Apple II Miscellaneous
#1: 80-Column Screen Dump

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Written by: Greg Seitz December 1984

This Technical Note presents an example assembly language program which dumps the contents of the 80-column text screen to whatever is connected to COUT.

```
0000:                1 *
0000:                2 *  80-column screen dump
0000:                3 *
0000:                4 *  By
0000:                5 *     Greg Seitz
0000:                6 *     12-Jul-84
0000:                7 *
0000:                8 *  This program will allow you to dump the contents
0000:                9 *  of your 80-column text screen to whatever device is
0000:               10 *  connected through COUT.  If it is still connected to
0000:               11 *  the screen, you will obviously be printing back
0000:               12 *  what you were reading.
0000:               13 *
0000:         FBC1   14 BASCALC   EQU   $FBC1          ;convert A reg to line addr on
scrn
0000:        FDED   15 COUT      EQU   $FDED         ;A register out as ASCII
0000:          C001    16 SET80COL   EQU    $C001          ;enable page 1/2 switches to
control aux
0000:        C055   17 TXTPAGE2  EQU   $C055         ;page 2 or Aux depending
0000:        C054   18 TXTPAGE1  EQU   $C054         ;page 1 or main depending
0000:        0028   19 BASL      EQU   $28           ;BASCALC puts base addr. here
0000:        0029   20 BASH      EQU   $29           ;and high byte here.
0000:               21 *
1000:        1000   22           ORG   $1000         ;or anywhere
1000:        1000   23 SCREENDMP EQU   *
1000:A2 00          24           LDX   #0            ;START AT LINE 0
1002:               25 *
1002:8A             26 SCRNLP    TXA                 ;CALL BASCALC
1003:20 C1 FB       27           JSR   BASCALC       ;FOR ADDRESS OF LINE X
1006:A0 00            28             LDY    #00             ;DO 80 CHARS STARTING FROM
CHARACTER 0
1008:               29 *
1008:        1008   30 SCRNLP2   EQU   *
1008:8D 01 C0       31           STA   SET80COL      ;SET UP FOR MAIN/AUX SWITCHING
100B:8D 55 C0       32           STA   TXTPAGE2      ;START ON AUX
100E:98              33           TYA                   ;GET CURRENT INDEX FOR DIVIDE BY
2
100F:48             34           PHA                 ;SAVE ACTUAL COLUMN NUM WE'RE ON
1010:4A              35           LSR                    ;COLUMN/2=ODD OR EVEN BRANCH IF
EVEN
1011:90 03    1016    36             BCC    SCRNDMP1       ;TAKEN IF EVEN SINCE STATE IS
PROPER
1013:8D 54 C0       37           STA   TXTPAGE1      ;ELSE IF ODD TURN ON MAIN MEM
```

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1016:              38 *
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1016:        1016   39 SCRNDMP1  EQU   *
1016:A8             40           TAY                ;USE COLUMN/2 FOR INDEX NOW
1017:B1 28          41           LDA   (BASL),Y     ;GRAB THE CHARACTER
1019:8D 54 C0        42           STA   TXTPAGE1      ;SEL MAIN SO IT SEES RIGHT SCREEN
HOLES
101C:20 ED FD       43           JSR   COUT         ;PRINT THE CHARACTER
101F:68             44           PLA                ;RECOVER COLUMN NUM
1020:A8             45           TAY                ;INTO Y FOR NEXT TRIP
1021:C8             46           INY                ;NEXT COLUMN NUM
1022:C0 50          47           CPY   #80          ;ANY MORE?
1024:90 E2   1008   48           BCC   SCRNLP2      ;TAKEN IF YES
1026:A9 8D          49           LDA   #$8D         ;ELSE CARRIAGE RETURN
1028:20 ED FD       50           JSR   COUT         ;OUT
102B:A9 8A          51           LDA   #$8A         ;LINE FEED
102D:20 ED FD       52           JSR   COUT         ;OUT
1030:E8             53           INX                ;NEXT LINE
1031:E0 18          54           CPX   #24          ;ANYMORE?
1033:90 CD   1002   55           BCC   SCRNLP       ;TAKEN IF YES
1035:60             56           RTS

 FBC1 BASCALC       ?  29 BASH            28 BASL          FDED COUT
 C054 TXTPAGE1       C055 TXTPAGE2      ?1000 SCREENDMP     1016 SCRNDMP1
 1008 SCRNLP2        1002 SCRNLP         C001 SET80COL
** SUCCESSFUL ASSEMBLY := NO ERRORS
** ASSEMBLER CREATED ON 15-JAN-84 21:28
** TOTAL LINES ASSEMBLED    56
** FREE SPACE PAGE COUNT   84
```