

!A

*** End of Pass 1

*** End of Pass 2

```
0800      1          ttl "Insta-Disk DISKCOPY, DISKCOPY.L"
0800      2      ;
0800      3      ;
0800      4      ; DISKCOPY.L
0800      5      ;
0800      6      ; 2024 February 14
0800      7      ;
0800      8      ;
0800      9      ; This software is based on the work of Egan Ford.
0800     10      ;
0800     11      ; This version of the Apple software that is used in c2t
0800     12      ; has been substantially modified in order to utilize the
0800     13      ; Compress Flag that has been added to the end of the
0800     14      ; start_table. RWTS is used to format the disk since this
0800     15      ; version of c2t transfers disk images and a DOS is not
0800     16      ; required. I prefer an asterisk to show sector writing in
0800     17      ; a downward direction rather than in an upward direction.
0800     18      ; The user is given a choice to boot the disk or enter DOS.
0800     19      ; I modified c2t to include the end address in the
0800     20      ; start_table in order to simplify this code. The
0800     21      ; start_table now includes the time to inflate each Set.
0800     22      ;
0800     23      ; Further changes to c2t include providing the number of
0800     24      ; tracks on a diskette, the number of tracks in a segment,
0800     25      ; and the number of segments. Also, c2t provides the Slot,
0800     26      ; Drive, and Volume numbers in order to transfer any sized
0800     27      ; diskette to any disk drive location. The volume number
0800     28      ; of the target VTOC is also updated.
0800     29      ;
0800     30      ; This version of DISKCOPY utilizes the 80-column display.
0800     31      ;
0800     32      ;
0800     33      ; Start of Source Code: 0x4000
0800     34      ; Start of Symbol List: 0x8000
0800     35      ;
0800     36      ;
0800     37      ; Copyright (c) 2024 February 14 by
0800     38      ; Walland Philip Vrbancic Jr.
0800     39      ;
0800     40      ; 6223 East Peabody Street
0800     41      ; Long Beach, California 90808
0800     42      ; United States of America
0800     43      ;
0800     44      ; All Rights Reserved
0800     45      ;
0800     46      ; This software is the confidential and
0800     47      ; proprietary intellectual property of
0800     48      ; Walland Philip Vrbancic Jr.
0800     49      ;
0800     50      ;
0000     51  DATAPTR    epz $00          ; DATACODE start address
0002     52  ENDPTR    epz $02          ; DATACODE end address
0005     53  TRKCNT    epz $05          ; track counter 00:23
0006     54  SECCNT    epz $06          ; sector counter, 15:00
0007     55  SETNUM    epz $07          ; number of segments
0008     56  BUFPAGE    epz $08          ; USBUF address, 10:n0
0009     57  SETTRKS    epz $09          ; number of tracks in segment
000A     58  IOCBPTR    epz $0A          ; RWTS IOCB
000C     59  MSBVAL    epz $0C          ; sector MSB value
000D     60  LINECNT    epz $0D          ; line count for sector MSB
```

000E	61	DECVALUE	epz \$0E	; value for decimal conversion
0800	62	;		
0010	63	INFLPTR	epz \$10	; INFLATE indata address
0012	64	OUTFLPTR	epz \$12	; INFLATE outdata address
001A	65	OUTDATA2	epz \$1A	; INFLATE outdata end addr
001C	66	TOTLTRKS	epz \$1C	; tracks left to write
001E	67	SETNDX	epz \$1E	; start_table index
001F	68	SAVY	epz \$1F	; save Y-reg
0800	69	;		
0024	70	CH	epz \$24	
0800	71	;		
0800	72		enz	
0800	73	;		
0000	74	ZERO	equ \$00	
00FF	75	NEGONE	equ \$FF	
0800	76	;		
0000	77	RWTSSEEK	equ \$00	; RWTS code to SEEK
0001	78	RWTSREAD	equ \$01	; RWTS code to READ
0002	79	RWTSWRIT	equ \$02	; RWTS code to WRITE
0004	80	RWTSFRMT	equ \$04	; RWTS code to FORMAT
0800	81	;		
0001	82	SLOTNDX	equ \$01	
0002	83	DRVNDX	equ \$02	
0003	84	VOLNDX	equ \$03	
0004	85	TRKNDX	equ \$04	
0005	86	SECNDX	equ \$05	
0008	87	BUFRNDX	equ \$08	
000B	88	BYTCNTDX	equ \$0B	
000C	89	CMDNDX	equ \$0C	
000D	90	ERRNDX	equ \$0D	
0800	91	;		
0006	92	VOLOFF	equ \$06	; volume number in VTOC
0800	93	;		
008D	94	RETURN	equ \$8D	
0091	95	CTRLQ	equ \$91	
009B	96	ESCAPE	equ \$9B	
00AA	97	ASTERISK	equ "*"	
00AB	98	PLUS	equ "+"	
00AD	99	HYPHEN	equ "-"	
00BD	100	EQUAL	equ "="	
0800	101	;		
0100	102	PAGESIZE	equ \$100	
0800	103	;		
03D3	104	DOSCOLD	equ \$3D3	
03D9	105	RWTS	equ \$3D9	
03E3	106	GETIOB	equ \$3E3	
03EA	107	HOOKDOS	equ \$3EA	
0800	108	;		
057B	109	OURCH	equ \$57B	
0800	110	;		
1000	111	OUTDATA1	equ \$1000	; INFLATE outdata start addr
0800	112	;		
B000	113	DATALOAD	equ \$B000	
B200	114	DISKCOPY	equ \$B200	
B800	115	INFLATE	equ \$B800	
0800	116	;		
BEF2	117	ENDTRK	equ \$BEF2	
BEFE	118	ENDSEC	equ \$BEFE	
0800	119	;		
C088	120	MOTOROFF	equ \$C088	
C089	121	MOTORON	equ \$C089	

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0800          122 ;
FAA6          123 PWRUP      equ $FAA6
0800          124 ;
FB2F          125 INIT      equ $FB2F
FB5B          126 TABV      equ $FB5B
FBE2          127 SND.BELL  equ $FBE2
0800          128 ;
FC42          129 CLREOP    equ $FC42
FC58          130 HOME      equ $FC58
0800          131 ;
FD0C          132 RDKEY     equ $FD0C
FD8E          133 CROUT     equ $FD8E
FDDA          134 PRBYTE    equ $FDDA
FDED          135 COUT      equ $FDED
0800          136 ;
FE95          137 OUTPORT   equ $FE95
0800          138 ;
FF69          139 MONITOR   equ $FF69
0800          140 ;
0800          141 ;
B200          142          org DISKCOPY
B200          143          obj $900
B200          144          usr
B200          145 ;
B200          146 ;
B200          147 ; Enable 80-column mode, clear the screen, and draw the
B200          148 ; DISKCOPY graph.
B200          149 ;
B200 A9 03     150          lda #3
B202 20 95 FE  151          jsr OUTPORT
B205          152 ;
B205 20 2F FB  153          jsr INIT
B208          154 ;
B208 20 58 FC  155          jsr HOOKDOS
B20B 20 8E FD  156          jsr HOME
B20E          157 ;
B20E A9 00     158          lda #ZERO
B210 20 5B FB  159          jsr TABV
B213          160 ;
B213 A0 00     161          ldy #HDR1-HDRS      ; Track headers, Information
B215 20 9A B4  162          jsr PRINT2
B218          163 ;
B218          164 ;
B218          165 ; Put X-reg number of hyphens at CH in Y-reg.
B218          166 ;
B218 A0 07     167          ldy #7
B21A 84 24     168          sty CH
B21C          169 ;
B21C A2 45     170          ldx #69
B21E A9 AD     171          lda #HYPHEN
B220          172 ;
B220 20 ED FD  173 ^1      jsr COUT
B223          174 ;
B223 E0 16     175          cpx #22
B225 D0 04     176          bne >2
B227          177 ;
B227 A0 39     178          ldy #57
B229 84 24     179          sty CH
B22B          180 ;
B22B CA        181 ^2      dex
B22C D0 F2     182          bne <1

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B22E      183 ;
B22E 20 8E FD 184      jsr CROUT
B231      185 ;
B231 A0 92   186      ldy #HDR2-HDRS      ; Sector headers
B233 20 9A B4 187      jsr PRINT2
B236      188 ;
B236 A0 00   189      ldy #INFO1-INFOS
B238 20 AE B4 190      jsr PRINT3
B23B      191 ;
B23B      192 ;
B23B      193 ; Initialize the major loop counters.
B23B      194 ;
B23B AD 30 B7 195      lda DISKTRKS      ; number of tracks in a disk
B23E 85 1C   196      sta TOTLTRKS      ; number of tracks to write
B240      197 ;
B240 AD 33 B7 198      lda NUMSEG      ; number of segments
B243 85 07   199      sta SETNUM      ; number of segments
B245      200 ;
B245      201 ;
B245      202 ;      lda #ZERO
B245      203 ;      sta NUMSEG
B245      204 ;
B245      205 ;      ldy #INFO2-INFOS
B245      206 ;      jsr PRINT3
B245      207 ;
B245      208 ;      jmp DONE
B245      209 ;
B245      210 ;
B245      211 ; Get the address for the internal IOCB for RWTS and
B245      212 ; initialize some of its content.
B245      213 ;
B245 20 E3 03 214      jsr GETIOB
B248      215 ;
B248 84 0A   216      sty IOCBPTR
B24A 85 0B   217      sta IOCBPTR+1
B24C      218 ;
B24C A0 01   219      ldy #SLOTNDX      ; slot index
B24E      220 ;
B24E AD 34 B7 221      lda SLOTNUM
B251      222 ;
B251 0A     223      asl
B252 0A     224      asl
B253 0A     225      asl
B254 0A     226      asl
B255      227 ;
B255 91 0A   228      sta (IOCBPTR),Y
B257      229 ;
B257 C8     230      iny      ; DRVNDX
B258      231 ;
B258 AD 35 B7 232      lda DRVNUM
B25B 91 0A   233      sta (IOCBPTR),Y
B25D      234 ;
B25D C8     235      iny      ; VOLNDX
B25E      236 ;
B25E AD 36 B7 237      lda VOLNUM
B261 91 0A   238      sta (IOCBPTR),Y
B263      239 ;
B263 C8     240      iny      ; TRKNDX
B264      241 ;
B264 A9 00   242      lda #ZERO
B266 8D 33 B7 243      sta NUMSEG      ; for INFO2 display

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B269          244 ;
B269 91 0A     245      sta (IOCBPTR),Y
B26B          246 ;
B26B C8       247      iny                ; SECNDX
B26C          248 ;
B26C 91 0A     249      sta (IOCBPTR),Y
B26E          250 ;
B26E 85 05     251      sta TRKCNT          ; starting track number
B270 85 1A     252      sta OUTDATA2        ; INFLATE LSB end addr
B272 85 1E     253      sta SETNDX          ; start_table index
B274          254 ;
B274 A0 0B     255      ldy #BYTCNTDX        ; byte index
B276          256 ;
B276 91 0A     257      sta (IOCBPTR),Y
B278          258 ;
B278 A0 08     259      ldy #BUFRNDX        ; USRBUF LSB index
B27A          260 ;
B27A 91 0A     261      sta (IOCBPTR),Y
B27C          262 ;
B27C C8       263      iny                ; USRBUF MSB index
B27D          264 ;
B27D A9 10     265      lda /OUTDATA1        ; for throw away data
B27F 91 0A     266      sta (IOCBPTR),Y
B281          267 ;
B281          268 ;
B281          269 ; Get FMTFLAG and bypass if zero. Otherwise, format the
B281          270 ; disk.
B281          271 ;
B281 AD 38 B7   272      lda FMTFLAG          ; format disk flag
B284 F0 16     273      beq >1
B286          274 ;
B286 A0 00     275      ldy #MSG1-MESGS        ; Formatting Disk
B288 20 7F B4   276      jsr PRINT0
B28B          277 ;
B28B AD 30 B7   278      lda DISKTRKS          ; number of tracks in a disk
B28E 8D F2 BE   279      sta ENDTRK          ; for diskette formatting
B291          280 ;
B291 AD 31 B7   281      lda DISKSECS          ; number of sectors in a track
B294 8D FE BE   282      sta ENDSEC          ; for diskette formatting
B297          283 ;
B297 A9 04     284      lda #RWTSFRMT
B299 20 19 B4   285      jsr DORWTS2
B29C          286 ;
B29C          287 ;
B29C          288 ; Use RWTS to READ track 17, sector zero.
B29C          289 ;
B29C A2 11     290      ^1      ldx #17
B29E A0 00     291      ldy #ZERO
B2A0          292 ;
B2A0 A9 01     293      lda #RWTSREAD
B2A2 20 0B B4   294      jsr DORWTS
B2A5          295 ;
B2A5          296 ;
B2A5          297 ; Now use RWTS to READ track zero, sector zero.
B2A5          298 ;
B2A5 A2 00     299      ldx #ZERO
B2A7 A0 00     300      ldy #ZERO
B2A9          301 ;
B2A9 A9 01     302      lda #RWTSREAD
B2AB 20 0B B4   303      jsr DORWTS
B2AE          304 ;

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B2AE          305 ;
B2AE          306 ; Track Set loop. Print the time in seconds to the screen
B2AE          307 ; to read this track set. A change in c2t code now uses a
B2AE          308 ; %03d format. Set up DATAPTR with start address and
B2AE          309 ; ENDPTR with end address. Call DATALOAD.
B2AE          310 ;
B2AE EE 33 B7 311 SETLOOP inc NUMSEG
B2B1          312 ;
B2B1 A0 8E    313         ldy #INFO2-INFOS
B2B3 20 AE B4 314         jsr PRINT3
B2B6          315 ;
B2B6 18       316         clc                     ; show load time
B2B7          317 ;
B2B7 A0 1E    318         ldy #MSG3-MESGS           ; READING DATA
B2B9 20 60 B4 319         jsr PRINTIME
B2BC          320 ;
B2BC A6 1E    321         ldx SETNDX
B2BE          322 ;
B2BE BC 3A B7 323         ldy BGN_ADR,X
B2C1 BD 3B B7 324         lda BGN_ADR+1,X
B2C4          325 ;
B2C4 84 00    326         sty DATAPTR
B2C6 85 01    327         sta DATAPTR+1
B2C8          328 ;
B2C8 BC 3C B7 329         ldy END_ADR,X
B2CB BD 3D B7 330         lda END_ADR+1,X
B2CE          331 ;
B2CE 84 02    332         sty ENDPTR
B2D0 85 03    333         sta ENDPTR+1
B2D2          334 ;
B2D2 20 00 B0 335         jsr DATALOAD
B2D5          336 ;
B2D5          337 ;
B2D5          338 ; Calculate the number of remaining tracks in this segment
B2D5          339 ; and OUTDATA2.
B2D5          340 ;
B2D5 AE 32 B7 341         ldx SEGTRKS           ; number of tracks in segment
B2D8 E4 1C    342         cpx TOTLTRKS
B2DA F0 04    343         beq >1
B2DC          344 ;
B2DC 90 02    345         bcc >1
B2DE          346 ;
B2DE A6 1C    347         ldx TOTLTRKS           ; the last tracks to write
B2E0          348 ;
B2E0 86 09    349 ^1      stx SETTRKS
B2E2          350 ;
B2E2 18       351         clc
B2E3          352 ;
B2E3 A9 10    353         lda /OUTDATA1
B2E5          354 ;
B2E5 6D 31 B7 355 ^2      adc DISKSECS
B2E8          356 ;
B2E8 CA       357         dex
B2E9 D0 FA    358         bne <2
B2EB          359 ;
B2EB 85 1B    360         sta OUTDATA2+1           ; INFLATE MSB end addr
B2ED          361 ;
B2ED 38       362         sec
B2EE          363 ;
B2EE A5 1C    364         lda TOTLTRKS
B2F0 E5 09    365         sbc SETTRKS

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B2F2 85 1C      366      sta TOTLTRKS
B2F4           367      ;
B2F4           368      ;
B2F4           369      ; If the inflate flag, or CMPFLAG is zero, bypass INFLATE.
B2F4           370      ; Print the time in seconds to the screen to inflate this
B2F4           371      ; data. A change in c2t code now uses a %03d format.
B2F4           372      ;
B2F4 AD 39 B7   373      lda CMPFLAG
B2F7 F0 31     374      beq >4
B2F9           375      ;
B2F9 38        376      sec                      ; show inflate time
B2FA           377      ;
B2FA A0 3A     378      ldy #MSG5-MESGS      ; INFLATING DATA
B2FC 20 60 B4  379      jsr PRINTIME
B2FF           380      ;
B2FF           381      ;
B2FF           382      ; Initialize INFLPTR with data start address and set
B2FF           383      ; OUTFLPTR to OUTDATA1. Call INFLATE.
B2FF           384      ;
B2FF A6 1E     385      ldx SETNDX
B301           386      ;
B301 BC 3A B7  387      ldy BGN_ADR,X
B304 BD 3B B7  388      lda BGN_ADR+1,X
B307           389      ;
B307 84 10     390      sty INFLPTR
B309 85 11     391      sta INFLPTR+1
B30B           392      ;
B30B A0 00     393      ldy #OUTDATA1
B30D A9 10     394      lda /OUTDATA1
B30F           395      ;
B30F 84 12     396      sty OUTFLPTR
B311 85 13     397      sta OUTFLPTR+1
B313           398      ;
B313 20 00 B8  399      jsr INFLATE
B316           400      ;
B316           401      ;
B316           402      ; Verify that OUTFLPTR and OUTDATA2 are the same.
B316           403      ;
B316 A5 12     404      lda OUTFLPTR
B318 C5 1A     405      cmp OUTDATA2
B31A D0 06     406      bne >3
B31C           407      ;
B31C A5 13     408      lda OUTFLPTR+1
B31E C5 1B     409      cmp OUTDATA2+1
B320 F0 08     410      beq >4
B322           411      ;
B322           412      ;
B322           413      ; Print error in INFLATE and enter Monitor.
B322           414      ;
B322 A0 49     415      ^3 ldy #MSG6-MESGS      ; Inflate Error
B324 20 7F B4  416      jsr PRINT0
B327           417      ;
B327 4C 32 B4  418      jmp ENTRMON
B32A           419      ;
B32A           420      ;
B32A           421      ; Data for this Track Set resides from OUTDATA1 to
B32A           422      ; OUTDATA2-1.
B32A           423      ;
B32A A0 57     424      ^4 ldy #MSG7-MESGS      ; WRITING DATA
B32C 20 7F B4  425      jsr PRINT0
B32F           426      ;

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B32F A9 10      427      lda /OUTDATA1
B331 85 08      428      sta BUFPAGE
B333           429      ;
B333           430      ;
B333           431      ; Track counter loop in Track Set.  If SECCNT equals 0x1F,
B333           432      ; then set sector header MSB to one.
B333           433      ;
B333 AC 31 B7    434 TRKLOOP  ldy DISKSECS          ; last sector in a track
B336 88         435      dey
B337 84 06      436      sty SECCNT
B339           437      ;
B339 C0 1F      438      cpy #32-1              ; 32 sector tracks
B33B D0 05      439      bne SECLOOP
B33D           440      ;
B33D A9 B1      441      lda #"1"
B33F 20 EF B3    442      jsr PUTMSB
B342           443      ;
B342           444      ;
B342           445      ; Sector counter loop for track.  Display track/sector that
B342           446      ; will be written next.
B342           447      ;
B342 18         448 SECLOOP  clc
B343           449      ;
B343 A5 05      450      lda TRKCNT
B345 69 07      451      adc #7
B347 85 24      452      sta CH
B349           453      ;
B349 A5 06      454      lda SECCNT
B34B 29 0F      455      and #15
B34D           456      ;
B34D 49 FF      457      eor #NEGONE
B34F 69 14      458      adc #20
B351           459      ;
B351 20 5B FB    460      jsr TABV
B354           461      ;
B354 A9 AA      462      lda #ASTERISK
B356           463      ;
B356 A4 06      464      ldy SECCNT
B358 C0 10      465      cpy #$10
B35A 90 02      466      bcc >1
B35C           467      ;
B35C A9 AB      468      lda #PLUS
B35E           469      ;
B35E 20 ED FD    470 ^1      jsr COUT
B361           471      ;
B361           472      ;
B361           473      ; Calculate the buffer page to write for RWTS.
B361           474      ;
B361 18         475      clc
B362           476      ;
B362 A5 06      477      lda SECCNT
B364 65 08      478      adc BUFPAGE
B366           479      ;
B366 A0 09      480      ldy #BUFRNDX+1          ; USRBUF MSB index
B368           481      ;
B368 91 0A      482      sta (IOCBPTR),Y
B36A           483      ;
B36A           484      ;
B36A           485      ; Write the sector data.
B36A           486      ;
B36A A6 05      487      ldx TRKCNT

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B36C A4 06      488      ldy SECCNT
B36E           489      ;
B36E A9 02      490      lda #RWTSWRIT
B370 20 0B B4   491      jsr DORWTS
B373           492      ;
B373           493      ;
B373           494      ; Decrement SECCNT.  If SECCNT equals 0x0F, then set sector
B373           495      ; header MSB to ZERO.
B373           496      ;
B373 C6 06      497      ^2      dec SECCNT                ; sector counter
B375 30 0D      498      bmi >3
B377           499      ;
B377 A5 06      500      lda SECCNT
B379 C9 0F      501      cmp #15
B37B D0 C5      502      bne SECLOOP
B37D           503      ;
B37D A9 B0      504      lda #"0"
B37F 20 EF B3   505      jsr PUTMSB
B382           506      ;
B382 30 BE      507      bmi SECLOOP                ; always taken
B384           508      ;
B384           509      ;
B384           510      ; Calculate the MSB address for the next track and write
B384           511      ; that track in this Track Set.  C-flag is clear from RWTS.
B384           512      ;
B384 A5 08      513      ^3      lda BUFPAGE
B386 6D 31 B7   514      adc DISKSECS
B389 85 08      515      sta BUFPAGE                ; USRBUF address
B38B           516      ;
B38B E6 05      517      inc TRKCNT                ; track counter
B38D           518      ;
B38D C6 09      519      dec SETTRKS                ; number of tracks in segment
B38F D0 A2      520      bne TRKLOOP
B391           521      ;
B391           522      ;
B391           523      ; Point to the next set of data in start_table.  Decrement
B391           524      ; the segment number.  If zero, all tracks are written.
B391           525      ;
B391 A5 1E      526      lda SETNDX
B393 69 0C      527      adc #NEXTSET
B395 85 1E      528      sta SETNDX
B397           529      ;
B397 C6 07      530      dec SETNUM                ; number of segments
B399 F0 03      531      beq >4
B39B           532      ;
B39B 4C AE B2   533      jmp SETLOOP
B39E           534      ;
B39E           535      ;
B39E           536      ; All tracks have now been written to disk.  Change the
B39E           537      ; volume number in the VTOC to VOLNUM.
B39E           538      ;
B39E A0 09      539      ^4      ldy #BUFRNDX+1
B3A0           540      ;
B3A0 A9 10      541      lda /OUTDATA1
B3A2 91 0A      542      sta (IOCBPTR),Y
B3A4           543      ;
B3A4 A2 11      544      ldx #17
B3A6 A0 00      545      ldy #ZERO
B3A8           546      ;
B3A8 A9 01      547      lda #RWTSREAD
B3AA 20 0B B4   548      jsr DORWTS

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B3AD          549 ;
B3AD AD 36 B7 550      lda VOLNUM
B3B0 8D 06 10 551      sta OUTDATA1+VOLOFF
B3B3          552 ;
B3B3 A9 02    553      lda #RWTSWRIT
B3B5 20 19 B4 554      jsr DORWTS2
B3B8          555 ;
B3B8          556 ;
B3B8          557 ; Print DONE message. If ESCAPE is pressed, enter DOS
B3B8          558 ; coldstart. If RETURN is pressed, boot disk.
B3B8          559 ;
B3B8          560 DONE:
B3B8          561 ;
B3B8 A0 64    562      ldy #MSG8-MESGS      ; Done. Press <RTN>
B3BA 20 7F B4 563      jsr PRINT0
B3BD          564 ;
B3BD 20 E2 FB 565      jsr SND.BELL
B3C0          566 ;
B3C0 20 0C FD 567      ^5 jsr RDKEY
B3C3          568 ;
B3C3 C9 8D    569      cmp #RETURN
B3C5 F0 04    570      beq >6
B3C7          571 ;
B3C7 C9 9B    572      cmp #ESCAPE
B3C9 D0 F5    573      bne <5
B3CB          574 ;
B3CB 48        575      ^6 pha
B3CC          576 ;
B3CC 20 DA B3 577      jsr SET40COL
B3CF          578 ;
B3CF 68        579      pla
B3D0          580 ;
B3D0 C9 9B    581      cmp #ESCAPE
B3D2 F0 03    582      beq >7
B3D4          583 ;
B3D4 4C A6 FA 584      jmp PWRUP                ; boot this disk
B3D7          585 ;
B3D7 4C D3 03 586      ^7 jmp DOSCOLD                ; enter DOS 4.5.06H
B3DA          587 ;
B3DA          588 ;
B3DA A9 9B    589 SET40COL lda #ESCAPE
B3DC 20 ED FD 590      jsr COUT
B3DF          591 ;
B3DF A9 91    592      lda #CTRLQ
B3E1 20 ED FD 593      jsr COUT
B3E4          594 ;
B3E4 A9 00    595      lda #ZERO
B3E6 20 95 FE 596      jsr OUTPORT
B3E9          597 ;
B3E9 20 2F FB 598      jsr INIT
B3EC          599 ;
B3EC 4C EA 03 600      jmp HOOKDOS
B3EF          601 ;
B3EF          602 ;
B3EF 85 0C    603 PUTMSB sta MSBVAL
B3F1          604 ;
B3F1 A9 0F    605      lda #15
B3F3 85 0D    606      sta LINECNT
B3F5          607 ;
B3F5 A9 02    608      ^1 lda #2
B3F7 85 24    609      sta CH

```

```

B3F9          610 ;
B3F9 38        611 sec
B3FA          612 ;
B3FA A9 13     613 lda #19
B3FC E5 0D     614 sbc LINECNT
B3FE          615 ;
B3FE 20 5B FB  616 jsr TABV
B401          617 ;
B401 A5 0C     618 lda MSBVAL
B403 20 ED FD  619 jsr COUT
B406          620 ;
B406 C6 0D     621 dec LINECNT
B408 10 EB     622 bpl <1
B40A          623 ;
B40A 60        624 rts
B40B          625 ;
B40B          626 ;
B40B          627 ; Call RWTS with X-reg = track, Y-reg = sector, A-reg =
B40B          628 ; command. Always return when no error.
B40B          629 ;
B40B 48        630 DORWTS pha
B40C          631 ;
B40C 84 1F     632 sty SAVY
B40E          633 ;
B40E A0 04     634 ldy #TRKNDX
B410          635 ;
B410 8A        636 txa
B411 91 0A     637 sta (IOCBPTR),Y ; save track
B413          638 ;
B413 C8        639 iny
B414          640 ;
B414 A5 1F     641 lda SAVY
B416 91 0A     642 sta (IOCBPTR),Y ; save sector
B418          643 ;
B418 68        644 pla
B419          645 ;
B419 A0 0C     646 DORWTS2 ldy #CMDNDX
B41B          647 ;
B41B 91 0A     648 sta (IOCBPTR),Y ; save command
B41D          649 ;
B41D 20 E3 03  650 jsr GETIOB
B420          651 ;
B420 20 D9 03  652 jsr RWTS
B423 B0 01     653 bcs >1
B425          654 ;
B425 60        655 rts
B426          656 ;
B426          657 ;
B426          658 ; Print error number from RWTS and enter Monitor.
B426          659 ;
B426 A0 10     660 ^1 ldy #MSG2-MESGS ; Disk Error 0x--
B428 20 7F B4  661 jsr PRINT0
B42B          662 ;
B42B A0 0D     663 ldy #ERRNDX ; error index
B42D          664 ;
B42D B1 0A     665 lda (IOCBPTR),Y
B42F 20 DA FD  666 jsr PRBYTE
B432          667 ;
B432          668 ;
B432 20 8E FD  669 ENTRMON jsr CROUT
B435 20 8E FD  670 jsr CROUT

```

```
B438      671 ;
B438 20 DA B3 672      jsr SET40COL
B43B      673 ;
B43B 4C 69 FF 674      jmp MONITOR
B43E      675 ;
B43E      676 ;
B43E      677 ; Change the HEX number at address in A-reg to an X-reg
B43E      678 ; digit decimal number.
B43E      679 ;
B43E 8D 42 B4 680 PRNTDEC  sta PRNTMOD+1
B441      681 ;
B441 AD 30 B7 682 PRNTMOD  lda DISKTRKS
B444 85 0E      683      sta DECVALUE
B446      684 ;
B446 A0 B0      685 ^1      ldy #"0"
B448      686 ;
B448 38      687      sec
B449      688 ;
B449 A5 0E      689      lda DECVALUE
B44B      690 ;
B44B FD 5C B4 691 ^2      sbc DECTBL-1,X
B44E 90 05      692      bcc >3
B450      693 ;
B450 85 0E      694      sta DECVALUE
B452      695 ;
B452 C8      696      iny
B453 D0 F6      697      bne <2
B455      698 ;
B455 98      699 ^3      tya
B456 20 ED FD 700      jsr COUT
B459      701 ;
B459 CA      702      dex
B45A D0 EA      703      bne <1
B45C      704 ;
B45C 60      705      rts
B45D      706 ;
B45D      707 ;
B45D 01 0A 64 708 DECTBL  byt 1,10,100
B460      709 ;
B460      710 ;
B460      711 ; Print the time to load/inflate this data.
B460      712 ;
B460 08      713 PRINTIME php
B461      714 ;
B461 20 7F B4 715      jsr PRINT0
B464      716 ;
B464 A6 1E      717      ldx SETNDX
B466 A0 00      718      ldy #ZERO
B468      719 ;
B468 28      720      plp
B469 90 04      721      bcc >1
B46B      722 ;
B46B E8      723      inx
B46C E8      724      inx
B46D E8      725      inx
B46E E8      726      inx
B46F      727 ;
B46F BD 3E B7 728 ^1      lda LOADTIME,X
B472 99 14 B5 729      sta MESGMOD,Y
B475      730 ;
B475 E8      731      inx
```

```

B476 C8          732      iny
B477            733      ;
B477 C0 04       734      cpy #4
B479 D0 F4       735      bne <1
B47B            736      ;
B47B A0 2B       737      ldy #MESG4-MESGS      ; seconds
B47D D0 0F       738      bne PRINT              ; always taken
B47F            739      ;
B47F            740      ;
B47F            741      ; Set cursor at the beginning of line 22 and clear all
B47F            742      ; lines to the end of the page.
B47F            743      ;
B47F 84 1F       744      PRINT0      sty SAVY
B481            745      ;
B481 A9 14       746      lda #20
B483 20 5B FB     747      jsr TABV
B486            748      ;
B486 20 8E FD     749      jsr CROUT
B489 20 42 FC     750      jsr CLREOP
B48C            751      ;
B48C A4 1F       752      ldy SAVY
B48E            753      ;
B48E            754      ;
B48E            755      ; Print the ASCII data indexed from MESGS.
B48E            756      ;
B48E B9 E7 B4     757      PRINT      lda MESGS,Y
B491 F0 06       758      beq >1
B493            759      ;
B493 20 ED FD     760      jsr COUT
B496            761      ;
B496 C8          762      iny
B497 D0 F5       763      bne PRINT              ; always taken
B499            764      ;
B499 60          765      ^1      rts
B49A            766      ;
B49A            767      ;
B49A            768      ; Print the ASCII data indexed from HDRS.
B49A            769      ;
B49A B9 9F B5     770      PRINT2      lda HDRS,Y
B49D F0 0E       771      beq >3
B49F            772      ;
B49F C9 20       773      cmp #32
B4A1 B0 04       774      bcs >1
B4A3            775      ;
B4A3 85 24       776      sta CH
B4A5 D0 03       777      bne >2              ; always taken
B4A7            778      ;
B4A7 20 ED FD     779      ^1      jsr COUT
B4AA            780      ;
B4AA C8          781      ^2      iny
B4AB D0 ED       782      bne PRINT2              ; always taken
B4AD            783      ;
B4AD 60          784      ^3      rts
B4AE            785      ;
B4AE            786      ;
B4AE            787      ; Print the ASCII data indexed from INFOS.
B4AE            788      ;
B4AE B9 8E B6     789      PRINT3      lda INFOS,Y
B4B1 F0 33       790      beq >3
B4B3            791      ;
B4B3 85 24       792      sta CH              ; OURCH

```

```

B4B5          793 ;
B4B5 C8       794      iny
B4B6 84 1F    795      sty SAVY
B4B8          796 ;
B4B8 B9 8E B6 797      lda INFOS,Y
B4BB 20 5B FB 798      jsr TABV
B4BE          799 ;
B4BE A4 1F    800      ldy SAVY
B4C0 C8       801      iny
B4C1          802 ;
B4C1 B9 8E B6 803      ^1  lda INFOS,Y
B4C4 10 06    804      bpl >2
B4C6          805 ;
B4C6 20 ED FD 806      jsr COUT
B4C9          807 ;
B4C9 C8       808      iny
B4CA D0 F5    809      bne <1
B4CC          810 ;
B4CC AA       811      ^2  tax                ; number of decimal digits
B4CD          812 ;
B4CD EE 7B 05 813      inc OURCH
B4D0          814 ;
B4D0 A9 BD    815      lda #EQUAL
B4D2 20 ED FD 816      jsr COUT
B4D5          817 ;
B4D5 EE 7B 05 818      inc OURCH
B4D8          819 ;
B4D8 C8       820      iny
B4D9 84 1F    821      sty SAVY
B4DB          822 ;
B4DB B9 8E B6 823      lda INFOS,Y
B4DE 20 3E B4 824      jsr PRNTDEC
B4E1          825 ;
B4E1 A4 1F    826      ldy SAVY
B4E3          827 ;
B4E3 C8       828      iny
B4E4 D0 C8    829      bne PRINT3                ; always taken
B4E6          830 ;
B4E6 60       831      ^3  rts
B4E7          832 ;
B4E7          833 ;
B4E7          834  MSGS:
B4E7          835 ;
B4E7 46 6F 72 836  MSG1  asc 'Formatting Disk'
B4EA 6D 61 74
B4ED 74 69 6E
B4F0 67 20 44
B4F3 69 73 6B
B4F6 00       837      byt ZERO
B4F7          838 ;
B4F7 C4 E9 F3 839  MSG2  asc "Disk Error 0x"
B4FA EB A0 C5
B4FD F2 F2 EF
B500 F2 A0 B0
B503 F8
B504 00       840      byt ZERO
B505          841 ;
B505 52 65 61 842  MSG3  asc 'Reading Data'
B508 64 69 6E
B50B 67 20 44
B50E 61 74 61

```

```

B511 00          843          byt ZERO
B512          844          ;
B512 AC A0      845 MSG4      asc ", "
B514 B0 B0 AE   846 MSGMOD    asc "00.0 seconds"
B517 B0 A0 F3
B51A E5 E3 EF
B51D EE E4 F3
B520 00          847          byt ZERO
B521          848          ;
B521 49 6E 66   849 MSG5      asc 'Inflating Data'
B524 6C 61 74
B527 69 6E 67
B52A 20 44 61
B52D 74 61
B52F 00          850          byt ZERO
B530          851          ;
B530 C9 EE E6   852 MSG6      asc "Inflate Error"
B533 EC E1 F4
B536 E5 A0 C5
B539 F2 F2 EF
B53C F2
B53D 00          853          byt ZERO
B53E          854          ;
B53E 57 72 69   855 MSG7      asc 'Writing Data'
B541 74 69 6E
B544 67 20 44
B547 61 74 61
B54A 00          856          byt ZERO
B54B          857          ;
B54B A0 A0 A0   858 MSG8      asc "          Press <RTN> to Boot this Disk or"
B54E A0 A0 A0
B551 A0 D0 F2
B554 E5 F3 F3
B557 A0 BC D2
B55A D4 CE BE
B55D A0 F4 EF
B560 A0 C2 EF
B563 EF F4 A0
B566 F4 E8 E9
B569 F3 A0 C4
B56C E9 F3 EB
B56F A0 EF F2
B572 8D 8D      859          byt RETURN,RETURN
B574 A0 A0 A0   860          asc "          Press <ESC> to Enter DOS 4.5.06H.  "
B577 A0 A0 A0
B57A A0 D0 F2
B57D E5 F3 F3
B580 A0 BC C5
B583 D3 C3 BE
B586 A0 F4 EF
B589 A0 C5 EE
B58C F4 E5 F2
B58F A0 C4 CF
B592 D3 A0 B4
B595 AE B5 AE
B598 B0 B6 C8
B59B AE A0 A0
B59E 00          861          byt ZERO
B59F          862          ;
B59F          863          ;
B59F          864 HDRS:

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B59F				865	;		
B59F	1C			866	HDR1	byt	28
B5A0	D4	F2	E1	867		asc	"Track"
B5A3	E3	EB					
B5A5	8D			868		byt	RETURN
B5A6	07			869		byt	7
B5A7	B0	B0	B0	870		asc	"000000000011111111112222222222333333333344444444"
B5AA	B0	B0	B0				
B5AD	B0	B0	B0				
B5B0	B0	B1	B1				
B5B3	B1	B1	B1				
B5B6	B1	B1	B1				
B5B9	B1	B1	B2				
B5BC	B2	B2	B2				
B5BF	B2	B2	B2				
B5C2	B2	B2	B2				
B5C5	B3	B3	B3				
B5C8	B3	B3	B3				
B5CB	B3	B3	B3				
B5CE	B3	B4	B4				
B5D1	B4	B4	B4				
B5D4	B4	B4	B4				
B5D7	A0	A0	A0	871		asc	" "
B5DA	A0	A0	A0				
B5DD	A0	A0					
B5DF	49	4E	53	872		asc	'INSTA-DISK'
B5E2	54	41	2D				
B5E5	44	49	53				
B5E8	4B						
B5E9	8D			873		byt	RETURN
B5EA	07			874		byt	7
B5EB	B0	B1	B2	875		asc	"01234567890123456789012345678901234567890123456789012345678901234567"
B5EE	B3	B4	B5				
B5F1	B6	B7	B8				
B5F4	B9	B0	B1				
B5F7	B2	B3	B4				
B5FA	B5	B6	B7				
B5FD	B8	B9	B0				
B600	B1	B2	B3				
B603	B4	B5	B6				
B606	B7	B8	B9				
B609	B0	B1	B2				
B60C	B3	B4	B5				
B60F	B6	B7	B8				
B612	B9	B0	B1				
B615	B2	B3	B4				
B618	B5	B6	B7				
B61B	A0	A0	A0	876		asc	" "
B61E	A0	A0					
B620	D0	F2	EF	877		asc	"Processing Info"
B623	E3	E5	F3				
B626	F3	E9	EE				
B629	E7	A0	C9				
B62C	EE	E6	EF				
B62F	8D	00		878		byt	RETURN,ZERO
B631				879	;		
B631	03			880	HDR2	byt	3
B632	C6	A0	FC	881		asc	"F "
B635	8D			882		byt	RETURN
B636	03			883		byt	3
B637	C5	A0	FC	884		asc	"E "

B63A	8D		885	byt	RETURN
B63B	03		886	byt	3
B63C	C4	A0 FC	887	asc	"D "
B63F	8D		888	byt	RETURN
B640	03		889	byt	3
B641	C3	A0 FC	890	asc	"C "
B644	8D		891	byt	RETURN
B645	03		892	byt	3
B646	C2	A0 FC	893	asc	"B "
B649	8D		894	byt	RETURN
B64A	D3	A0 A0	895	asc	"S A "
B64D	C1	A0 FC			
B650	8D		896	byt	RETURN
B651	E5	A0 A0	897	asc	"e 9 "
B654	B9	A0 FC			
B657	8D		898	byt	RETURN
B658	E3	A0 A0	899	asc	"c 8 "
B65B	B8	A0 FC			
B65E	8D		900	byt	RETURN
B65F	F4	A0 A0	901	asc	"t 7 "
B662	B7	A0 FC			
B665	8D		902	byt	RETURN
B666	EF	A0 A0	903	asc	"o 6 "
B669	B6	A0 FC			
B66C	8D		904	byt	RETURN
B66D	F2	A0 A0	905	asc	"r 5 "
B670	B5	A0 FC			
B673	8D		906	byt	RETURN
B674	03		907	byt	3
B675	B4	A0 FC	908	asc	"4 "
B678	8D		909	byt	RETURN
B679	03		910	byt	3
B67A	B3	A0 FC	911	asc	"3 "
B67D	8D		912	byt	RETURN
B67E	03		913	byt	3
B67F	B2	A0 FC	914	asc	"2 "
B682	8D		915	byt	RETURN
B683	03		916	byt	3
B684	B1	A0 FC	917	asc	"1 "
B687	8D		918	byt	RETURN
B688	03		919	byt	3
B689	B0	A0 FC	920	asc	"0 "
B68C	8D	00	921	byt	RETURN,ZERO
B68E			922	;	
B68E			923	;	
B68E			924	INFOS:	
B68E			925	;	
B68E	3D	04	926	INFO1	byt 61,4
B690	C4	E9 F3	927	asc	"Disk Tracks"
B693	EB	A0 D4			
B696	F2	E1 E3			
B699	EB	F3			
B69B	02	30	928	byt	2,DISKTRKS
B69D			929	;	
B69D	3C	05	930	byt	60,5
B69F	C4	E9 F3	931	asc	"Disk Sectors"
B6A2	EB	A0 D3			
B6A5	E5	E3 F4			
B6A8	EF	F2 F3			
B6AB	02	31	932	byt	2,DISKSECS
B6AD			933	;	

B6AD	3A	07	934	byt	58,7
B6AF	D3	E5 E7	935	asc	"Segment Tracks"
B6B2	ED	E5 EE			
B6B5	F4	A0 D4			
B6B8	F2	E1 E3			
B6BB	EB	F3			
B6BD	02	32	936	byt	2,SEGTRKS
B6BF			937	;	
B6BF	3A	08	938	byt	58,8
B6C1	D4	EF F4	939	asc	"Total Segments"
B6C4	E1	EC A0			
B6C7	D3	E5 E7			
B6CA	ED	E5 EE			
B6CD	F4	F3			
B6CF	02	33	940	byt	2,NUMSEG
B6D1			941	;	
B6D1	44	0A	942	byt	68,10
B6D3	D3	EC EF	943	asc	"Slot"
B6D6	F4				
B6D7	01	34	944	byt	1,SLOTNUM
B6D9			945	;	
B6D9	43	0B	946	byt	67,11
B6DB	C4	F2 E9	947	asc	"Drive"
B6DE	F6	E5			
B6E0	02	35	948	byt	2,DRVNUM
B6E2			949	;	
B6E2	42	0C	950	byt	66,12
B6E4	D6	EF EC	951	asc	"Volume"
B6E7	F5	ED E5			
B6EA	03	36	952	byt	3,VOLNUM
B6EC			953	;	
B6EC	3C	0E	954	byt	60,14
B6EE	C2	E9 F4	955	asc	"Bit-One Flag"
B6F1	AD	CF EE			
B6F4	E5	A0 C6			
B6F7	EC	E1 E7			
B6FA	01	37	956	byt	1,ONEFLAG
B6FC			957	;	
B6FC	3D	0F	958	byt	61,15
B6FE	C6	EF F2	959	asc	"Format Flag"
B701	ED	E1 F4			
B704	A0	C6 EC			
B707	E1	E7			
B709	01	38	960	byt	1,FMTFLAG
B70B			961	;	
B70B	3C	10	962	byt	60,16
B70D	C9	EE E6	963	asc	"Inflate Flag"
B710	EC	E1 F4			
B713	E5	A0 C6			
B716	EC	E1 E7			
B719	01	39	964	byt	1,CMPFLAG
B71B			965	;	
B71B	00		966	byt	ZERO
B71C			967	;	
B71C	39	12	968	INFO2	byt 57,18
B71E	C3	F5 F2	969	asc	"Current Segment"
B721	F2	E5 EE			
B724	F4	A0 D3			
B727	E5	E7 ED			
B72A	E5	EE F4			
B72D	02	33	970	byt	2,NUMSEG

```

B72F          971  ;
B72F 00        972          byt ZERO
B730          973  ;
B730          974  ;

```

BSAVE DISKCOPY,A\$0900,B,L\$0530

```

B730          975          usr DISKCOPY
B730          976  ;
B730          977  ;
B730          978  ; The following values, addresses, and times are supplied
B730          979  ; by c2t from its start_table.
B730          980  ;
B730 00        981 DISKTRKS hex 00          ; number of tracks in diskette
B731 00        982 DISKSECS hex 00          ; number sectors in a track
B732 00        983 SEGTRKS hex 00          ; number of tracks in segment
B733 00        984 NUMSEG  hex 00          ; number of segments
B734          985  ;
B734 00        986 SLOTNUM hex 00          ; target slot number
B735 00        987 DRVNUM  hex 00          ; target drive number
B736 00        988 VOLNUM  hex 00          ; target volume number
B737          989  ;
B737 00        990 ONEFLAG hex 00          ; bit-one flag
B738 00        991 FMTFLAG hex 00          ; format disk flag
B739 00        992 CMPFLAG hex 00          ; inflate data flag
B73A          993  ;
B73A          994  ;
B73A 00 00      995 BGN_ADR  adr *-*        ; start address #1
B73C 00 00      996 END_ADR  adr *-*        ; end address #1
B73E B0 B0 AE   997 LOADTIME asc "00.0"     ; time to load #1
B741 B0
B742 B0 B0 AE   998 INFLTIME asc "00.0"     ; time to inflate #1
B745 B0
B746          999  ;
000C          1000 NEXTSET  equ *-BGN_ADR
B746          1001  ;
B746 00 00      1002          adr *-*        ; start address #2
B748 00 00      1003          adr *-*        ; end address #2
B74A B0 B0 AE   1004          asc "00.0"     ; time to load #2
B74D B0
B74E B0 B0 AE   1005          asc "00.0"     ; time to inflate #2
B751 B0
B752          1006  ;
B752 00 00      1007          adr *-*        ; start address #3
B754 00 00      1008          adr *-*        ; end address #3
B756 B0 B0 AE   1009          asc "00.0"     ; time to load #3
B759 B0
B75A B0 B0 AE   1010          asc "00.0"     ; time to inflate #3
B75D B0
B75E          1011  ;
B75E 00 00      1012          adr *-*        ; start address #4
B760 00 00      1013          adr *-*        ; end address #4
B762 B0 B0 AE   1014          asc "00.0"     ; time to load #4
B765 B0
B766 B0 B0 AE   1015          asc "00.0"     ; time to inflate #4
B769 B0
B76A          1016  ;
B76A 00 00      1017          adr *-*        ; start address #5
B76C 00 00      1018          adr *-*        ; end address #5
B76E B0 B0 AE   1019          asc "00.0"     ; time to load #5
B771 B0

```

```
B772 B0 B0 AE 1020      asc "00.0"      ; time to inflate #5
B775 B0
B776      1021 ;
B776 00 00 1022      adr *-*      ; start address #6
B778 00 00 1023      adr *-*      ; end address #6
B77A B0 B0 AE 1024      asc "00.0"      ; time to load #6
B77D B0
B77E B0 B0 AE 1025      asc "00.0"      ; time to inflate #6
B781 B0
B782      1026 ;
B782 00 00 1027      adr *-*      ; start address #7
B784 00 00 1028      adr *-*      ; end address #7
B786 B0 B0 AE 1029      asc "00.0"      ; time to load #7
B789 B0
B78A B0 B0 AE 1030      asc "00.0"      ; time to inflate #7
B78D B0
B78E      1031 ;
B78E 00 00 1032      adr *-*      ; start address #8
B790 00 00 1033      adr *-*      ; end address #8
B792 B0 B0 AE 1034      asc "00.0"      ; time to load #8
B795 B0
B796 B0 B0 AE 1035      asc "00.0"      ; time to inflate #8
B799 B0
B79A      1036 ;
B79A 00 00 1037      adr *-*      ; start address #9
B79C 00 00 1038      adr *-*      ; end address #9
B79E B0 B0 AE 1039      asc "00.0"      ; time to load #9
B7A1 B0
B7A2 B0 B0 AE 1040      asc "00.0"      ; time to inflate #9
B7A5 B0
B7A6      1041 ;
B7A6 00 00 1042      adr *-*      ; start address #10
B7A8 00 00 1043      adr *-*      ; end address #10
B7AA B0 B0 AE 1044      asc "00.0"      ; time to load #10
B7AD B0
B7AE B0 B0 AE 1045      asc "00.0"      ; time to inflate #10
B7B1 B0
B7B2      1046 ;
B7B2 00 00 1047      adr *-*      ; start address #11
B7B4 00 00 1048      adr *-*      ; end address #11
B7B6 B0 B0 AE 1049      asc "00.0"      ; time to load #11
B7B9 B0
B7BA B0 B0 AE 1050      asc "00.0"      ; time to inflate #11
B7BD B0
B7BE      1051 ;
B7BE 00 00 1052      adr *-*      ; start address #12
B7C0 00 00 1053      adr *-*      ; end address #12
B7C2 B0 B0 AE 1054      asc "00.0"      ; time to load #12
B7C5 B0
B7C6 B0 B0 AE 1055      asc "00.0"      ; time to inflate #12
B7C9 B0
B7CA      1056 ;
B7CA      1057 ;
B7CA      1058      stt "DISKCOPY Symbol Table"
B7CA      1059 ;
B7CA      1060 ;
B7CA      1061      end 111
```

*** End of Assembly

Symbol List starts at 0x8000, ends at 0x8492, used 0x0492, remaining 0x32B2

Symbols unsorted:

DATAPTR	0000	ENDPTR	0002	TRKCNT	0005	SECCNT	0006	SETNUM	0007
BUFPAGE	0008	SETTRKS	0009	IOCBPTR	000A	MSBVAL	000C	LINECNT	000D
DECVALUE	000E	INFLPTR	0010	OUTFLPTR	0012	OUTDATA2	001A	TOTLTRKS	001C
SETNDX	001E	SAVY	001F	CH	0024	ZERO	0000	NEGONE	00FF
RWTSSEEK	0000	RWTSREAD	0001	RWTSWRIT	0002	RWTSFRMT	0004	SLOTNDX	0001
DRVNDX	0002	VOLNDX	0003	TRKNDX	0004	SECNDX	0005	BUFRNDX	0008
BYTCNTDX	000B	CMDNDX	000C	ERRNDX	000D	VOLOFF	0006	RETURN	008D
CTRLQ	0091	ESCAPE	009B	ASTERISK	00AA	PLUS	00AB	HYPHEN	00AD
EQUAL	00BD	PAGESIZE	0100	DOSCOLD	03D3	RWTS	03D9	GETIOB	03E3
HOOKDOS	03EA	OURCH	057B	OUTDATA1	1000	DATALOAD	B000	DISKCOPY	B200
INFLATE	B800	ENDTRK	BEF2	ENDSEC	BEFE	MOTOROFF	C088	MOTORON	C089
PWRUP	FAA6	INIT	FB2F	TABV	FB5B	SND.BELL	FBE2	CLREOP	FC42
HOME	FC58	RDKEY	FD0C	CROUT	FD8E	PRBYTE	FDDA	COUT	FDED
OUTPORT	FE95	MONITOR	FF69	SETLOOP	B2AE	TRKLOOP	B333	SECLOOP	B342
DONE	B3B8	SET40COL	B3DA	PUTMSB	B3EF	DORWTS	B40B	DORWTS2	B419
ENTRMON	B432	PRNTDEC	B43E	PRNTMOD	B441	DECTBL	B45D	PRINTIME	B460
PRINT0	B47F	PRINT	B48E	PRINT2	B49A	PRINT3	B4AE	MESGS	B4E7
MESG1	B4E7	MESG2	B4F7	MESG3	B505	MESG4	B512	MESGMOD	B514
MESG5	B521	MESG6	B530	MESG7	B53E	MESG8	B54B	HDRS	B59F
HDR1	B59F	HDR2	B631	INFOS	B68E	INFO1	B68E	INFO2	B71C
DISKTRKS	B730	DISKSECS	B731	SEGTRKS	B732	NUMSEG	B733	SLOTNUM	B734
DRVNUM	B735	VOLNUM	B736	ONEFLAG	B737	FMTFLAG	B738	CMPFLAG	B739
BGN_ADR	B73A	END_ADR	B73C	LOADTIME	B73E	INFLTIME	B742	NEXTSET	000C

Symbols alphabetically sorted:

ASTERISK	00AA	BGN_ADR	B73A	BUFPAGE	0008	BUFRNDX	0008	BYTCNTDX	000B
CH	0024	CLREOP	FC42	CMDNDX	000C	CMPFLAG	B739	COUT	FDED
CROUT	FD8E	CTRLQ	0091	DATALOAD	B000	DATAPTR	0000	DECTBL	B45D
DECVALUE	000E	DISKCOPY	B200	DISKSECS	B731	DISKTRKS	B730	DONE	B3B8
DORWTS	B40B	DORWTS2	B419	DOSCOLD	03D3	DRVNDX	0002	DRVNUM	B735
ENDPTR	0002	ENDSEC	BEFE	ENDTRK	BEF2	END_ADR	B73C	ENTRMON	B432
EQUAL	00BD	ERRNDX	000D	ESCAPE	009B	FMTFLAG	B738	GETIOB	03E3
HDR1	B59F	HDR2	B631	HDRS	B59F	HOME	FC58	HOOKDOS	03EA
HYPHEN	00AD	INFLATE	B800	INFLPTR	0010	INFLTIME	B742	INFO1	B68E
INFO2	B71C	INFOS	B68E	INIT	FB2F	IOCBPTR	000A	LINECNT	000D
LOADTIME	B73E	MESG1	B4E7	MESG2	B4F7	MESG3	B505	MESG4	B512
MESG5	B521	MESG6	B530	MESG7	B53E	MESG8	B54B	MESGMOD	B514
MESGS	B4E7	MONITOR	FF69	MOTOROFF	C088	MOTORON	C089	MSBVAL	000C
NEGONE	00FF	NEXTSET	000C	NUMSEG	B733	ONEFLAG	B737	OURCH	057B
OUTDATA1	1000	OUTDATA2	001A	OUTFLPTR	0012	OUTPORT	FE95	PAGESIZE	0100
PLUS	00AB	PRBYTE	FDDA	PRINT	B48E	PRINT0	B47F	PRINT2	B49A
PRINT3	B4AE	PRINTIME	B460	PRNTDEC	B43E	PRNTMOD	B441	PUTMSB	B3EF
PWRUP	FAA6	RDKEY	FD0C	RETURN	008D	RWTS	03D9	RWTSFRMT	0004
RWTSREAD	0001	RWTSSEEK	0000	RWTSWRIT	0002	SAVY	001F	SECCNT	0006
SECLOOP	B342	SECNDX	0005	SEGTRKS	B732	SET40COL	B3DA	SETLOOP	B2AE
SETNDX	001E	SETNUM	0007	SETTRKS	0009	SLOTNDX	0001	SLOTNUM	B734
SND.BELL	FBE2	TABV	FB5B	TOTLTRKS	001C	TRKCNT	0005	TRKLOOP	B333
TRKNDX	0004	VOLNDX	0003	VOLNUM	B736	VOLOFF	0006	ZERO	0000

Symbols numerically sorted:

ZERO	0000	RWTSSEEK	0000	DATAPTR	0000	SLOTNDX	0001	RWTSREAD	0001
RWTSWRIT	0002	ENDPTR	0002	DRVNDX	0002	VOLNDX	0003	TRKNDX	0004
RWTSFRMT	0004	TRKCNT	0005	SECNDX	0005	VOLOFF	0006	SECCNT	0006
SETNUM	0007	BUFRNDX	0008	BUFPAGE	0008	SETTRKS	0009	IOCBPTR	000A
BYTCNTDX	000B	NEXTSET	000C	MSBVAL	000C	CMDNDX	000C	LINECNT	000D
ERRNDX	000D	DECVALUE	000E	INFLPTR	0010	OUTFLPTR	0012	OUTDATA2	001A
TOTLTRKS	001C	SETNDX	001E	SAVY	001F	CH	0024	RETURN	008D
CTRLQ	0091	ESCAPE	009B	ASTERISK	00AA	PLUS	00AB	HYPHEN	00AD
EQUAL	00BD	NEGONE	00FF	PAGESIZE	0100	DOSCOLD	03D3	RWTS	03D9
GETIOB	03E3	HOOKDOS	03EA	OURCH	057B	OUTDATA1	1000	DATALOAD	B000
DISKCOPY	B200	SETLOOP	B2AE	TRKLOOP	B333	SECLOOP	B342	DONE	B3B8
SET40COL	B3DA	PUTMSB	B3EF	DORWTS	B40B	DORWTS2	B419	ENTRMON	B432
PRNTDEC	B43E	PRNTMOD	B441	DECTBL	B45D	PRINTIME	B460	PRINT0	B47F
PRINT	B48E	PRINT2	B49A	PRINT3	B4AE	MESGS	B4E7	MESG1	B4E7
MESG2	B4F7	MESG3	B505	MESG4	B512	MESGMOD	B514	MESG5	B521
MESG6	B530	MESG7	B53E	MESG8	B54B	HDRS	B59F	HDR1	B59F
HDR2	B631	INFOS	B68E	INFO1	B68E	INFO2	B71C	DISKTRKS	B730
DISKSECS	B731	SEGTRKS	B732	NUMSEG	B733	SLOTNUM	B734	DRVNUM	B735
VOLNUM	B736	ONEFLAG	B737	FMTFLAG	B738	CMPFLAG	B739	BGN_ADR	B73A
END_ADR	B73C	LOADTIME	B73E	INFLTME	B742	INFLATE	B800	ENDTRK	BEF2
ENDSEC	BEFE	MOTOROFF	C088	MOTORON	C089	PWRUP	FAA6	INIT	FB2F
TABV	FB5B	SND.BELL	FBE2	CLREOP	FC42	HOME	FC58	RDKEY	FD0C
CROUT	FD8E	PRBYTE	FDDA	COUT	FDED	OUTPORT	FE95	MONITOR	FF69