

MICOPY

3

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10 .TITLE
20 .OPT OBJ
30 *= $8500
40 CIOV = $E456
50 DSKINV = $E453
60 SIOV = $E459
70 DOSVEC = $0A
80 DOSINI = $0C
90 COLDST = $0244
0100 KBDHND = $E420
0110 DISPLA = $E410
0120 GETCH = $8300 ; POINTER KEYBD HANDLER
0130 OUTCH1 = $8302 ; POINTER TO DISPLA HANDLER
0140 CHAR = $02FA
0150 ATACHR = $02FB
0160 INBUF = $8400 ; TEMP WORK AREA
0170 SDRIVE = $8304 ; SOURCE DRIVE
0180 DDRIVE = $8305 ; DEST DRIVE
0190 NUMBER = $8306 ; NUMBER OF COPIES
0200 FFLAG = $8307 ; FORMAT FLAG
0210 SECTLO = $8308
0220 SECTHI = $8309
0230 D301 = $8310 ; SAVED
0240 WRTC = $8312 ; VERIFY FLAG
0250 BKTEST = $8313 ; BANKING TEST
0260 TNUM = $8314
0270 TEMP1 = $8315
0280 TEMP2 = $8316
0290 BUSCMD = $8317
0300 DENFLG = $8318
0310 SRANGE = $8320
0315 KCOUNT = $8323
0320 TBUFLO = $00 ; INITIAL IO BUFFER
0330 TBUFHI = $40
0340 DDEVIC = $0300 ; BUS I.D. #
0350 DUNIT = $0301 ; DEVICE #
0360 DCOMND = $0302 ; BUS COMMAND
0370 DSTATS = $0303 ; STATUS
0380 DBUFLO = $0304 ; BUFFER POINTER LO
0390 DBUFHI = $0305 ; BUFFER POINTER HI
0400 DTIMLO = $0306 ; DISK TIME OUT
0410 DBYTLO = $0308 ; # OF BYTES LO
0420 DBYTHI = $0309 ; # OF BYTES HI
0430 DAUX1 = $030A ; SECTOR # LO
0440 DAUX2 = $030B ; SECTOR # HI
0450 RAMTOP = $6A
0460 ;SET UP TITLE
0470 START JSR INIT ; INIT&PROTECTION
0480 NCOPY LDA #1
0490 STA SECTLO ; POINT TO FIRST
0500 LDX #MESS1&255
0510 LDY #MESS1/256
0520 JSR PUTLIN ; COPYRIGHT
0530 LDX #MESS2&255
0540 LDY #MESS2/256
0550 JSR PUTLIN ; NUM OF COPIES?
0560 LDX #0
0570 STX SECTHI
0580 STX KCOUNT
0590 STX DENFLG
0600 LDA #$D1
0610 STA SRANGE
0620 LDA #2
0630 STA SRANGE+1
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Needs two bytes

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0650      LDX KCOUNT
0660      LDA ATACHR
0670      CMP #'X      ;EXIT
0680      BNE CHKD
0690      LDA D301      ;SAVED REG
0700      STA $D301     ;SET IT NORMAL
0710      RTS
0720 CHKD CMP #$44      ;"D" FOR DOUBLE DENSITY
0730      BNE CHKH
0740      STA DENFLG    ;SHOW DD
0750      JMP PRCH
0760 CHKH CMP #'H      ' ;$171 SECTORS
0770      BNE CHKQ
0780      LDY #$72
0790      STY SRANGE
0800      LDY #1
0810      STY SRANGE+1
0820      JMP PRCH
0830 CHKQ CMP #'Q      ' ;$5A0 SECTORS
0840      BNE CHKO
0850      LDY #$A1
0860      STY SRANGE
0870      LDY #5
0880      STY SRANGE+1
0890      JMP PRCH
0900 CHKO CMP #'O      ' ;$B40 SECTORS
0910      BNE CKDIG
0920      LDY #$41
0930      STY SRANGE
0940      LDY #$0B
0950      STY SRANGE+1
0960 PRCH JSR OUTCH    ;PRINT CHAR
0970      JMP KGET
0980 CKDIG CMP #$30    ;LESS THAN 0?
0990      BCC KGET
1000      CMP #$3A      ;MORE THAN 9
1010      BCC NEXTCH
1020      CMP #$9B      ;RETURN?
1030      BNE KGET
1040 NEXTCH STA INBUF,X
1050      JSR OUTCH
1060      INC KCOUNT
1070      CMP #$9B      ;RETURN?
1080      BNE KGET
1090      LDA KCOUNT
1100      CMP #4
1110      BCC K4
1120      JMP NCOPY
1130 K4  CMP #2
1140      BNE TWODIG
1150      LDA INBUF
1160      SEC
1170      SBC #$30
1180      JMP STNUM
1190 TWODIG LDA INBUF ;ASCII TO HEX
1200      SEC
1210      SBC #$30
1220      ASL A
1230      STA NUMBER
1240      ASL A
1250      ASL A
1260      CLC
1270      ADC NUMBER
1280      STA NUMBER
1290      LDA INBUF+1

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1310 SBC #$30
1320 CLC
1330 ADC NUMBER
1340 STNUM STA NUMBER
1350 STA TNUM
1360 SRCDRV LDX #MESS3&255
1370 LDY #MESS3/256
1380 JSR PUTLIN ;SOURCE DRIVE?
1390 K2 JSR GETKEY
1400 LDA ATACHR
1410 CMP #$31 ;LESS THAN 1?
1420 BCC K2
1430 CMP #$35 ;MORE THAN 4?
1440 BCS K2
1450 SEC
1460 SBC #$30
1470 STA SDRIVE
1480 JSR MYOUT
1490 DESDRV LDX #MESS4&255
1500 LDY #MESS4/256
1510 JSR PUTLIN ;DESTIN DRIVE?
1520 K3 JSR GETKEY
1530 LDA ATACHR
1540 CMP #$31 ;LESS THAN 1?
1550 BCC K3
1560 CMP #$35 ;MORE THAN 4?
1570 BCS K3
1580 SEC
1590 SBC #$30
1600 STA DDRIVE
1610 JSR MYOUT
1620 VERIFY LDX #MESS7&255
1630 LDY #MESS7/256
1640 JSR PUTLIN ;VERIFY DISK?
1650 JSR GETKEY
1660 LDA #$50
1670 STA WRTC ;NON VERIFY
1680 LDA ATACHR
1690 CMP #$59 ;Y
1700 BNE VER1
1710 LDA #$57
1720 STA WRTC
1730 VER1 JSR MYOUT
1740 FORMAT LDX #MESS5&255
1750 LDY #MESS5/256
1760 JSR PUTLIN ;FORMAT DISK?
1770 JSR GETKEY
1780 LDA ATACHR
1790 STA FFLAG
1800 JSR MYOUT
1810 MAIN JMP SRCMSG ;GO WAIT FOR START
1820 RSRC LDA #$40
1830 STA BUSCMD
1840 JSR READ
1850 JMP DSTMSG
1860 WLOOP JSR FMTDSK
1870 WRT LDA #$80
1880 STA BUSCMD
1890 JSR WRITE
1900 DEC TNUM ;NUMBER OF COPIES
1910 LDA TNUM ;IN PASS
1920 CMP #0
1930 BNE DSTMSG
1940 STA FFLAG ;TURN OFF FORMAT FLAG
1950 LDA NUMBER ;GET READY FOR NEXT

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 ... 83 for ...

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1970 JSR TDONE ;SEE IF FINISHED
1980 SRCMSG JSR MSG6
1990 JSR BEGIN
2000 JMP RSRC ;GO READ MORE SECTORS
2010 DSTMSG JSR MSG8
2020 JSR BEGIN
2030 JMP WLOOP ;GO WRITE NEXT DISK
2040 BEGIN LDA $D01F
2050 CMP #6 ;IS START PUSHED
2060 BNE BEGIN ;NO. GOTO BEGIN
2070 RTS
2080 FMTDSK LDA FFLAG ;FORMAT FLAG
2090 CMP #$59 ;"Y"
2100 BNE CONT ;NO.GOTO CONT
2110 LDA #$80 ;TIMEOUT 120 SEC.
2120 STA DTIMLO
2130 LDA DDRIVE
2140 STA DUNIT
2150 LDA #$21 ;FORMAT
2160 STA DCOMND
2170 JSR GETRDY
2180 LDA #$40
2190 STA DSTATS
2200 STA DBUFLO
2210 LDA #$80
2220 STA DBUFHI ;FOR STATUS
2230 JSR SIOV ;GO FORMAT DISK
2240 BMI FMTDSK ;TRY AGAIN IF BAD
2250 CONT RTS
2260 READ LDA SDRIVE ;SOURCE DRIVE
2270 STA DUNIT
2280 LDA #$52 ;READ COMMAND
2290 STA DCOMND
2300 LDA SECTLO ;STORE IN TEMP SO WE
2310 STA TEMP1 ;KNOW WHERE TO WRITE
2320 STA DAUX1 ;AND GET READY
2330 LDA SECTHI ;FOR I/O CALL
2340 STA TEMP2
2350 STA DAUX2 ;SECTOR TO READ
2360 JSR GETRDY
2370 LDA #TBUFLO
2380 STA DBUFLO
2390 LDA #TBUFHI
2400 STA DBUFHI ;BUFFER POINTERS
2410 CONT2 JSR SIOV
2420 JSR INCSD
2430 BCC CONT2
2440 RTS
2450 INCSD CLC ;INCREMENT SECTOR
2460 LDA SECTLO ;AND BUFFER PIONTERS
2470 ADC #1
2480 STA SECTLO
2490 STA DAUX1
2500 LDA SECTHI
2510 ADC #0
2520 STA SECTHI
2530 STA DAUX2
2540 CMP SRANGE+1
2550 BNE CONT1
2560 LDA SECTLO
2570 CMP SRANGE
2580 BNE CONT1
2590 LDA #$01 ;BRING IN FIRST
2600 STA $D301 ;RAM BANK AND
2610 LDA #$10 ;SETUP TEST BYTE

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< #D#11
 STA \$D301
 LDA#\$90
 STA ~~#~~ BKTest

< LDA #TBUFLO
 STA DBUFLO
 LDA #TBUFHI
 STA DBUFHI

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2630     SEC                ;SET CARRY WHEN DONE
2640     RTS
2650 CONT1 JSR GETRDY
2660     RTS
2670 WRITE LDA DDRIVE ;GET READY
2680     STA DUNIT        ;TO WRITE
2690     LDA #$50         ;WRITE COMMAND
2700     STA DCOMND
2710     LDA #10
2720     STA $4D          ;ATTRACT FLAG
2730     STA DTIMLO
2740     LDA TEMP1
2750     STA SECTLO
2760     STA DAUX1
2770     LDA TEMP2
2780     STA SECTHI
2790     STA DAUX2
2800     JSR GETRDY
2810     LDA #TBUFLO
2820     STA DBUFLO
2830     LDA #TBUFHI
2840     STA DBUFHI
2850 CONT3 JSR SIOV
2860     JSR INCSD
2870     BCC CONT3
2880     RTS
2890 GETRDY LDA #$31
2900     STA DDEVIC
2910     LDA BUSCMD
2920     STA DSTATS
2930     LDA DENFLG
2940     BEQ SINGLE
2950     LDA DCOMND
2960     CMP #$21
2970     BEQ B256
2980     LDA SECTLO
2990     CMP #4
3000     BCS B256
3010     LDA SECTHI
3020     BNE B256
3030 SINGLE LDA #0
3040     STA DBYTHI
3050     LDA #$80
3060     STA DBYTLO
3070     CLC
3080     LDA DBUFLO
3090     ADC #$80
3100     STA DBUFLO
3110     LDA DBUFHI
3120     ADC #0
3130     STA DBUFHI
3140     JMP RDT
3150 B256 LDA #0
3160     STA DBYTLO
3170     LDA #1
3180     STA DBYTHI
3190     CLC
3200     LDA DBUFHI
3210     ADC #1
3220     STA DBUFHI
3230 RDT LDA DBUFHI ;DON'T DELETE THIS DUMMY
3240     CMP #$7F    ;AT TOP OF BANK?
3250     BCC RDT4    ;NO
3260     CLC
3270     LDA $D301

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3290     CMP BKTEST      ;GO TO ANOTHER BANK,M1=2,M2=4,M3=1
3300     BCC RDT3        ;YES
3310     CLC             ;SET UP NEXT SET OF BANKS
3320     ADC #$10
3330     STA $D301
3340     CLC
3350     LDA #$20        ;M1=$20,M2=$10,M3=$40
3360     ADC BKTEST
3370     STA BKTEST
3380     BCC RDT5
3390     LDA D301       ;NO BANKS LEFT
3400     STA $D301     ;RESET TO NORMAL
3410 RDT4 RTS
3420 RDT3 STA $D301
3430 RDT5 LDA #0       ;RESET BUFFERS FOR
3440     STA DBUFLO    ;XTRA BANKS
3450     LDA #$40
3460     STA DBUFHI
3470     CLC
3480     RTS
3490 MESS2 .BYTE "HOW MANY COPIES? (X TO EXIT)", $9B
3500 MESS3 .BYTE "SOURCE DRIVE?", $9B
3510 MESS4 .BYTE "DESTINATION DRIVE?", $9B
3520 MESS7 .BYTE "VERIFY WRITES?(Y OR N)", $9B
3530 MESS5 .BYTE "FORMAT DESTINATION (Y or N)?", $9B
3540 MESS6 .BYTE "}INSERT SOURCE DISK, PUSH START}", $9B
3550 MESS8 .BYTE "}INSERT DESTINATION DISK, PUSH START}", $9B
3560 MSG6 LDX #MESS6&255
3570     LDY #MESS6/256
3580     JMP PUTLIN    ;SOURCE DISK
3590 MSG8 LDX #MESS8&255
3600     LDY #MESS8/256
3610     JMP PUTLIN    ;NEXT DISK
3620 TDONE LDA SECTLO
3630     CMP SRANGE
3640     BNE TRTS
3650     LDA SECTHI
3660     CMP SRANGE+1
3670     BNE TRTS
3680     LDA D301
3690     STA $D301     ;RESTORE MAP REG
3700     PLA          ;CLEAN UP STACK
3710     PLA          ;BEFORE JMP OUT OF SUBROUTINE
3720     JMP START    ;RESTART
3730 TRTS RTS
3740 MYOUT LDA ATACHR
3750 OUTCH JMP (OUTCH1) ;TO OS TO PRINT CHARACTER
3760 GETKEY JMP (GETCH) ;GO TO OS AND GET KEY
3770 INIT LDA $D301    ;BANK MAP
3780     STA D301     ;SAVE IT FOR EXIT
3790     LDA #$01    ;SET UP MMU FOR FIRST RAM BANK
3800     STA $D301    ;M1&M3=1,M2=3
3810     LDA #$10    ;SETUP TEST BYTE
3820     STA BKTEST   ;FOR 1ST RAM BANKS
3830     LDA #10
3840     STA DTIMLO   ;SET DEVICE TIMEOUT
3850     LDA KBDHND+5 ;SET UP FOR CALL TO GET KEYBOARD CHARACTER
3860     STA GETCH+1 ;VIA JMP(GETCH)
3870     LDA KBDHND+4
3880     CLC
3890     ADC #1       ;FOR SCREWED UP VECTOR TABLE
3900     STA GETCH    ;IF WE CROSS PAGE BOUNDARY
3910     BCC SOUTCH
3920     INC GETCH+1 ;ADD 1 TO HIGH BIT
3930 SOUTCH LDA DISPLA+7 ;SAME AS ABOVE TO PRINT CHR.

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3950 LDA DISPLA+6
3960 CLC
3970 ADC #1
3980 STA OUTCH1
3990 BCC GOON
4000 INC OUTCH1+1
4010 GOON RTS
4020 MESS1 .BYTE "M1COPY (C) 1990 NEWELL INDUSTRIES", $9B
4030 PUTLIN TXA ;PUT LINE ON SCREEN
4040 LDX #0
4050 STA $0344,X
4060 TYA
4070 STA $0345,X
4080 LDA #9
4090 STA $0342,X
4100 LDA #$FF
4110 STA $0348,X
4120 END JMP CIOV
4130 .END
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