

!A

*** End of Pass 1

*** End of Pass 2

```
0800          1          ttl "Load LISA40 Source Code"
0800          2          ;
0800          3          ;
0800          4          ; LOADLISA40.L
0800          5          ;
0800          6          ;
0800          7          ; Load LISA40 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 the DOS 4.3 version of LISA40 into
0800         36          ; Auxiliary memory from EPROM. The LISA40.3 code
0800         37          ; interfaces LISA40 and DOS.
0800         38          ;
0800         39          ;
0010         40          PTR1      epz $10
0012         41          PTR2      epz $12
0033         42          PROMPT    epz $33
0076         43          ASRUN     epz $76
00D8         44          ASONERR   epz $D8
0800         45          ;
0800         46                   enz
0800         47          ;
0000         48          ZERO      equ $00
0084         49          CTRLD     equ $84
0087         50          BELL      equ $87
008D         51          RETURN    equ $8D
00FF         52          NEGONE    equ $FF
0800         53          ;
0001         54          LOADCMD   equ $01
0070         55          SRCHALL   equ $70
0800         56          ;
0028         57          LISA1PGS  equ $28
0010         58          LISA2PGS  equ $10
0800         59          ;
03D0         60          DOSWARM   equ $3D0
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03EA          61  HOOKDOS    equ  $3EA
0800          62  ;
1000          63  PAGE10    equ  $1000
D000          64  PAGED0    equ  $D000
F800          65  PAGEF8    equ  $F800
0800          66  ;
B7E0          67  XFERSTRT  equ  $B7E0
BCDC          68  SETUPJMP  equ  $BCDC
BCDF          69  SETUPFLG  equ  $BCDF
0800          70  ;
C008          71  AUXZPOFF  equ  $C008
C009          72  AUXZPON   equ  $C009
0800          73  ;
C080          74  RAM2WP    equ  $C080
C081          75  ROM2WE    equ  $C081
C082          76  ROM2WP    equ  $C082
C083          77  RAM2WE    equ  $C083
C08A          78  ROM1WP    equ  $C08A
C08B          79  RAM1WE    equ  $C08B
0800          80  ;
E000          81  COLDSTRT  equ  $E000
0800          82  ;
FB2F          83  INIT      equ  $FB2F
FC58          84  HOME      equ  $FC58
FD8E          85  CROUT     equ  $FD8E
FDDA          86  PRBYTE    equ  $FDDA
FDED          87  COUT      equ  $FDED
FE84          88  SETNORM   equ  $FE84
FE89          89  SETKBD    equ  $FE89
FE93          90  SETVID    equ  $FE93
0800          91  ;
0800          92  ;
0900          93              org  $900
0900          94              obj  $900
0900          95              usr
0900          96  ;
0900          97  ;
0900          98  ; QL puts address of QLBIKEOS in Y and A registers.
0900          99  ;
0900  8C  1C  0A  100              sty  QLBIKJMP+1
0903  8D  1D  0A  101              sta  QLBIKJMP+2
0906          102  ;
0906  20  58  FC  103              jsr  HOME
0909  20  EA  03  104              jsr  HOOKDOS
090C          105  ;
090C          106  ;
090C          107  ; Load LISA40.1 into Main memory, then copy to Auxiliary
090C          108  ; memory.
090C          109  ;
090C  A0  20      110              ldy  #EOS1DCB
090E  A9  0A      111              lda  /EOS1DCB
0910          112  ;
0910  20  1B  0A  113              jsr  QLBIKJMP
0913          114  ;
0913  A2  01      115              ldx  #1
0915          116  ;
0915  AD  24  0A  117              lda  DCB1STAT
0918  D0  71      118              bne  ERROR
091A          119  ;
091A  2C  8B  C0  120              bit  RAM1WE
091D  2C  8B  C0  121              bit  RAM1WE

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0920          122 ;
0920 A2 28      123      ldx #LISA1PGS
0922 20 B0 09   124      jsr MOVELISA
0925          125 ;
0925 20 D6 09   126      jsr COPYROM
0928          127 ;
0928          128 ;
0928          129 ; Load LISA40.2 into Main memory, then copy to Auxiliary
0928          130 ; memory.
0928          131 ;
0928 A0 30      132      ld y #EOS2DCB
092A A9 0A      133      lda /EOS2DCB
092C          134 ;
092C 20 1B 0A   135      jsr QLBINJMP
092F          136 ;
092F A2 02      137      ld x #2
0931          138 ;
0931 AD 34 0A   139      lda DCB2STAT
0934 D0 55      140      bne ERROR
0936          141 ;
0936 2C 83 C0   142      bit RAM2WE
0939 2C 83 C0   143      bit RAM2WE
093C          144 ;
093C A2 10      145      ld x #LISA2PGS
093E 20 B0 09   146      jsr MOVELISA
0941          147 ;
0941          148 ;
0941          149 ; Load LISA40.3 into Main memory.
0941          150 ;
0941 A0 40      151      ld y #EOS3DCB
0943 A9 0A      152      lda /EOS3DCB
0945          153 ;
0945 20 1B 0A   154      jsr QLBINJMP
0948          155 ;
0948 A2 03      156      ld x #3
094A          157 ;
094A AD 44 0A   158      lda DCB3STAT
094D D0 3C      159      bne ERROR
094F          160 ;
094F AC 1C 0A   161      ld y QLBINJMP+1
0952 AD 1D 0A   162      lda QLBINJMP+2
0955          163 ;
0955 8C DD BC   164      sty SETUPJMP+1
0958 8D DE BC   165      sta SETUPJMP+2
095B          166 ;
095B A9 01      167      lda #1
095D 8D DF BC   168      sta SETUPFLG
0960          169 ;
0960 A0 00      170      ld y #MSG1-MESGS
0962 20 0F 0A   171      jsr PRMSG
0965          172 ;
0965 8D 08 C0   173      sta AUXZPOFF
0968          174 ;
0968 A9 00      175      lda #ZERO
096A 85 33      176      sta PROMPT
096C 85 76      177      sta ASRUN
096E 85 D8      178      sta ASONERR
0970          179 ;
0970 20 F8 09   180      jsr INITHOOK
0973          181 ;
0973 8D 09 C0   182      sta AUXZPON

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0976      183 ;
0976 2C 82 C0 184      bit ROM2WP
0979      185 ;
0979 20 84 FE 186      jsr SETNORM
097C 20 2F FB 187      jsr INIT
097F 20 89 FE 188      jsr SETKBD
0982 20 93 FE 189      jsr SETVID
0985      190 ;
0985 2C 80 C0 191      bit RAM2WP
0988      192 ;
0988 4C 00 E0 193      jmp COLDSTRT
098B      194 ;
098B      195 ;
098B 8E 1E 0A 196 ERROR stx DCBNUM
098E 8D 1F 0A 197      sta DCBERR
0991      198 ;
0991 A0 19      199      ld y #MSG2-MESGS
0993 20 0F 0A 200      jsr PRTMSG
0996      201 ;
0996 AD 1E 0A 202      lda DCBNUM
0999 20 DA FD 203      jsr PRBYTE
099C      204 ;
099C A0 38      205      ld y #MSG3-MESGS
099E 20 0F 0A 206      jsr PRTMSG
09A1      207 ;
09A1 AD 1F 0A 208      lda DCBERR
09A4 20 DA FD 209      jsr PRBYTE
09A7      210 ;
09A7 20 8E FD 211      jsr CROUT
09AA 20 8E FD 212      jsr CROUT
09AD      213 ;
09AD 4C D0 03 214      jmp DOSWARM
09B0      215 ;
09B0      216 ;
09B0 8D 09 C0 217 MOVELISA sta AUXZPON
09B3      218 ;
09B3 A0 00      219      ld y #PAGE10
09B5 84 10      220      sty PTR1
09B7 84 12      221      sty PTR2
09B9      222 ;
09B9 A9 10      223      lda /PAGE10
09BB 85 11      224      sta PTR1+1
09BD      225 ;
09BD A9 D0      226      lda /PAGED0
09BF 85 13      227      sta PTR2+1
09C1      228 ;
09C1 B1 10      229 ^1      lda (PTR1),Y
09C3 91 12      230      sta (PTR2),Y
09C5      231 ;
09C5 C8      232      iny
09C6 D0 F9      233      bne <1
09C8      234 ;
09C8 E6 11      235      inc PTR1+1
09CA E6 13      236      inc PTR2+1
09CC      237 ;
09CC CA      238      dex
09CD D0 F2      239      bne <1
09CF      240 ;
09CF 8D 08 C0 241      sta AUXZPOFF
09D2      242 ;
09D2 2C 8A C0 243      bit ROM1WP

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```

09D5          244 ;
09D5 60       245      rts
09D6          246 ;
09D6          247 ;
09D6          248 ; Copy Main memory ROM to Auxiliary memory RAM.
09D6          249 ;
09D6 8D 09 C0 250 COPYROM sta AUXZPON
09D9          251 ;
09D9 2C 81 C0 252      bit ROM2WE
09DC 2C 81 C0 253      bit ROM2WE
09DF          254 ;
09DF A0 00    255      ldy #PAGEF8
09E1 A2 F8    256      ldx /PAGEF8
09E3          257 ;
09E3 84 10    258      sty PTR1
09E5          259 ;
09E5 86 11    260 ^1    stx PTR1+1
09E7          261 ;
09E7 B1 10    262 ^2    lda (PTR1),Y
09E9 91 10    263      sta (PTR1),Y
09EB          264 ;
09EB C8       265      iny
09EC D0 F9    266      bne <2
09EE          267 ;
09EE E8       268      inx
09EF D0 F4    269      bne <1
09F1          270 ;
09F1 8D 08 C0 271      sta AUXZPOFF
09F4          272 ;
09F4 2C 8A C0 273      bit ROM1WP
09F7          274 ;
09F7 60       275      rts
09F8          276 ;
09F8          277 ;
09F8          278 ; Get address in HOOKDOS and save to DOSHOOK.
09F8          279 ;
09F8 AE EB 03 280 INITHOOK ldx HOOKDOS+1
09FB AD EC 03 281      lda HOOKDOS+2
09FE          282 ;
09FE 8E E1 B7 283      stx XFERSTRT+1
0A01 8D E2 B7 284      sta XFERSTRT+2
0A04          285 ;
0A04          286 ;
0A04          287 ; Get address of XHOOKDOS and save to HOOKDOS.
0A04          288 ;
0A04 A2 E3    289      ldx #XFERSTRT+3
0A06 A9 B7    290      lda /XFERSTRT+3
0A08          291 ;
0A08 8E EB 03 292      stx HOOKDOS+1
0A0B 8D EC 03 293      sta HOOKDOS+2
0A0E          294 ;
0A0E 60       295      rts
0A0F          296 ;
0A0F          297 ;
0A0F B9 50 0A 298 PRTMSG  lda MSGS,Y
0A12 F0 06    299      beq >1
0A14          300 ;
0A14 20 ED FD 301      jsr COUT
0A17          302 ;
0A17 C8       303      iny
0A18 D0 F5    304      bne PRTMSG

```

```

0A1A          305 ;
0A1A 60       306 ^1      rts
0A1B          307 ;
0A1B          308 ;
0A1B 4C 00 00 309 QLBINJMP jmp *-*          ; QLBINEOS
0A1E          310 ;
0A1E          311 ;
0A1E          312 DCBNUM    dfs 1,ZERO
0A1F          313 DCBERR    dfs 1,ZERO
0A20          314 ;
0A20          315 ;
0A20          316 EOS1DCB:
0A20          317 ;
0A20 01       318 DCB1CMD    byt LOADCMD
0A21 70       319 DCB1EP     byt SRCHALL
0A22 00 10    320 DCB1ALT    adr PAGE10
0A24 FF       321 DCB1STAT    byt NEGONE
0A25 08       322 DCB1LEN    byt FIL1END-FIL1NAM
0A26 28 0A    323 DCB1ADR    adr FIL1NAM
0A28          324 ;
0A28 CC C9 D3 325 FIL1NAM    asc "LISA40.1"
0A2B C1 B4 B0
0A2E AE B1
0A30          326 FIL1END    equ *
0A30          327 ;
0A30          328 ;
0A30          329 EOS2DCB:
0A30          330 ;
0A30 01       331 DCB2CMD    byt LOADCMD
0A31 70       332 DCB2EP     byt SRCHALL
0A32 00 10    333 DCB2ALT    adr PAGE10
0A34 FF       334 DCB2STAT    byt NEGONE
0A35 08       335 DCB2LEN    byt FIL2END-FIL2NAM
0A36 38 0A    336 DCB2ADR    adr FIL2NAM
0A38          337 ;
0A38 CC C9 D3 338 FIL2NAM    asc "LISA40.2"
0A3B C1 B4 B0
0A3E AE B2
0A40          339 FIL2END    equ *
0A40          340 ;
0A40          341 ;
0A40          342 EOS3DCB:
0A40          343 ;
0A40 01       344 DCB3CMD    byt LOADCMD
0A41 70       345 DCB3EP     byt SRCHALL
0A42 E0 B7    346 DCB3ALT    adr XFERSTRT
0A44 FF       347 DCB3STAT    byt NEGONE
0A45 08       348 DCB3LEN    byt FIL3END-FIL3NAM
0A46 48 0A    349 DCB3ADR    adr FIL3NAM
0A48          350 ;
0A48 CC C9 D3 351 FIL3NAM    asc "LISA40.3"
0A4B C1 B4 B0
0A4E AE B3
0A50          352 FIL3END    equ *
0A50          353 ;
0A50          354 ;
0A50          355 MESGS:
0A50          356 ;
0A50 8D 84    357 MSG1      byt RETURN,CTRLD
0A52 CD C1 D8 358          asc "MAXFILES 2"
0A55 C6 C9 CC

```

```
0A58 C5 D3 A0
0A5B B2
0A5C 8D 84      359      byt RETURN,CTRLD
0A5E CD CF CE   360      asc "MON C,I,O"
0A61 A0 C3 AC
0A64 C9 AC CF
0A67 8D 00      361      byt RETURN,ZERO
0A69            362      ;
0A69 8D 87 8D   363      MSG2    byt RETURN,BELL,RETURN
0A6C D5 EE E1   364      asc "Unable to load LISA40 DCB #"
0A6F E2 EC E5
0A72 A0 F4 EF
0A75 A0 EC EF
0A78 E1 E4 A0
0A7B CC C9 D3
0A7E C1 B4 B0
0A81 A0 C4 C3
0A84 C2 A0 A3
0A87 00          365      byt ZERO
0A88            366      ;
0A88 8D 8D      367      MSG3    byt RETURN,RETURN
0A8A A0 A0 A0   368      asc "      DCB returned error 0x"
0A8D A0 C4 C3
0A90 C2 A0 F2
0A93 E5 F4 F5
0A96 F2 EE E5
0A99 E4 A0 E5
0A9C F2 F2 EF
0A9F F2 A0 B0
0AA2 F8
0AA3 00          369      byt ZERO
0AA4            370      ;
0AA4            371      ;
```

BSAVE LOADLISA40,D1,A\$0900,B,L\$01A4

```
0AA4            372      usr LOADLISA40,D1
0AA4            373      ;
0AA4            374      ;
CD D2

0AA4            375      dcm "CD D2"
0AA4            376      ;
0AA4            377      ;
0AA4            378      stt "LOADLISA40 Symbol Table"
0AA4            379      ;
0AA4            380      ;
0AA4            381      end 111
```

*** End of Assembly

Symbol List starts at 0x7800, ends at 0x7B20, used 0x0320, remaining 0x3C80

Symbols unsorted:

PTR1	0010	PTR2	0012	PROMPT	0033	ASRUN	0076	ASONERR	00D8
ZERO	0000	CTRLD	0084	BELL	0087	RETURN	008D	NEGONE	00FF
LOADCMD	0001	SRCHALL	0070	LISA1PGS	0028	LISA2PGS	0010	DOSWARM	03D0
HOOKDOS	03EA	PAGE10	1000	PAGED0	D000	PAGEF8	F800	XFERSTRT	B7E0
SETUPJMP	BCDC	SETUPFLG	BCDF	AUXZPOFF	C008	AUXZPON	C009	RAM2WP	C080
ROM2WE	C081	ROM2WP	C082	RAM2WE	C083	ROM1WP	C08A	RAM1WE	C08B
COLDSTRT	E000	INIT	FB2F	HOME	FC58	CROUT	FD8E	PRBYTE	FDDA
COUT	FDED	SETNORM	FE84	SETKBD	FE89	SETVID	FE93	ERROR	098B
MOVELISA	09B0	COPYROM	09D6	INITHOOK	09F8	PRTMSG	0A0F	QLBINJMP	0A1B
DCBNUM	0A1E	DCBERR	0A1F	EOS1DCB	0A20	DCB1CMD	0A20	DCB1EP	0A21
DCB1ALT	0A22	DCB1STAT	0A24	DCB1LEN	0A25	DCB1ADR	0A26	FIL1NAM	0A28
FIL1END	0A30	EOS2DCB	0A30	DCB2CMD	0A30	DCB2EP	0A31	DCB2ALT	0A32
DCB2STAT	0A34	DCB2LEN	0A35	DCB2ADR	0A36	FIL2NAM	0A38	FIL2END	0A40
EOS3DCB	0A40	DCB3CMD	0A40	DCB3EP	0A41	DCB3ALT	0A42	DCB3STAT	0A44
DCB3LEN	0A45	DCB3ADR	0A46	FIL3NAM	0A48	FIL3END	0A50	MESGS	0A50
MESG1	0A50	MESG2	0A69	MESG3	0A88				

Symbols alphabetically sorted:

ASONERR	00D8	ASRUN	0076	AUXZPOFF	C008	AUXZPON	C009	BELL	0087
COLDSTRT	E000	COPYROM	09D6	COUT	FDED	CROUT	FD8E	CTRLD	0084
DCB1ADR	0A26	DCB1ALT	0A22	DCB1CMD	0A20	DCB1EP	0A21	DCB1LEN	0A25
DCB1STAT	0A24	DCB2ADR	0A36	DCB2ALT	0A32	DCB2CMD	0A30	DCB2EP	0A31
DCB2LEN	0A35	DCB2STAT	0A34	DCB3ADR	0A46	DCB3ALT	0A42	DCB3CMD	0A40
DCB3EP	0A41	DCB3LEN	0A45	DCB3STAT	0A44	DCBERR	0A1F	DCBNUM	0A1E
DOSWARM	03D0	EOS1DCB	0A20	EOS2DCB	0A30	EOS3DCB	0A40	ERROR	098B
FIL1END	0A30	FIL1NAM	0A28	FIL2END	0A40	FIL2NAM	0A38	FIL3END	0A50
FIL3NAM	0A48	HOME	FC58	HOOKDOS	03EA	INIT	FB2F	INITHOOK	09F8
LISA1PGS	0028	LISA2PGS	0010	LOADCMD	0001	MESG1	0A50	MESG2	0A69
MESG3	0A88	MESGS	0A50	MOVELISA	09B0	NEGONE	00FF	PAGE10	1000
PAGED0	D000	PAGEF8	F800	PRBYTE	FDDA	PROMPT	0033	PRTMSG	0A0F
PTR1	0010	PTR2	0012	QLBINJMP	0A1B	RAM1WE	C08B	RAM2WE	C083
RAM2WP	C080	RETURN	008D	ROM1WP	C08A	ROM2WE	C081	ROM2WP	C082
SETKBD	FE89	SETNORM	FE84	SETUPFLG	BCDF	SETUPJMP	BCDC	SETVID	FE93
SRCHALL	0070	XFERSTRT	B7E0	ZERO	0000				

Symbols numerically sorted:

ZERO	0000	LOADCMD	0001	PTR1	0010	LISA2PGS	0010	PTR2	0012
LISA1PGS	0028	PROMPT	0033	SRCHALL	0070	ASRUN	0076	CTRLD	0084
BELL	0087	RETURN	008D	ASONERR	00D8	NEGONE	00FF	DOSWARM	03D0
HOOKDOS	03EA	ERROR	098B	MOVELISA	09B0	COPYROM	09D6	INITHOOK	09F8
PRTMSG	0A0F	QLBINJMP	0A1B	DCBNUM	0A1E	DCBERR	0A1F	EOS1DCB	0A20
DCB1CMD	0A20	DCB1EP	0A21	DCB1ALT	0A22	DCB1STAT	0A24	DCB1LEN	0A25
DCB1ADR	0A26	FIL1NAM	0A28	FIL1END	0A30	EOS2DCB	0A30	DCB2CMD	0A30
DCB2EP	0A31	DCB2ALT	0A32	DCB2STAT	0A34	DCB2LEN	0A35	DCB2ADR	0A36
FIL2NAM	0A38	FIL2END	0A40	EOS3DCB	0A40	DCB3CMD	0A40	DCB3EP	0A41
DCB3ALT	0A42	DCB3STAT	0A44	DCB3LEN	0A45	DCB3ADR	0A46	FIL3NAM	0A48
MESGS	0A50	MESG1	0A50	FIL3END	0A50	MESG2	0A69	MESG3	0A88
PAGE10	1000	XFERSTRT	B7E0	SETUPJMP	BCDC	SETUPFLG	BCDF	AUXZPOFF	C008
AUXZPON	C009	RAM2WP	C080	ROM2WE	C081	ROM2WP	C082	RAM2WE	C083
ROM1WP	C08A	RAM1WE	C08B	PAGED0	D000	COLDSTRT	E000	PAGEF8	F800
INIT	FB2F	HOME	FC58	CROUT	FD8E	PRBYTE	FDDA	COUT	FDED
SETNORM	FE84	SETKBD	FE89	SETVID	FE93				