

!A

*** End of Pass 1

*** End of Pass 2

```
0800      1          ttl "STRING DRAW Source Code, SD.L"
0800      2      ;
0800      3      ;
0800      4      ; SD.L
0800      5      ;
0800      6      ;
0800      7      ; STRING DRAW Source Code
0800      8      ;
0800      9      ; 2024 February 14
0800     10      ;
0800     11      ;
0800     12      ; DOS 4.5, Build 06
0800     13      ;
0800     14      ; 2024 February 14
0800     15      ;
0800     16      ;
0800     17      ; Start of Source Code: 0x4000
0800     18      ; Start of Symbol List: 0x7800
0800     19      ;
0800     20      ;
0800     21      ; Copyright (c) 2024 February 14 by
0800     22      ; Walland Philip Vrbancic Jr
0800     23      ;
0800     24      ; 6223 East Peabody Street
0800     25      ; Long Beach, California 90808
0800     26      ; Unitied States of America
0800     27      ;
0800     28      ; All Rights Reserved
0800     29      ;
0800     30      ; This software is the confidential and
0800     31      ; proprietary intellectual property of
0800     32      ; Walland Philip Vrbancic Jr
0800     33      ;
0800     34      ;
0800     35      ; CALL SD,S$[,H%,L%,W%,C%,I%]
0800     36      ;
0800     37      ; SD = Entry address of routine
0800     38      ;
0800     39      ; S$ = String to draw on HIRES screen
0800     40      ;
0800     41      ; Required in command line
0800     42      ;
0800     43      ; H% = Home cursor, clear screen
0800     44      ;
0800     45      ; Optional in command line
0800     46      ;
0800     47      ; If > 0 command is performed and then reset to 0
0800     48      ;
0800     49      ; If H% = 0x20, write to HIRES page 1
0800     50      ; If H% = 0x40, write to HIRES page 2
0800     51      ;
0800     52      ; This command initializes HPAG and must precede any
0800     53      ; HIRES character string writing.
0800     54      ;
0800     55      ; L% = Line on which to draw string
0800     56      ;
0800     57      ; Optional in command line
0800     58      ;
0800     59      ; Range = 0 to 23
0800     60      ;
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0800      61 ;   W% = Window in which to begin drawing string
0800      62 ;
0800      63 ;       Optional in command line
0800      64 ;
0800      65 ;       Range = 0 to 39
0800      66 ;
0800      67 ;       Returns current value
0800      68 ;
0800      69 ;   C% = Cell within window to begin drawing string
0800      70 ;
0800      71 ;       Optional in command line
0800      72 ;
0800      73 ;       Range = 0 to 6
0800      74 ;
0800      75 ;       Returns current value
0800      76 ;
0800      77 ;   I% = Inverse command
0800      78 ;
0800      79 ;       Optional in command line
0800      80 ;
0800      81 ;       If > 0 entire string affected, then reset to 0
0800      82 ;
0800      83 ;
00B7     84 CHRGOT   epz $B7
0800     85 ;
00EC     86 S%ADR    epz $EC
00EE     87 VARADR   epz $EE
0800     88 ;
00F6     89 STRPTR   epz $F6
00FA     90 CHARPTR   epz $FA
00FC     91 SCRNPTR   epz $FC
0800     92 ;
0800     93         enz
0800     94 ;
0000     95 ZERO      equ $00
0020     96 HIRESPGS equ $20
0020     97 TBLOFF    equ $20
007F     98 ASCIMASK  equ $7F
00FF     99 NEGONE    equ $FF
0800    100 ;
00AC    101 COMMA     equ $AC
0800    102 ;
DEBE    103 CHKCOM     equ $DEBE
DFE3    104 PTRGET    equ $DFE3
0800    105 ;
0800    106 ;
6000    107         org $6000
6000    108         obj $900
6000    109         usr
6000    110 ;
6000    111 ;
6000    112 ; Initialize some variables to zero.
6000    113 ;
6000 A9 00    114         lda #ZERO
6002 8D A3 61 115         sta INVFLAG
6005 8D A4 61 116         sta STRNDX
6008 8D B2 61 117         sta ERROR
600B    118 ;
600B 8D AF 61 119         sta W%SAV+1
600E 8D B1 61 120         sta C%SAV+1
6011    121 ;

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```

6011      122 ;
6011      123 ; Get S$ variable string address.
6011      124 ;
6011 20 BE DE 125      jsr CHKCOM
6014 20 E3 DF 126      jsr PTRGET
6017      127 ;
6017 85 EC 128      sta S%ADR
6019 84 ED 129      sty S%ADR+1
601B      130 ;
601B A0 00 131      ldY #ZERO
601D      132 ;
601D B1 EC 133      lda (S%ADR),Y
601F 8D A5 61 134      sta STRLEN
6022      135 ;
6022 C8 136      iny
6023      137 ;
6023 B1 EC 138      lda (S%ADR),Y
6025 85 F6 139      sta STRPTR
6027      140 ;
6027 C8 141      iny
6028      142 ;
6028 B1 EC 143      lda (S%ADR),Y
602A 85 F7 144      sta STRPTR+1
602C      145 ;
602C      146 ;
602C      147 ; Get H% variable address is available, save value to HPAG,
602C      148 ; reset command to zero, and process command.
602C      149 ;
602C 20 AE 60 150      jsr GETPARM
602F B0 24 151      bcs >2
6031      152 ;
6031 F0 22 153      beq >2
6033      154 ;
6033 8D A2 61 155      sta HPAG
6036 AA 156      tax
6037      157 ;
6037 A9 00 158      lda #ZERO
6039 91 EE 159      sta (VARADR),Y
603B      160 ;
603B 8D AB 61 161      sta LINE
603E 8D AC 61 162      sta WINDOW
6041 8D AD 61 163      sta CELL
6044      164 ;
6044 A8 165      tay
6045      166 ;
6045 84 FC 167      sty SCRNPTR
6047 86 FD 168      stx SCRNPTR+1
6049      169 ;
6049 A2 20 170      ldx #HIRESPGS
604B      171 ;
604B 91 FC 172      sta (SCRNPTR),Y
604D      173 ;
604D C8 174      iny
604E D0 FB 175      bne <1
6050      176 ;
6050 E6 FD 177      inc SCRNPTR+1
6052      178 ;
6052 CA 179      dex
6053 D0 F6 180      bne <1
6055      181 ;
6055      182 ;

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6055      183 ; Get L% variable address if available and set line number
6055      184 ; to draw string.  If LINE value exceeds 23, set ERROR.
6055      185 ;
6055 20 AE 60 186 ^2      jsr GETPARM
6058 B0 0A    187      bcs >3
605A      188 ;
605A 8D AB 61 189      sta LINE
605D      190 ;
605D C9 18    191      cmp #24
605F 90 03    192      bcc >3
6061      193 ;
6061 EE B2 61 194      inc ERROR
6064      195 ;
6064      196 ;
6064      197 ; Get W% variable address if available and set window
6064      198 ; number.  If WINDOW value exceeds 39, set ERROR.
6064      199 ;
6064 20 AE 60 200 ^3      jsr GETPARM
6067 B0 14    201      bcs >5
6069      202 ;
6069 8D AC 61 203      sta WINDOW
606C      204 ;
606C C9 28    205      cmp #40
606E 90 03    206      bcc >4
6070      207 ;
6070 EE B2 61 208      inc ERROR
6073      209 ;
6073 A5 EE     210 ^4      lda VARADR
6075 8D AE 61 211      sta W%SAV
6078      212 ;
6078 A5 EF     213      lda VARADR+1
607A 8D AF 61 214      sta W%SAV+1
607D      215 ;
607D      216 ;
607D      217 ; Get C% variable address if available and set cell
607D      218 ; number.  If CELL value exceeds 6, set ERROR.
607D      219 ;
607D 20 AE 60 220 ^5      jsr GETPARM
6080 B0 14    221      bcs >7
6082      222 ;
6082 8D AD 61 223      sta CELL
6085      224 ;
6085 C9 07     225      cmp #7
6087 90 03     226      bcc >6
6089      227 ;
6089 EE B2 61 228      inc ERROR
608C      229 ;
608C A5 EE     230 ^6      lda VARADR
608E 8D B0 61 231      sta C%SAV
6091      232 ;
6091 A5 EF     233      lda VARADR+1
6093 8D B1 61 234      sta C%SAV+1
6096      235 ;
6096      236 ;
6096      237 ; Get I% variable address if available, reset variable to
6096      238 ; zero, and set inverse flag.
6096      239 ;
6096 20 AE 60 240 ^7      jsr GETPARM
6099 B0 35     241      bcs BEGIN
609B      242 ;
609B F0 33    243      beq BEGIN

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```

609D      244 ;
609D CE A3 61 245      dec INVFLAG
60A0      246 ;
60A0 A9 00 247      lda #ZERO
60A2 91 EE 248      sta (VARADR),Y
60A4      249 ;
60A4 8D A7 61 250      sta CHAROFF          ; set for SPACE character
60A7      251 ;
60A7 AD B2 61 252      lda ERROR
60AA F0 6B 253      beq PROCESS2
60AC      254 ;
60AC D0 2C 255      bne EXIT          ; always taken
60AE      256 ;
60AE      257 ;
60AE      258 ; Get the address and data of the next command line
60AE      259 ; parameter if it exists.
60AE      260 ;
60AE 20 B7 00 261 GETPARM jsr CHRGOT
60B1 F0 1B 262      beq >2
60B3      263 ;
60B3 20 BE DE 264      jsr CHKCOM
60B6      265 ;
60B6 20 B7 00 266      jsr CHRGOT
60B9 F0 13 267      beq >2
60BB      268 ;
60BB C9 2C 269      cmp #COMMA&ASCIMASK
60BD F0 0D 270      beq >1
60BF      271 ;
60BF 20 E3 DF 272      jsr PTRGET
60C2      273 ;
60C2 85 EE 274      sta VARADR
60C4 84 EF 275      sty VARADR+1
60C6      276 ;
60C6 A0 01 277      ldy #1
60C8      278 ;
60C8 B1 EE 279      lda (VARADR),Y
60CA      280 ;
60CA 18 281      clc
60CB      282 ;
60CB 60 283      rts
60CC      284 ;
60CC 38 285 ^1      sec
60CD      286 ;
60CD 60 287      rts
60CE      288 ;
60CE      289 ;
60CE      290 ; No more parameters on the command line.
60CE      291 ;
60CE 68 292 ^2      pla
60CF 68 293      pla
60D0      294 ;
60D0      295 ;
60D0 AD B2 61 296 BEGIN      lda ERROR
60D3 D0 05 297      bne EXIT
60D5      298 ;
60D5 CE A5 61 299 CONTINUE dec STRLEN
60D8 10 22 300      bpl PROCESS
60DA      301 ;
60DA AC AF 61 302 EXIT      ldy W%SAV+1
60DD F0 09 303      beq >1
60DF      304 ;

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60DF AE AE 61 305      ldx W%SAV
60E2 AD AC 61 306      lda WINDOW
60E5      307      ;
60E5 20 F3 60 308      jsr SAVE
60E8      309      ;
60E8 AC B1 61 310      ^1      ldy C%SAV+1
60EB F0 0E      311      beq >2
60ED      312      ;
60ED AE B0 61 313      ldx C%SAV
60F0 AD AD 61 314      lda CELL
60F3      315      ;
60F3      316      ;
60F3 86 EE      317      SAVE      stx VARADR
60F5 84 EF      318      sty VARADR+1
60F7      319      ;
60F7 A0 01      320      ldy #1
60F9      321      ;
60F9 91 EE      322      sta (VARADR),Y
60FB      323      ;
60FB 60      324      ^2      rts
60FC      325      ;
60FC      326      ;
60FC AC A4 61 327      PROCESS      ldy STRNDX
60FF      328      ;
60FF EE A4 61 329      inc STRNDX
6102      330      ;
6102 B1 F6      331      lda (STRPTR),Y
6104 29 7F      332      and #ASCIMASK
6106      333      ;
6106 38      334      sec
6107      335      ;
6107 E9 20      336      sbc #TBLOFF
6109 8D A7 61 337      sta CHAROFF
610C      338      ;
610C 4A      339      lsr
610D AA      340      tax
610E      341      ;
610E BD D2 61 342      lda CHARSIZE,X
6111      343      ;
6111 B0 04      344      bcs PROCESS2
6113      345      ;
6113 4A      346      lsr
6114 4A      347      lsr
6115 4A      348      lsr
6116 4A      349      lsr
6117      350      ;
6117 29 0F      351      PROCESS2      and #$0F
6119 8D A8 61 352      sta WIDTH
611C      353      ;
611C A9 06      354      lda #6
611E 8D AA 61 355      sta ROW
6121      356      ;
6121 AD AB 61 357      lda LINE
6124 4A      358      lsr
6125 AA      359      tax
6126      360      ;
6126 BD B3 61 361      lda LINEL,X
6129      362      ;
6129 90 02      363      bcc >1
612B      364      ;
612B 09 80      365      ora #$80

```

```

612D      366 ;
612D 85 FC      367 ^1      sta SCRNPTR
612F      368 ;
612F BD BF 61   369      lda LINEH,X
6132 0D A2 61   370      ora HPAG
6135 85 FD      371      sta SCRNPTR+1
6137      372 ;
6137 A9 02      373      lda #CHARDATA
6139 85 FA      374      sta CHARPTR
613B      375 ;
613B A9 62      376      lda /CHARDATA
613D 85 FB      377      sta CHARPTR+1
613F D0 11      378      bne >3          ; always taken
6141      379 ;
6141 18          380 ^2      clc
6142      381 ;
6142 A5 FD      382      lda SCRNPTR+1
6144 69 04      383      adc #4
6146 85 FD      384      sta SCRNPTR+1
6148      385 ;
6148 A5 FA      386      lda CHARPTR
614A 69 60      387      adc #CHARLIN2-CHARLIN1
614C 85 FA      388      sta CHARPTR
614E      389 ;
614E 90 02      390      bcc >3
6150      391 ;
6150 E6 FB      392      inc CHARPTR+1
6152      393 ;
6152 AC A7 61   394 ^3      ldy CHAROFF
6155      395 ;
6155 B1 FA      396      lda (CHARPTR),Y
6157 4D A3 61   397      eor INVFLAG
615A 8D A6 61   398      sta CHAR
615D      399 ;
615D AD A8 61   400      lda WIDTH
6160 8D A9 61   401      sta HWIDTH
6163      402 ;
6163 AC AC 61   403      ldy WINDOW
6166      404 ;
6166 AE AD 61   405      ldx CELL
6169 10 08      406      bpl >5          ; always taken
616B      407 ;
616B E8          408 ^4      inx
616C      409 ;
616C E0 07      410      cpx #7
616E 90 03      411      bcc >5
6170      412 ;
6170 A2 00      413      ldx #ZERO
6172      414 ;
6172 C8          415      iny
6173      416 ;
6173      417 ;
6173      418 ; In order to support the display of directory files and a
6173      419 ; file selection using INVERSE text, the following
6173      420 ; algorithm must be used: turn the selected screen bit ON,
6173      421 ; shift the screen value left for that screen line, and
6173      422 ; turn that screen bit OFF if there is no character bit to
6173      423 ; display. This does require a little extra work, but
6173      424 ; NORMAL and INVERSE text will appear to alternate when a
6173      425 ; file selection from a display of directory files is made.
6173      426 ;

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6173 B1 FC      427 ^5      lda (SCRNPTR),Y
6175 1D CB 61   428      ora CELLBIT,X      ; turn pixel ON
6178           429      ;
6178 4E A6 61   430      lsr CHAR
617B B0 03      431      bcs >6
617D           432      ;
617D 5D CB 61   433      eor CELLBIT,X      ; turn pixel OFF
6180           434      ;
6180 91 FC      435 ^6      sta (SCRNPTR),Y
6182           436      ;
6182 CE A9 61   437      dec HWIDTH
6185 10 E4      438      bpl <4
6187           439      ;
6187 CE AA 61   440      dec ROW
618A 10 B5      441      bpl <2
618C           442      ;
618C 38         443      sec      ; add pixel before next CHAR
618D           444      ;
618D AD AD 61   445      lda CELL
6190 6D A8 61   446      adc WIDTH
6193           447      ;
6193 C9 07      448      cmp #7
6195 90 05      449      bcc >7
6197           450      ;
6197 E9 07      451      sbc #7
6199           452      ;
6199 EE AC 61   453      inc WINDOW
619C           454      ;
619C 8D AD 61   455 ^7      sta CELL
619F           456      ;
619F 4C D5 60   457      jmp CONTINUE
61A2           458      ;
61A2           459      ;
61A2           460 HPAG      dfs 1,ZERO
61A3           461 INVFLAG   dfs 1,ZERO
61A4           462      ;
61A4           463 STRNDX    dfs 1,ZERO
61A5           464 STRLEN    dfs 1,ZERO
61A6           465      ;
61A6           466 CHAR      dfs 1,ZERO
61A7           467 CHAROFF   dfs 1,ZERO
61A8           468      ;
61A8           469 WIDTH     dfs 1,ZERO
61A9           470 HWIDTH    dfs 1,ZERO
61AA           471      ;
61AA           472 ROW       dfs 1,ZERO
61AB           473      ;
61AB           474 LINE      dfs 1,ZERO
61AC           475 WINDOW    dfs 1,ZERO
61AD           476 CELL      dfs 1,ZERO
61AE           477      ;
61AE           478 W%SAV     dfs 2,ZERO
61B0           479 C%SAV     dfs 2,ZERO
61B2           480      ;
61B2           481 ERROR     dfs 1,ZERO
61B3           482      ;
61B3           483      ;
61B3 00 00 00   484 LINEL    hex 00000000
61B6 00         485
61B7 28 28 28   485      hex 28282828
61BA 28

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```

61BB 50 50 50      486          hex 50505050
61BE 50
61BF              487      ;
61BF 00 01 02      488      LINEH      hex 00010203
61C2 03
61C3 00 01 02      489          hex 00010203
61C6 03
61C7 00 01 02      490          hex 00010203
61CA 03
61CB              491      ;
61CB              492      ;
61CB 01 02 04      493      CELLBIT      hex 01020408102040
61CE 08 10 20
61D1 40
61D2              494      ;
61D2              495      ;
61D2              496      CHARSIZE:
61D2 21 35 55      497          hex 21355551
61D5 51
61D6 33 53 23      498          hex 33532314
61D9 14
61DA 43 44 44      499          hex 43444444
61DD 44
61DE 44 12 43      500          hex 44124344
61E1 44
61E2 54 44 43      501          hex 54444334
61E5 34
61E6 43 44 35      502          hex 43443544
61E9 44
61EA 44 44 34      503          hex 44443435
61ED 35
61EE 33 32 42      504          hex 33324234
61F1 34
61F2 24 43 44      505          hex 24434444
61F5 44
61F6 41 33 35      506          hex 41333544
61F9 44
61FA 44 44 44      507          hex 44444435
61FD 35
61FE 34 43 13      508          hex 34431343
6201 43
6202              509      ;
6202              510      ;
6202              511      ; Character order of table
6202              512      ;
6202              513      ;      ! " # $ % & '
6202              514      ;      ( ) * + , - . /
6202              515      ;      0 1 2 3 4 5 6 7
6202              516      ;      8 9 : ; < = > ?
6202              517      ;      @ A B C D E F G
6202              518      ;      H I J K L M N O
6202              519      ;      P Q R S T U V W
6202              520      ;      X Y Z [ \ ] ^ _
6202              521      ;      ` a b c d e f g
6202              522      ;      h i j k l m n o
6202              523      ;      p q r s t u v w
6202              524      ;      x y z { | } ~
6202              525      ;
6202              526      ;
6202              527      CHARDATA:
6202              528      ;

```

```
6202          529 CHARLIN1:
6202 00 01 05 530          hex 0001050004000201
6205 00 04 00
6208 02 01
620A 04 01 00 531          hex 0401000000000000
620D 00 00 00
6210 00 00
6212 06 02 06 532          hex 06020606090F040F
6215 06 09 0F
6218 04 0F
621A 06 06 00 533          hex 0606000008000106
621D 00 08 00
6220 01 06
6222 0E 06 07 534          hex 0E06070607070706
6225 06 07 07
6228 07 06
622A 09 07 08 535          hex 0907080901110906
622D 09 01 11
6230 09 06
6232 07 06 07 536          hex 0706070607090511
6235 06 07 09
6238 05 11
623A 05 05 07 537          hex 0505070300030000
623D 03 00 03
6240 00 00
6242 01 00 01 538          hex 0100010008000400
6245 00 08 00
6248 04 00
624A 01 00 00 539          hex 0100000103000000
624D 01 03 00
6250 00 00
6252 00 00 00 540          hex 0000000002000000
6255 00 02 00
6258 00 00
625A 00 00 00 541          hex 0000000401010A05
625D 04 01 01
6260 0A 05
6262          542 ;
6262          543 CHARLIN2:
6262 00 01 05 544          hex 0001050A1E110501
6265 0A 1E 11
6268 05 01
626A 02 02 04 545          hex 0202040000000008
626D 00 00 00
6270 00 08
6272 09 03 09 546          hex 0903090909010208
6275 09 09 01
6278 02 08
627A 09 09 00 547          hex 0909000004000209
627D 00 04 00
6280 02 09
6282 11 09 0A 548          hex 11090A090A010109
6285 09 0A 01
6288 01 09
628A 09 02 08 549          hex 09020805011B0909
628D 05 01 1B
6290 09 09
6292 09 09 09 550          hex 0909090902090511
6295 09 02 09
6298 05 11
629A 05 05 04 551          hex 0505040101020000
```

```
629D 01 01 02
62A0 00 00
62A2 02 00 01    552          hex 0200010008000A00
62A5 00 08 00
62A8 0A 00
62AA 01 01 04    553          hex 0101040102000000
62AD 01 02 00
62B0 00 00
62B2 00 00 00    554          hex 0000000002000000
62B5 00 02 00
62B8 00 00
62BA 00 00 00    555          hex 0000000201020502
62BD 02 01 02
62C0 05 02
62C2          556      ;
62C2          557      CHARLIN3:
62C2 00 01 00    558          hex 0001001F05080500
62C5 1F 05 08
62C8 05 00
62CA 01 04 15    559          hex 0104150200000004
62CD 02 00 00
62D0 00 04
62D2 0D 02 08    560          hex 0D02080409070104
62D5 04 09 07
62D8 01 04
62DA 06 0E 00    561          hex 060E000002070408
62DD 00 02 07
62E0 04 08
62E2 10 09 06    562          hex 100906010A030301
62E5 01 0A 03
62E8 03 01
62EA 0F 02 08    563          hex 0F02080301150B09
62ED 03 01 15
62F0 0B 09
62F2 09 09 09    564          hex 0909090202090511
62F5 02 02 09
62F8 05 11
62FA 02 05 02    565          hex 0205020102020200
62FD 01 02 02
6300 02 00
6302 00 06 07    566          hex 000607060E060206
6305 06 0E 06
6308 02 06
630A 07 00 00    567          hex 07000005020B0506
630D 05 02 0B
6310 05 06
6312 07 0E 05    568          hex 070E050E07090511
6315 0E 07 09
6318 05 11
631A 05 09 0F    569          hex 05090F0201020005
631D 02 01 02
6320 00 05
6322          570      ;
6322          571      CHARLIN4:
6322 00 01 00    572          hex 0001000A0E040200
6325 0A 0E 04
6328 02 00
632A 01 04 0E    573          hex 01040E0700070002
632D 07 00 07
6330 00 02
6332 0B 02 06    574          hex 0B0206080F080704
```

```
6335 08 0F 08
6338 07 04
633A 09 08 01    575          hex 0908010201000804
633D 02 01 00
6340 08 04
6342 16 0F 0A    576          hex 160F0A010A01010D
6345 01 0A 01
6348 01 0D
634A 09 02 08    577          hex 0902080301150D09
634D 03 01 15
6350 0D 09
6352 07 09 07    578          hex 0709070402090515
6355 04 02 09
6358 05 15
635A 02 02 02    579          hex 0202020104020500
635D 01 04 02
6360 05 00
6362 00 05 09    580          hex 00050901090F0709
6365 01 09 0F
6368 07 09
636A 09 01 04    581          hex 0901040302150B09
636D 03 02 15
6370 0B 09
6372 09 09 0B    582          hex 09090B0302090511
6375 03 02 09
6378 05 11
637A 02 09 04    583          hex 0209040101040002
637D 01 01 04
6380 00 02
6382          584 ;
6382          585 CHARLIN5:
6382 00 00 00    586          hex 0000001F14021500
6385 1F 14 02
6388 15 00
638A 01 04 15    587          hex 0104150202000001
638D 02 02 00
6390 00 01
6392 09 02 01    588          hex 0902010908080902
6395 09 08 08
6398 09 02
639A 09 04 00    589          hex 0904000002070400
639D 00 02 07
63A0 04 00
63A2 15 09 0A    590          hex 15090A090A010109
63A5 09 0A 01
63A8 01 09
63AA 09 02 09    591          hex 0902090501110909
63AD 05 01 11
63B0 09 09
63B2 01 05 05    592          hex 0105050902090515
63B5 09 02 09
63B8 05 15
63BA 05 02 01    593          hex 0502010108020000
63BD 01 08 02
63C0 00 00
63C2 00 05 09    594          hex 000509010901020E
63C5 01 09 01
63C8 02 0E
63CA 09 01 04    595          hex 0901040302150909
63CD 03 02 15
63D0 09 09
```

```
63D2 07 0E 01    596          hex 070E010C0A0D0515
63D5 0C 0A 0D
63D8 05 15
63DA 02 0E 02    597          hex 020E020201020005
63DD 02 01 02
63E0 00 05
63E2              598      ;
63E2              599      CHARLIN6:
63E2 00 01 00    600          hex 0001000A0F110900
63E5 0A 0F 11
63E8 09 00
63EA 02 02 04    601          hex 0202040002000100
63ED 00 02 00
63F0 01 00
63F2 06 07 0F    602          hex 06070F0608070602
63F5 06 08 07
63F8 06 02
63FA 06 02 01    603          hex 0602010204000204
63FD 02 04 00
6400 02 04
6402 0E 09 07    604          hex 0E09070607070106
6405 06 07 07
6408 01 06
640A 09 07 06    605          hex 0907060907110906
640D 09 07 11
6410 09 06
6412 01 0A 09    606          hex 010A09060206020A
6415 06 02 06
6418 02 0A
641A 05 02 07    607          hex 0502070300030000
641D 03 00 03
6420 00 00
6422 00 0E 07    608          hex 000E07060E0E0208
6425 06 0E 0E
6428 02 08
642A 09 01 05    609          hex 0901050507150906
642D 05 07 15
6430 09 06
6432 01 08 01    610          hex 01080107040A020A
6435 07 04 0A
6438 02 0A
643A 05 08 0F    611          hex 05080F0201020002
643D 02 01 02
6440 00 02
6442              612      ;
6442              613      CHARLIN7:
6442 00 00 00    614          hex 0000000004001600
6445 00 04 00
6448 16 00
644A 04 01 00    615          hex 0401000001000000
644D 00 01 00
6450 00 00
6452 00 00 00    616          hex 0000000000000000
6455 00 00 00
6458 00 00
645A 00 00 00    617          hex 0000000108000100
645D 01 08 00
6460 01 00
6462 00 00 00    618          hex 0000000000000000
6465 00 00 00
6468 00 00
```

```
646A 00 00 00    619          hex 0000000000000000
646D 00 00 00
6470 00 00
6472 00 00 00    620          hex 0000000000000000
6475 00 00 00
6478 00 00
647A 00 00 00    621          hex 000000000000000F
647D 00 00 00
6480 00 0F
6482 00 00 00    622          hex 0000000000000006
6485 00 00 00
6488 00 06
648A 00 00 02    623          hex 0000020000000000
648D 00 00 00
6490 00 00
6492 01 08 00    624          hex 0108000000000000
6495 00 00 00
6498 00 00
649A 00 06 00    625          hex 0006000401010005
649D 04 01 01
64A0 00 05
64A2              626 ;
64A2              627 ;
```

```
BSAVE SD,A$0900,B,L$04A2
```

```
64A2              628          usr SD
64A2              629 ;
64A2              630 ;
64A2              631          stt "SD Symbol Table"
64A2              632 ;
64A2              633 ;
64A2              634          end 111
```

```
*** End of Assembly
```

Symbol List starts at 0x7800, ends at 0x79F4, used 0x01F4, remaining 0x3D74

Symbols unsorted:

CHRGOT	00B7	S%ADR	00EC	VARADR	00EE	STRPTR	00F6	CHARPTR	00FA
SCRNPTR	00FC	ZERO	0000	HIRESPGS	0020	TBLOFF	0020	ASCIMASK	007F
NEGONE	00FF	COMMA	00AC	CHKCOM	DEBE	PTRGET	DFE3	GETPARM	60AE
BEGIN	60D0	CONTINUE	60D5	EXIT	60DA	SAVE	60F3	PROCESS	60FC
PROCESS2	6117	HPAG	61A2	INVFLAG	61A3	STRNDX	61A4	STRLEN	61A5
CHAR	61A6	CHAROFF	61A7	WIDTH	61A8	HWIDTH	61A9	ROW	61AA
LINE	61AB	WINDOW	61AC	CELL	61AD	W%SAV	61AE	C%SAV	61B0
ERROR	61B2	LINEL	61B3	LINEH	61BF	CELLBIT	61CB	CHARSIZE	61D2
CHARDATA	6202	CHARLIN1	6202	CHARLIN2	6262	CHARLIN3	62C2	CHARLIN4	6322
CHARLIN5	6382	CHARLIN6	63E2	CHARLIN7	6442				

Symbols alphabetically sorted:

ASCIMASK	007F	BEGIN	60D0	C%SAV	61B0	CELL	61AD	CELLBIT	61CB
CHAR	61A6	CHARDATA	6202	CHARLIN1	6202	CHARLIN2	6262	CHARLIN3	62C2
CHARLIN4	6322	CHARLIN5	6382	CHARLIN6	63E2	CHARLIN7	6442	CHAROFF	61A7
CHARPTR	00FA	CHARSIZE	61D2	CHKCOM	DEBE	CHRGOT	00B7	COMMA	00AC
CONTINUE	60D5	ERROR	61B2	EXIT	60DA	GETPARM	60AE	HIRESPGS	0020
HPAG	61A2	HWIDTH	61A9	INVFLAG	61A3	LINE	61AB	LINEH	61BF
LINEL	61B3	NEGONE	00FF	PROCESS	60FC	PROCESS2	6117	PTRGET	DFE3
ROW	61AA	S%ADR	00EC	SAVE	60F3	SCRNPTR	00FC	STRLEN	61A5
STRNDX	61A4	STRPTR	00F6	TBLOFF	0020	VARADR	00EE	W%SAV	61AE
WIDTH	61A8	WINDOW	61AC	ZERO	0000				

Symbols numerically sorted:

ZERO	0000	TBLOFF	0020	HIRESPGS	0020	ASCIMASK	007F	COMMA	00AC
CHRGOT	00B7	S%ADR	00EC	VARADR	00EE	STRPTR	00F6	CHARPTR	00FA
SCRNPTR	00FC	NEGONE	00FF	GETPARM	60AE	BEGIN	60D0	CONTINUE	60D5
EXIT	60DA	SAVE	60F3	PROCESS	60FC	PROCESS2	6117	HPAG	61A2
INVFLAG	61A3	STRNDX	61A4	STRLEN	61A5	CHAR	61A6	CHAROFF	61A7
WIDTH	61A8	HWIDTH	61A9	ROW	61AA	LINE	61AB	WINDOW	61AC
CELL	61AD	W%SAV	61AE	C%SAV	61B0	ERROR	61B2	LINEL	61B3
LINEH	61BF	CELLBIT	61CB	CHARSIZE	61D2	CHARLIN1	6202	CHARDATA	6202
CHARLIN2	6262	CHARLIN3	62C2	CHARLIN4	6322	CHARLIN5	6382	CHARLIN6	63E2
CHARLIN7	6442	CHKCOM	DEBE	PTRGET	DFE3				