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 OUTEEE). 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.

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

E1D1                OUTEEE EQU    $E1D1
8008                PIA    EQU    $8008

1F00                       ORG    $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

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    OUTEEE 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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