

!A

*** End of Pass 1

*** End of Pass 2

```
0800      1          ttl "DOS 4.1H Loader Source Code, LOADOS41H.L"
0800      2      ;
0800      3      ;
0800      4      ; LOADOS41H.L
0800      5      ;
0800      6      ;
0800      7      ; DOS 4.1H Loader Source Code (EPROM)
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      ; This program loads DOS 4.1H into Main memory and
0800     36      ; activates the DOS using the USER interface.
0800     37      ;
0800     38      ;
0010     39      PTR1      epz $10
0012     40      PTR2      epz $12
00EE     41      CMDPTR    epz $EE
0800     42      ;
0800     43      enz
0800     44      ;
0000     45      ZERO      equ $00
0087     46      BELL      equ $87
008D     47      RETURN    equ $8D
00FF     48      NEGONE    equ $FF
0800     49      ;
0001     50      LOADCMD    equ $01
0015     51      UADRNDX    equ $15          ; USERADR index
0070     52      SRCHALL    equ $70
0800     53      ;
03D0     54      DOSWARM    equ $3D0
0800     55      ;
1000     56      PAGE10    equ $1000
0800     57      ;
BE00     58      BOOTART    equ $BE00
C000     59      BOOTEND    equ $C000
0800     60      ;
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D000      61  DOSTART    equ  $D000
EA00      62  DOSEND    equ  $EA00
0800      63  ;
D000      64  RWTSTART   equ  $D000
DE00      65  HELPEND   equ  $DE00
0800      66  ;
BFF8      67  INITDOS    equ  $BFF8
BFFA      68  USERNDX    equ  $BFFA
0800      69  ;
C082      70  ROM2WP     equ  $C082
C083      71  RAM2WE     equ  $C083
C08B      72  RAM1WE     equ  $C08B
0800      73  ;
FC58      74  HOME       equ  $FC58
FD8E      75  CROUT      equ  $FD8E
FDDA      76  PRBYTE     equ  $FDDA
FDED      77  COUT       equ  $FDED
FF65      78  MONITOR    equ  $FF65
0800      79  ;
0800      80  ;
0900      81              org  $900
0900      82              obj  $900
0900      83              usr
0900      84  ;
0900      85  ;
0900      86  ; QL puts address of QLBINEOS in Y and A registers.
0900      87  ;
0900 8C B2 09      88              sty  QLBINJMP+1
0903 8D B3 09      89              sta  QLBINJMP+2
0906      90  ;
0906 20 58 FC      91              jsr  HOME
0909      92  ;
0909      93  ;
0909      94  ; Load DOS 4.1H into Main memory.
0909      95  ;
0909 A0 B5      96              ldy  #EOSDCB
090B A9 09      97              lda  /EOSDCB
090D      98  ;
090D 20 B1 09      99              jsr  QLBINJMP
0910     100  ;
0910 AD B9 09     101              lda  DCBSTAT
0913 F0 14     102              beq  >1
0915     103  ;
0915 A0 00     104              ldy  #MSG1-MESGS
0917 20 A5 09     105              jsr  PRTMSG
091A     106  ;
091A AD B9 09     107              lda  DCBSTAT
091D 20 DA FD     108              jsr  PRBYTE
0920     109  ;
0920 20 8E FD     110              jsr  CROUT
0923 20 8E FD     111              jsr  CROUT
0926     112  ;
0926 4C D0 03     113              jmp  DOSWARM
0929     114  ;
0929     115  ;
0929     116  ; DOS 4.1H is composed of three sections. The first
0929     117  ; and second sections reside in the Language card and
0929     118  ; the third section resides in Main memory.
0929     119  ;
0929 A0 00     120  ^1          ldy  #PAGE10
092B 84 10     121              sty  PTR1

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```
092D 84 12      122      sty PTR2
092F           123      ;
092F A9 10      124      lda /PAGE10
0931 85 11      125      sta PTR1+1
0933           126      ;
0933           127      ;
0933           128      ; Load Bank 2 of the Language card.
0933           129      ;
0933 AD 83 C0    130      lda RAM2WE
0936 AD 83 C0    131      lda RAM2WE
0939           132      ;
0939 A9 D0       133      lda /RWTSTART
093B A2 1A       134      ldx /DOSEND-DOSTART
093D           135      ;
093D 20 64 09    136      jsr MOVEDOS
0940           137      ;
0940           138      ;
0940           139      ; Load Bank 1 of the Language card.
0940           140      ;
0940 AD 8B C0     141      lda RAM1WE
0943 AD 8B C0     142      lda RAM1WE
0946           143      ;
0946 A9 D0       144      lda /RWTSTART
0948 A2 0E       145      ldx /HELPEPEND-RWTSTART
094A           146      ;
094A 20 64 09    147      jsr MOVEDOS
094D           148      ;
094D           149      ;
094D           150      ; Load Main memory.
094D           151      ;
094D AD 82 C0     152      lda ROM2WP
0950           153      ;
0950 A9 BE        154      lda /BOOTART
0952 A2 02        155      ldx /BOOTEND-BOOTART
0954           156      ;
0954 20 64 09    157      jsr MOVEDOS
0957           158      ;
0957           159      ;
0957           160      ; Initialize the USER interface and DOS.
0957           161      ;
0957 AE FA BF     162      ldx USERNDX
095A           163      ;
095A A0 75        164      ldy #LOADRTN
095C A9 09        165      lda /LOADRTN
095E           166      ;
095E 20 87 09    167      jsr SETUSER
0961           168      ;
0961 6C F8 BF     169      jmp (INITDOS)
0964           170      ;
0964           171      ;
0964 85 13        172      MOVEDOS sta PTR2+1
0966           173      ;
0966 B1 10        174      ^1  lda (PTR1),Y
0968 91 12        175      sta (PTR2),Y
096A           176      ;
096A C8          177      iny
096B D0 F9       178      bne <1
096D           179      ;
096D E6 11        180      inc PTR1+1
096F E6 13        181      inc PTR2+1
0971           182      ;
```

```

0971 CA          183          dex
0972 D0 F2       184          bne <1
0974           185          ;
0974 60          186          rts
0975           187          ;
0975           188          ;
0975 20 80 09    189 LOADRTN  jsr CLRUSER
0978           190          ;
0978 A0 38       191          ldy #MSG2-MESGS
097A 20 A5 09    192          jsr PRTMSG
097D           193          ;
097D 4C D0 03    194          jmp DOSWARM
0980           195          ;
0980           196          ;
0980 AE B4 09    197 CLRUSER  ldx DOSCMD
0983           198          ;
0983 A0 65       199          ldy #MONITOR
0985 A9 FF       200          lda /MONITOR
0987           201          ;
0987 48          202 SETUSER  pha
0988           203          ;
0988 AD F8 BF    204          lda INITDOS
098B 85 EE       205          sta CMDPTR
098D           206          ;
098D AD F9 BF    207          lda INITDOS+1
0990 85 EF       208          sta CMDPTR+1
0992           209          ;
0992 98          210          tya
0993           211          ;
0993 A0 15       212          ldy #UADRNDX
0995           213          ;
0995 91 EE       214          sta (CMDPTR),Y
0997           215          ;
0997 C8          216          iny
0998           217          ;
0998 68          218          pla
0999 91 EE       219          sta (CMDPTR),Y
099B           220          ;
099B C8          221          iny
099C           222          ;
099C B1 EE       223          lda (CMDPTR),Y
099E 8D B4 09    224          sta DOSCMD
09A1           225          ;
09A1 8A          226          txa
09A2 91 EE       227          sta (CMDPTR),Y
09A4           228          ;
09A4 60          229          rts
09A5           230          ;
09A5           231          ;
09A5 B9 C4 09    232 PRTMSG  lda MSGS,Y
09A8 F0 06       233          beq >1
09AA           234          ;
09AA 20 ED FD    235          jsr COUT
09AD           236          ;
09AD C8          237          iny
09AE D0 F5       238          bne PRTMSG
09B0           239          ;
09B0 60          240 ^1      rts
09B1           241          ;
09B1           242          ;
09B1 4C 00 00    243 QLBINJMP jmp *-*

```

; QLBINEOS

```

09B4      244      ;
09B4      245      ;
09B4      246      DOSCMD      dfs 1,ZERO
09B5      247      ;
09B5      248      ;
09B5      249      EOSDCB:
09B5      250      ;
09B5 01    251      DCBCMD      byt LOADCMD
09B6 70    252      DCBEP       byt SRCHALL
09B7 00 10 253      DCBFADR     adr PAGE10
09B9 FF    254      DCBSTAT     byt NEGONE
09BA 07    255      DCBNLEN     byt FILEEND-FILNAM
09BB BD 09 256      DCBBFADR     adr FILNAM
09BD      257      ;
09BD C4 CF D3 258      FILNAM     asc "DOS4.1H"
09C0 B4 AE B1
09C3 C8
09C4      259      FILEEND     equ *
09C4      260      ;
09C4      261      ;
09C4      262      MESGS:
09C4      263      ;
09C4 8D 87 8D 264      MSG1      byt RETURN,BELL,RETURN
09C7 D5 EE E1 265      asc "Unable to load LOADOS41H DCB."
09CA E2 EC E5
09CD A0 F4 EF
09D0 A0 EC EF
09D3 E1 E4 A0
09D6 CC CF C1
09D9 C4 CF D3
09DC B4 B1 C8
09DF A0 C4 C3
09E2 C2 AE
09E4 8D 8D      266      byt RETURN,RETURN
09E6 C4 C3 C2   267      asc "DCB returned error 0x"
09E9 A0 F2 E5
09EC F4 F5 F2
09EF EE E5 E4
09F2 A0 E5 F2
09F5 F2 EF F2
09F8 A0 B0 F8
09FB 00      268      byt ZERO
09FC      269      ;
09FC 8D 8D 8D 270      MSG2      byt RETURN,RETURN,RETURN
09FF C4 CF D3 271      asc "DOS 4.1H is in memory and initialized."
0A02 A0 B4 AE
0A05 B1 C8 A0
0A08 E9 F3 A0
0A0B E9 EE A0
0A0E ED E5 ED
0A11 EF F2 F9
0A14 A0 E1 EE
0A17 E4 A0 E9
0A1A EE E9 F4
0A1D E9 E1 EC
0A20 E9 FA E5
0A23 E4 AE
0A25 8D 8D 8D 272      byt RETURN,RETURN,RETURN,ZERO
0A28 00
0A29      273      ;
0A29      274      ;

```

BSAVE LOADOS41H,D1,A\$0900,B,L\$0129

0A29 275 usr LOADOS41H,D1

0A29 276 ;

0A29 277 ;

CD D2

0A29 278 dcm "CD D2"

0A29 279 ;

0A29 280 ;

0A29 281 stt "LOADOS41H Symbol Table"

0A29 282 ;

0A29 283 ;

0A29 284 end 111

*** End of Assembly

Symbol List starts at 0x7800, ends at 0x79EA, used 0x01EA, remaining 0x3DBA

Symbols unsorted:

PTR1	0010	PTR2	0012	CMDPTR	00EE	ZERO	0000	BELL	0087
RETURN	008D	NEGONE	00FF	LOADCMD	0001	UADRNDX	0015	SRCHALL	0070
DOSWARM	03D0	PAGE10	1000	BOOTART	BE00	BOOTEND	C000	DOSTART	D000
DOSEND	EA00	RWTSTART	D000	HELPEND	DE00	INITDOS	BFF8	USERNDX	BFFA
ROM2WP	C082	RAM2WE	C083	RAM1WE	C08B	HOME	FC58	CROUT	FD8E
PRBYTE	FDDA	COUT	FDED	MONITOR	FF65	MOVEDOS	0964	LOADRTN	0975
CLRUSER	0980	SETUSER	0987	PRTMSG	09A5	QLBINJMP	09B1	DOSCMD	09B4
EOSDCB	09B5	DCBCMD	09B5	DCBEP	09B6	DCBFADR	09B7	DCBSTAT	09B9
DCBNLEN	09BA	DCBBFADR	09BB	FILNAM	09BD	FILEND	09C4	MESGS	09C4
MESG1	09C4	MESG2	09FC						

Symbols alphabetically sorted:

BELL	0087	BOOTART	BE00	BOOTEND	C000	CLRUSER	0980	CMDPTR	00EE
COUT	FDED	CROUT	FD8E	DCBBFADR	09BB	DCBCMD	09B5	DCBEP	09B6
DCBFADR	09B7	DCBNLEN	09BA	DCBSTAT	09B9	DOSCMD	09B4	DOSEND	EA00
DOSTART	D000	DOSWARM	03D0	EOSDCB	09B5	FILEND	09C4	FILNAM	09BD
HELPEND	DE00	HOME	FC58	INITDOS	BFF8	LOADCMD	0001	LOADRTN	0975
MESG1	09C4	MESG2	09FC	MESGS	09C4	MONITOR	FF65	MOVEDOS	0964
NEGONE	00FF	PAGE10	1000	PRBYTE	FDDA	PRTMSG	09A5	PTR1	0010
PTR2	0012	QLBINJMP	09B1	RAM1WE	C08B	RAM2WE	C083	RETURN	008D
ROM2WP	C082	RWTSTART	D000	SETUSER	0987	SRCHALL	0070	UADRNDX	0015
USERNDX	BFFA	ZERO	0000						

Symbols numerically sorted:

ZERO	0000	LOADCMD	0001	PTR1	0010	PTR2	0012	UADRNDX	0015
SRCHALL	0070	BELL	0087	RETURN	008D	CMDPTR	00EE	NEGONE	00FF
DOSWARM	03D0	MOVEDOS	0964	LOADRTN	0975	CLRUSER	0980	SETUSER	0987
PRTMSG	09A5	QLBINJMP	09B1	DOSCMD	09B4	EOSDCB	09B5	DCBCMD	09B5
DCBEP	09B6	DCBFADR	09B7	DCBSTAT	09B9	DCBNLEN	09BA	DCBBFADR	09BB
FILNAM	09BD	MESGS	09C4	MESG1	09C4	FILEND	09C4	MESG2	09FC
PAGE10	1000	BOOTART	BE00	INITDOS	BFF8	USERNDX	BFFA	BOOTEND	C000
ROM2WP	C082	RAM2WE	C083	RAM1WE	C08B	RWTSTART	D000	DOSTART	D000
HELPEND	DE00	DOSEND	EA00	HOME	FC58	CROUT	FD8E	PRBYTE	FDDA
COUT	FDED	MONITOR	FF65						