

!A

*** End of Pass 1

*** End of Pass 2

```
0800      1          ttl "DOS 4.1L Loader Source Code, LOADOS41L.L"
0800      2      ;
0800      3      ;
0800      4      ; LOADOS41L.L
0800      5      ;
0800      6      ;
0800      7      ; DOS 4.1L 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 4.1L 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      ;
9D00     58      DOSTART    equ $9D00
B600     59      VTOCSB     equ $B600
B900     60      RWTSTART   equ $B900
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C000          61  BOOTEND    equ  $C000
0800          62  ;
BFF8          63  INITDOS    equ  $BFF8
BFFA          64  USERNDX    equ  $BFFA
0800          65  ;
FC58          66  HOME       equ  $FC58
FD8E          67  CROUT      equ  $FD8E
FDDA          68  PRBYTE     equ  $FDDA
FDED          69  COUT       equ  $FDED
FF65          70  MONITOR    equ  $FF65
0800          71  ;
0800          72  ;
0900          73              org  $900
0900          74              obj  $900
0900          75              usr
0900          76  ;
0900          77  ;
0900          78  ; QL puts address of QLBINEOS in Y and A registers.
0900          79  ;
0900 8C 9C 09   80              sty  QLBINJMP+1
0903 8D 9D 09   81              sta  QLBINJMP+2
0906          82  ;
0906 20 58 FC   83              jsr  HOME
0909          84  ;
0909          85  ;
0909          86  ; Load DOS 4.1L into Main memory.
0909          87  ;
0909 A0 9F      88              ldy  #EOSDCB
090B A9 09      89              lda  /EOSDCB
090D          90  ;
090D 20 9B 09   91              jsr  QLBINJMP
0910          92  ;
0910 AD A3 09   93              lda  DCBSTAT
0913 F0 14      94              beq  >1
0915          95  ;
0915 A0 00      96              ldy  #MSG1-MESGS
0917 20 8F 09   97              jsr  PRTMSG
091A          98  ;
091A AD A3 09   99              lda  DCBSTAT
091D 20 DA FD  100             jsr  PRBYTE
0920          101 ;
0920 20 8E FD  102             jsr  CROUT
0923 20 8E FD  103             jsr  CROUT
0926          104 ;
0926 4C D0 03   105             jmp  DOSWARM
0929          106 ;
0929          107 ;
0929          108 ; DOS 4.1L is composed of two sections.  Both sections
0929          109 ; reside in Main memory.
0929          110 ;
0929 A0 00      111 ^1         ldy  #PAGE10
092B 84 10      112             sty  PTR1
092D 84 12      113             sty  PTR2
092F          114 ;
092F A9 10      115             lda  /PAGE10
0931 85 11      116             sta  PTR1+1
0933          117 ;
0933 A9 9D      118             lda  /DOSTART
0935 A2 19      119             ldx  /VTOCSB-DOSTART
0937          120 ;
0937 20 4E 09   121             jsr  MOVEDOS

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093A          122 ;
093A A9 B9     123         lda /RWTSTART
093C A2 07     124         ldx /BOOTEND-RWTSTART
093E          125 ;
093E 20 4E 09  126         jsr MOVEDOS
0941          127 ;
0941 AE FA BF  128         ldx USERNDX
0944          129 ;
0944 A0 5F     130         ldy #LOADRTN
0946 A9 09     131         lda /LOADRTN
0948          132 ;
0948 20 71 09  133         jsr SETUSER
094B          134 ;
094B 6C F8 BF  135         jmp (INITDOS)
094E          136 ;
094E          137 ;
094E 85 13     138 MOVEDOS  sta PTR2+1
0950          139 ;
0950 B1 10     140 ^1      lda (PTR1),Y
0952 91 12     141         sta (PTR2),Y
0954          142 ;
0954 C8        143         iny
0955 D0 F9     144         bne <1
0957          145 ;
0957 E6 11     146         inc PTR1+1
0959 E6 13     147         inc PTR2+1
095B          148 ;
095B CA        149         dex
095C D0 F2     150         bne <1
095E          151 ;
095E 60        152         rts
095F          153 ;
095F          154 ;
095F 20 6A 09  155 LOADRTN  jsr CLRUSER
0962          156 ;
0962 A0 38     157         ldy #MSG2-MESGS
0964 20 8F 09  158         jsr PRMSG
0967          159 ;
0967 4C D0 03  160         jmp DOSWARM
096A          161 ;
096A          162 ;
096A AE 9E 09  163 CLRUSER  ldx DOSCMD
096D          164 ;
096D A0 65     165         ldy #MONITOR
096F A9 FF     166         lda /MONITOR
0971          167 ;
0971 48        168 SETUSER  pha
0972          169 ;
0972 AD F8 BF  170         lda INITDOS
0975 85 EE     171         sta CMDPTR
0977          172 ;
0977 AD F9 BF  173         lda INITDOS+1
097A 85 EF     174         sta CMDPTR+1
097C          175 ;
097C 98        176         tya
097D          177 ;
097D A0 15     178         ldy #UADRNDX
097F          179 ;
097F 91 EE     180         sta (CMDPTR),Y
0981          181 ;
0981 C8        182         iny

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0982      183 ;
0982 68      184      pla
0983 91 EE    185      sta (CMDPTR),Y
0985      186 ;
0985 C8      187      iny
0986      188 ;
0986 B1 EE    189      lda (CMDPTR),Y
0988 8D 9E 09 190      sta DOSCMD
098B      191 ;
098B 8A      192      txa
098C 91 EE    193      sta (CMDPTR),Y
098E      194 ;
098E 60      195      rts
098F      196 ;
098F      197 ;
098F B9 AE 09 198 PRTMSG  lda MSGS,Y
0992 F0 06    199      beq >1
0994      200 ;
0994 20 ED FD 201      jsr COUT
0997      202 ;
0997 C8      203      iny
0998 D0 F5    204      bne PRTMSG
099A      205 ;
099A 60      206      ^1      rts
099B      207 ;
099B      208 ;
099B 4C 00 00 209 QLBINJMP jmp *-*          ; QLBINEOS
099E      210 ;
099E      211 ;
099E      212 DOSCMD  dfs 1,ZERO
099F      213 ;
099F      214 ;
099F      215 EOSDCB:
099F      216 ;
099F 01      217 DCBCMD  byt LOADCMD
09A0 70      218 DCBEP   byt SRCHALL
09A1 00 10    219 DCBFADR  adr PAGE10
09A3 FF      220 DCBSTAT  byt NEGONE
09A4 07      221 DCBNLEN  byt FILEEND-FILNAM
09A5 A7 09    222 DCBBFADR  adr FILNAM
09A7      223 ;
09A7 C4 CF D3 224 FILNAM  asc "DOS4.1L"
09AA B4 AE B1
09AD CC
09AE      225 FILEEND  equ *
09AE      226 ;
09AE      227 ;
09AE      228 MSGS:
09AE      229 ;
09AE 8D 87 8D 230 MSG1    byt RETURN,BELL,RETURN
09B1 D5 EE E1 231      asc "Unable to load LOADOS41L DCB."
09B4 E2 EC E5
09B7 A0 F4 EF
09BA A0 EC EF
09BD E1 E4 A0
09C0 CC CF C1
09C3 C4 CF D3
09C6 B4 B1 CC
09C9 A0 C4 C3
09CC C2 AE
09CE 8D 8D    232      byt RETURN,RETURN

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```
09D0 C4 C3 C2      233          asc "DCB returned error 0x"
09D3 A0 F2 E5
09D6 F4 F5 F2
09D9 EE E5 E4
09DC A0 E5 F2
09DF F2 EF F2
09E2 A0 B0 F8
09E5 00            234          byt ZERO
09E6              235          ;
09E6 8D 8D 8D      236  MSG2    byt RETURN,RETURN,RETURN
09E9 C4 CF D3      237          asc "DOS 4.1L is in memory and initialized."
09EC A0 B4 AE
09EF B1 CC A0
09F2 E9 F3 A0
09F5 E9 EE A0
09F8 ED E5 ED
09FB EF F2 F9
09FE A0 E1 EE
0A01 E4 A0 E9
0A04 EE E9 F4
0A07 E9 E1 EC
0A0A E9 FA E5
0A0D E4 AE
0A0F 8D 8D 8D      238          byt RETURN,RETURN,RETURN,ZERO
0A12 00
0A13              239          ;
0A13              240          ;

BSAVE LOADOS41L,D1,A$0900,B,L$0113

0A13              241          usr LOADOS41L,D1
0A13              242          ;
0A13              243          ;
CD D2

0A13              244          dcm "CD D2"
0A13              245          ;
0A13              246          ;
0A13              247          stt "LOADOS41L Symbol Table"
0A13              248          ;
0A13              249          ;
0A13              250          end 111

*** End of Assembly
```

Symbol List starts at 0x7800, ends at 0x79B8, used 0x01B8, remaining 0x3DEC

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	DOSTART	9D00	VTOCSB	B600	RWTSTART	B900
BOOTEND	C000	INITDOS	BFF8	USERNDX	BFFA	HOME	FC58	CROUT	FD8E
PRBYTE	FDDA	COUT	FDED	MONITOR	FF65	MOVEDOS	094E	LOADRTN	095F
CLRUSER	096A	SETUSER	0971	PRTMSG	098F	QLBINJMP	099B	DOSCMD	099E
EOSDCB	099F	DCBCMD	099F	DCBEP	09A0	DCBFADR	09A1	DCBSTAT	09A3
DCBNLEN	09A4	DCBBFADR	09A5	FILNAM	09A7	FILEND	09AE	MESGS	09AE
MESG1	09AE	MESG2	09E6						

Symbols alphabetically sorted:

BELL	0087	BOOTEND	C000	CLRUSER	096A	CMDPTR	00EE	COUT	FDED
CROUT	FD8E	DCBBFADR	09A5	DCBCMD	099F	DCBEP	09A0	DCBFADR	09A1
DCBNLEN	09A4	DCBSTAT	09A3	DOSCMD	099E	DOSTART	9D00	DOSWARM	03D0
EOSDCB	099F	FILEND	09AE	FILNAM	09A7	HOME	FC58	INITDOS	BFF8
LOADCMD	0001	LOADRTN	095F	MESG1	09AE	MESG2	09E6	MESGS	09AE
MONITOR	FF65	MOVEDOS	094E	NEGONE	00FF	PAGE10	1000	PRBYTE	FDDA
PRTMSG	098F	PTR1	0010	PTR2	0012	QLBINJMP	099B	RETURN	008D
RWTSTART	B900	SETUSER	0971	SRCHALL	0070	UADRNDX	0015	USERNDX	BFFA
VTOCSB	B600	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	094E	LOADRTN	095F	CLRUSER	096A	SETUSER	0971
PRTMSG	098F	QLBINJMP	099B	DOSCMD	099E	EOSDCB	099F	DCBCMD	099F
DCBEP	09A0	DCBFADR	09A1	DCBSTAT	09A3	DCBNLEN	09A4	DCBBFADR	09A5
FILNAM	09A7	MESGS	09AE	MESG1	09AE	FILEND	09AE	MESG2	09E6
PAGE10	1000	DOSTART	9D00	VTOCSB	B600	RWTSTART	B900	INITDOS	BFF8
USERNDX	BFFA	BOOTEND	C000	HOME	FC58	CROUT	FD8E	PRBYTE	FDDA
COUT	FDED	MONITOR	FF65						