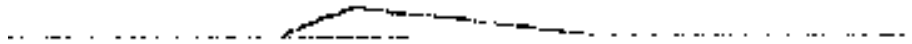
Apple /// Computer Technical Information

Apple /// Serial Printer Port Driver 1.30 Source Code Listing



Created by David T. Craig
07 January 1998 • 71533.606@compuserve.com

FORMATTED LISTING

```
; ##########################################################################################################
; #   PROJECT  :  Apple /// SOS Serial Printer Driver 1.30 (6502 Assembly Source Code)
; #   FILE NAME:  SERPRINT.text
; ##########################################################################################################

000001                  .TITLE      "SOS Serial Printer Driver"
000002                  .NOPATCHLIST
000003                  .NOMACROLIST
000004
000005  ;---------------------------------------------------------------------
000006  ;
000007  ;               SOS Serial Printer Driver
000008  ;
000009  ;               Copyright (C) 1983 by Apple Computer Inc.
000010  ;               All Rights Reserved
000011  ;
000012  ;
000013  ;       Revisions:
000014  ;
000015  ;       1.00    14-Nov-80
000016  ;
000017  ;       1.10    14-Apr-81
000018  ;               Bug fixes:
000019  ;               Switch to 1 MHz for all ACIA references.
000020  ;               Check buffer count and delay count for write completion.
000021  ;
000022  ;       1.30    05-Jan-83
000023  ;               Bug fixes:
000024  ;               Add XMIT flag for improved communications between Driver
000025  ;                  and Interrupt Handler.
000026  ;
000027  ;---------------------------------------------------------------------
000028
000029  DEVTYPE         .EQU        41
000030  SUBTYPE         .EQU        01
000031  APPLE           .EQU        0001
000032  RELEASE         .EQU        1300
000033                  .PAGE
000034  ;---------------------------------------------------------------------
000035  ;
000036  ;  The macro SWITCH performs an N way branch based on a switch index.  The
000037  ;  maximum value of the switch index is 127 with bounds checking provided
000038  ;  as an option.  The macro uses the A and Y registers and alters the C,
000039  ;  Z, and N flags of the status register, but the X register is unchanged.
000040  ;
000041  ;               SWITCH  [index], [bounds], adrs_table, [*]
000042  ;
000043  ;       index   This is the variable that is to be used as the switch index.
000044  ;               If omitted, the value in the accumulator is used.
000045  ;
000046  ;      bounds   This is the maximum allowable value for index.  If index
000047  ;               exceeds this value, the carry bit will be set and execution
000048  ;               will continue following the macro.  If bounds is omitted,
000049  ;               no bounds checking will be performed.
000050  ;
000051  ;  adrs_table   This is a table of addresses (low byte first) used by the
000052  ;               switch.  The first entry corresponds to index zero.
000053  ;
000054  ;           *   If an asterisk is supplied as the fourth parameter, the
000055  ;               macro will push the switch address but will not exit to
000056  ;               it; execution will continue following the macro.  The
000057  ;               program may then load registers or set the status before
000058  ;               exiting to the switch address.
000059  ;
000060  ;---------------------------------------------------------------------
000061  ;
000062                  .MACRO      SWITCH
000063                  .IF         "%1" <> ""              ;If PARM1 is present,
000064                  LDA         %1                      ;  Load A with switch index
000065                  .ENDC
000066                  .IF         "%2" <> ""              ;If PARM2 is present,
000067                  CMP         #%2+1                   ;  Perform bounds checking
000068                  BCS         $3579                   ;  on switch index
000069                  .ENDC
000070                  ASL         A
000071                  TAY
000072                  LDA         %3+1,Y                  ;Get switch address from table
000073                  PHA                                 ;  and push onto stack
000074                  LDA         %3,Y
000075                  PHA
000076                  .IF         "%4" <> "*"             ;If PARM4 is omitted,
000077                  RTS                                 ;  Exit to code
000078                  .ENDC                               ;Otherwise, drop through
000079  $3579           .ENDM
000080                  .PROC       SERPRNT
000081                  .WORD       0FFFF
000082                  .WORD       66.
000083                  .ASCII      "Serial Printer Driver -- "
000084                  .ASCII      "Copyright (C) 1983 by Apple Computer Inc."
```

```
000550                  PHP
000551                  SEI
000552                  LDA         E_REG
000553                  TAX
000554                  ORA         #BITON7
000555                  STA         E_REG                   ;Switch to 1 MHz
000556                  STA         ACIASTAT                ;Reset ACIA
000557                  LDA         DFORMAT
000558                  AND         #0F0
000559                  ORA         DRATE
000560                  STA         ACIACTL                 ;Set up ACIA control register
000561                  LDA         DFORMAT
000562                  ASL         A
000563                  ASL         A
000564                  ASL         A
000565                  ASL         A
000566                  ORA         #00B
000567                  STA         ACIACMD                 ;Set up ACIA command register
000568                  STX         E_REG                   ;Switch back to 2 MHz
000569                  PLP
000570                  RTS
000571
000572  CNTL01          .EQU        *                       ;1 -- Serial Printer Status Table
000573                  RTS
000574
000575  CNTL02          .EQU        *                       ;2 -- New Line
000576                  RTS
000577                  .END
000578

; ###############################################################################################
; #   END OF FILE:  SERPRINT.text
; #   LINES      :  578
; #   CHARACTERS :  26582
; #   Formatter  :  Assembly Language Reformatter 1.0.2 (07 January 1998)
; #   Author     :  David T. Craig -- 71533.606@compuserve.com -- Santa Fe, New Mexico USA
; ###############################################################################################
```

###