

HIGH SPEED PAPER TAPE READER SOFTWARE

Recently an ad has appeared in several magazines for an optical high speed paper tape reader by Oliver Audio Engineering, 7330 Laurel Canyon Blvd., North Hollywood, Calif. 91605, (213) 765-8080. Some SWTPC 6800 compatible software has been developed for this unit which we are passing along here.

The following programs assume that the required parallel interface is in the #2 card position in the 6800. The program PAPTAP is the loader that takes the parallel data in from the reader through the PIA and stores it in memory. This program is rather long and it is not convenient to load it in by hand each time. If you currently have some type of save/load device (AC-30 cassette, Teletype, etc.) you will have no problems in loading the loader program. If you have no AC-30 or teletype but can steal a few minutes time on someone else's paper tape punch, punch out the program QUICKLOAD using a binary format (no header characters, checksum, address pointers, etc. - just send the data to the punch using OUTEETEE). Be sure to use only black paper tape. Do not use the BUNCH program in this newsletter.

If you are using an AC-30, etc. simply load in the PAPTAP program and set the program counter to 1F00. Place the paper tape in the reader and type G. Pull the paper tape through the reader and your program will be loaded. If a software interrupt is encountered an error was seen and the program should be reloaded.

If you are using the binary formatted tape, type in the QUICKLOAD program and insert the binary loader tape in the reader. Start execution at 0000 and pull the tape through the reader. This loads the PAPTAP program from locations 1F00-1F6E. The loading of your program can now be accomplished as described earlier.

Instructions come with the tape reader concerning assembly and use. If you have any questions concerning the mechanics, price, availability, etc. of the loader, please contact Oliver Audio, not SWTPC.

Note: You may have to re-write the loader programs to move them to a convenient area of memory for your computer. Also, the reader has a jumper that must be installed on it - Jumper A to ACK, not -ACK.

NAM PAPTAP
 *HIGH SPEED PAPER TAPE LOADER PROGRAM
 *DEVELOPED BY DR. CHARLES ADAMS
 *TEXAS A&M UNIVERSITY

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E1D1      OUTEEE EQU   $E1D1
8008      PIA    EQU   $8008

1F00
1F00 86 2E      ENTER  LDA A  #$2E
1F02 B7 80 0B      STA A  PIA+3
1F05 B7 80 0A      STA A  PIA+2
1F08 8D 28      OV    BSR   SUB1
1F0A 81 53      CMP A  #'S
1F0C 26 FA      BNE   OV
1F0E 8D 22      BSR   SUB1
1F10 81 31      CMP A  #$31
1F12 26 F4      BNE   OV
1F14 7F 1F 43      CLR   CLR1
1F17 8D 39      BSR   SUB2
1F19 80 02      SUB A  #2
1F1B B7 1F 42      STA A  TMP3
1F1E 8D 24      BSR   SUB3
1F20 8D 30      BR2   BSR   SUB2
1F22 7A 1F 42      DEC   TMP3
1F25 27 05      BEQ   BR1
1F27 A7 00      STA A  0,X
1F29 08      INX
1F2A 20 F4      BRA   BR2

1F2C 7C 1F 43      BR1   INC   CLR1
1F2F 27 D7      BEQ   OV
1F31 3F      SWI

1F32 B6 80 0B      SUB1  LDA A  PIA+3
1F35 2A FB      BPL   SUB1
1F37 B6 80 0A      LDA A  PIA+2
1F3A 84 7F      AND A  #$7F
1F3C B7 80 0A      STA A  PIA+2
1F3F 39      RTS

1F40      TMP1  RMB   1
1F41      TMP2  RMB   1
1F42      TMP3  RMB   1
1F43      CLR1  RMB   1

1F44 8D 0C      SUB3  BSR   SUB2
1F46 B7 1F 40      STA A  TMP1
1F49 8D 07      BSR   SUB2
1F4B B7 1F 41      STA A  TMP2
1F4E FE 1F 40      LDX  TMP1
1F51 39      RTS

1F52 8D 10      SUB2  BSR   SUB4
1F54 48      ASL A
1F55 48      ASL A
1F56 48      ASL A

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1F57 48          ASL A
1F58 16          TAB
1F59 8D 09       BSR      SUB4
1F5B 1B          ABA
1F5C 16          TAB
1F5D FB 1F 43   ADD B   CLR1
1F60 F7 1F 43   STA B   CLR1
1F63 39          RTS

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1F64 8D CC      SUB4   BSR      SUB1
1F66 80 30      SUB A   #$30
1F68 81 09      CMP A   #$09
1F6A 2F 02      BLE     RT
1F6C 80 07      SUB A   #7
1F6E 39          RT      RTS

```

END

NO ERROR(S) DETECTED

SYMBOL TABLE:

BR1	1F2C	BR2	1F20	CLR1	1F43	ENTER	1F00	OUTEEEE	E1D1
OV	1F08	PIA	8008	RT	1F6E	SUB1	1F32	SUB2	1F52
SUB3	1F44	SUB4	1F64	TMP1	1F40	TMP2	1F41	TMP3	1F42

NAM QUICKLOAD

```

8008          PIA      EQU      $8008

0000          ORG      $0000

0000 CE 1F 00          LDX      #$1F00
0003 86 2E          LDA a   #$2E
0005 B7 80 0B          STA A   PIA+3
0008 B7 80 0A  HERE   STA A   PIA+2
000B B6 80 0B  LOOP   LDA A   PIA+3
000E 2A FB          BPL     LOOP
0010 B6 80 0A          LDA A   PIA+2
0013 A7 00          STA A   0,X
0015 08          INX
0016 7E 00 08          JMP     HERE
END

```

NO ERROR(S) DETECTED

SYMBOL TABLE:

HERE	0008	LOOP	000B	PIA	8008
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