

!A

*** End of Pass 1

*** End of Pass 2

```
0800      1          ttl "Install DOS 4.1H Source Code, INSTALL41H.L"
0800      2      ;
0800      3      ;
0800      4      ; INSTALL41H.L
0800      5      ;
0800      6      ;
0800      7      ; Install DOS 4.1H Source Code
0800      8      ;
0800      9      ; 2024 February 14
0800     10      ;
0800     11      ;
0800     12      ; DOS 4.1H, Build 46
0800     13      ;
0800     14      ; 2019 January 18
0800     15      ;
0800     16      ;
0800     17      ; DOS 4.5, Build 06
0800     18      ;
0800     19      ; 2024 February 14
0800     20      ;
0800     21      ;
0800     22      ; Start of Source Code: 0x4000
0800     23      ; Start of Symbol List: 0x7800
0800     24      ;
0800     25      ;
0800     26      ; Copyright (c) 2024 February 14 by
0800     27      ; Walland Philip Vrbancic Jr.
0800     28      ;
0800     29      ; 6223 East Peabody Street
0800     30      ; Long Beach, California 90808
0800     31      ; Unitied States of America
0800     32      ;
0800     33      ; All Rights Reserved
0800     34      ;
0800     35      ; This software is the confidential and
0800     36      ; proprietary intellectual property of
0800     37      ; Walland Philip Vrbancic Jr.
0800     38      ;
0800     39      ;
0800     40      ; Sector to Memory Address map:
0800     41      ;
0800     42      ; Tk   Sr   Addr   Pgm       Tk   Sr   Addr   Pgm
0800     43      ; --   --   ----   ----       --   --   ----   ----
0800     44      ; 0    0    BF00    BOOT        1    5    E400    MNGR
0800     45      ; 0    1    BE00    I/F          1    6    E300    MNGR
0800     46      ; 0    2    DD00*    HELP        1    7    E200    MNGR
0800     47      ; 0    3    DC00*    HELP        1    8    E100    MNGR
0800     48      ; 0    4    DB00*    HELP        1    9    E000    MNGR
0800     49      ; 0    5    DA00*    HELP        1    A    DF00    MNGR
0800     50      ; 0    6    D900*    HELP        1    B    DE00    MNGR
0800     51      ; 0    7    D800*    HELP        1    C    DD00    MNGR
0800     52      ; 0    8    D700*    HELP        1    D    DC00    CMD
0800     53      ; 0    9    D600*    HELP        1    E    DB00    CMD
0800     54      ; 0    A    D500*    RWTS        1    F    DA00    CMD
0800     55      ; 0    B    D400*    RWTS        2    0    D900    CMD
0800     56      ; 0    C    D300*    RWTS        2    1    D800    CMD
0800     57      ; 0    D    D200*    RWTS        2    2    D700    CMD
0800     58      ; 0    E    D100*    RWTS        2    3    D600    CMD
0800     59      ; 0    F    D000*    RWTS        2    4    D500    CMD
0800     60      ; 1    0    E900    DATA        2    5    D400    CMD
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0800      61 ; 1 1 E800 DATA 2 6 D300 CMD
0800      62 ; 1 2 E700 DATA 2 7 D200 CMD
0800      63 ; 1 3 E600 DATA 2 8 D100 CMD
0800      64 ; 1 4 E500 MNGR 2 9 D000 CMD
0800      65 ;
0800      66 ;
0000      67 ZERO equ $00
00FF      68 NEGONE equ $FF
0800      69 ;
0002      70 RWTSWRIT equ $02
0800      71 ;
0084      72 CTRLD equ $84
008D      73 RETURN equ $8D
0800      74 ;
0100      75 PAGESIZE equ $100
0800      76 ;
03D0      77 DOSWARM equ $3D0
03D9      78 RWTS equ $3D9
03E8      79 PRTERADR equ $3E8
0800      80 ;
1000      81 IMAGBGN equ $1000
0800      82 ;
D000      83 DOSTART equ $D000
EA00      84 DOSEND equ $EA00
D000      85 RWTSTART equ $D000
DE00      86 HELPEND equ $DE00
BE00      87 XFERSTRT equ $BE00
C000      88 BOOTEND equ $C000
0800      89 ;
1A00      90 PAGE1 equ DOSEND-DOSTART
0E00      91 PART2 equ HELPEND-RWTSTART
0200      92 PART3 equ BOOTEND-XFERSTRT
0800      93 ;
2A00      94 IMAGLEN equ PAGE1+PART2+PART3
0800      95 ;
C000      96 KEY equ $C000
C010      97 CLRKEY equ $C010
0800      98 ;
FC58      99 HOME equ $FC58
FD8E     100 CROUT equ $FD8E
FDDA     101 PRBYTE equ $FDDA
FDED     102 COUT equ $FDED
0800     103 ;
0800     104 ;
0900     105 org $900
0900     106 obj $900
0900     107 usr
0900     108 ;
0900     109 ;
0900 20 58 FC 110 jsr HOME
0903     111 ;
0903 A0 00 112 ldy #MSG1-MESGS
0905 20 95 09 113 jsr PRTMSG
0908     114 ;
0908 A0 25 115 ldy #MSG2-MESGS
090A 20 95 09 116 jsr PRTMSG
090D     117 ;
090D A0 3C 118 ldy #MSG3-MESGS
090F 20 95 09 119 jsr PRTMSG
0912     120 ;
0912 A0 5B 121 ldy #MSG4-MESGS

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0914 20 95 09      122      jsr PRTMESG
0917              123      ;
0917 20 88 09      124      jsr GETKEY
091A              125      ;
091A A0 A0          126      ldy #MESG5-MESGS
091C 20 95 09      127      jsr PRTMESG
091F              128      ;
091F A9 10          129      lda /IMAGBGN
0921 8D A7 0A       130      sta USRBUF+1
0924              131      ;
0924 A2 2A          132      ldx /IMAGLEN
0926 20 31 09      133      jsr WRDATA
0929              134      ;
0929 A0 B9          135      ldy #MESG6-MESGS
092B 20 95 09      136      jsr PRTMESG
092E              137      ;
092E 4C D0 03       138      jmp DOSWARM
0931              139      ;
0931              140      ;
0931 8E 9D 0A       141      WRDATA stx COUNTER
0934              142      ;
0934 A0 9E          143      ^1 ldy #TBLTYPE
0936 A9 0A          144      lda /TBLTYPE
0938              145      ;
0938 20 D9 03       146      jsr RWTS
093B B0 1B          147      bcs >3
093D              148      ;
093D A9 AE          149      lda #"."
093F 20 ED FD       150      jsr COUT
0942              151      ;
0942 EE A7 0A       152      inc USRBUF+1
0945              153      ;
0945 CE A3 0A       154      dec SNUM
0948 10 08          155      bpl >2
094A              156      ;
094A A9 0F          157      lda #15
094C 8D A3 0A       158      sta SNUM
094F              159      ;
094F CE A2 0A       160      dec TNUM
0952              161      ;
0952 CE 9D 0A       162      ^2 dec COUNTER
0955 D0 DD          163      bne <1
0957              164      ;
0957 60              165      rts
0958              166      ;
0958 A0 E5          167      ^3 ldy #ERRMESG-MESGS
095A 20 95 09      168      jsr PRTMESG
095D              169      ;
095D AD AC 0A       170      lda ERRCODE
0960 20 DA FD       171      jsr PRBYTE
0963              172      ;
0963 20 8E FD       173      jsr CROUT
0966 20 8E FD       174      jsr CROUT
0969              175      ;
0969 AD AC 0A       176      lda ERRCODE
096C              177      ;
096C 4A              178      lsr
096D 4A              179      lsr
096E 4A              180      lsr
096F 4A              181      lsr
0970              182      ;

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0970 A8          183          tay
0971            184          ;
0971 BE 80 09    185          ldx RWTS2FM,Y
0974 20 85 09    186          jsr PRTEROR
0977            187          ;
0977 20 8E FD    188          jsr CROUT
097A 20 8E FD    189          jsr CROUT
097D            190          ;
097D 4C D0 03    191          jmp DOSWARM
0980            192          ;
0980            193          ;
0980 03 04 07    194 RWTS2FM  hex 0304070B08
0983 0B 08
0985            195          ;
0985            196          ;
0985 6C E8 03    197 PRTEROR  jmp (PRTERADR)
0988            198          ;
0988            199          ;
0988 2C 10 C0    200 GETKEY   bit CLRKEY
098B            201          ;
098B AD 00 C0    202 ^1        lda KEY
098E            203          ;
098E EA          204          nop
098F            205          ;
098F 10 FA       206          bpl <1
0991            207          ;
0991 2C 10 C0    208          bit CLRKEY
0994            209          ;
0994 60          210          rts
0995            211          ;
0995            212          ;
0995 B9 A1 09    213 PRTMSG   lda MSGS,Y
0998 F0 06       214          beq >1
099A            215          ;
099A 20 ED FD    216          jsr COUT
099D            217          ;
099D C8          218          iny
099E D0 F5       219          bne PRTMSG
09A0            220          ;
09A0 60          221 ^1        rts
09A1            222          ;
09A1            223          ;
09A1            224 MSGS:
09A1            225          ;
09A1 8D          226 MSG1     byt RETURN
09A2 D2 E5 E1    227          asc "Reading DOS 4.1H file into memory."
09A5 E4 E9 EE
09A8 E7 A0 C4
09AB CF D3 A0
09AE B4 AE B1
09B1 C8 A0 E6
09B4 E9 EC E5
09B7 A0 E9 EE
09BA F4 EF A0
09BD ED E5 ED
09C0 EF F2 F9
09C3 AE
09C4 8D 00       228          byt RETURN,ZERO
09C6            229          ;
09C6 84          230 MSG2     byt CTRLD
09C7 C2 CC CF    231          asc "BLOAD DOS4.1H,A$1000"

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09CA C1 C4 A0
09CD C4 CF D3
09D0 B4 AE B1
09D3 C8 AC C1
09D6 A4 B1 B0
09D9 B0 B0
09DB 8D 00      232      byt RETURN,ZERO
09DD      233      ;
09DD 8D      234      MSG3      byt RETURN
09DE C4 CF D3      235      asc "DOS 4.1H file now in memory."
09E1 A0 B4 AE
09E4 B1 C8 A0
09E7 E6 E9 EC
09EA E5 A0 EE
09ED EF F7 A0
09F0 E9 EE A0
09F3 ED E5 ED
09F6 EF F2 F9
09F9 AE
09FA 8D 00      236      byt RETURN,ZERO
09FC      237      ;
09FC 8D 8D      238      MSG4      byt RETURN,RETURN
09FE C9 EE F3      239      asc "Insert diskette into Slot 6, Drive 2."
0A01 E5 F2 F4
0A04 A0 E4 E9
0A07 F3 EB E5
0A0A F4 F4 E5
0A0D A0 E9 EE
0A10 F4 EF A0
0A13 D3 EC EF
0A16 F4 A0 B6
0A19 AC A0 C4
0A1C F2 E9 F6
0A1F E5 A0 B2
0A22 AE
0A23 8D 8D      240      byt RETURN,RETURN
0A25 D0 F2 E5      241      asc "Press any key to continue."
0A28 F3 F3 A0
0A2B E1 EE F9
0A2E A0 EB E5
0A31 F9 A0 F4
0A34 EF A0 E3
0A37 EF EE F4
0A3A E9 EE F5
0A3D E5 AE
0A3F 8D 00      242      byt RETURN,ZERO
0A41      243      ;
0A41 8D 8D      244      MSG5      byt RETURN,RETURN
0A43 C9 EE F3      245      asc "Installing DOS 4.1H."
0A46 F4 E1 EC
0A49 EC E9 EE
0A4C E7 A0 C4
0A4F CF D3 A0
0A52 B4 AE B1
0A55 C8 AE
0A57 8D 8D 00      246      byt RETURN,RETURN,ZERO
0A5A      247      ;
0A5A 8D 8D 8D      248      MSG6      byt RETURN,RETURN,RETURN
0A5D C9 EE F3      249      asc "Installation of DOS 4.1H is complete."
0A60 F4 E1 EC
0A63 EC E1 F4
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0A66 E9 EF EE
0A69 A0 EF E6
0A6C A0 C4 CF
0A6F D3 A0 B4
0A72 AE B1 C8
0A75 A0 E9 F3
0A78 A0 E3 EF
0A7B ED F0 EC
0A7E E5 F4 E5
0A81 AE
0A82 8D 8D 8D 250          byt RETURN,RETURN,RETURN,ZERO
0A85 00
0A86          251          ;
0A86 8D 8D 252  ERRMSG  byt RETURN,RETURN
0A88 C5 F2 F2 253          asc "Error from RWTS = 0x"
0A8B EF F2 A0
0A8E E6 F2 EF
0A91 ED A0 D2
0A94 D7 D4 D3
0A97 A0 BD A0
0A9A B0 F8
0A9C 00          254          byt ZERO
0A9D          255          ;
0A9D          256          ;
0A9D          257  COUNTER  dfs 1,ZERO
0A9E          258          ;
0A9E          259          ;
0A9E          260  TBLTYPE  dfs 1,1          ; IOB structure block
0A9F 60          261  SNUM16  hex 60          ; slot * 16
0AA0          262  DNUM      dfs 1,1          ; drive number
0AA1          263  VOLEXPT  dfs 1,ZERO        ; volume number
0AA2          264  TNUM      dfs 1,2          ; track number
0AA3          265  SNUM      dfs 1,9          ; sector number
0AA4 00 00      266  DCTADR  adr *-*          ; address of DCT
0AA6 00 10      267  USRBUF  adr IMAGBGN      ; user buffer address
0AA8          268  IOCBPHAS dfs 1,ZERO        ; half phases per track
0AA9 01 00      269  BYTCNT  byt 1,PAGESIZE   ; bytes to read/write
0AAB          270  CMDCODE  dfs 1,RWTSWRIT    ; command
0AAC          271  ERRCODE  dfs 1,ZERO        ; return error code
0AAD          272  VOLFND   dfs 1,ZERO        ; return volume found
0AAE          273  SLOTFND  dfs 1,ZERO        ; return slot found
0AAF          274  DRVFND   dfs 1,ZERO        ; return drive found
0AB0          275          ;
0AB0          276          ;

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BSAVE INSTALL41H,D1,A\$0900,B,L\$01B0

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0AB0          277          usr INSTALL41H,D1
0AB0          278          ;
0AB0          279          ;
0AB0          280          stt "INSTALL41H Symbol Table"
0AB0          281          ;
0AB0          282          ;
0AB0          283          end 111

```

*** End of Assembly

Symbol List starts at 0x7800, ends at 0x7A3A, used 0x023A, remaining 0x3D62

Symbols unsorted:

| | | | | | | | | | |
|----------|------|---------|------|----------|------|----------|------|----------|------|
| ZERO | 0000 | NEGONE | 00FF | RWTSWRIT | 0002 | CTRLD | 0084 | RETURN | 008D |
| PAGESIZE | 0100 | DOSWARM | 03D0 | RWTS | 03D9 | PRTERADR | 03E8 | IMAGBGN | 1000 |
| DOSTART | D000 | DOSEND | EA00 | RWTSTART | D000 | HELPEND | DE00 | XFERSTRT | BE00 |
| BOOTEND | C000 | PAGE1 | 1A00 | PART2 | 0E00 | PART3 | 0200 | IMAGLEN | 2A00 |
| KEY | C000 | CLRKEY | C010 | HOME | FC58 | CROUT | FD8E | PRBYTE | FDDA |
| COUT | FDED | WRDATA | 0931 | RWTS2FM | 0980 | PRTERORR | 0985 | GETKEY | 0988 |
| PRTMSG | 0995 | MESGS | 09A1 | MSG1 | 09A1 | MSG2 | 09C6 | MSG3 | 09DD |
| MSG4 | 09FC | MSG5 | 0A41 | MSG6 | 0A5A | ERRMSG | 0A86 | COUNTER | 0A9D |
| TBLTYPE | 0A9E | SNUM16 | 0A9F | DNUM | 0AA0 | VOLEXPT | 0AA1 | TNUM | 0AA2 |
| SNUM | 0AA3 | DCTADR | 0AA4 | USRBUF | 0AA6 | IOCBPHAS | 0AA8 | BYTCNT | 0AA9 |
| CMDCODE | 0AAB | ERRCODE | 0AAC | VOLFND | 0AAD | SLOTFND | 0AAE | DRVFND | 0AAF |

Symbols alphabetically sorted:

| | | | | | | | | | |
|---------|------|----------|------|----------|------|----------|------|---------|------|
| BOOTEND | C000 | BYTCNT | 0AA9 | CLRKEY | C010 | CMDCODE | 0AAB | COUNTER | 0A9D |
| COUT | FDED | CROUT | FD8E | CTRLD | 0084 | DCTADR | 0AA4 | DNUM | 0AA0 |
| DOSEND | EA00 | DOSTART | D000 | DOSWARM | 03D0 | DRVFND | 0AAF | ERRCODE | 0AAC |
| ERRMSG | 0A86 | GETKEY | 0988 | HELPEND | DE00 | HOME | FC58 | IMAGBGN | 1000 |
| IMAGLEN | 2A00 | IOCBPHAS | 0AA8 | KEY | C000 | MSG1 | 09A1 | MSG2 | 09C6 |
| MSG3 | 09DD | MSG4 | 09FC | MSG5 | 0A41 | MSG6 | 0A5A | MESGS | 09A1 |
| NEGONE | 00FF | PAGE1 | 1A00 | PAGESIZE | 0100 | PART2 | 0E00 | PART3 | 0200 |
| PRBYTE | FDDA | PRTERADR | 03E8 | PRTERORR | 0985 | PRTMSG | 0995 | RETURN | 008D |
| RWTS | 03D9 | RWTS2FM | 0980 | RWTSTART | D000 | RWTSWRIT | 0002 | SLOTFND | 0AAE |
| SNUM | 0AA3 | SNUM16 | 0A9F | TBLTYPE | 0A9E | TNUM | 0AA2 | USRBUF | 0AA6 |
| VOLEXPT | 0AA1 | VOLFND | 0AAD | WRDATA | 0931 | XFERSTRT | BE00 | ZERO | 0000 |

Symbols numerically sorted:

| | | | | | | | | | |
|----------|------|----------|------|----------|------|----------|------|----------|------|
| ZERO | 0000 | RWTSWRIT | 0002 | CTRLD | 0084 | RETURN | 008D | NEGONE | 00FF |
| PAGESIZE | 0100 | PART3 | 0200 | DOSWARM | 03D0 | RWTS | 03D9 | PRTERADR | 03E8 |
| WRDATA | 0931 | RWTS2FM | 0980 | PRTERORR | 0985 | GETKEY | 0988 | PRTMSG | 0995 |
| MESGS | 09A1 | MSG1 | 09A1 | MSG2 | 09C6 | MSG3 | 09DD | MSG4 | 09FC |
| MSG5 | 0A41 | MSG6 | 0A5A | ERRMSG | 0A86 | COUNTER | 0A9D | TBLTYPE | 0A9E |
| SNUM16 | 0A9F | DNUM | 0AA0 | VOLEXPT | 0AA1 | TNUM | 0AA2 | SNUM | 0AA3 |
| DCTADR | 0AA4 | USRBUF | 0AA6 | IOCBPHAS | 0AA8 | BYTCNT | 0AA9 | CMDCODE | 0AAB |
| ERRCODE | 0AAC | VOLFND | 0AAD | SLOTFND | 0AAE | DRVFND | 0AAF | PART2 | 0E00 |
| IMAGBGN | 1000 | PAGE1 | 1A00 | IMAGLEN | 2A00 | XFERSTRT | BE00 | KEY | C000 |
| BOOTEND | C000 | CLRKEY | C010 | RWTSTART | D000 | DOSTART | D000 | HELPEND | DE00 |
| DOSEND | EA00 | HOME | FC58 | CROUT | FD8E | PRBYTE | FDDA | COUT | FDED |