A6D BOOST
0A70 CHKLOWB	0A76 L08C0	?0A79 L08C3	?0A80 L08CA
0A81 L08CE	0A83 ZEROBYTES	0A85 ONEBYTE	0A8A TWOBYTES
0A8E MIDIMSG	0AA1 SKIPMSG	0AAB L0902	0AB6 L090D
0AC0 L0918	0ACA L0922	0AD3 L092B	0AD9 L0931
0AE9 KEYPRESS	0AF4 L094D	0AFD L0956	0B00 PHASCHK
0B03 PHASPRCS	0B1F NOTNOTE	0B24 L0B35	0B32 PHNOT00
0B52 L0B64	0B57 L0B69	0B6E NOTEDOWN	0B8E POKETEXT
0B98 TONEGEN	0B9E MIDIIN	0BB4 LOOKVOIC	0BC3 GOODVOIC
0BCF VOICADRS	0C0B PRCSVOIC	0C0D CHKVOICE	0C15 CHKTEXT
0C2F TEXTEXIT	0C30 FINDVOIC	0C32 FINDVLOO	0C40 FNDVOICE
0C52 NEXTVOIC	0D00 MIDISCRL	0D80 MIDISCRH	0E00 NUMDBYTS
0E80 MOUSETXT	0F00 MIDMOCKL	0F80 MIDMOCKH	C000 APPLEKBD
C010 KBDSTROB	C0A8 PPMIDICR	C0A9 PPMIDIDR	C400 MOCKBASE
FCA8 MONWAIT			

