OCT 11, 1982

```
1                       ;       This source was derived by disassembling the rom in the SOL
2                       ;        All labels, comments, etc are derived from the dissassembly.
3                       ;
4                       ;       .lall
5                       ENTRY   MACRO   CHARS,ADDR
6                               DB      CHARS
7                               DW      ADDR
8                               MEND
9
10                      ;       Labels for addresses outside the code area
11                      ;
12      C800    SAVED0  EQU     0C800H
13      C802    SAVED1  EQU     0C802H
14      C806    ICHNL   EQU     0C806H
15      C807    OCHNL   EQU     0C807H
16      C808    CURCOL  EQU     0C808H
17      C809    CURROW  EQU     0C809H
18      C80A    OUTROW  EQU     0C80AH
19      C80B    OUTCOL  EQU     0C80BH
20      C80C    ESCCHAR EQU     0C80CH
21      C810    LOC10   EQU     0C810H
22      C83C    LOC3C   EQU     0C83CH
23      CBFF    STAKTOP EQU     0CBFFH
24      CC00    SCRMEM  EQU     0CC00H
25                      ;
26                      ; Masks and useful constants
27                      ;
28
29      003F    COLMASK EQU     03FH    ; mask for cursur column (max 63)
30      000F    ROWMASK EQU     0FH     ; mask for cursor row (max 15)
31      000F    MAXROW  EQU     15
32      003F    MAXCOL  EQU     63
33      0001    BIT0    EQU     001H
34      0002    BIT1    EQU     002H
35      0004    BIT2    EQU     004H
36      0008    BIT3    EQU     008H
37      0010    BIT4    EQU     010H
38      0020    BIT5    EQU     020H
39      0040    BIT6    EQU     040H
40      0080    BIT7    EQU     080H
41                      ;
42                      ; Ascii constants
43      0007    BEL     EQU     07H     ; Bell
44      0008    BS      EQU     08H     ; Backspace
45      0009    HTAB    EQU     09H     ; Horizontal tab
46      000B    VTAB    EQU     0BH     ; Vertical tab
47      001B    ESC     EQU     1BH     ; Escape
48      000A    LF      EQU     0AH     ; Line feed
49      000D    CR      EQU     0DH     ; Carriage Return
50      007F    DEL     EQU     07FH    ; Delete
51                      ;
```

```
                        ; Port associations gleaned from the code:
                        ;       CONTROL     DATA        Comment
                        ;       0FA         0FC         Input
                        ;       0FA         0FD         Input and Output
                        ;       0F8         0F9         Input and Output
                        ;                   0FE         Output -- to CRT      ?
                        ;       0F0                     Input? BOOT
                        ;       0F1                     Output? BOOT
                        ;       0F3                     Output? LC391
                        ;       0F4                     Output? LC391
                        ;       0F5                     Output? BOOT
                        ;       0F6                     Output? LC391
                        ;       0F7                     Output? BOOT, OUTF7
                        ;
                        ; Control port assigments:
                        ;
                        ; PORT   BITMASK    IN/OUT      Use
                        ; 0FA                           OUT 0 to this port on abort -- reset?
                        ; 0FA     01        In          0FC ready when 0
                                                       ;(IN, CMA, ANI 01, RZ, else read)
                        ; 0FA     02        In          0FD input ready when 0
                        ; 0FA     04        In          0FD output ready when 0
                        ; 0F0     01        In          Tests in LC3AA
                        ; 0F0     02        In          Tests in LC3AA
                        ; 0F0     08        In          Tests in LC3AA
                        ; 0F0     10        In          Tests in LC3AA
                        ; 0F0     40        In          0F7 played with after clears
                        ; 0F0     02        In          0 out on F5 and F6 after 1 (LC391)
                        ; 0F8     40        In          0F9 ready when 1

          C000                  ORG         0C000H
                                ASEG
C000                    ROMBASE:            ;C000
C000    00                      NOP
C001                    RESETV:             ;C001
C001    C3 C1AF                 JMP         RESET
C004    C3 C1C9                 JMP         GETLINE
C007    C3 C5E0                 JMP         SUB60
C00A    C3 C603                 JMP         0C603H
C00D    C3 C646                 JMP         0C646H
C010    C3 C683                 JMP         0C683H
C013    C3 C6CB                 JMP         0C6CBH
C016    C3 C77F                 JMP         0C77FH
C019                    PUTC:               ;C019
                        ;       Vectored output routine, uses stored output channel
                        ;       BCDE safe until xfr via XFRVEC
C019    3A C807                 LDA         OCHNL
C01C    C3 C03B                 JMP         VECOUT
C01F                    GETC:               ;C01F
                        ;       Vectored input routine
                        ;       BCDE safe until xfr via XFRVEC
```

```
102 C01F  3A C806          LDA       ICHNL
103 C022            VECIN: ;         A contains input channel id
104 C022  E5               PUSH      H
105 C023  21 C29A          LXI       H,INTBL
106 C026            ATBLGO:          ;C026
107                 ;      Switch on A,  HL holds xfr table address
108                 ;      BCDE safe until xfr via XFRVEC
109 C026  E6 03            ANI       3
110 C028  07               RLC
111 C029  85               ADD       L
112 C02A  6F               MOV       L,A
113 C02B  C3 C227          JMP       XFRVEC
114 C02E            CKRDC:           ;C02E
115                 ;
116                 ;      BCDEHL    safe
117                 ;      On return A==0 => no char?
118                 ;        else,  A has the char read from port FC.
119 C02E  DB FA            IN        0FAH
120 C030  2F               CMA
121 C031  E6 01            ANI       BIT0
122 C033  C8               RZ
123 C034  DB FC            IN        0FCH
124 C036  C9               RET
125                 ;      ?
126 C037  00               NOP
127 C038  C3 C001          JMP       RESETV
128
129 C03B            VECOUT:          ;C03B
130                        ;         A contains output channel id
131                        ;         BCDE safe until xfr via XFRVEC
132 C03B  E5               PUSH      H
133 C03C  21 C292          LXI       H,OUTTBL
134 C03F  C3 C026          JMP       ATBLGO
135 C042            CKRD9:           ;C042
136                 ;      On return, A==0 => no character,
137                 ;                else, A has the char
138                 ;      BCDEHL safe
139 C042  DB F8            IN        0F8H
140 C044  E6 40            ANI       BIT6
141 C046  C8               RZ
142 C047  DB F9            IN        0F9H
143 C049  C9               RET
144 C04A            OUTF9:           ;C04A
145 C04A  DB F8            IN        0F8H
146 C04C  17               RAL
147 C04D  D2 C04A          JNC       OUTF9
148 C050  78               MOV       A,B
149 C051  D3 F9            OUT       0F9H
150 C053  C9               RET
151 C054            CONSTR:          ;C054
152 C054  E5               PUSH      H
```

```
153 C055  D5              PUSH    D
154 C056  C5              PUSH    B
155 C057  3A C80C         LDA     ESCCHAR
156 C05A  B7              ORA     A
157 C05B  C2 C15F         JNZ     SUB15
158 C05E  78              MOV     A,B
159 C05F  E6 7F           ANI     DEL
160 C061  47              MOV     B,A
161 C062  CA C07C         JZ      DONE1
162 C065  21 C273         LXI     H,TABLE2
163 C068  CD C082         CALL    X1
164 C06B            SETBIT7:      ;C06B
165 C06B  CD C11C         CALL    SCRADR
166 C06E  7E              MOV     A,M
167 C06F  F6 80           ORI     BIT7
168 C071  77              MOV     M,A
169 C072  2A C80A         LHLD    OUTROW
170 C075  2C              INR     L
171 C076  AF              XRA     A
172 C077            LOOP2:        ;C077
173 C077  2B              DCX     H
174 C078  BC              CMP     H
175 C079  C2 C077         JNZ     LOOP2
176 C07C            DONE1:        ;C07C
177 C07C  C1              POP     B
178 C07D  D1              POP     D
179 C07E  E1              POP     H
180 C07F  C9              RET
181 C080            SUB6:         ;C080
182 C080  23              INX     H
183 C081  23              INX     H
184 C082            X1:           ;C082
185 C082  7E              MOV     A,M
186 C083  B7              ORA     A
187 C084  CA C094         JZ      CHKDEL
188 C087  B8              CMP     B
189 C088  23              INX     H
190 C089  C2 C080         JNZ     SUB6
191 C08C  E5              PUSH    H
192 C08D  CD C136         CALL    CLRBIT7
193 C090  E3              XTHL
194 C091  C3 C227         JMP     XFRVEC
195 C094            CHKDEL:       ;C094
196 C094  78              MOV     A,B
197 C095  FE 7F           CPI     DEL
198 C097  C8              RZ
199 C098            NXTPOS:       ;C098
200 C098  CD C11C         CALL    SCRADR
201 C09B  70              MOV     M,B
202 C09C  3A C808         LDA     CURCOL
203 C09F  FE 3F           CPI     MAXCOL
204 C0A1  DA C0C1         JC      NXTCURCOL
```

```
205 C0A4  3A C809          LDA       CURROW
206 C0A7  FE 0F            CPI       MAXROW
207 C0A9  C2 C0C1          JNZ       NXTCURCOL
208 C0AC  AF               XRA       A
209 C0AD  32 C808          STA       CURCOL
210 C0B0            SUB7B:           ;C0B0
211 C0B0  4F               MOV       C,A
212 C0B1  CD C123          CALL      SCRAD2
213 C0B4  AF               XRA       A
214 C0B5  CD C0FA          CALL      CLREL1
215 C0B8  3A C80A          LDA       OUTROW
216 C0BB  3C               INR       A
217 C0BC  E6 0F            ANI       ROWMASK
218 C0BE  C3 C0EE          JMP       OUTSCR
219 C0C1            NXTCURCOL:                 ;C0C1
220 C0C1  3A C808          LDA       CURCOL
221 C0C4  3C               INR       A
222 C0C5  E6 3F            ANI       COLMASK
223 C0C7  32 C808          STA       CURCOL
224 C0CA  C0               RNZ
225 C0CB            INCCURROW:                 ;C0CB
226 C0CB  3A C809          LDA       CURROW
227 C0CE  3C               INR       A
228 C0CF            STOCURROW:                 ;C0CF
229 C0CF  E6 0F            ANI       ROWMASK
230 C0D1            STCURROW1:                 ;C0D1
231 C0D1  32 C809          STA       CURROW
232 C0D4  C9               RET
233 C0D5            CLEAR:           ;C0D5
234 C0D5  21 CC00          LXI       H,SCRMEM
235 C0D8  36 A0            MVI       M,0A0H
236 C0DA  23               INX       H
237 C0DB            CLREOS:          ;C0DB
238 C0DB  36 20            MVI       M,' '      ;20H
239 C0DD  23               INX       H
240 C0DE  7C               MOV       A,H
241 C0DF  FE 0D            CPI       CR
242 C0E1  DA C0DB          JC        CLREOS
243 C0E4  37               STC
244 C0E5            HOME:            ;C0E5
245 C0E5  3E 00            MVI       A,0
246 C0E7  32 C809          STA       CURROW
247 C0EA  32 C808          STA       CURCOL
248 C0ED  D0               RNC
249 C0EE            OUTSCR:          ;C0EE
250 C0EE  D3 FE            OUT       0FEH
251 C0F0  32 C80A          STA       OUTROW
252 C0F3  C9               RET
253 C0F4            CLREOL:          ;C0F4
254 C0F4  CD C11C          CALL      SCRADR
255 C0F7  3A C808          LDA       CURCOL
```

```
256 C0FA                CLREL1:         ;C0FA
257 C0FA  FE 40                 CPI     64
258 C0FC  D0                    RNC
259 C0FD  36 20                 MVI     M,' '       ;20H
260 C0FF  23                    INX     H
261 C100  3C                    INR     A
262 C101  C3 C0FA               JMP     CLREL1
263 C104                DECCURROW:                  ;C104
264 C104  3A C809               LDA     CURROW
265 C107  3D                    DCR     A
266 C108  C3 C0CF               JMP     STOCURROW
267 C10B                DECCURCOL:                  ;C10B
268 C10B  3A C808               LDA     CURCOL
269 C10E  3D                    DCR     A
270 C10F                STOCURCOL:                  ;C10F
271 C10F  E6 3F                 ANI     COLMASK
272 C111  32 C808               STA     CURCOL
273 C114  C9                    RET
274 C115                INCCURCOL:                  ;C115
275 C115  3A C808               LDA     CURCOL
276 C118  3C                    INR     A
277 C119  C3 C10F               JMP     STOCURCOL
278 C11C                SCRADR:         ;C11C
279 C11C  3A C808               LDA     CURCOL
280 C11F  4F                    MOV     C,A
281 C120                SCRAD1:         ;C120
282 C120  3A C809               LDA     CURROW
283 C123                SCRAD2:         ;C123
284                             ;Screen memory address (X,Y) == 0CC00H+((X+Y)&16)*64+Y  ?
285 C123  6F                    MOV     L,A
286 C124  3A C80A               LDA     OUTROW
287 C127  85                    ADD     L
288 C128  0F                    RRC
289 C129  0F                    RRC
290 C12A  6F                    MOV     L,A
291 C12B  E6 03                 ANI     3
292 C12D  C6 CC                 ADI     0CCH
293 C12F  67                    MOV     H,A
294 C130  7D                    MOV     A,L
295 C131  E6 C0                 ANI     0C0H
296 C133  81                    ADD     C
297 C134  6F                    MOV     L,A
298 C135  C9                    RET
299 C136                CLRBIT7:        ;C136
300 C136  CD C11C               CALL    SCRADR
301 C139  7E                    MOV     A,M
302 C13A  E6 7F                 ANI     7FH
303 C13C  77                    MOV     M,A
304 C13D  C9                    RET
305 C13E                DELCHR:         ;C13E
306 C13E  CD C10B               CALL    DECCURCOL
```

```
307 C141  CD C11C          CALL    SCRADR
308 C144  36 20            MVI     M,' '       ;20H
309 C146  C9               RET
310 C147            DOCR:          ;C147
311 C147  CD C0F4          CALL    CLREOL
312 C14A  C3 C10F          JMP     STOCURCOL
313 C14D            DOLF:          ;C14D
314 C14D  3A C809          LDA     CURROW
315 C150  3C               INR     A
316 C151  E6 0F            ANI     ROWMASK
317 C153  C2 C0D1          JNZ     STCURROW1
318 C156  C3 C0B0          JMP     SUB7B
319 C159            SETESC:        ;C159
320 C159  3E FF            MVI     A,0FFH
321 C15B  32 C80C          STA     ESCCHAR
322 C15E  C9               RET
323 C15F            SUB15:         ;C15F
324 C15F  CD C136          CALL    CLRBIT7
325 C162  CD C168          CALL    DOESCSEQ
326 C165  C3 C06B          JMP     SETBIT7
327 C168            DOESCSEQ:                  ;C168
328 C168  3A C80C          LDA     ESCCHAR
329 C16B  FE FF            CPI     0FFH
330 C16D  CA C190          JZ      SUB19
331 C170  21 C80C          LXI     H,ESCCHAR
332 C173  36 00            MVI     M,0
333 C175  FE 02            CPI     2
334 C177  DA C188          JC      B2COL
335 C17A  CA C18C          JZ      B2ROW
336 C17D  FE 08            CPI     8
337 C17F  CA C598          JZ      LC598
338 C182  FE 09            CPI     9
339 C184  DA C098          JC      NXTPOS
340 C187  C0               RNZ
341 C188            B2COL:         ;C188
342 C188  78               MOV     A,B
343 C189  C3 C10F          JMP     STOCURCOL
344 C18C            B2ROW:         ;C18C
345 C18C  78               MOV     A,B
346 C18D  C3 C0CF          JMP     STOCURROW
347 C190            SUB19:         ;C190
348 C190  78               MOV     A,B
349 C191  FE 03            CPI     3
350 C193  CA C1A6          JZ      YX2BC
351 C196  FE 04            CPI     4
352 C198  C2 C1A2          JNZ     RET2
353 C19B  44               MOV     B,H
354 C19C  4D               MOV     C,L
355 C19D            RET1:          ;C19D
356 C19D  E1               POP     H
357 C19E  D1               POP     D
```

```
358 C19F C5                     PUSH    B
359 C1A0 E5                     PUSH    H
360 C1A1 AF                     XRA     A
361 C1A2                RET2:           ;C1A2
362 C1A2 32 C80C                STA     ESCCHAR
363 C1A5 C9                     RET
364 C1A6                YX2BC:          ;C1A6
365 C1A6 21 C808                LXI     H,CURCOL
366 C1A9 46                     MOV     B,M
367 C1AA 23                     INX     H
368 C1AB 4E                     MOV     C,M
369 C1AC C3 C19D                JMP     RET1
370 C1AF                RESET:          ;C1AF
371 C1AF AF                     XRA     A
372 C1B0 4F                     MOV     C,A
373 C1B1 21 C800                LXI     H,SAVED0
374 C1B4                FILBLK:         ;C1B4
375 C1B4 77                     MOV     M,A
376 C1B5 23                     INX     H
377 C1B6 0C                     INR     C
378 C1B7 C2 C1B4                JNZ     FILBLK
379 C1BA 31 CBFF                LXI     SP,STAKTOP
380 C1BD CD C0D5                CALL    CLEAR
381 C1C0                ABORT:          ;C1C0
382 C1C0 AF                     XRA     A
383 C1C1 D3 FA                  OUT     0FAH
384 C1C3 32 C807                STA     OCHNL
385 C1C6 32 C806                STA     ICHNL
386 C1C9                GETLINE:        ;C1C9
387 C1C9 31 CBFF                LXI     SP,STAKTOP
388 C1CC 3A C807                LDA     OCHNL
389 C1CF F5                     PUSH    PSW
390 C1D0 AF                     XRA     A
391 C1D1 32 C807                STA     OCHNL
392 C1D4 CD C2F1                CALL    PROMPT
393 C1D7 CD C1E4                CALL    GETLN1
394 C1DA F1                     POP     PSW
395 C1DB 32 C807                STA     OCHNL
396 C1DE CD C205                CALL    EXECWD
397 C1E1 C3 C1C9                JMP     GETLINE
398 C1E4                GETLN1:         ;C1E4
399 C1E4 CD C01F                CALL    GETC
400 C1E7 CA C1E4                JZ      GETLN1
401 C1EA E6 7F                  ANI     7FH
402 C1EC CA C1C0                JZ      ABORT
403 C1EF 47                     MOV     B,A
404 C1F0 FE 0D                  CPI     0DH
405 C1F2 CA C0F4                JZ      CLREOL
406 C1F5 FE 0A                  CPI     0AH
407 C1F7 C8                     RZ
408 C1F8 FE 7F                  CPI     7FH
409 C1FA C2 C1FF                JNZ     ECHO
```

clears C800 → C85F to Ø

```
410 C1FD  06 5F            MVI     B,5FH
411 C1FF                   ECHO:   ;C1FF
412 C1FF  CD C019          CALL    PUTC
413 C202  C3 C1E4          JMP     GETLN1
414 C205                   EXECWD: ;C205
415 C205  CD C136          CALL    CLRBIT7
416 C208  0E 01            MVI     C,1
417 C20A  CD C120          CALL    SCRAD1
418 C20D  EB               XCHG
419 C20E  21 C000          LXI     H,ROMBASE
420 C211  E5               PUSH    H
421 C212  CD C32E          CALL    SKPBLNKS
422 C215  CA C480          JZ      SAYWHATDE
423 C218  EB               XCHG
424 C219  11 C24A          LXI     D,CMDTBL
425 C21C  CD C231          CALL    LKUP
426 C21F  CC C22E          CZ      LKUP2
427 C222  CA C481          XFRDE:  JZ      SAYWHAT
428 C225  13               INX     D
429 C226  EB               XCHG
430 C227                   XFRVEC: ;C227
431 C227  7E               MOV     A,M
432 C228  23               INX     H
433 C229  66               MOV     H,M
434 C22A  6F               MOV     L,A
435 C22B  E3               XTHL
436 C22C  7D               MOV     A,L
437 C22D  C9               RET
438 C22E                   LKUP2:  ;C22E
439 C22E  11 C83C          LXI     D,LOC3C
440 C231                   LKUP:   ;C231
441 C231  1A               LDAX    D
442 C232  B7               ORA     A
443 C233  C8               RZ
444 C234  E5               PUSH    H
445 C235  BE               CMP     M
446 C236  13               INX     D
447 C237  C2 C243          JNZ     NOMTCH
448 C23A  23               INX     H
449 C23B  1A               LDAX    D
450 C23C  BE               CMP     M
451 C23D  C2 C243          JNZ     NOMTCH
452 C240  E1               POP     H
453 C241  B7               ORA     A
454 C242  C9               RET
455 C243                   NOMTCH: ;C243
456 C243  13               INX     D
457 C244  13               INX     D
458 C245  13               INX     D
459 C246  E1               POP     H
460 C247  C3 C231          JMP     LKUP
```

```
461 C24A                CMDTBL:         ;C24A
462                                 ENTRY   'BO',BOOT
  1 C24A  42 4F       A             DB      'BO'
  2 C24C  C367        A             DW      BOOT
463                                 ENTRY   'DU',DUMP  ;0C3BFH
  1 C24E  44 55       A             DB      'DU'
  2 C250  C3BF        A             DW      DUMP
464                                 ENTRY   'EN',ENTER ;0C423H
  1 C252  45 4E       A             DB      'EN'
  2 C254  C423        A             DW      ENTER
465                                 ENTRY   'EX',EXIT  ;0C45EH
  1 C256  45 58       A             DB      'EX'
  2 C258  C45E        A             DW      EXIT
466                                 ENTRY   'GE',GETQ  ;0C4A7H
  1 C25A  47 45       A             DB      'GE'
  2 C25C  C4A7        A             DW      GETQ
467                                 ENTRY   'SA',SAVQ  ;0C4E6H
  1 C25E  53 41       A             DB      'SA'
  2 C260  C4E6        A             DW      SAVQ
468                                 ENTRY   'XE',XEQQ  ;0C4A6H
  1 C262  58 45       A             DB      'XE'
  2 C264  C4A6        A             DW      XEQQ
469                                 ENTRY   'CA',CALQ  ;0C52BH
  1 C266  43 41       A             DB      'CA'
  2 C268  C52B        A             DW      CALQ
470                                 ENTRY   'SE',SETQ  ;0C57AH
  1 C26A  53 45       A             DB      'SE'
  2 C26C  C57A        A             DW      SETQ
471                                 ENTRY   'CU',CUTQ  ;0C5BDH
  1 C26E  43 55       A             DB      'CU'
  2 C270  C5BD        A             DW      CUTQ
472 C272  00                        DB      0
473 C273                TABLE2:         ;C273
474                                 ENTRY   0BH,CLEAR
  1 C273  0B          A             DB      0BH
  2 C274  C0D5        A             DW      CLEAR
475                                 ENTRY   17H,DECCURROW
  1 C276  17          A             DB      17H
  2 C277  C104        A             DW      DECCURROW
476                                 ENTRY   1AH,INCCURROW
  1 C279  1A          A             DB      1AH
  2 C27A  C0CB        A             DW      INCCURROW
477                                 ENTRY   1,DECCURCOL
  1 C27C  01          A             DB      1
  2 C27D  C10B        A             DW      DECCURCOL
478                                 ENTRY   13H,INCCURCOL
  1 C27F  13          A             DB      13H
  2 C280  C115        A             DW      INCCURCOL
479                                 ENTRY   0EH,HOME
  1 C282  0E          A             DB      0EH
  2 C283  C0E5        A             DW      HOME
```

```
480                                ENTRY   0DH,DOCR
  1 C285  0D          A            DB      0DH
  2 C286  C147        A            DW      DOCR
481                                ENTRY   0AH,DOLF
  1 C288  0A          A            DB      0AH
  2 C289  C14D        A            DW      DOLF
482                                ENTRY   '_',DELCHR
  1 C28B  5F          A            DB      '_'
  2 C28C  C13E        A            DW      DELCHR
483                                ENTRY   1BH,SETESC
  1 C28E  1B          A            DB      1BH
  2 C28F  C159        A            DW      SETESC
484 C291  00                       DB      0
485 C292                OUTTBL:    ;C292
486 C292  C054                     DW      CONSTR
487 C294  C04A                     DW      OUTF9
488 C296  C2E6                     DW      OUTFD
489 C298  C2D2                     DW      GOSAV1
490 C29A                INTBL:     ;C29A
491 C29A  C02E                     DW      CKRDC
492 C29C  C042                     DW      CKRD9
493 C29E  C2DD                     DW      CKRDD
494 C2A0  C2CB                     DW      GOSAV0
495 C2A2                TABLE5:    ;C2A2
496                                ENTRY   'TA',0C58EH  TA MOD
  1 C2A2  54 41       A            DB      'TA'
  2 C2A4  C58E        A            DW      0C58EH
497                                ENTRY   'S=',0C599H  S EQ
  1 C2A6  53 3D       A            DB      'S='
  2 C2A8  C599        A            DW      0C599H
498                                ENTRY   'I=',0C59DH  I EQ
  1 C2AA  49 3D       A            DB      'I='
  2 C2AC  C59D        A            DW      0C59DH
499                                ENTRY   'O=',0C5A1H  O EQ
  1 C2AE  4F 3D       A            DB      'O='
  2 C2B0  C5A1        A            DW      0C5A1H
500                                ENTRY   'N=',0C5B5H  N EQ
  1 C2B2  4E 3D       A            DB      'N='
  2 C2B4  C5B5        A            DW      0C5B5H
501                                ENTRY   'CI',0C5A5H  CI MOD
  1 C2B6  43 49       A            DB      'CI'
  2 C2B8  C5A5        A            DW      0C5A5H
502                                ENTRY   'CO',0C5A9H  CO MOD
  1 C2BA  43 4F       A            DB      'CO'
  2 C2BC  C5A9        A            DW      0C5A9H
503                                ENTRY   'XE',0C5B1H  XE MOD
  1 C2BE  58 45       A            DB      'XE'
  2 C2C0  C5B1        A            DW      0C5B1H
504                                ENTRY   'TY',0C5ADH  TY MOD
  1 C2C2  54 59       A            DB      'TY'
  2 C2C4  C5AD        A            DW      0C5ADH
```

```
505                                ENTRY   'CR',0C5B9H
  1 C2C6  43 52          A         DB      'CR'
  2 C2C8  C5B9           A         DW      0C5B9H
506 C2CA  00                       DB      0
507 C2CB                GOSAV0:            ;C2CB
508 C2CB  E5                       PUSH    H
509 C2CC  2A C800                  LHLD    SAVED0
510 C2CF  C3 C2D6                  JMP     JMPHL
511 C2D2                GOSAV1:            ;C2D2
512 C2D2  E5                       PUSH    H
513 C2D3  2A C802                  LHLD    SAVED1
514 C2D6                JMPHL:             ;C2D6
515 C2D6  7D                       MOV     A,L
516 C2D7  B4                       ORA     H
517 C2D8  CA C1C0                  JZ      ABORT
518 C2DB  E3                       XTHL
519 C2DC  C9                       RET
520 C2DD                CKRDD:             ;C2DD
521 C2DD  DB FA                    IN      0FAH
522 C2DF  2F                       CMA
523 C2E0  E6 02                    ANI     2
524 C2E2  C8                       RZ
525 C2E3  DB FD                    IN      0FDH
526 C2E5  C9                       RET
527 C2E6                OUTFD:             ;C2E6
528 C2E6  DB FA                    IN      0FAH
529 C2E8  E6 04                    ANI     4
530 C2EA  C2 C2E6                  JNZ     OUTFD
531 C2ED  78                       MOV     A,B
532 C2EE  D3 FD                    OUT     0FDH
533 C2F0  C9                       RET
534 C2F1                PROMPT:            ;C2F1
535 C2F1  CD C2F9                  CALL    LFSTROUT
536 C2F4  06 3E                    MVI     B,'>'       ;3EH
537 C2F6  C3 C019                  JMP     PUTC
538 C2F9                LFSTROUT:                      ;C2F9
539 C2F9  06 0A                    MVI     B,0AH
540 C2FB  CD C019                  CALL    PUTC
541 C2FE                CRSTROUT:                      ;C2FE
542 C2FE  06 0D                    MVI     B,0DH
543 C300  CD C019                  CALL    PUTC
544 C303  3A C810                  LDA     LOC10
545 C306  4F                       MOV     C,A
546 C307                LOOP5:             ;C307
547 C307  0D                       DCR     C
548 C308  F8                       RM
549 C309  AF                       XRA     A
550 C30A  CD C41F                  CALL    OUTCHAR
551 C30D  C3 C307                  JMP     LOOP5
552 C310                GETHEXOR1:                     ;C310
553 C310  CD C31B                  CALL    NEXTWORD
554 C313  3E 01                    MVI     A,1
```

```
555 C315  C8              RZ
556 C316  CD C340         CALL      HEX2HL
557 C319  7D              MOV       A,L
558 C31A  C9              RET
559 C31B            NEXTWORD:                     ;C31B
560 C31B  0E 0C           MVI       C,0CH
561 C31D            NXTWD1:         ;C31D
562 C31D  1A              LDAX      D
563 C31E  FE 20           CPI       ' '         ;20H
564 C320  CA C32E         JZ        SKPBLNKS
565 C323  13              INX       D
566 C324  FE 3D           CPI       '='         ;3DH
567 C326  CA C32E         JZ        SKPBLNKS
568 C329  0D              DCR       C
569 C32A  C2 C31D         JNZ       NXTWD1
570 C32D  C9              RET
571 C32E            SKPBLNKS:                     ;C32E
572 C32E  0E 0A           MVI       C,0AH
573 C330            SKP1BLNK:                     ;C330
574 C330  1A              LDAX      D
575 C331  FE 20           CPI       ' '         ;20H
576 C333  C0              RNZ
577 C334  13              INX       D
578 C335  0D              DCR       C
579 C336  C8              RZ
580 C337  C3 C330         JMP       SKP1BLNK
581 C33A            GETHEX:         ;C33A
582 C33A  CD C31B         CALL      NEXTWORD
583 C33D  CA C480         JZ        SAYWHATDE
584 C340            HEX2HL:         ;C340
585 C340  21 0000         LXI       H,0000
586 C343            NXTHEX:         ;C343
587 C343  1A              LDAX      D
588 C344  FE 20           CPI       ' '         ;20H
589 C346  C8              RZ
590 C347  FE 2F           CPI       '/'         ;2FH
591 C349  C8              RZ
592 C34A  FE 3A           CPI       ':'         ;3AH
593 C34C  C8              RZ
594 C34D  29              DAD       H
595 C34E  29              DAD       H
596 C34F  29              DAD       H
597 C350  29              DAD       H
598 C351  CD C35D         CALL      FMHEX
599 C354  D2 C480         JNC       SAYWHATDE
600 C357  85              ADD       L
601 C358  6F              MOV       L,A
602 C359  13              INX       D
603 C35A  C3 C343         JMP       NXTHEX
604 C35D            FMHEX:          ;C35D
605 C35D  D6 30           SUI       '0'         ;30H
```

```
606 C35F  FE 0A           CPI     0AH
607 C361  D8              RC
608 C362  D6 07           SUI     7
609 C364  FE 10           CPI     10H
610 C366  C9              RET
611 C367            BOOT:         ;C367
612 C367  3E CF           MVI     A,0CFH
613 C369  D3 F7           OUT     0F7H
614 C36B  D3 F5           OUT     0F5H
615 C36D  3E FF           MVI     A,0FFH
616 C36F  D3 F1           OUT     0F1H
617 C371  DB F0           IN      0F0H
618 C373  E6 40           ANI     '@'       ;40H
619 C375  C2 C37A         JNZ     OUTF7
620 C378  3E DF           MVI     A,0DFH
621 C37A            OUTF7:        ;C37A
622 C37A  D3 F7           OUT     0F7H
623 C37C            IN0F0:        ;C37C
624 C37C  DB F0           IN      0F0H
625 C37E  07              RLC
626 C37F  DA C37C         JC      IN0F0
627 C382  01 1290         LXI     B,1290H
628 C385            DLAY1290:               ;C385
629 C385  0B              DCX     B
630 C386  78              MOV     A,B
631 C387  B1              ORA     C
632 C388  C2 C385         JNZ     DLAY1290
633 C38B            LC38B:        ;C38B
634 C38B  DB F0           IN      0F0H
635 C38D  07              RLC
636 C38E  DA C38B         JC      LC38B
637 C391            LC391:        ;C391
638 C391  DB F0           IN      0F0H
639 C393  E6 02           ANI     2
640 C395  CA C391         JZ      LC391
641 C398  AF              XRA     A
642 C399  D3 F5           OUT     0F5H
643 C39B  D3 F6           OUT     0F6H
644 C39D  21 0340         LXI     H,0340H
645 C3A0  7D              MOV     A,L
646 C3A1  D3 F3           OUT     0F3H
647 C3A3  7C              MOV     A,H
648 C3A4  D3 F4           OUT     0F4H
649 C3A6  3E 03           MVI     A,3
650 C3A8  D3 F1           OUT     0F1H
651 C3AA            LC3AA:        ;C3AA
652 C3AA  DB F0           IN      0F0H
653 C3AC  E6 1B           ANI     1BH
654 C3AE  CA C3AA         JZ      LC3AA
655 C3B1  E6 08           ANI     8
656 C3B3  C2 C367         JNZ     BOOT
```

```
657 C3B6  DB F0            IN      0F0H
658 C3B8  E6 03            ANI     3
659 C3BA  CA C3AA          JZ      LC3AA
660 C3BD  C7               RST     0
661 C3BE  76               HLT
662 C3BF  CD C33A    DUMP: CALL    GETHEX
663 C3C2  E5               PUSH    H
664 C3C3  CD C310          CALL    GETHEXOR1
665 C3C6  D1               POP     D
666 C3C7  EB               XCHG
667 C3C8             DUMP1:        ;C3C8
668 C3C8  CD C2F9          CALL    LFSTROUT
669 C3CB  CD C3E8          CALL    OUTXXB
670 C3CE  CD C406          CALL    OUTBLNK
671 C3D1  0E 10            MVI     C,10H
672 C3D3             DUMP2:        ;C3D3
673 C3D3  7E               MOV     A,M
674 C3D4  C5               PUSH    B
675 C3D5  CD C3ED          CALL    OUTXB
676 C3D8  7D               MOV     A,L
677 C3D9  93               SUB     E
678 C3DA  7C               MOV     A,H
679 C3DB  9A               SBB     D
680 C3DC  D2 C1C9          JNC     GETLINE
681 C3DF  C1               POP     B
682 C3E0  23               INX     H
683 C3E1  0D               DCR     C
684 C3E2  C2 C3D3          JNZ     DUMP2
685 C3E5  C3 C3C8          JMP     DUMP1
686 C3E8             OUTXXB:       ;C3E8  -- Out hexword (XX) + Blank, then getline
687 C3E8  7C               MOV     A,H
688 C3E9  CD C40B          CALL    LC40B
689 C3EC  7D               MOV     A,L
690 C3ED             OUTXB:        ;C3ED  -- Out hexbyte (X) + Blank, then getline
691 C3ED  CD C40B          CALL    LC40B
692 C3F0  CD C01F          CALL    GETC
693 C3F3  CA C406          JZ      OUTBLNK
694 C3F6  E6 7F            ANI     7FH
695 C3F8  CA C1C9          JZ      GETLINE
696 C3FB  FE 20            CPI     ' '       ;20H
697 C3FD  C2 C406          JNZ     OUTBLNK
698 C400  CD C01F    GETCHAR:CALL  GETC
699 C403  CA C400          JZ      GETCHAR
700 C406             OUTBLNK:      ;C406
701 C406  06 20            MVI     B,' '     ;20H
702 C408  C3 C019          JMP     PUTC
703 C40B             LC40B:        ;C40B
704 C40B  4F               MOV     C,A
705 C40C  0F               RRC
706 C40D  0F               RRC
707 C40E  0F               RRC
```

```
708 C40F  0F                    RRC
709 C410  CD C414               CALL    TOHEX
710 C413  79                    MOV     A,C
711 C414  E6 0F   LOWBL TOHEX:  ANI     0FH
712 C416  C6 30                 ADI     '0'         ;30H
713 C418  FE 3A                 CPI     ':'         ;3AH
714 C41A  DA C41F               JC      OUTCHAR
715 C41D  C6 07                 ADI     7
716 C41F            OUTCHAR:    ;C41F
717 C41F  47                    MOV     B,A
718 C420  C3 C019               JMP     PUTC
719 C423  CD C33A   ENTER:      CALL    GETHEX
720 C426  E5                    PUSH    H
721 C427  AF                    XRA     A
722 C428  32 C807               STA     OCHNL
723 C42B  CD C2F9               CALL    LFSTROUT
724 C42E  06 3A                 MVI     B,':'       ;3AH
725 C430  CD C1FF               CALL    ECHO
726 C433  CD C136               CALL    CLRBIT7
727 C436  0E 01                 MVI     C,1
728 C438  CD C120               CALL    SCRAD1
729 C43B  EB                    XCHG
730 C43C  0E 03     SUB40:      MVI     C,3
731 C43E  CD C330               CALL    SKP1BLNK
732 C441  CA C42B               JZ      0C42BH
733 C444  FE 2F                 CPI     '/'         ;2FH
734 C446  CA C1C0               JZ      ABORT
735 C449  CD C340               CALL    HEX2HL
736 C44C  FE 3A                 CPI     ':'         ;3AH
737 C44E  CA C459               JZ      0C459H
738 C451  7D                    MOV     A,L
739 C452  E1                    POP     H
740 C453  77                    MOV     M,A
741 C454  23                    INX     H
742 C455  E5                    PUSH    H
743 C456  C3 C43C               JMP     SUB40
744 C459  E3                    XTHL
745 C45A  13                    INX     D
746 C45B  C3 C43C               JMP     SUB40
747 C45E  CD C33A   EXIT:       CALL    GETHEX
748 C461  E5                    PUSH    H
749 C462  21 C000               LXI     H,ROMBASE
750 C465  C9                    RET
751 C466  21 C81C   SUB50:      LXI     H,0C81CH
752 C469  CD C31B               CALL    NEXTWORD
753 C46C  06 06                 MVI     B,6
754 C46E  1A                    LDAX    D
755 C46F  FE 20                 CPI     ' '         ;20H
756 C471  CA C486               JZ      0C486H
757 C474  FE 2F                 CPI     '/'         ;2FH
758 C476  CA C486               JZ      0C486H
759 C479  77                    MOV     M,A
```

```
760 C47A  13              INX     D
761 C47B  23              INX     H
762 C47C  05              DCR     B
763 C47D  C2 C46E         JNZ     0C46EH
764 C480            SAYWHATDE:                ;C480
765 C480  EB              XCHG
766 C481            SAYWHAT:        ;C481
767 C481  36 3F           MVI     M,'?'       ;3FH
768 C483  C3 C1C0         JMP     ABORT
769 C486  36 00           MVI     M,0
770 C488  23              INX     H
771 C489  05              DCR     B
772 C48A  C2 C486         JNZ     0C486H
773 C48D  FE 2F           CPI     '/'         ;2FH
774 C48F  3E 01           MVI     A,1
775 C491  C2 C49A         JNZ     0C49AH
776 C494  13              INX     D
777 C495  CD C32E         CALL    SKPBLNKS
778 C498  D6 30           SUI     '0'         ;30H
779 C49A  E6 01           ANI     1
780 C49C  3E 80           MVI     A,80H
781 C49E  C2 C4A2         JNZ     0C4A2H
782 C4A1  1F              RAR
783 C4A2  32 C854         STA     0C854H
784 C4A5  C9              RET
785 C4A6  3E        XEQQ: DB      '>'         ; Pun!  3E AF can be read MVI A, AF
786 C4A7  AF        GETQ: XRA     A
787 C4A8  F5              PUSH    PSW
788 C4A9  21 C82C         LXI     H,0C82CH
789 C4AC  CD C469         CALL    0C469H
790 C4AF  21 0000         LXI     H,0000H
791 C4B2  CD C310         CALL    GETHEXOR1
792 C4B5  EB              XCHG
793 C4B6  21 C82C         LXI     H,0C82CH
794 C4B9  7E              MOV     A,M
795 C4BA  B7              ORA     A
796 C4BB  C2 C4C1         JNZ     0C4C1H
797 C4BE  21 C81C         LXI     H,0C81CH
798 C4C1  E5              PUSH    H
799 C4C2  CD C548         CALL    0C548H
800 C4C5  E1              POP     H
801 C4C6  CD C6CB         CALL    0C6CBH
802 C4C9  DA C514         JC      0C514H
803 C4CC  CD C550         CALL    0C550H
804 C4CF  F1              POP     PSW
805 C4D0  B7              ORA     A
806 C4D1  C8              RZ
807 C4D2  3A C822         LDA     0C822H
808 C4D5  B7              ORA     A
809 C4D6  FA C514         JM      0C514H
810 C4D9  3A C821         LDA     0C821H
```

```
811 C4DC  B7                    ORA     A
812 C4DD  C2 C514               JNZ     0C514H
813 C4E0  2A C827               LHLD    0C827H
814 C4E3  C3 C461               JMP     0C461H
815 C4E6  CD C466       SAVQ:   CALL    SUB50
816 C4E9  CD C33A               CALL    GETHEX
817 C4EC  E5                    PUSH    H
818 C4ED  CD C33A               CALL    GETHEX
819 C4F0  E3                    XTHL
820 C4F1  E5                    PUSH    H
821 C4F2  CD C310               CALL    GETHEXOR1
822 C4F5  22 C825               SHLD    0C825H
823 C4F8  E1                    POP     H
824 C4F9  D1                    POP     D
825 C4FA  E5                    PUSH    H
826 C4FB  7B                    MOV     A,E
827 C4FC  95                    SUB     L
828 C4FD  6F                    MOV     L,A
829 C4FE  7A                    MOV     A,D
830 C4FF  9C                    SBB     H
831 C500  67                    MOV     H,A
832 C501  23                    INX     H
833 C502  22 C823               SHLD    0C823H
834 C505  E5                    PUSH    H
835 C506  CD C548               CALL    0C548H
836 C509  21 C81C               LXI     H,0C81CH
837 C50C  CD C7AF               CALL    0C7AFH
838 C50F  D1                    POP     D
839 C510  E1                    POP     H
840 C511  C3 C790               JMP     0C790H
841 C514  CD C2F9       ←0C514  CALL    LFSTROUT
842 C517  16 06                 MVI     D,6
843 C519  21 C525               LXI     H,0C525H
844 C51C  CD C56A               CALL    0C56AH
845 C51F  CD C550               CALL    0C550H
846 C522  C3 C1C0               JMP     ABORT
847 C525  45 52 52 4F           DB      'ERROR '
848 C52B  CD C466       CALQ:   CALL    SUB50
849 C52E  CD C2F9               CALL    LFSTROUT
850 C531  CD C548               CALL    0C548H
851 C534  06 01                 MVI     B,1
852 C536  CD C7EF               CALL    0C7EFH
853 C539  CD C723               CALL    0C723H
854 C53C  DA C1C0               JC      ABORT
855 C53F  C2 C539               JNZ     0C539H
856 C542  CD C550               CALL    0C550H
857 C545  C3 C539               JMP     0C539H
858 C548  21 C854       LC548:  LXI     H,0C854H
859 C54B  3A C80D               LDA     0C80DH
860 C54E  B6                    ORA     M
861 C54F  C9                    RET
```

```
862 C550  16 08              MVI     D,8
863 C552  21 C81B            LXI     H,0C81BH
864 C555  CD C56A            CALL    0C56AH  OUTMSG
865 C558  CD C406            CALL    OUTBLNK
866 C55B  2A C825            LHLD    0C825H
867 C55E  CD C3E8            CALL    OUTXXB
868 C561  2A C823            LHLD    0C823H
869 C564  CD C3E8            CALL    OUTXXB
870 C567  C3 C2F9            JMP     LFSTROUT
871 C56A  7E        OUTMSG:  MOV     A,M
872 C56B  B7                 ORA     A
873 C56C  C2 C571            JNZ     0C571H
874 C56F  3E 20              MVI     A,' '       ;20H
875 C571  CD C41F            CALL    OUTCHAR
876 C574  23                 INX     H
877 C575  15                 DCR     D
878 C576  C2 C56A            JNZ     0C56AH
879 C579  C9                 RET
880 C57A  CD C31B    SETQ:   CALL    NEXTWORD
881 C57D  CA C480            JZ      SAYWHATDE
882 C580  D5                 PUSH    D
883 C581  CD C33A            CALL    GETHEX
884 C584  E3                 XTHL
885 C585  11 C2A2            LXI     D,TABLE5
886 C588  CD C231            CALL    LKUP
887 C58B  C3 C222            JMP     XFRDE
888 C58E  B7        TAMOD:   ORA     A                  should write 0 to 0C80H in
889 C58F  CA C594            JZ      0C594H             C80D
890 C592  3E 20              MVI     A,' '       ;20H
891 C594  32 C80D            STA     0C80DH
892 C597  C9                 RET
893 C598            LC598:   ;C598
894 C598  78                 MOV     A,B
895 C599  32 C80B    S.EQ:   STA     0C80BH  — longer # slower display!
896 C59C  C0                 RNZ
897 C59D  32 C806    IEQ:    STA     ICHNL
898 C5A0  C9                 RET
899 C5A1  32 C807    OEQ:    STA     OCHNL
900 C5A4  C9                 RET
901 C5A5  22 C800    CIMOD:  SHLD    SAVED0
902 C5A8  C9                 RET
903 C5A9  22 C802    COMOD:  SHLD    SAVED1
904 C5AC  C9                 RET
905 C5AD  32 C822    TYMOD:  STA     0C822H
906 C5B0  C9                 RET
907 C5B1  22 C827    XEMOD:  SHLD    0C827H
908 C5B4  C9                 RET
909 C5B5  32 C810    NEGQ:   STA     LOC10
910 C5B8  C9                 RET
911 C5B9  32 C811    CRMOD:  STA     0C811H
912 C5BC  C9                 RET
```

```
 913 C5BD  CD C466      CUTQ:   CALL        SUB50
 914 C5C0  21 C1C9              LXI         H,GETLINE
 915 C5C3  CD C310              CALL        GETHEXOR1
 916 C5C6  E5                   PUSH        H
 917 C5C7  21 C81C              LXI         H,0C81CH
 918 C5CA  CD C22E              CALL        LKUP2
 919 C5CD  CA C5D3              JZ          0C5D3H
 920 C5D0  1B                   DCX         D
 921 C5D1  36 00                MVI         M,0
 922 C5D3  7E                   MOV         A,M
 923 C5D4  12                   STAX        D
 924 C5D5  13                   INX         D
 925 C5D6  23                   INX         H
 926 C5D7  7E                   MOV         A,M
 927 C5D8  12                   STAX        D
 928 C5D9  13                   INX         D
 929 C5DA  E1                   POP         H
 930 C5DB  EB                   XCHG
 931 C5DC  73                   MOV         M,E
 932 C5DD  23                   INX         H
 933 C5DE  72                   MOV         M,D
 934 C5DF  C9                   RET
 935 C5E0              SUB60:                ;C5E0
 936 C5E0  E5                   PUSH        H
 937 C5E1  CD C633              CALL        0C633H
 938 C5E4  C2 C5FA              JNZ         0C5FAH
 939 C5E7  36 01                MVI         M,1
 940 C5E9  23                   INX         H
 941 C5EA  77                   MOV         M,A
 942 C5EB  23                   INX         H
 943 C5EC  77                   MOV         M,A
 944 C5ED  11 C863              LXI         D,0C863H
 945 C5F0  3A C854              LDA         0C854H
 946 C5F3  82                   ADD         D
 947 C5F4  57                   MOV         D,A
 948 C5F5  C1                   POP         B
 949 C5F6  B7                   ORA         A
 950 C5F7  C3 C6B6              JMP         0C6B6H
 951 C5FA  E1                   POP         H
 952 C5FB  D1                   POP         D
 953 C5FC  AF                   XRA         A
 954 C5FD  37                   STC
 955 C5FE  C9                   RET
 956                            END
0 Error(s) Detected.
1535 Absolute Bytes. 149 Symbols Detected.
```

Cross Reference:

Cross Reference:

001B	ESC	47							
C80C	ESCCHAR	20	155	321	328	331	362		
C205	EXECWD	396	414						
C45E	EXIT	465	747						
C1B4	FILBLK	374	378						
C35D	FMHEX	598	604						
C01F	GETC	99	399	692	698				
C400	GETCHAR	698	699						
C33A	GETHEX	581	662	719	747	816	818	883	
C310	GETHEXOR1	552	664	791	821	915			
C1C9	GETLINE	87	386	397	680	695	914		
C1E4	GETLN1	393	398	400	413				
C4A7	GETQ	466	786						
C2CB	GOSAV0	494	507						
C2D2	GOSAV1	489	511						
C340	HEX2HL	556	584	735					
C0E5	HOME	244	479						
0009	HTAB	45							
C806	ICHNL	14	102	385	897				
C37C	IN0F0	623	626						
C115	INCCURCOL	274	478						
C0CB	INCCURROW	225	476						
C29A	INTBL	105	490						
C2D6	JMPHL	510	514						
C38B	LC38B	633	636						
C391	LC391	637	640						
C3AA	LC3AA	651	654	659					
C40B	LC40B	688	691	703					
C598	LC598	337	893						
000A	LF	48							
C2F9	LFSTROUT	535	538	668	723	841	849	870	
C231	LKUP	425	440	460	886				
C22E	LKUP2	426	438	918					
C810	LOC10	21	544	909					
C83C	LOC3C	22	439						
C077	LOOP2	172	175						
C307	LOOP5	546	551						
003F	MAXCOL	32	203						
000F	MAXROW	31	206						
C31B	NEXTWORD	553	559	582	752	880			
C243	NOMTCH	447	451	455					
C0C1	NXTCURCOL	204	207	219					
C343	NXTHEX	586	603						
C098	NXTPOS	199	339						
C31D	NXTWD1	561	569						
C807	OCHNL	15	97	384	388	391	395	722	899
C406	OUTBLNK	670	693	697	700	865			
C41F	OUTCHAR	550	714	716	875				
C80B	OUTCOL	19							
C37A	OUTF7	619	621						
C04A	OUTF9	144	147	487					

Cross Reference:

C2E6	OUTFD	488	527	530				
C80A	OUTROW	18	169	215	251	286		
C0EE	OUTSCR	218	249					
C292	OUTTBL	133	485					
C3ED	OUTXB	675	690					
C3E8	OUTXXB	669	686	867	869			
C2F1	PROMPT	392	534					
C019	PUTC	94	412	537	540	543	702	718
C1AF	RESET	86	370					
C001	RESETV	85	127					
C19D	RET1	355	369					
C1A2	RET2	352	361					
C000	ROMBASE	83	419	749				
000F	ROWMASK	30	217	229	316			
C800	SAVED0	12	373	509	901			
C802	SAVED1	13	513	903				
C4E6	SAVQ	467	815					
C481	SAYWHAT	427	766					
C480	SAYWHATDE	422	583	599	764	881		
C120	SCRAD1	281	417	728				
C123	SCRAD2	212	283					
C11C	SCRADR	165	200	254	278	300	307	
CC00	SCRMEM	24	234					
C06B	SETBIT7	164	326					
C159	SETESC	319	483					
C57A	SETQ	470	880					
C330	SKP1BLNK	573	580	731				
C32E	SKPBLNKS	421	564	567	571	777		
CBFF	STAKTOP	23	379	387				
C0D1	STCURROW1	230	317					
C10F	STOCURCOL	270	277	312	343			
C0CF	STOCURROW	228	266	346				
C15F	SUB15	157	323					
C190	SUB19	330	347					
C43C	SUB40	730	743	746				
C466	SUB50	751	815	848	913			
C080	SUB6	181	190					
C5E0	SUB60	88	935					
C0B0	SUB7B	210	318					
C273	TABLE2	162	473					
C2A2	TABLE5	495	885					
C414	TOHEX	709	711					
C022	VECIN	103						
C03B	VECOUT	98	129					
000B	VTAB	46						
C082	X1	163	184					
C4A6	XEQQ	468	785					
C222	XFRDE	427	887					
C227	XFRVEC	113	194	430				
C1A6	YX2BC	350	364					