```
SOURCE FILE: PHSRMIDI.SC0
SOURCE FILE: PHSRMIDI.SC1
0000:              1 ; PHASOR MIDI IN TONE GENERATOR
0000:              2 ;
----- NEXT OBJECT FILE NAME IS PHSRMIDI.OBJ
6000:              3                              ORG $6000
6000:              4 ;
6400:              5 PITCHLO      EQU      $6400              ;LOAD MIDI NOTE # TO P
ITCH MAP HERE
6480:              6 PITCHHI      EQU      $6480
C000:              7 APPLEKBD EQU $C000
C010:              8 KBDSTROB EQU $C010
6000:              9 ;
6000:             10 ; PASSPORT MIDI CONFIGURED FOR SLOT 2
6000:             11 ;
C0A8:             12 PPMIDICR EQU $C0A8                       ; CONTROL REGISTER
C0A9:             13 PPMIDIDR EQU $C0A9                       ; DATA REGISTER
6000:             14 ;
6000:             15 ; PHASOR CONFIGURED FOR SLOT 4:
6000:             16 ;
C0CD:             17 PHTRIG                  EQU $C0CD         ; INIT
C493:             18 PHRES1                  EQU $C493         ; RESET 1
C492:             19 PHRES2                  EQU $C492         ; RESET 2
C411:             20 CHIPAC                  EQU $C411         ; CHIP A CONTROL R
EGISTER
C410:             21 CHIPAD                  EQU $C410         ; CHIP A DATA REGI
STER
C481:             22 CHIPBC                  EQU $C481         ; CHIP B CONTROL R
EGISTER
C480:             23 CHIPBD                  EQU $C480         ; CHIP B DATA REGI
STER
6000:             24 ;
6000:4C 8B 60     25                              JMP MAIN
6003:4C D9 62     26                              JMP CHKMIDI         ;SET MIDITES
T BYTE BELOW
6006:4C B9 60     27                              JMP PANIC
6009:4C 92 60     28                              JMP TSTNOTON        ;FOR TESTING
 PHASOR NOTE ALLOCATION DIRECTLY
600C:4C 9B 60     29                              JMP TSTNOTOF
600F:             30 ;
600F:FF           31 MIDITEST DFB $FF                         ;FF = USE PASSPORT MIDI, E
LSE TEST 1 MIDI BYTE
6010:00           32 KBDCMD                  DFB $00           ;FOR APPLESOFT TO
READ KEYPRESS UPON EXIT
6011:00           33 SOLOCHNL DFB $00                         ;HI BIT = YES, ELSE NO. LO
W 4 BITS = CHNL
6012:             34 ;
6012:00 00 00     35 NOTESON      DFB      $00,$00,$00,$00,$00,$00,$00,$00,$00,$0
0,$00,$00
6015:00 00 00
6018:00 00 00
601B:00 00 00
601E:             36 ;                              ; WHICH MIDI NOTES ARE ON FOR EA
CH VOICE
601E:             37 ;
601E:00 00 00     38 NOTEVELS DFB $00,$00,$00,$00,$00,$00,$00,$00,$00,$00,$00,$00
6021:00 00 00
6024:00 00 00
6027:00 00 00
602A:             39 ;                              ; VELOCITIES FOR EACH VOICE PLAY
ING
602A:             40 ;
602A:             41 ; INTERNAL VARIABLES - NOT FOR EXTERNAL USE
602A:FF           42 MIDIPHAS DFB $FF                         ;STATE MACHINE PHASE. FF=A
```

```
WAITING COMMAND
602B:90           43 MIDISTS     DFB        $90
602C:3C           44 MIDIDAT1 DFB $3C
602D:40           45 MIDIDAT2 DFB $40
602E:00           46 FREESLOT DFB $00                        ;FIRST FREE ELEMENT IN NOT
ESON AND NOTEVELS
602F:             47 ;
602F:01 01 01     48 CHIPNUM     DFB        $01,$01,$01,$02,$02,$02,$03,$03,$03,$0
4,$04,$04
6032:02 02 02
6035:03 03 03
6038:04 04 04
603B:08 09 0A     49 VOFFSET     DFB        $08,$09,$0A,$08,$09,$0A,$08,$09,$0A,$0
8,$09,$0A
603E:08 09 0A
6041:08 09 0A
6044:08 09 0A
6047:00 02 04     50 NOFFSET     DFB        $00,$02,$04,$00,$02,$04,$00,$02,$04,$0
0,$02,$04
604A:00 02 04
604D:00 02 04
6050:00 02 04
6053:             51 ;
6053:             52 ;                                 ; PHASOR SOUND REGISTER DATA FOR
 EACH CHIP
6053:F4 00 C1     53 CHIP1PRM DFB $F4,$00,$C1,$00,$A3,$00,$00,$38,$00,$00,$00,$00,
$00,$00
6056:00 A3 00
6059:00 38 00
605C:00 00 00
605F:00 00
6061:F4 00 C1     54 CHIP2PRM DFB $F4,$00,$C1,$00,$A3,$00,$00,$38,$00,$00,$00,$00,
$00,$00
6064:00 A3 00
6067:00 38 00
606A:00 00 00
606D:00 00
606F:F4 00 C1     55 CHIP3PRM DFB $F4,$00,$C1,$00,$A3,$00,$00,$38,$00,$00,$00,$00,
$00,$00
6072:00 A3 00
6075:00 38 00
6078:00 00 00
607B:00 00
607D:F4 00 C1     56 CHIP4PRM DFB $F4,$00,$C1,$00,$A3,$00,$00,$38,$00,$00,$00,$00,
$00,$00
6080:00 A3 00
6083:00 38 00
6086:00 00 00
6089:00 00
608B:             57 ;
608B:20 A1 60     58 MAIN                         JSR INITPHSR
608E:20 A6 62     59                              JSR INITMIDI
6091:60           60                               RTS
6092:             61 ;
6092:AE 2C 60     62 TSTNOTON LDX MIDIDAT1
6095:AC 2D 60     63                              LDY MIDIDAT2
6098:4C F0 61     64                              JMP NOTEON
609B:             65 ;
609B:AE 2C 60     66 TSTNOTOF LDX MIDIDAT1
609E:4C B6 61     67                              JMP NOTEOFF
60A1:             68 ;
60A1:2C CD C0     69 INITPHSR BIT PHTRIG          ; INIT AND RESET
60A4:A9 FF        70                              LDA #$FF
60A6:8D 93 C4     71                              STA PHRES1
60A9:8D 92 C4     72                              STA PHRES2
60AC:20 3A 61     73                              JSR PHPLAY1          ; INIT ALL S
```

```
OUND REGISTERS
60AF:20 59 61    74                               JSR PHPLAY2
60B2:20 78 61    75                               JSR PHPLAY3
60B5:20 97 61    76                               JSR PHPLAY4
60B8:60          77                               RTS
60B9:            78 ;
60B9:20 49 61    79 PANIC          JSR PHSTOP1          ;STOP ALL SOUNDS
60BC:20 68 61    80                               JSR PHSTOP2
60BF:20 87 61    81                               JSR PHSTOP3
60C2:20 A6 61    82                               JSR PHSTOP4
60C5:60          83                               RTS
60C6:            84 ;
60C6:8A          85 PHSROUT1 TXA                     ;CHIP 1: X = REGISTER
Y=DATA
60C7:8D 11 C4    86                               STA CHIPAC
60CA:A9 0F       87                               LDA #$0F
60CC:8D 10 C4    88                               STA CHIPAD
60CF:A9 0C       89                               LDA #$0C
60D1:8D 10 C4    90                               STA CHIPAD
60D4:98          91                               TYA
60D5:8D 11 C4    92                               STA CHIPAC
60D8:A9 0E       93                               LDA #$0E
60DA:8D 10 C4    94                               STA CHIPAD
60DD:A9 0C       95                               LDA #$0C
60DF:8D 10 C4    96                               STA CHIPAD
60E2:60          97                               RTS
60E3:8A          98 PHSROUT2 TXA                     ;CHIP 2: X = REGISTER
Y=DATA
60E4:8D 11 C4    99                               STA CHIPAC
60E7:A9 17       100                              LDA #$17
60E9:8D 10 C4    101                              STA CHIPAD
60EC:A9 14       102                              LDA #$14
60EE:8D 10 C4    103                              STA CHIPAD
60F1:98          104                              TYA
60F2:8D 11 C4    105                              STA CHIPAC
60F5:A9 16       106                              LDA #$16
60F7:8D 10 C4    107                              STA CHIPAD
60FA:A9 14       108                              LDA #$14
60FC:8D 10 C4    109                              STA CHIPAD
60FF:60          110                              RTS
6100:8A          111 PHSROUT3 TXA                        ;CHIP 3
6101:8D 81 C4    112                              STA CHIPBC
6104:A9 0F       113                              LDA #$0F
6106:8D 80 C4    114                              STA CHIPBD
6109:A9 0C       115                              LDA #$0C
610B:8D 80 C4    116                              STA CHIPBD
610E:98          117                              TYA
610F:8D 81 C4    118                              STA CHIPBC
6112:A9 0E       119                              LDA #$0E
6114:8D 80 C4    120                              STA CHIPBD
6117:A9 0C       121                              LDA #$0C
6119:8D 80 C4    122                              STA CHIPBD
611C:60          123                              RTS
611D:8A          124 PHSROUT4 TXA                        ;CHIP 4
611E:8D 81 C4    125                              STA CHIPBC
6121:A9 17       126                              LDA #$17
6123:8D 80 C4    127                              STA CHIPBD
6126:A9 14       128                              LDA #$14
6128:8D 80 C4    129                              STA CHIPBD
612B:98          130                              TYA
612C:8D 81 C4    131                              STA CHIPBC
612F:A9 16       132                              LDA #$16
6131:8D 80 C4    133                              STA CHIPBD
6134:A9 14       134                              LDA #$14
6136:8D 80 C4    135                              STA CHIPBD
6139:60          136                              RTS
```

```
613A:              137 ;
613A:A2 00          138 PHPLAY1     LDX       #$00
613C:BD 53 60       139 PARMOUT1 LDA CHIP1PRM,X
613F:A8             140                              TAY
6140:20 C6 60       141                              JSR PHSROUT1
6143:E8             142                              INX
6144:E0 0E          143                              CPX #$0E
6146:90 F4          144                              BCC PARMOUT1
6148:60             145                              RTS
6149:A2 08          146 PHSTOP1     LDX       #$08
614B:A0 00          147                              LDY #$00
614D:20 C6 60       148                              JSR PHSROUT1
6150:E8             149                              INX
6151:20 C6 60       150                              JSR PHSROUT1
6154:E8             151                              INX
6155:20 C6 60       152                              JSR PHSROUT1
6158:60             153                              RTS
6159:              154 ;
6159:A2 00          155 PHPLAY2     LDX       #$00
615B:BD 61 60       156 PARMOUT2 LDA CHIP2PRM,X
615E:A8             157                              TAY
615F:20 E3 60       158                              JSR PHSROUT2
6162:E8             159                              INX
6163:E0 0E          160                              CPX #$0E
6165:90 F4          161                              BCC PARMOUT2
6167:60             162                              RTS
6168:A2 08          163 PHSTOP2     LDX       #$08
616A:A0 00          164                              LDY #$00
616C:20 E3 60       165                              JSR PHSROUT2
616F:E8             166                              INX
6170:20 E3 60       167                              JSR PHSROUT2
6173:E8             168                              INX
6174:20 E3 60       169                              JSR PHSROUT2
6177:60             170                              RTS
6178:              171 ;
6178:A2 00          172 PHPLAY3     LDX       #$00
617A:BD 6F 60       173 PARMOUT3 LDA CHIP3PRM,X
617D:A8             174                              TAY
617E:20 00 61       175                              JSR PHSROUT3
6181:E8             176                              INX
6182:E0 0E          177                              CPX #$0E
6184:90 F4          178                              BCC PARMOUT3
6186:60             179                              RTS
6187:A2 08          180 PHSTOP3     LDX       #$08
6189:A0 00          181                              LDY #$00
618B:20 00 61       182                              JSR PHSROUT3
618E:E8             183                              INX
618F:20 00 61       184                              JSR PHSROUT3
6192:E8             185                              INX
6193:20 00 61       186                              JSR PHSROUT3
6196:60             187                              RTS
6197:              188 ;
6197:A2 00          189 PHPLAY4     LDX       #$00
6199:BD 7D 60       190 PARMOUT4 LDA CHIP4PRM,X
619C:A8             191                              TAY
619D:20 1D 61       192                              JSR PHSROUT4
61A0:E8             193                              INX
61A1:E0 0E          194                              CPX #$0E
61A3:90 F4          195                              BCC PARMOUT4
61A5:60             196                              RTS
61A6:A2 08          197 PHSTOP4     LDX       #$08
61A8:A0 00          198                              LDY #$00
61AA:20 1D 61       199                              JSR PHSROUT4
61AD:E8             200                              INX
61AE:20 1D 61       201                              JSR PHSROUT4
61B1:E8             202                              INX
```

```
61B2:20 1D 61   203                     JSR PHSROUT4
61B5:60         204                     RTS
61B6:           205 ;
61B6:8A         206 NOTEOFF             TXA         ; X=MIDI NOTE NUMBER
61B7:A8         207                     TAY
61B8:A2 0B      208                     LDX #$0B
61BA:DD 12 60   209 FINDNOTE CMP NOTESON,X
61BD:F0 03      210                     BEQ FOUNDN
61BF:CA         211                     DEX
61C0:10 F8      212                     BPL FINDNOTE
61C2:A9 00      213 FOUNDN              LDA #$00
61C4:9D 12 60   214                     STA NOTESON,X
61C7:9D 1E 60   215                     STA NOTEVELS,X
61CA:BD 2F 60   216                     LDA CHIPNUM,X
61CD:A8         217                     TAY             ;SELECT CHI
P THEN ZERO OUT VOLUME REGISTER
61CE:BD 3B 60   218                     LDA VOFFSET,X
61D1:AA         219                     TAX             ;X=REGISTER
 8, 9, OR A
61D2:C0 01      220                     CPY #$01
61D4:D0 05      221                     BNE OFFCHIP2
61D6:A0 00      222                     LDY #$00
61D8:4C C6 60   223                     JMP PHSROUT1
61DB:C0 02      224 OFFCHIP2 CPY #$02
61DD:D0 05      225                     BNE OFFCHIP3
61DF:A0 00      226                     LDY #$00
61E1:4C E3 60   227                     JMP PHSROUT2
61E4:C0 03      228 OFFCHIP3 CPY #$03
61E6:D0 05      229                     BNE OFFCHIP4
61E8:A0 00      230                     LDY #$00
61EA:4C 00 61   231                     JMP PHSROUT3
61ED:4C 1D 61   232 OFFCHIP4 JMP PHSROUT4
61F0:           233 ;
61F0:98         234 NOTEON              TYA         ; X=MIDI NOTE NUMBER Y=MIDI
 VELOCITY (0-127)
61F1:F0 C3      235                     BEQ NOTEOFF
61F3:29 7F      236                     AND #$7F
61F5:4A         237                     LSR A
61F6:4A         238                     LSR A
61F7:4A         239                     LSR A
61F8:48         240                     PHA         ;CONVERT VEL TO 0-15
61F9:A9 FF      241                     LDA #$FF
61FB:8D 2E 60   242                     STA FREESLOT      ;FF IS SIGNA
L FOR NO FREE SLOTS
61FE:8A         243                     TXA
61FF:A2 0B      244                     LDX #$0B
6201:DD 12 60   245 CHKNOTE      CMP    NOTESON,X
6204:F0 5A      246                     BEQ NOTEXIT      ;DONT STORE
NOTE IF ALREADY PLAYING ON ANY CHNL
6206:A8         247                     TAY
6207:BD 1E 60   248                     LDA NOTEVELS,X     ;CHECK IF SL
OT IS FREE FOR A NEW NOTE
620A:D0 03      249                     BNE NOTFREE
620C:8E 2E 60   250                     STX FREESLOT
620F:98         251 NOTFREE             TYA
6210:CA         252                     DEX
6211:10 EE      253                     BPL CHKNOTE      ;AFTER LOOP
WE KNOW WE HAVE A GOOD NOTE #
6213:AE 2E 60   254                     LDX FREESLOT
6216:E0 FF      255                     CPX #$FF
6218:F0 46      256                     BEQ NOTEXIT      ;ALL VOICES
FULL, SUPPRESS ADDITIONAL NOTES
621A:9D 12 60   257                     STA NOTESON,X
621D:68         258                     PLA
621E:9D 1E 60   259                     STA NOTEVELS,X
6221:48         260                     PHA              ;PUSH VELOC
```

```
ITY
6222:BD 3B 60   261                              LDA VOFFSET,X
6225:48         262                              PHA                    ;PUSH REGIS
TER NUMBER FOR VOLUME
6226:BD 12 60   263                              LDA NOTESON,X          ;GET MIDI NO
TE NUMBER IN Y
6229:A8         264                              TAY
622A:B9 80 64   265                              LDA PITCHHI,Y          ;PUSH PITCH
HI
622D:F0 25      266                              BEQ CHKZERO
622F:48         267 PNOTZERO PHA
6230:B9 00 64   268                              LDA PITCHLO,Y          ;PUSH PITCH
LO
6233:48         269                              PHA
6234:BD 47 60   270                              LDA NOFFSET,X          ;PUSH REGIST
ER NUMBER FOR VOICE WITHIN CHIP IN X
6237:48         271                              PHA
6238:BD 2F 60   272                              LDA CHIPNUM,X
623B:A8         273                              TAY                    ;SELECT CHI
P THEN POKE THE NOTE AND VOL REGISTERS
623C:C0 01      274                              CPY #$01
623E:D0 22      275                              BNE ONCHIP2
6240:68         276                               PLA
6241:AA         277                               TAX
6242:68         278                               PLA
6243:A8         279                               TAY
6244:20 C6 60   280                              JSR PHSROUT1
6247:E8         281                               INX
6248:68         282                               PLA
6249:A8         283                               TAY
624A:20 C6 60   284                              JSR PHSROUT1
624D:68         285                               PLA
624E:AA         286                               TAX
624F:68         287                               PLA
6250:A8         288                               TAY
6251:4C C6 60   289                              JMP PHSROUT1
6254:B9 00 64   290 CHKZERO      LDA      PITCHLO,Y        ;DONT STORE PITCH IF U
NUSED PART OF PITCH MAP
6257:F0 06      291                              BEQ ZEROEXIT
6259:B9 80 64   292                              LDA PITCHHI,Y
625C:4C 2F 62   293                              JMP PNOTZERO
625F:68         294 ZEROEXIT PLA                             ;REMOVE 2 BYTES FROM S
TACK
6260:68         295 NOTEXIT            PLA                   ;REMOVE BYTE THAT
WAS PUSHED BEFORE RTS
6261:60         296                              RTS
6262:C0 02      297 ONCHIP2      CPY      #$02
6264:D0 14      298                              BNE ONCHIP3
6266:68         299                               PLA
6267:AA         300                               TAX
6268:68         301                               PLA
6269:A8         302                               TAY
626A:20 E3 60   303                              JSR PHSROUT2
626D:E8         304                               INX
626E:68         305                               PLA
626F:A8         306                               TAY
6270:20 E3 60   307                              JSR PHSROUT2
6273:68         308                               PLA
6274:AA         309                               TAX
6275:68         310                               PLA
6276:A8         311                               TAY
6277:4C E3 60   312                              JMP PHSROUT2
627A:C0 03      313 ONCHIP3      CPY      #$03
627C:D0 14      314                              BNE ONCHIP4
627E:68         315                               PLA
627F:AA         316                               TAX
```

```
6280:68           317                              PLA
6281:A8           318                              TAY
6282:20 00 61     319                              JSR PHSROUT3
6285:E8           320                              INX
6286:68           321                              PLA
6287:A8           322                              TAY
6288:20 00 61     323                              JSR PHSROUT3
628B:68           324                              PLA
628C:AA           325                              TAX
628D:68           326                              PLA
628E:A8           327                              TAY
628F:4C 00 61     328                              JMP PHSROUT3
6292:68           329 ONCHIP4              PLA
6293:AA           330                              TAX
6294:68           331                              PLA
6295:A8           332                              TAY
6296:20 1D 61     333                              JSR PHSROUT4
6299:E8           334                              INX
629A:68           335                              PLA
629B:A8           336                              TAY
629C:20 1D 61     337                              JSR PHSROUT4
629F:68           338                              PLA
62A0:AA           339                              TAX
62A1:68           340                              PLA
62A2:A8           341                              TAY
62A3:4C 1D 61     342                              JMP PHSROUT4
62A6:             343 ;
62A6:             344                              CHN PHSRMIDI.SC1
62A6:              1 ; PHASOR MIDI IN TONE GENERATOR – SOURCE 1
62A6:              2 ;
62A6:A9 13         3 INITMIDI LDA #$13
62A8:8D A8 C0      4                               STA PPMIDICR
62AB:A9 11         5                               LDA #$11
62AD:8D A8 C0      6                               STA PPMIDICR
62B0:A9 FF         7                               LDA #$FF
62B2:8D 2A 60      8                               STA MIDIPHAS        ; INITIAL PH
ASE = WAITING FOR A MIDI COMMAND
62B5:60            9                               RTS
62B6:AD 0F 60     10 PSPTMIDI LDA MIDITEST         ; FF = REAL TIME PLAYBACK, ELSE
 TEST 1 BYTE
62B9:C9 FF        11                               CMP #$FF
62BB:F0 01        12                               BEQ PSPTMID1
62BD:60           13                               RTS
62BE:AD A8 C0     14 PSPTMID1 LDA PPMIDICR
62C1:29 01        15                               AND #$01            ; WAIT FOR R
ECEIVE DATA REGISTER FULL
62C3:F0 F9        16                               BEQ PSPTMID1
62C5:AD A9 C0     17                               LDA PPMIDIDR
62C8:C9 F8        18                               CMP #$F8            ;IGNORE REAL
TIME MESSAGES LIKE ACTIVE SENSING
62CA:B0 F2        19                               BCS PSPTMID1
62CC:60           20                               RTS
62CD:AD 00 C0     21 LOOPBACK LDA APPLEKBD
62D0:10 07        22                               BPL CHKMIDI
62D2:8D 10 60     23                               STA KBDCMD
62D5:2C 10 C0     24                               BIT KBDSTROB
62D8:60           25                               RTS
62D9:AD 0F 60     26 CHKMIDI         LDA         MIDITEST
62DC:C9 FF        27                               CMP #$FF
62DE:D0 06        28                               BNE GETMIDI
62E0:20 E6 62     29                               JSR GETMIDI
62E3:4C CD 62     30                               JMP LOOPBACK
62E6:AD 2A 60     31 GETMIDI         LDA         MIDIPHAS
62E9:C9 91        32                               CMP #$91
62EB:F0 30        33                               BEQ GETDAT1         ;GET FIRST D
ATA BYTE OF NOTE ON
```

```
62ED:C9 81        34                          CMP #$81
62EF:F0 2C        35                          BEQ GETDAT1          ;GET FIRST D
ATA BYTE OF NOTE OFF
62F1:C9 92        36                          CMP #$92
62F3:F0 34        37                          BEQ GETDAT2          ;GET 2ND DAT
A BYTE OF NOTE ON OR NOTE OFF MESSAGE
62F5:C9 90        38                          CMP #$90
62F7:D0 06        39                          BNE GETMIDI1         ;PROCESS STA
TUS BYTE WHEN NOT RUNNING STATUS
62F9:AD 2B 60     40                          LDA MIDISTS          ;PHASE 90 –
CHECK MIDI BYTE
62FC:4C 02 63     41                          JMP SKIPMIDI
62FF:20 B6 62     42 GETMIDI1 JSR PSPTMIDI       ;PHASE FF – GET MIDI BYTE
6302:C9 80        43 SKIPMIDI CMP #$80
6304:90 C7        44                          BCC LOOPBACK
6306:C9 A0        45                          CMP #$A0
6308:B0 C3        46                          BCS LOOPBACK
630A:8D 2B 60     47                          STA MIDISTS
630D:C9 90        48                          CMP #$90
630F:B0 06        49                          BCS SETPH91
6311:A9 81        50                          LDA #$81
6313:8D 2A 60     51                          STA MIDIPHAS
6316:60           52                           RTS
6317:A9 91        53 SETPH91        LDA        #$91
6319:8D 2A 60     54                          STA MIDIPHAS
631C:60           55                           RTS
631D:20 B6 62     56 GETDAT1        JSR      PSPTMIDI
6320:8D 2C 60     57                          STA MIDIDAT1
6323:A9 92        58                          LDA #$92
6325:8D 2A 60     59                          STA MIDIPHAS
6328:60           60                           RTS
6329:20 B6 62     61 GETDAT2        JSR      PSPTMIDI
632C:8D 2D 60     62                          STA MIDIDAT2
632F:A9 FF        63                          LDA #$FF
6331:8D 2A 60     64                          STA MIDIPHAS
6334:AD 2D 60     65                          LDA MIDIDAT2
6337:F0 13        66                          BEQ DONOTOFF
6339:AD 2B 60     67                          LDA MIDISTS
633C:C9 90        68                          CMP #$90
633E:90 0C        69                          BCC DONOTOFF
6340:             70 ;
6340:AE 2C 60     71 DONOTEON LDX MIDIDAT1
6343:AC 2D 60     72                          LDY MIDIDAT2
6346:20 F0 61     73                          JSR NOTEON
6349:4C 52 63     74                          JMP NEXTBYTE
634C:AE 2C 60     75 DONOTOFF LDX MIDIDAT1
634F:20 B6 61     76                          JSR NOTEOFF
6352:20 B6 62     77 NEXTBYTE JSR PSPTMIDI
6355:10 0B        78                          BPL SETRUNNG
6357:8D 2B 60     79                          STA MIDISTS
635A:A9 90        80                          LDA #$90
635C:8D 2A 60     81                          STA MIDIPHAS
635F:4C CD 62     82                          JMP LOOPBACK
6362:8D 2C 60     83 SETRUNNG STA MIDIDAT1
6365:A9 92        84                          LDA #$92
6367:8D 2A 60     85                          STA MIDIPHAS
636A:4C CD 62     86                          JMP LOOPBACK
636D:             87 ;

*** SUCCESSFUL ASSEMBLY: NO ERRORS
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```
C000 APPLEKBD        6053 CHIP1PRM        6061 CHIP2PRM        606F CHIP3PRM
607D CHIP4PRM        C411 CHIPAC          C410 CHIPAD          C481 CHIPBC
C480 CHIPBD          602F CHIPNUM         62D9 CHKMIDI         6201 CHKNOTE
6254 CHKZERO        ?6340 DONOTEON        634C DONOTOFF        61BA FINDNOTE
61C2 FOUNDN          602E FREESLOT        631D GETDAT1         6329 GETDAT2
62E6 GETMIDI         62FF GETMIDI1        62A6 INITMIDI        60A1 INITPHSR
6010 KBDCMD          C010 KBDSTROB        62CD LOOPBACK        608B MAIN
602C MIDIDAT1        602D MIDIDAT2        602A MIDIPHAS        602B MIDISTS
600F MIDITEST        6352 NEXTBYTE        6047 NOFFSET         61B6 NOTEOFF
61F0 NOTEON          6012 NOTESON         601E NOTEVELS        6260 NOTEXIT
620F NOTFREE         61DB OFFCHIP2        61E4 OFFCHIP3        61ED OFFCHIP4
6262 ONCHIP2         627A ONCHIP3         6292 ONCHIP4         60B9 PANIC
613C PARMOUT1        615B PARMOUT2        617A PARMOUT3        6199 PARMOUT4
613A PHPLAY1         6159 PHPLAY2         6178 PHPLAY3         6197 PHPLAY4
C493 PHRES1          C492 PHRES2          60C6 PHSROUT1        60E3 PHSROUT2
6100 PHSROUT3        611D PHSROUT4        6149 PHSTOP1         6168 PHSTOP2
6187 PHSTOP3         61A6 PHSTOP4         C0CD PHTRIG          6480 PITCHHI
6400 PITCHLO         622F PNOTZERO        C0A8 PPMIDICR        C0A9 PPMIDIDR
62BE PSPTMID1        62B6 PSPTMIDI        6317 SETPH91         6362 SETRUNNG
6302 SKIPMIDI       ?6011 SOLOCHNL        609B TSTNOTOF        6092 TSTNOTON
603B VOFFSET         625F ZEROEXIT
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                                              600F MIDITEST        6010 KBDCMD
?6011 SOLOCHNL      6012 NOTESON
 601E NOTEVELS      602A MIDIPHAS       602B MIDISTS         602C MIDIDAT1
 602D MIDIDAT2      602E FREESLOT       602F CHIPNUM         603B VOFFSET
 6047 NOFFSET       6053 CHIP1PRM       6061 CHIP2PRM        606F CHIP3PRM
 607D CHIP4PRM      608B MAIN           6092 TSTNOTON        609B TSTNOTOF
 60A1 INITPHSR      60B9 PANIC          60C6 PHSROUT1        60E3 PHSROUT2
 6100 PHSROUT3      611D PHSROUT4       613A PHPLAY1         613C PARMOUT1
 6149 PHSTOP1       6159 PHPLAY2        615B PARMOUT2        6168 PHSTOP2
 6178 PHPLAY3       617A PARMOUT3       6187 PHSTOP3         6197 PHPLAY4
 6199 PARMOUT4      61A6 PHSTOP4        61B6 NOTEOFF         61BA FINDNOTE
 61C2 FOUNDN        61DB OFFCHIP2       61E4 OFFCHIP3        61ED OFFCHIP4
 61F0 NOTEON        6201 CHKNOTE        620F NOTFREE         622F PNOTZERO
 6254 CHKZERO       625F ZEROEXIT       6260 NOTEXIT         6262 ONCHIP2
 627A ONCHIP3       6292 ONCHIP4        62A6 INITMIDI        62B6 PSPTMIDI
 62BE PSPTMID1      62CD LOOPBACK       62D9 CHKMIDI         62E6 GETMIDI
 62FF GETMIDI1      6302 SKIPMIDI       6317 SETPH91         631D GETDAT1
 6329 GETDAT2      ?6340 DONOTEON       634C DONOTOFF        6352 NEXTBYTE
 6362 SETRUNNG      6400 PITCHLO        6480 PITCHHI         C000 APPLEKBD
 C010 KBDSTROB      C0A8 PPMIDICR       C0A9 PPMIDIDR        C0CD PHTRIG
 C410 CHIPAD        C411 CHIPAC         C480 CHIPBD          C481 CHIPBC
 C492 PHRES2        C493 PHRES1
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