

|       |              |        |          |        |
|-------|--------------|--------|----------|--------|
| 00001 |              | NAM    | FDOSPR0M |        |
| 00002 |              | OPT    | 0, NOG   |        |
| 00003 | F080         | DKDID  | EQU      | \$F080 |
| 00004 | F081         | DKDIC  | EQU      | \$F081 |
| 00005 | F082         | DKCOD  | EQU      | \$F082 |
| 00006 | F083         | DKCOC  | EQU      | \$F083 |
| 00007 | F086         | DKDOD  | EQU      | \$F086 |
| 00008 | F087         | DKDOC  | EQU      | \$F087 |
| 00009 | FFFC         | SBUG   | EQU      | \$FFFC |
| 00010 | FEE5         | CO     | EQU      | \$FEE5 |
| 00011 | 0011         | TEMP   | EQU      | \$0011 |
| 00012 | FE8B         | XSTACK | EQU      | \$FE8B |
| 00013 | 0020         | EXEC   | EQU      | \$20   |
| 00014 | 0023         | UPDATE | EQU      | \$23   |
| 00015 | 0020         | EDIT   | EQU      | \$20   |
| 00016 | 0400         | ASMB   | EQU      | \$0400 |
| 00017 |              | *      |          |        |
| 00018 | 0000         | PASS   | EQU      | \$0    |
| 00019 | 0001         | OFIL   | EQU      | \$1    |
| 00020 | 0002         | OUNIT  | EQU      | \$2    |
| 00021 | 0003         | IUNIT  | EQU      | \$3    |
| 00022 | 0004         | ISIZ   | EQU      | \$4    |
| 00023 | 0006         | ITRK   | EQU      | \$6    |
| 00024 | 0007         | ISCTR  | EQU      | \$7    |
| 00025 | 0008         | ICNTR  | EQU      | \$8    |
| 00026 | 0009         | OSIZ   | EQU      | \$9    |
| 00027 | 000B         | OTRK   | EQU      | \$B    |
| 00028 | 000C         | OSCTR  | EQU      | \$C    |
| 00029 | 000D         | OCNTR  | EQU      | \$D    |
| 00030 | 000E         | TITRK  | EQU      | \$E    |
| 00031 | 000F         | TISZ   | EQU      | \$F    |
| 00032 |              | *      |          |        |
| 00033 | FC00         |        | ORG      | \$FC00 |
| 00034 |              | *      |          |        |
| 00035 | FC00         | FDOS   | EQU      | *      |
| 00036 | FC00 7E FE82 |        | JMP      | PATCH1 |
| 00037 | FC03 7E 0020 |        | JMP      | EXEC   |
| 00038 |              | *      |          |        |
| 00039 | FC06         | INTIO  | EQU      | *      |
| 00040 | FC06 7E FC59 |        | JMP      | RESET  |
| 00041 |              | *      |          |        |
| 00042 | FC09         | XRI    | EQU      | *      |
| 00043 | FC09 7E FD1B |        | JMP      | RI     |
| 00044 |              | *      |          |        |
| 00045 | FC0C         | XWRT   | EQU      | *      |
| 00046 | FC0C 7E FD8E |        | JMP      | WRT    |
| 00047 |              | *      |          |        |
| 00048 | FC0F         | UPDT   | EQU      | *      |
| 00049 | FC0F 7E FE79 |        | JMP      | PATCH  |
| 00050 | FC12 7E 0023 |        | JMP      | UPDATE |
| 00051 |              | *      |          |        |
| 00052 | FC15         | PR0G   | EQU      | *      |
| 00053 | FC15 BD FC87 |        | JSR      | REDX   |
| 00054 | FC18 7E FFFC |        | JMP      | SBUG   |
| 00055 |              | *      |          |        |
| 00056 | FC1B         | ASSEM  | EQU      | *      |
| 00057 | FC1B BD FC87 |        | JSR      | REDX   |
| 00058 | FC1E BD FC2D |        | JSR      | RESTR  |

4FFF

ASSEMBLY PASS INFO  
OUTPUT FILE NUMBER  
OUTPUT UNIT  
INPUT UNIT  
INPUT FILE SIZE  
INPUT FILE TRACK  
INPUT FILE SECTOR  
INPUT FILE BUFFER COUNTER  
OUTPUT FILE SIZE  
OUTPUT FILE TRACK  
OUTPUT FILE SECTOR  
OUTPUT FILE BUFFER COUNTER  
TEMP LOC 1  
TEMP LOC 2

```

00059 FC21 7E 0400      JMP      ASMB      START ASSEMBLER
00060
00061      FC24      * EDITR EQU      *
00062 FC24 BD FC87      JSR      REDX      LOAD EDITOR
00063 FC27 BD FC2D      JSR      RESTR     RESTORE IFILE PNTRS
00064 FC2A 7E 0020      JMP      EDIT      START EDITOR
00065
00066      FC2D      * RESTR EQU      *
00067 FC2D DE 0F      LDX      TISZE     RESTORE IFILE PNTRS
00068 FC2F DF 04      STX      ISIZE     IFILE SIZE
00069 FC31 96 0E      LDA A    TITRK
00070 FC33 97 06      STA A    ITRK      TRACK
00071 FC35 96 03      LDA A    IUNIT     UNIT/SECTOR
00072 FC37 0C      CLC
00073 FC38 46      ROR A
00074 FC39 46      ROR A
00075 FC3A 46      ROR A
00076 FC3B 97 07      STA A    ISCTR
00077 FC3D 7F 0008      CLR     ICNTR     BUFFER COUNTER
00078 FC40 39      RTS
00079
00080      FC41      * FDOS1 EQU      *
00081 FC41 BD FC59      JSR      RESET     RESET ELECTRONICS
00082 FC44 CE 004E      LDX      #78       SET ISIZE=78
00083 FC47 DF 04      STX      ISIZE
00084 FC49 7F 0006      CLR     ITRK      TRACK=1
00085 FC4C 7C 0006      INC     ITRK
00086 FC4F 7F 0007      CLR     ISCTR     SECTOR=0
00087 FC52 7F 0008      CLR     ICNTR     RD BFR EMPTY
00088 FC55 BD FC87      JSR      REDX      LOAD FDOS
00089 FC58 39      RTS
00090
00091      * SUBROUTINE TO SET UP PIA'S AND
00092      * DRIVE ELECTRONICS
00093      *
00094      FC59      RESET EQU      *
00095 FC59 7F F081      CLR     DKDIC     SET DIRECTIONS
00096 FC5C 7F F083      CLR     DKCOC
00097 FC5F 7F F087      CLR     DKDOC
00098 FC62 7F F080      CLR     DKDID
00099 FC65 86 FF      LDA A    #$FF
00100 FC67 B7 F082      STA A    DKCOD
00101 FC6A B7 F086      STA A    DKDOD
00102 FC6D 86 04      LDA A    #$4      SET DATA IN CNTRL
00103 FC6F B7 F081      STA A    DKDIC
00104 FC72 86 04      LDA A    #$4      SET DATA OUT CNTRL
00105 FC74 B7 F087      STA A    DKDOC
00106 FC77 86 2C      LDA A    #$2C     SET CMD OUT CNTRL
00107 FC79 B7 F083      STA A    DKCOC
00108 FC7C 86 80      LDA A    #$80     ISSUE CLEAR ELECTRONICS
00109 FC7E B7 F082      STA A    DKCOD
00110 FC81 86 0C      LDA A    #$0C
00111 FC83 BD FE3E      JSR      LOOP
00112 FC86 39      RTS
00113
00114      * SUBROUTINE TO READ AN OBJECT FILE
00115      * INTO MEMORY
00116      *

```

|       |      |       |      |       |           |                        |
|-------|------|-------|------|-------|-----------|------------------------|
| 00117 | FC87 | REDX  | EQU  | *     |           |                        |
| 00118 | FC87 | BD    | FD12 | JSR   | RIX       | GET A CHAR             |
| 00119 | FC8A | 25    | 23   | BCS   | REDX3     | EOF                    |
| 00120 | FC8C | 81    | 53   | CMP   | A #53     | S?                     |
| 00121 | FC8E | 26    | F7   | BNE   | REDX      | NO                     |
| 00122 | FC90 | 7F    | 0013 | CLR   | TEMP+2    | RESET CHKSM            |
| 00123 | FC93 | 8D    | 7D   | BSR   | RIX       | GET A CHAR             |
| 00124 | FC95 | 25    | 10   | BCS   | REDX2     | LOAD ERROR             |
| 00125 | FC97 | 81    | 30   | CMP   | A #30     |                        |
| 00126 | FC99 | 27    | EC   | BEQ   | REDX      | HDR BLK-SKIP           |
| 00127 | FC9B | 81    | 31   | CMP   | A #31     |                        |
| 00128 | FC9D | 27    | 11   | BEQ   | REDX4     | DATA BLK               |
| 00129 | FC9F | 81    | 39   | CMP   | A #39     |                        |
| 00130 | FCA1 | 27    | E4   | BEQ   | REDX      | EOF BLK-SKIP           |
| 00131 | FCA3 | 81    | 1B   | CMP   | A #1B     | ESC?                   |
| 00132 | FCA5 | 27    | 08   | BEQ   | REDX3     | YES-END OF OBJECT FILE |
| 00133 | FCA7 | 86    | 3F   | REDX2 | LDA A #3F | LOAD ERROR             |
| 00134 | FCA9 | BD    | FEE5 | JSR   | CO        |                        |
| 00135 | FCAC | 7E    | FFFC | JMP   | SBUG      |                        |
| 00136 | FCAF | 39    |      | REDX3 | RTS       |                        |
| 00137 | FCB0 | 8D    | 29   | REDX4 | BSR       | RDBYT GET BYTE COUNT   |
| 00138 | FCB2 | 4A    |      | DEC   | A DECR    | COUNT                  |
| 00139 | FCB3 | 97    | 14   | STA   | A TEMP+3  | SAVE CNT B7 φφ 14      |
| 00140 | FCB5 | 01    |      | NOP   |           |                        |
| 00141 | FCB6 | 8D    | 23   | BSR   | RDBYT     | READ ADDR(H)           |
| 00142 | FCB8 | 97    | 11   | STA   | A TEMP    | B7 φφ 11               |
| 00143 | FCBA | 01    |      | NOP   |           |                        |
| 00144 | FCBB | 8D    | 1E   | BSR   | RDBYT     | READ ADDR(L)           |
| 00145 | FCBD | 97    | 12   | STA   | A TEMP+1  | B7 φφ 12               |
| 00146 | FCBF | 01    |      | NOP   |           |                        |
| 00147 | FCC0 | 7D    | 0014 | REDX5 | TST       | TEMP+3 COUNT=0?        |
| 00148 | FCC3 | 27    | 0D   | BEQ   | REDX6     | YES                    |
| 00149 | FCC5 | 8D    | 14   | BSR   | RDBYT     | NO-READ DATA           |
| 00150 | FCC7 | DE    | 11   | LDX   | TEMP      | FE φφ 11               |
| 00151 | FCC9 | 01    |      | NOP   |           |                        |
| 00152 | FCCA | A7    | 00   | STA   | A 0,X     | SAVE IT                |
| 00153 | FCCC | 08    |      | INX   |           |                        |
| 00154 | FCCD | DF    | 11   | STX   | TEMP      | FF φφ 11               |
| 00155 | FCCF | 01    |      | NOP   |           |                        |
| 00156 | FCD0 | 20    | EE   | BRA   | REDX5     | CONTINUE               |
| 00157 | FCD2 | 8D    | 07   | REDX6 | BSR       | RDBYT READ CHKSM       |
| 00158 | FCD4 | 7C    | 0013 | INC   | TEMP+2    |                        |
| 00159 | FCD7 | 26    | CE   | BNE   | REDX2     | CHKSM ERROR            |
| 00160 | FCD9 | 20    | AC   | BRA   | REDX      | CHKSM OK               |
| 00161 |      |       |      | *     |           |                        |
| 00162 | FCDB | RDBYT | EQU  | *     |           |                        |
| 00163 | FCDB | 8D    | 35   | BSR   | RIX       | GET A CHAR             |
| 00164 | FCDD | 25    | C8   | BCS   | REDX2     | EOF                    |
| 00165 | FCDF | 8D    | 1D   | BSR   | CHEX      | CONVERT TO HEX         |
| 00166 | FCE1 | 25    | C4   | BCS   | REDX2     |                        |
| 00167 | FCE3 | 48    |      | ASL   | A         |                        |
| 00168 | FCE4 | 48    |      | ASL   | A         |                        |
| 00169 | FCE5 | 48    |      | ASL   | A         |                        |
| 00170 | FCE6 | 48    |      | ASL   | A         |                        |
| 00171 | FCE7 | 36    |      | PSH   | A         |                        |
| 00172 | FCE8 | 8D    | 28   | BSR   | RIX       |                        |
| 00173 | FCEA | 25    | BB   | BCS   | REDX2     |                        |
| 00174 | FCEC | 8D    | 10   | BSR   | CHEX      |                        |

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00175 FCEE 25 B7      BCS      REDX2
00176 FCF0 33        PUL B
00177 FCF1 1B        ABA
00178 FCF2 16        TAB
00179 FCF3 9B 13     ADD A   TEMP+2   ADD TO CHKSM      B3 00 13
00180 FCF5 01        NOP
00181 FCF6 97 13     STA A   TEMP+2      B7 00 13
00182 FCF8 01        NOP
00183 FCF9 7A 0014   DEC     TEMP+3   DECR BYTE CNT
00184 FCFC 17        TBA
00185 FCFD 39        RTS
00186 FCFE 80 30     CHEX   SUB A   #$30
00187 FD00 25 0F     BCS    CHEX2
00188 FD02 8B E9     ADD A  #$E9
00189 FD04 25 0B     BCS    CHEX2
00190 FD06 8B 06     ADD A  #$6
00191 FD08 2A 04     BPL    CHEX1
00192 FD0A 8B 07     ADD A  #$7
00193 FD0C 25 03     BCS    CHEX2
00194 FD0E 8B 0A     CHEX1  ADD A  #$0A
00195 FD10 0C        CLC
00196 FD11 39        CHEX2  RTS
00197                *
00198                *SUBROUTINE TO READ AN ASCII BYTE FROM DISK
00199                *& RETURN IT IN A-REGISTER. IF EOF, CARRY IS SET
00200                *
00201                FD12  RIX  EQU  *
00202 FD12 8D FD1B     JSR    RI      GET BYTE
00203 FD15 25 03     BCS    RIX1    EOF
00204 FD17 84 7F     AND A  #$7F
00205 FD19 0C        CLC
00206 FD1A 39        RIX1  RTS
00207                *
00208                * SUBROUTINE TO READ AN 8-BIT BYTE FROM DISK &
00209                * RETURN IT IN A-REGISTER. IF EOF, CARRY IS SET.
00210                *
00211                FD1B  RI   EQU  *
00212 FD1B 7D 0008     TST    ICNTR   COUNT=0
00213 FD1E 26 4D     BNE    RI10    NO
00214 FD20 CE 0006   RI5  LDX    #ITRK
00215 FD23 8D FDEF   JSR    INCDA
00216 FD26 DE 04     LDX    ISIZE   DECR & CHK IFILE SIZE
00217 FD28 09        DEX
00218 FD29 26 05     BNE    RI3     OK
00219 FD2B 7F 0008   CLR    ICNTR
00220 FD2E 0D        SEC
00221 FD2F 39        RTS
00222                *
00223 FD30 DF 04     RI3  STX    ISIZE
00224 FD32 96 07     LDA A  ISCTR   XMIT U/S
00225 FD34 8D FE03   JSR    XUS
00226 FD37 8D FE4D   JSR    CHK     MAKE SURE A DISK
00227 FD3A 86 80     LDA A  #128    SET CNTR=128
00228 FD3C 97 08     STA A  ICNTR
00229 FD3E 86 05     LDA A  #5      SET TRY COUNT=5
00230 FD40 97 15     STA A  TEMP+4
00231 FD42 01        NOP
00232 FD43 96 06     LDA A  ITRK    SEEK TRACK

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B7 00 15

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00233 FD45 B0 FE2B      JSR     SEEK
00234 FD48 86 02 RI6   LDA A  #2      READ DATA
00235 FD4A B0 FE3E      JSR     LOOP
00236 FD4D B6 F080      LDA A  DKDID   DD MARK?
00237 FD50 84 80        AND A  #$80
00238 FD52 27 05        BEQ    RI4     NO
00239 FD54 B0 FE38      JSR     RFLAG  YES-RESET FLAG
00240 FD57 20 C7        BRA    RI5
00241                    *
00242 FD59 B6 F080 RI4   LDA A  DKDID   CRC ERROR?
00243 FD5C 84 08        AND A  #8
00244 FD5E 27 0D        BEQ    RI10    NO
00245 FD60 B0 FE38      JSR     RFLAG  YES-RESET FLAG
00246 FD63 7A 0015      DEC    TEMP+4  DECR TRIES
00247 FD66 26 E0        BNE    RI6     TRY AGAIN
00248 FD68 86 01        LDA A  #1     CAN'T READ MEDIA
00249 FD6A 7E FE57      JMP    CHK1
00250                    *
00251 FD6D 86 3C RI10    LDA A  #$3C   SET CMND CNTRL
00252 FD6F B7 F083      STA A  DKCOC
00253 FD72 86 40        LDA A  #$40   SET FOR READ DATA
00254 FD74 B7 F082      STA A  DKCOD
00255 FD77 B6 F080      LDA A  DKDID   READ DATA
00256 FD7A 36          PSH A
00257 FD7B 86 2C        LDA A  #$2C   RESET CMND CNTRL
00258 FD7D B7 F083      STA A  DKCOC
00259 FD80 86 40        LDA A  #$40   STROBE BUFR
00260 FD82 B7 F082      STA A  DKCOD
00261 FD85 7F F082      CLR    DKCOD
00262 FD88 7A 0008      DEC    ICNTR  DECR READ CNTR
00263 FD8B 32          PUL A
00264 FD8C 0C          CLC
00265 FD8D 39          RTS
00266                    *
00267                    * SUBROUTINE TO WRITE A BYTE TO DISK.
00268                    * EXPECTS BYTE IN A-REGISTER
00269                    *
00270                    FD8E WRT EQU *
00271 FD8E B7 F086      STA A  DKDOD   OUTPUT DATA
00272 FD91 86 30        LDA A  #$30
00273 FD93 B7 F082      STA A  DKCOD
00274 FD96 7C 000D      INC    OCNTR  INCR BFR COUNT
00275 FD99 96 0D        LDA A  OCNTR  =128?
00276 FD9B 81 80        CMP A  #128
00277 FD9D 27 01        BEQ    WRT4   YES
00278 FDA0 39          RTS          NO-EXIT
00279                    *
00280 FDA0 7F 000D WRT4  CLR    OCNTR  CLR COUNT
00281 FDA3 96 0C WRT1  LDA A  OSCTR  XMIT U/S
00282 FDA5 B0 FE03      JSR
00283 FDA8 B0 FE4D      JSR     CHK    MAKE SURE A DISK
00284 FDAB 86 05        LDA A  #5     SET TRY COUNT=5
00285 FDD 97 15        STA A  TEMP+4
00286 FDDAF 01        NOP
00287 FDB0 96 0B        LDA A  OTRK   SEEK TRACK
00288 FDB2 B0 FE2B      JSR     SEEK
00289 FDB5 86 04 WRT2  LDA A  #4     WRITE DATA
00290 FDB7 B0 FE3E      JSR     LOOP

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B7 φφ 15

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00291 FD8A 86 06      LDA A  #6      READ FOR CRC
00292 FD8C 8D FE3E    JSR    LOOP
00293 FD8F 86 F080    LDA A  DKDID   CRC ERROR?
00294 FDC2 84 08      AND A  #8
00295 FDC4 27 12      BEQ    WRT3    NO
00296 FDC6 8D FE38    JSR    RFLAG   YES-RESET FLAG
00297 FDC9 7A 0015    DEC    TEMP+4  DECR TRY COUNT
00298 FDCC 26 E7      BNE    WRT2    TRY AGAIN
00299 FDCE 86 0E      LDA A  #$E     WRITE AS DD
00300 FDD0 8D FE3E    JSR    LOOP
00301 FDD3 8D FDDC    JSR    WRTN    INCR DA & CHK SIZE
00302 FDD6 20 CB      BRA    WRT1
00303 FDD8 8D FDDC WRT3 JSR    WRTN
00304 FDDB 39      RTS
00305
00306 *
00307 * SUBROUTINE TO INCR DA & CHK OFILE SIZE
00308 *
00308 FDDC WRTN EQU *
00309 FDDC CE 000B    LDX   #OTRK
00310 FDDF 8D FDEF    JSR   INCD A
00311 FDE2 DE 09      LDX   OSIZE
00312 FDE4 09        DEX
00313 FDE5 DF 09      STX   OSIZE
00314 FDE7 2B 01     BMI   WRTN1
00315 FDE9 39        RTS
00316 FDEA 86 02 WRTN1 LDA A #2
00317 FDEC 7E FE57  JMP   CHK1
00318
00319 *
00319 * SUBROUTINE TO INCR DA
00320 * TRACK @ (X) SECTOR @ (X+1)
00321 *
00322 FDEF INCD A EQU *
00323 FDEF 6C 01      INC   1, X
00324 FDF1 A6 01     LDA A 1, X      SECTOR=27?
00325 FDF3 84 1F     AND A #$1F
00326 FDF5 81 1B     CMP A #27
00327 FDF7 27 01     BEQ  INCD B     YES
00328 FDF9 39        RTS          NO
00329
00330 FDF A6 01 INCD B LDA A 1, X
00331 FDFC 84 C1     AND A #$C1     SET SECTOR=1
00332 FDFE A7 01     STA A 1, X
00333 FE00 6C 00     INC   0, X     INCR TRACK
00334 FE02 39        RTS
00335
00336 *
00336 * SUBROUTINE TO XMIT UNIT/SECTOR (LOGICAL) BYTE
00337 *
00338 FE03 XUS EQU *
00339 FE03 36        PSH A EXTRACT LOG SECTOR
00340 FE04 84 1F     AND A #$1F
00341 FE06 CE FE5E    LD X #TBL     GET TABLE PNTR
00342 FE09 DF 15     ST X TEMP+4
00343 FE0B 01        NOP
00344 FE0C 5F        CLR B MAKE INTO SECTOR PNTR
00345 FE0D 9B 16     ADD A TEMP+5
00346 FE0F 01        NOP
00347 FE10 D9 15     ADC B TEMP+4
00348 FE12 01        NOP

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FF 00 15

BB 00 16

F9 00 15

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00349 FE13 97 15      STA A  TEMP+5      B7 φφ 16
00350 FE15 01          NOP
00351 FE16 D7 15      STA B  TEMP+4      F7 φφ 15
00352 FE18 01          NOP
00353 FE19 DE 15      LDX   TEMP+4      FE φφ 15
00354 FE1B 01          NOP
00355 FE1C 33          PUL B  MERGE      UNIT & PHYS SCTR
00356 FE1D C4 C0      AND B  #$C0
00357 FE1F A6 00      LDA A  0,X
00358 FE21 1B          ABA
00359 FE22 B7 F086     STA A  DKDOD      ISSUE IT
00360 FE25 86 20      LDA A  #$20
00361 FE27 B7 F082     STA A  DKCOD
00362 FE2A 39          RTS
00363
00364      * SUBROUTINE TO SEEK TRACK IN A
00365      *
00366      FE2B      SEEK  EQU  *
00367 FE2B B7 F086     STA A  DKDOD
00368 FE2E 86 10      LDA A  #$10
00369 FE30 B7 F082     STA A  DKCOD
00370 FE33 86 08      LDA A  #$8
00371 FE35 7E FE3E     JMP   LOOP
00372
00373      * SUBROUTINE TO RESET ERROR FLAG
00374      *
00375      FE38      RFLAG EQU  *
00376 FE38 86 0A      LDA A  #$A
00377 FE3A B7 F082     STA A  DKCOD
00378 FE3D 39          RTS
00379
00380      * SUBROUTINE TO ISSUE (A) CMND & LOOP ON BUSY
00381      *
00382      FE3E      LOOP  EQU  *
00383 FE3E F6 F080     LDA B  DKDID      CLEAR BUSY
00384 FE41 B7 F082     STA A  DKCOD      ISSUE CMND
00385 FE44 B6 F081     LDA A  DKDIC      DONE?
00386 FE47 2A FB      BPL   LOOP1      NO
00387 FE49 F6 F080     LDA B  DKDID      YES-CLR BUSY
00388 FE4C 39          RTS              EXIT
00389
00390      * SUBROUTINE TO CHECK IF A DISK, ELSE ERROR 3
00391      *
00392      FE4D      CHK   EQU  *
00393 FE4D B6 F080     LDA A  DKDID
00394 FE50 84 20      AND A  #$20
00395 FE52 26 01      BNE   CHK2
00396 FE54 39          RTS              OK
00397 FE55 86 03      CHK2  LDA A  #3      ERROR
00398
00399      * ROUTINE TO PUT ERROR (A)
00400      *
00401 FE57 8A 30      CHK1  ORA A  #$30      CONVERT TO ASCII
00402 FE59 BD FEE5     JSR   C0
00403 FE5C 7E FFFC     JMP   SBUG
00404
00405      * PHYSICAL SECTOR TABLE. IS IN ORDER OF
00406      * LOGICAL SECTOR NUMBER

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```

00407 *
00408 FE5E TBL EQU *-1
00409 FE5F 01 FCB 1
00410 FE60 0A FCB 10
00411 FE61 13 FCB 19
00412 FE62 02 FCB 2
00413 FE63 0B FCB 11
00414 FE64 14 FCB 20
00415 FE65 03 FCB 3
00416 FE66 0C FCB 12
00417 FE67 15 FCB 21
00418 FE68 04 FCB 4
00419 FE69 0D FCB 13
00420 FE6A 16 FCB 22
00421 FE6B 05 FCB 5
00422 FE6C 0E FCB 14
00423 FE6D 17 FCB 23
00424 FE6E 06 FCB 6
00425 FE6F 0F FCB 15
00426 FE70 18 FCB 24
00427 FE71 07 FCB 7
00428 FE72 10 FCB 16
00429 FE73 19 FCB 25
00430 FE74 08 FCB 8
00431 FE75 11 FCB 17
00432 FE76 1A FCB 26
00433 FE77 09 FCB 9
00434 FE78 12 FCB 18
00435 *
00436 FE79 8E FE8B PATCH LDS #XSTACK 9E 4FFF
00437 FE7C BD FC41 JSR FDOS1
00438 FE7F 7E 0023 JMP UPDATE
00439 FE82 8E 1E00 PATCH1 LDS #1E00 8E 4FFF
00440 FE85 BD FC41 JSR FDOS1
00441 FE88 7E 0020 JMP EXEC
00442 *
00443 *
00444 *
00445 *
00446 FE8B ORG $FE8B
00447 *
00448 *END OF MEMORY FIND
00449 *
00450 FE8B 86 55 MEMSTR LDA A #$55
00451 FE8D CE 0FFF LDX #$0FFF
00452 FE90 E6 00 LDA B 0,X
00453 FE92 E7 00 MEM1 STR B 0,X
00454 FE94 08 INX
00455 FE95 E6 00 LDA B 0,X
00456 FE97 A7 00 STR A 0,X
00457 FE99 A1 00 CMP A 0,X
00458 FE9B 27 F5 BEQ MEM1
00459 FE9D 09 DEX
00460 FE9E 39 RTS
00461 *
00462 *CLEAR SCREEN
00463 **
00464 FE9F CE E000 CLRSCN LDX #$E000

```

LOAD REG. A WITH VALUE OF 55<sub>16</sub> (85<sub>10</sub>)  
 LOAD INDEX REG WITH VALUE OF 0FFF (4095)  
 LOAD REG B WITH CONTENTS OF LOC AT INDEX REG.  
 STORE CONTENTS OF REG B AT LOC OF INDEX REG.  
 INCREMENT INDEX REG.  
 LOAD REG B WITH CONTENTS OF LOC AT INDEX REG  
 STORE CONTENTS OF REG A AT LOC OF INDEX REG.  
 COMPARE CONTENTS OF REG A WITH CONT AT LOC OF IX  
 IF EQUAL CONTINUE LOOP  
 DECREMENT INDEX REGISTER  
 RETURN  
 LOAD INTO INDEX REG.  
 CRT BUFFER BEGINNING ADDRESS



```

00465 FE92 DF 17 STX $17
00466 FE94 8D 05 BSR CLEAR
00467 FE96 CE E1E0 CRLF LDX #$E1E0
00468 FE99 DF 17 STX $17
00469 FE9B C6 20 CLEAR LDA B #$20
00470 FE9D CE E200 LDX #$E200
00471 FE90 09 CLEAR1 DEX
00472 FEB1 E7 00 STA B 0,X
00473 FEB3 9C 17 CPX $17
00474 FEB5 26 F9 BNE CLEAR1
00475 FEB7 39 RTS

```

STORE CONTENTS OF INDEX REG AT LOC. 17 & 18  
 GO TO CLEAR CRT BUFFER.  
 SET INDEX REG TO CLEAR LAST LINE OF CRT BUFFER  
 STORE CONTENTS OF INDEX REG  
 LOAD REG B WITH (A) SPACE.  
 CRT BUFFER ENDING LOCATION  
 DECREMENT INDEX REG.  
 MOVE SPACE TO LOC. AT INDEX REG.  
 HAS LOC E000<sub>16</sub> BEEN REACHED?  
 NO, THEN GO BACK TO LOOP  
 RETURN TO SUBROUTINE

```

00476 *
00477 *SCROLL UP
00478 *
00479 FEB8 CE E000 SCRLUP LDX #$E000
00480 FEBB E6 20 SCRP1 LDA B 32,X
00481 FEBD E7 00 STA B 0,X
00482 FEBF 08 INX
00483 FEC0 8C E1E0 CPX #$E1E0
00484 FEC3 26 F6 BNE SCRP1
00485 FEC5 DF 17 STX $17
00486 FEC7 8D E2 BSR CLEAR
00487 FEC9 39 RTS

```

```

00488 *
00489 *CHARACTER IN
00490 *
00491 FECA DE 17 CI LDX $17
00492 FECC 63 00 COM 0,X
00493 FECE CE 26F0 LDX #$26F0
00494 FED1 09 GET1 DEX
00495 FED2 27 F6 BEQ CI
00496 FED4 7D F001 BD FFAA TST $F001 F041
00497 FED7 2A F8 27 F8 BPL GET1
00498 FED9 DE 17 LDX $17
00499 FEDB A6 00 LDA A 0,X
00500 FEDD 2A 02 BPL GET2
00501 FEDF 63 00 COM 0,X
00502 FEE1 B6 F000 GET2 LDA A $F000
00503 FEE4 39 RTS

```

```

00504 *
00505 *CHARACTER OUT
00506 *
00507 FEE5 DE 17 CO LDX $17
00508 FEE7 81 00 CMP A #$0D
00509 FEE9 27 CD BEQ SCRLUP
00510 FEEB 81 0A CMP A #$0A
00511 FEED 27 0A BEQ CO1
00512 FEEF A7 00 STA A 0,X
00513 FEF1 08 INX
00514 FEF2 DF 17 STX $17
00515 FEF4 8C E200 CPX #$E200
00516 FEF7 27 BF BEQ SCRLUP
00517 FEF9 39 CO1 RTS

```

```

00518 *
00519 *DEBUG
00520 *
00521 FEFA 8D A3 DEBUG BSR CLRSCN
00522 FEFC 8D 8D BSR MEMSTR

```

FE9F  
 FE8B

|       |      |    |        |       |          |  |
|-------|------|----|--------|-------|----------|--|
| 00523 | FEFE | 35 |        | TXS   |          | MOVES END OF MEMORY ADDRESS AS STACK POINTER |
| 00524 | FEFF | 36 | 07 16  | LDA A | #\$0716  |  |
| 00525 | FF01 | B7 | F00141 | STA A | \$F00141 | SET CPU PIA CONTROL BYTE - REG A             |
| 00526 | FF04 | 86 | 3C     | LDA A | #\$3C    |  |
| 00527 | FF06 | B7 | F08D   | STA A | \$F08D   | SET PIM E9 PIA CONTROL BYTE - REG A          |
| 00528 | FF09 | 7F | F08F   | CLR   | \$F08F   | CLEAR PIM E9 PIA CONTROL BYTE - REG B        |
| 00529 | FF0C | 86 | FF     | LDA A | #\$FF    |  |
| 00530 | FF0E | B7 | F08E   | STA A | \$F08E   | SET PIM E9 PIA DATA BYTE - REG B             |
| 00531 | FF11 | 86 | 2C     | LDA A | #\$2C    |  |
| 00532 | FF13 | B7 | F08F   | STA A | \$F08F   | SET PIM E9 PIA CONTROL BYTE - REG B          |
| 00533 | FF16 | 7F | 0019   | CLR   | \$0019   | CLEAR LOCATION 19 <sub>16</sub>              |
| 00534 | FF19 | 7F | 001A   | CLR   | \$001A   | CLEAR LOC 1A <sub>16</sub>                   |
| 00535 | FF1C | 86 | 00     | LDA A | #\$00    |  |
| 00536 | FF1E | 97 | 1B     | STA A | \$1B     |  |
| 00537 | FF20 | 97 | 1C     | STA A | \$1C     |  |
| 00538 | FF22 | 97 | 1D     | STA A | \$1D     |  |
| 00539 | FF24 | 8D | A4     | BSR   | CI       | FECA   |
| 00540 | FF26 | 8D | BD     | BSR   | CO       | FEE5   |
| 00541 | FF28 | 81 | 06     | CMP A | #\$06    | ↑ F (ACK)                                    |
| 00542 | FF2A | 26 | 03     | BNE   | BUG1     |  |
| 00543 | FF2C | 7E | FC00   | JMP   | \$FC00   |  |
| 00544 | FF2F | 81 | 0D     | CMP A | #\$0D    | ↑ CR   |
| 00545 | FF31 | 26 | 0D     | BNE   | BUG2     |  |
| 00546 | FF33 | 7D | 001D   | TST   | \$001D   |  |
| 00547 | FF36 | 2A | DE     | BPL   | CLRTMP   |  |
| 00548 | FF38 | 96 | 1A     | LDA A | \$1A     |  |
| 00549 | FF3A | DE | 1B     | LDX   | \$1B     |  |
| 00550 | FF3C | A7 | 00     | STA A | 0, X     |  |
| 00551 | FF3E | 20 | D6     | BRA   | CLRTMP   |  |
| 00552 | FF40 | 81 | 20     | CMP A | #\$20    | SPACE  |
| 00553 | FF42 | 26 | 06     | BNE   | BUG3     |  |
| 00554 | FF44 | 86 | FF     | LDA A | #\$FF    |  |
| 00555 | FF46 | 97 | 1D     | STA A | \$1D     |  |
| 00556 | FF48 | 20 | DA     | BRA   | NXTCHR   |  |
| 00557 | FF4A | 81 | 2F     | CMP A | #\$2F    | /  |
| 00558 | FF4C | 26 | 37     | BNE   | BUG4     |  |
| 00559 | FF4E | DE | 19     | LDX   | \$19     |  |
| 00560 | FF50 | DF | 1B     | STX   | \$1B     |  |
| 00561 | FF52 | A6 | 00     | LDA A | 0, X     |  |
| 00562 | FF54 | 08 |        | INX   |          |  |
| 00563 | FF55 | DF | 19     | STX   | \$19     |  |
| 00564 | FF57 | 01 |        | NOP   |          |  |
| 00565 | FF58 | 01 |        | NOP   |          |  |
| 00566 | FF59 | 01 |        | NOP   |          |  |
| 00567 | FF5A | 44 |        | LSR A |          |  |
| 00568 | FF5B | 56 |        | ROR B |          |  |
| 00569 | FF5C | 44 |        | LSR A |          |  |
| 00570 | FF5D | 56 |        | ROR B |          |  |
| 00571 | FF5E | 44 |        | LSR A |          |  |
| 00572 | FF5F | 56 |        | ROR B |          |  |
| 00573 | FF60 | 44 |        | LSR A |          |  |
| 00574 | FF61 | 56 |        | ROR B |          |  |
| 00575 | FF62 | 54 |        | LSR B |          |  |
| 00576 | FF63 | 54 |        | LSR B |          |  |
| 00577 | FF64 | 54 |        | LSR B |          |  |
| 00578 | FF65 | 54 |        | LSR B |          |  |
| 00579 | FF66 | 81 | 09     | CMP A | #\$09    | HORIZ. TAB                                   |
| 00580 | FF68 | 23 | 02     | BLS   | NUMA     |  |

|       |      |    |      |        |       |        |
|-------|------|----|------|--------|-------|--------|
| 00581 | FF6A | 8B | 07   |        | ADD A | #\$07  |
| 00582 | FF6C | 8B | 30   | NUMA   | ADD A | #\$30  |
| 00583 | FF6E | C1 | 09   |        | CMP B | #\$09  |
| 00584 | FF70 | 23 | 02   |        | BLS   | NUMB   |
| 00585 | FF72 | CB | 07   |        | ADD B | #\$07  |
| 00586 | FF74 | CB | 30   | NUMB   | ADD B | #\$30  |
| 00587 | FF76 | D7 | 1D   |        | STA B | \$1D   |
| 00588 | FF78 | BD | FEE5 |        | JSR   | CO     |
| 00589 | FF7B | 96 | 1D   |        | LDA A | \$1D   |
| 00590 | FF7D | BD | FEE5 |        | JSR   | CO     |
| 00591 | FF80 | 7F | 001D |        | CLR   | \$001D |
| 00592 | FF83 | 20 | 9F   |        | BRA   | NXTCHR |
| 00593 | FF85 | 81 | 07   | BUG4   | CMP A | #\$07  |
| 00594 | FF87 | 26 | 04   |        | BNE   | BUG5   |
| 00595 | FF89 | DE | 19   |        | LDX   | \$19   |
| 00596 | FF8B | 6E | 00   |        | JMP   | 0, X   |
| 00597 | FF8D | 81 | 41   | BUG5   | CMP A | #\$41  |
| 00598 | FF8F | 2D | 08   |        | BLT   | BUG6   |
| 00599 | FF91 | 81 | 46   |        | CMP A | #\$46  |
| 00600 | FF93 | 2E | 28   |        | BGT   | BUG7   |
| 00601 | FF95 | 80 | 37   |        | SUB A | #\$37  |
| 00602 | FF97 | 20 | 0A   |        | BRA   | BUG65  |
| 00603 | FF99 | 81 | 30   | BUG6   | CMP A | #\$30  |
| 00604 | FF9B | 2D | 20   |        | BLT   | BUG7   |
| 00605 | FF9D | 81 | 39   |        | CMP A | #\$39  |
| 00606 | FF9F | 2E | 1C   |        | BGT   | BUG7   |
| 00607 | FFA1 | 80 | 30   |        | SUB A | #\$30  |
| 00608 | FFA3 | D6 | 1A   | BUG65  | LDA B | \$1A   |
| 00609 | FFA5 | 58 |      |        | ASL B |        |
| 00610 | FFA6 | 58 |      |        | ASL B |        |
| 00611 | FFA7 | 58 |      |        | ASL B |        |
| 00612 | FFA8 | 58 |      |        | ASL B |        |
| 00613 | FFA9 | 1B |      |        | ABA   |        |
| 00614 | FFAA | D6 | 1A   |        | LDA B | \$1A   |
| 00615 | FFAC | 97 | 1A   |        | STA A | \$1A   |
| 00616 | FFAE | 96 | 19   |        | LDA A | \$19   |
| 00617 | FFB0 | 58 |      |        | ASL B |        |
| 00618 | FFB1 | 49 |      |        | ROL A |        |
| 00619 | FFB2 | 58 |      |        | ASL B |        |
| 00620 | FFB3 | 49 |      |        | ROL A |        |
| 00621 | FFB4 | 58 |      |        | ASL B |        |
| 00622 | FFB5 | 49 |      |        | ROL A |        |
| 00623 | FFB6 | 58 |      |        | ASL B |        |
| 00624 | FFB7 | 49 |      |        | ROL A |        |
| 00625 | FFB8 | 97 | 19   |        | STA A | \$19   |
| 00626 | FFBA | 7E | FF24 |        | JMP   | NXTCHR |
| 00627 | FFBD | 86 | 3F   | BUG7   | LDA A | #\$3F  |
| 00628 | FFBF | BD | FEE5 |        | JSR   | CO     |
| 00629 | FFC2 | 86 | 0D   | SDEBUG | LDA A | #\$0D  |
| 00630 | FFC4 | BD | FEE5 |        | JSR   | CO     |
| 00631 | FFC7 | 7E | FF16 |        | JMP   | CLRTMP |
| 00632 | FFCA | 86 | FF   |        | LDA A | #\$FF  |
| 00633 | FFCC | B7 | F082 |        | STA A | \$F082 |
| 00634 | FFCF | 39 |      |        | RTS   |        |
| 00635 | FFD0 | B6 | F080 |        | LDA A | \$F080 |
| 00636 | FFD3 | 43 |      |        | COM A |        |
| 00637 | FFD4 | 39 |      |        | RTS   |        |
| 00638 | FFD5 | 43 |      |        | COM A |        |

↑G (BELL)

A

F

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```
00639 FFD6 B7 F082 STA A $F082
00640 FFD9 39 RTS
00641 FFDA 43 COM A
00642 FFDB B7 F086 STA A $F086
00643 FFDE 39 RTS
00644 FFDF F6 F080 LDA B $F080
00645 FFE2 53 COM B
00646 FFE3 39 RTS
00647 FFE4 86 FF LDA A #$FF
00648 FFE6 B7 F082 STA A $F082
00649 FFE9 39 RTS
00650 *
00651 *
00652 FFF2 ORG $FFF2
00653 FFF2 8E 0006 LDS #$0006
00654 FFF5 7E FEFA JMP $FEFA
00655 FFF8 0002 FDB $0002
00656 FFFA FF06 FDB $FF06
00657 FFFC 0000 FDB $0000
00658 FFFE FFF2 FDB $FFF2
00659 *76-05-20 09:08
00660 END
```

TOTAL ERRORS 00000

| Address | Label     | Symbol     | Value    | Comment    |
|---------|-----------|------------|----------|------------|
| 00001   |           | NAM        | IOHANDLR |            |
| 00002   |           | OPT        | 0, NOG   |            |
| 00003   | 00DF      | ORG        | \$00DF   |            |
| 00004   | F000      | KBDID EQU  | \$F000   | NEW \$F040 |
| 00005   | F001      | KBDIC EQU  | KBDID+1  |            |
| 00006   | F042      | TTCPID EQU | \$F042   |            |
| 00007   | F043      | TTCPIC EQU | TTCPID+1 |            |
| 00008   | F050      | CMTPD EQU  | \$F050   |            |
| 00009   | F051      | CMTPC EQU  | CMTPD+1  |            |
| 00010   | F060      | CASFD2 EQU | \$F060   |            |
| 00011   | F061      | CASPC2 EQU | CASPD2+1 |            |
| 00012   | F08C      | LPDID EQU  | \$F08C   |            |
| 00013   | F08D      | LPDIC EQU  | LPDID+1  |            |
| 00014   | F08E      | LPD0D EQU  | LPDID+2  |            |
| 00015   | F08F      | LPDOC EQU  | LPDID+3  |            |
| 00016   |           | *          |          |            |
| 00017   | 0080      | MASK EQU   | \$80     | NEW \$40   |
| 00018   | 0007      | MARK EQU   | \$07     | NEW \$14   |
| 00019   | 0020      | SP EQU     | \$20     |            |
| 00020   | 000D      | CR EQU     | \$D      |            |
| 00021   | 000A      | LF EQU     | \$A      |            |
| 00022   | 26F0      | TIMEA EQU  | \$26F0   |            |
| 00023   | E000      | VIDB EQU   | \$E000   |            |
| 00024   | E1E0      | VIDC EQU   | \$E1E0   |            |
| 00025   | E200      | VIDE EQU   | \$E200   |            |
| 00026   |           | *          |          |            |
| 00027   | 0001      | OFILF EQU  | \$1      |            |
| 00028   | 0002      | OUNIT EQU  | \$2      |            |
| 00029   | 0003      | IUNIT EQU  | \$3      |            |
| 00030   | 0004      | ISIZE EQU  | \$4      |            |
| 00031   | 0006      | ITRK EQU   | \$6      |            |
| 00032   | 0007      | ISCTR EQU  | \$7      |            |
| 00033   | 0008      | ICNTR EQU  | \$8      |            |
| 00034   | 0009      | OSIZE EQU  | \$9      |            |
| 00035   | 000B      | OTRK EQU   | \$B      |            |
| 00036   | 000C      | OSCTR EQU  | \$C      |            |
| 00037   | 000D      | OCNTR EQU  | \$D      |            |
| 00038   | FC09      | XRI EQU    | \$FC09   |            |
| 00039   | FC0C      | XWRT EQU   | \$FC0C   |            |
| 00040   | FC06      | INTIO EQU  | \$FC06   |            |
| 00041   |           | *          |          |            |
| 00042   | F050      | CAS1 EQU   | \$F050   |            |
| 00043   | F060      | CAS2 EQU   | \$F060   |            |
| 00044   | 0009      | CSTAT5 EQU | \$0009   |            |
| 00045   | 0033      | BLKNAM EQU | \$0033   |            |
| 00046   | 0038      | ACIANO EQU | \$0038   |            |
| 00047   | 003C      | BFRPTR EQU | \$003C   |            |
| 00048   | 003E      | BFRSZE EQU | \$003E   |            |
| 00049   | FB00      | INTL2 EQU  | \$FB00   |            |
| 00050   | FB77      | TURNON EQU | \$FB77   |            |
| 00051   | FB60      | TRNOFF EQU | \$FB60   |            |
| 00052   | FB2D      | WRTBLK EQU | \$FB2D   |            |
| 00053   | FB91      | RDBLK EQU  | \$FB91   |            |
| 00054   |           | *          |          |            |
| 00055   | 00DF 0002 | STMP RMB   | 2        |            |
| 00056   | 00E1 0002 | XBUF1 RMB  | 2        |            |
| 00057   | 00E3 0002 | XBUF2 RMB  | 2        |            |
| 00058   | 00E5 0002 | XTMP1 RMB  | 2        |            |

|       |      |      |      |        |       |         |
|-------|------|------|------|--------|-------|---------|
| 00059 | 00E7 | 0002 |      | XTMP2  | RMB   | 2       |
| 00060 | 00E9 | 0001 |      | ATMP1  | RMB   | 1       |
| 00061 | 00EA | 0001 |      | BTMP1  | RMB   | 1       |
| 00062 | 00EB | 0001 |      | BTMP2  | RMB   | 1       |
| 00063 | 00EC | 0001 |      | CNT    | RMB   | 1       |
| 00064 | 00ED | 0001 |      | CHRCNT | RMB   | 1       |
| 00065 | 00EE | 0002 |      | LSTBLK | RMB   | 2       |
| 00066 | 00F0 | 0002 |      | BLKLEN | RMB   | 2       |
| 00067 | 00F2 | 0001 |      | CASSWT | RMB   | 1       |
| 00068 | 00F3 | 0001 |      | PORTA  | RMB   | 1       |
| 00069 | 00F4 | 0001 |      | PORTB  | RMB   | 1       |
| 00070 | 00F5 | 0001 |      | DSWT   | RMB   | 1       |
| 00071 | 00F6 | 0A   |      | SWT    | FCB   | \$0A    |
| 00072 | 00F7 | E1E0 |      | CUSPNT | FDB   | \$E1E0  |
| 00073 |      |      |      | *      |       |         |
| 00074 | 0200 |      |      | ORG    |       | \$0200  |
| 00075 |      |      |      | *      |       |         |
| 00076 | 0200 | 7F   | 00F2 | START  | CLR   | CASSWT  |
| 00077 | 0203 | 7F   | 00F5 |        | CLR   | DSWT    |
| 00078 | 0206 | CE   | 0297 |        | LDX   | #IPTMSG |
| 00079 | 0209 | BD   | 0644 |        | JSR   | MSGOUT  |
| 00080 | 020C | BD   | 062D |        | JSR   | GETDAT  |
| 00081 | 020F | 97   | F3   |        | STA A | PORTA   |
| 00082 | 0211 | 81   | 4B   |        | CMP A | ##'K    |
| 00083 | 0213 | 26   | 05   |        | BNE   | A0      |
| 00084 | 0215 | BD   | 0312 |        | JSR   | IKBD    |
| 00085 | 0218 | 20   | 19   |        | BRA   | A3      |
| 00086 | 021A | 81   | 54   | A0     | CMP A | ##'T    |
| 00087 | 021C | 26   | 05   |        | BNE   | A1      |
| 00088 | 021E | BD   | 031D |        | JSR   | ITTY    |
| 00089 | 0221 | 20   | 10   |        | BRA   | A3      |
| 00090 | 0223 | 81   | 43   | A1     | CMP A | ##'C    |
| 00091 | 0225 | 26   | 05   |        | BNE   | A2      |
| 00092 | 0227 | BD   | 034C |        | JSR   | CASI    |
| 00093 | 022A | 20   | 07   |        | BRA   | A3      |
| 00094 | 022C | 81   | 44   | A2     | CMP A | ##'D    |
| 00095 | 022E | 26   | 03   |        | BNE   | A3      |
| 00096 | 0230 | BD   | 03E2 |        | JSR   | DISKI   |
| 00097 | 0233 | 7F   | 00F4 | A3     | CLR   | PORTB   |
| 00098 | 0236 | CE   | 02CA |        | LDX   | #OPTMSG |
| 00099 | 0239 | BD   | 028E |        | JSR   | OEXAM   |
| 00100 | 023C | 26   | 09   |        | BNE   | A4      |
| 00101 | 023E | BD   | 0312 |        | JSR   | IKBD    |
| 00102 | 0241 | 96   | F4   |        | LDA A | PORTB   |
| 00103 | 0243 | 8A   | 01   |        | ORA A | ##01    |
| 00104 | 0245 | 97   | F4   |        | STA A | PORTB   |
| 00105 | 0247 | CE   | 02F0 | A4     | LDX   | #OPTMG1 |
| 00106 | 024A | BD   | 028E |        | JSR   | OEXAM   |
| 00107 | 024D | 26   | 09   |        | BNE   | A5      |
| 00108 | 024F | BD   | 031D |        | JSR   | ITTY    |
| 00109 | 0252 | 96   | F4   |        | LDA A | PORTB   |
| 00110 | 0254 | 8A   | 02   |        | ORA A | ##02    |
| 00111 | 0256 | 97   | F4   |        | STA A | PORTB   |
| 00112 | 0258 | CE   | 02F6 | A5     | LDX   | #OPTMG2 |
| 00113 | 025B | BD   | 028E |        | JSR   | OEXAM   |
| 00114 | 025E | 26   | 09   |        | BNE   | A6      |
| 00115 | 0260 | BD   | 0327 |        | JSR   | IPRT    |
| 00116 | 0263 | 96   | F4   |        | LDA A | PORTB   |

```

00117 0265 8A 04      ORA A  #04
00118 0267 97 F4      STA A  PORTB
00119 0269 CE 0300 A6  LDX   #OPTMG3
00120 026C BD 028E      JSR   OEXAM
00121 026F 26 09      BNE   A7
00122 0271 BD 034C      JSR   CASI
00123 0274 96 F4      LDA A  PORTB
00124 0276 8A 08      ORA A  #08
00125 0278 97 F4      STA A  PORTB
00126 027A CE 0308 A7  LDX   #OPTMG4
00127 027D BD 028E      JSR   OEXAM
00128 0280 26 09      BNE   A8
00129 0282 BD 03B9      JSR   DISKO
00130 0285 96 F4      LDA A  PORTB
00131 0287 8A 10      ORA A  #10
00132 0289 97 F4      STA A  PORTB
00133 028B 7E 0839 A8  JMP   IOFIN
00134                *
00135 028E BD 0644 OEXAM JSR   MSGOUT
00136 0291 BD 062D      JSR   GETDAT
00137 0294 81 59      CMP A  #'Y
00138 0296 39        RTS
00139                *
00140 0297 45        IPTMSG FCC  /ENTER INPUT DEVICE:/
00141 02A0 0D        FCB  $0D
00142 02AB 4B        FCC  /K=KBD T=TTY C=CASSETTE D=DISK/
00143 02C8 0D00      FDB  $0D00
00144 02CA 4F        OPTMSG FCC  /OUTPUT DATA TO: (Y=YES N=NO)/
00145 02E6 0D        FCB  $0D
00146 02E7 53        FCC  /SCREEN?/
00147 02EE 0D00      FDB  $0D00
00148 02F0 54        OPTMG1 FCC  /TTY?/
00149 02F4 0D00      FDB  $0D00
00150 02F6 50        OPTMG2 FCC  /PRINTER?/
00151 02FE 0D00      FDB  $0D00
00152 0300 43        OPTMG3 FCC  /CASSETTE?/
00153 0309 0D00      FDB  $0D00
00154 030B 44        OPTMG4 FCC  /DISK?/
00155 0310 0D00      FDB  $$0D00
00156                *
00157                *
00158 0312 86 07      IKBD  LDA A  #MARK
00159 0314 B7 F001      STA A  KBDIC
00160 0317 CE E1E0      LDX   #VIDC
00161 031A DF F7      STX   CUSPNT
00162 031C 39        RTS
00163                *
00164 031D 86 13      ITTY  LDA A  #13
00165 031F B7 F050      STA A  CMTPD
00166 0322 4A        DEC A
00167 0323 B7 F050      STA A  CMTPD
00168 0326 39        RTS
00169                *
00170 0327 CE F08C      IPRT  LDX   #LPDID
00171 032A 6F 00      CLR   0,X
00172 032C 6F 01      CLR   1,X
00173 032E 6F 02      CLR   2,X
00174 0330 6F 03      CLR   3,X

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|       |      |    |      |      |       |          |
|-------|------|----|------|------|-------|----------|
| 00175 | 0332 | 86 | 3E   |      | LDA A | #\$3E    |
| 00176 | 0334 | A7 | 01   |      | STA A | 1,X      |
| 00177 | 0336 | 86 | FF   |      | LDA A | #\$FF    |
| 00178 | 0338 | A7 | 02   |      | STA A | 2,X      |
| 00179 | 033A | 86 | 2C   |      | LDA A | #\$2C    |
| 00180 | 033C | A7 | 03   |      | STA A | 3,X      |
| 00181 | 033E | 86 | 50   |      | LDA A | #80      |
| 00182 | 0340 | 97 | ED   |      | STA A | CHRCNT   |
| 00183 | 0342 | 16 |      |      | TAB   |          |
| 00184 | 0343 | 86 | 20   | I1   | LDA A | #SP      |
| 00185 | 0345 | B7 | F08E |      | STA A | LPDOD    |
| 00186 | 0348 | 5A |      |      | DEC B |          |
| 00187 | 0349 | 26 | F8   |      | BNE   | I1       |
| 00188 | 034B | 39 |      |      | RTS   |          |
| 00189 |      |    |      | *    |       |          |
| 00190 |      |    |      | *    |       |          |
| 00191 | 034C | 96 | F2   | CASI | LDA A | CASSWT   |
| 00192 | 034E | 26 | 68   |      | BNE   | CAI4     |
| 00193 | 0350 | 4C |      |      | INC A |          |
| 00194 | 0351 | 97 | F2   |      | STA A | CASSWT   |
| 00195 | 0353 | 4F |      |      | CLR A |          |
| 00196 | 0354 | 97 | 09   |      | STA A | \$09     |
| 00197 | 0356 | 4A |      |      | DEC A |          |
| 00198 | 0357 | 97 | 3A   |      | STA A | \$3A     |
| 00199 | 0359 | CE | 0686 |      | LDX   | #DRIVEM  |
| 00200 | 035C | BD | 0644 |      | JSR   | MSGOUT   |
| 00201 | 035F | BD | 062D | CAI1 | JSR   | GETDAT   |
| 00202 | 0362 | 81 | 31   |      | CMP A | ##'1     |
| 00203 | 0364 | 26 | 05   |      | BNE   | CAI2     |
| 00204 | 0366 | CE | F050 |      | LDX   | #CAS1    |
| 00205 | 0369 | 20 | 07   |      | BRA   | CAI3     |
| 00206 | 036B | 81 | 32   | CAI2 | CMP A | ##'2     |
| 00207 | 036D | 26 | F0   |      | BNE   | CAI1     |
| 00208 | 036F | CE | F060 |      | LDX   | #CAS2    |
| 00209 | 0372 | DF | 38   | CAI3 | STX   | ACIANO   |
| 00210 | 0374 | CE | 06A4 |      | LDX   | #NAMBLK  |
| 00211 | 0377 | BD | 0644 |      | JSR   | MSGOUT   |
| 00212 | 037A | BD | 062D |      | JSR   | GETDAT   |
| 00213 | 037D | D7 | 33   |      | STA B | BLKNAM   |
| 00214 | 037F | 97 | 34   |      | STA A | BLKNAM+1 |
| 00215 | 0381 | CE | 06BC |      | LDX   | #BLKLST  |
| 00216 | 0384 | BD | 0644 |      | JSR   | MSGOUT   |
| 00217 | 0387 | BD | 062D |      | JSR   | GETDAT   |
| 00218 | 038A | D7 | EE   |      | STA B | LSTBLK   |
| 00219 | 038C | 97 | EF   |      | STA A | LSTBLK+1 |
| 00220 | 038E | CE | 06D3 |      | LDX   | #DATSTR  |
| 00221 | 0391 | BD | 0644 |      | JSR   | MSGOUT   |
| 00222 | 0394 | BD | 0653 |      | JSR   | GETADR   |
| 00223 | 0397 | DE | DF   |      | LDX   | STMP     |
| 00224 | 0399 | DF | 3C   |      | STX   | BFRPTR   |
| 00225 | 039B | CE | 06E8 |      | LDX   | #DATFIN  |
| 00226 | 039E | BD | 0644 |      | JSR   | MSGOUT   |
| 00227 | 03A1 | BD | 0653 |      | JSR   | GETADR   |
| 00228 | 03A4 | DE | DF   |      | LDX   | STMP     |
| 00229 | 03A6 | DF | 3E   |      | STX   | BFRSZE   |
| 00230 | 03A8 | CE | 06FB |      | LDX   | #BLKLNQ  |
| 00231 | 03AB | BD | 0644 |      | JSR   | MSGOUT   |
| 00232 | 03AE | BD | 0653 |      | JSR   | GETADR   |



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|       |      |         |       |       |         |
|-------|------|---------|-------|-------|---------|
| 00233 | 03B1 | DE DF   |       | LDX   | STMP    |
| 00234 | 03B3 | DF F0   |       | STX   | BLKLEN  |
| 00235 | 03B5 | BD FB00 |       | JSR   | INTLZ   |
| 00236 | 03B8 | 39      | CAI4  | RTS   |         |
| 00237 |      |         | *     |       |         |
| 00238 |      |         | *     |       |         |
| 00239 | 03B9 | BD FC06 | DISKO | JSR   | INTIO   |
| 00240 | 03BC | CE 0824 |       | LDX   | #DSKFLO |
| 00241 | 03BF | BD 0644 |       | JSR   | MSGOUT  |
| 00242 | 03C2 | 5F      |       | CLR B |         |
| 00243 | 03C3 | BD 062D |       | JSR   | GETDAT  |
| 00244 | 03C6 | 97 E9   |       | STA A | ATMP1   |
| 00245 | 03C8 | D7 EA   |       | STA B | BTMP1   |
| 00246 | 03CA | BD 0767 |       | JSR   | FIXFLE  |
| 00247 | 03CD | 97 0B   |       | STA A | OTRK    |
| 00248 | 03CF | 86 EA   |       | LDA A | #\$EA   |
| 00249 | 03D1 | 97 0A   |       | STA A | OSIZE+1 |
| 00250 | 03D3 | 4F      |       | CLR A |         |
| 00251 | 03D4 | 97 09   |       | STA A | OSIZE   |
| 00252 | 03D6 | 97 0D   |       | STA A | OCNTR   |
| 00253 | 03D8 | C1 31   |       | CMP B | #\$31   |
| 00254 | 03DA | 26 02   |       | BNE   | DK01    |
| 00255 | 03DC | 8A 40   |       | ORA A | #\$40   |
| 00256 | 03DE | 4C      | DK01  | INC A |         |
| 00257 | 03DF | 97 0C   |       | STA A | OSCTR   |
| 00258 | 03E1 | 39      |       | RTS   |         |
| 00259 |      |         | *     |       |         |
| 00260 |      |         | *     |       |         |
| 00261 | 03E2 | BD FC06 | DISKI | JSR   | INTIO   |
| 00262 | 03E5 | 7F 00F5 |       | CLR   | DSWT    |
| 00263 | 03E8 | CE 0810 |       | LDX   | #DSKFLI |
| 00264 | 03EB | BD 0644 |       | JSR   | MSGOUT  |
| 00265 | 03EE | 5F      |       | CLR B |         |
| 00266 | 03EF | BD 062D |       | JSR   | GETDAT  |
| 00267 | 03F2 | 37      |       | PSH B |         |
| 00268 | 03F3 | 36      |       | PSH A |         |
| 00269 | 03F4 | 84 0F   |       | AND A | #\$0F   |
| 00270 | 03F6 | 8B 0D   |       | ADD A | #\$0D   |
| 00271 | 03F8 | C1 31   |       | CMP B | #\$31   |
| 00272 | 03FA | 26 02   |       | BNE   | DKI0    |
| 00273 | 03FC | 8A 40   |       | ORA A | #\$40   |
| 00274 | 03FE | 97 07   | DKI0  | STA A | ISCTR   |
| 00275 | 0400 | 4F      |       | CLR A |         |
| 00276 | 0401 | 97 04   |       | STA A | ISIZE   |
| 00277 | 0403 | 97 06   |       | STA A | ITRK    |
| 00278 | 0405 | 97 08   |       | STA A | ICNTR   |
| 00279 | 0407 | 86 02   |       | LDA A | #\$02   |
| 00280 | 0409 | 97 05   |       | STA A | ISIZE+1 |
| 00281 | 040B | BD FC09 |       | JSR   | XRI     |
| 00282 | 040E | 97 05   |       | STA A | ISIZE+1 |
| 00283 | 0410 | 32      |       | PUL A |         |
| 00284 | 0411 | BD 0767 |       | JSR   | FIXFLE  |
| 00285 | 0414 | 97 06   |       | STA A | ITRK    |
| 00286 | 0416 | 4F      |       | CLR A |         |
| 00287 | 0417 | 97 04   |       | STA A | ISIZE   |
| 00288 | 0419 | 97 08   |       | STA A | ICNTR   |

CMP B #31

|       |      |    |      |      |       |          |
|-------|------|----|------|------|-------|----------|
| 00291 | 041E | 26 | 02   |      | BNE   | DKI1     |
| 00292 | 0420 | 8A | 40   |      | ORA A | #\$40    |
| 00293 | 0422 | 97 | 07   | DKI1 | STA A | ISCTR    |
| 00294 | 0424 | 39 |      |      | RTS   |          |
| 00295 |      |    |      | *    |       |          |
| 00296 |      |    |      | *    |       |          |
| 00297 | 0425 | DF | E5   | CI   | STX   | XTMP1    |
| 00298 | 0427 | DE | F7   | CI1  | LDX   | CUSPNT   |
| 00299 | 0429 | 63 | 00   |      | COM   | 0,X      |
| 00300 | 042B | CE | 26F0 |      | LDX   | #TIMER   |
| 00301 | 042E | 09 |      | CI2  | DEX   |          |
| 00302 | 042F | 27 | F6   |      | BEQ   | CI1      |
| 00303 | 0431 | B6 | F001 |      | LDA A | KBDIC    |
| 00304 | 0434 | 85 | 80   |      | BIT A | #MASK    |
| 00305 | 0436 | 27 | F6   |      | BEQ   | CI2      |
| 00306 | 0438 | DE | F7   |      | LDX   | CUSPNT   |
| 00307 | 043A | A6 | 00   |      | LDA A | 0,X      |
| 00308 | 043C | 2A | 02   |      | BPL   | CI3      |
| 00309 | 043E | 63 | 00   |      | COM   | 0,X      |
| 00310 | 0440 | B6 | F000 | CI3  | LDA A | KBDID    |
| 00311 | 0443 | DE | E5   |      | LDX   | XTMP1    |
| 00312 | 0445 | 39 |      |      | RTS   |          |
| 00313 |      |    |      | *    |       |          |
| 00314 |      |    |      | *    |       |          |
| 00315 |      |    |      | *    |       |          |
| 00316 | 0446 | 37 |      | TCI  | PSH B |          |
| 00317 | 0447 | 86 | 01   |      | LDA A | #1       |
| 00318 | 0449 | B5 | F050 | TI1  | BIT A | CMTPD    |
| 00319 | 044C | 27 | FB   |      | BEQ   | TI1      |
| 00320 | 044E | 86 | 70   |      | LDA A | #\$70    |
| 00321 | 0450 | B4 | F050 |      | AND A | CMTPD    |
| 00322 | 0453 | 27 | 00   |      | BEQ   | TI2      |
| 00323 | 0455 | B6 | F051 |      | LDA A | CMTPC    |
| 00324 | 0458 | C6 | 13   |      | LDA B | #\$13    |
| 00325 | 045A | F7 | F050 |      | STA B | CMTPD    |
| 00326 | 045D | 5A |      |      | DEC B |          |
| 00327 | 045E | F7 | F050 |      | STA B | CMTPD    |
| 00328 | 0461 | 39 |      |      | RTS   |          |
| 00329 | 0462 | B6 | F051 | TI2  | LDA A | CMTPC    |
| 00330 | 0465 | 33 |      |      | PUL B |          |
| 00331 | 0466 | 39 |      |      | RTS   |          |
| 00332 |      |    |      | *    |       |          |
| 00333 |      |    |      | *    |       |          |
| 00334 | 0467 | DF | E5   | CCI  | STX   | XTMP1    |
| 00335 | 0469 | DE | 3C   |      | LDX   | BFRPTR   |
| 00336 | 046B | 9C | 3E   |      | CPX   | BFRSZE   |
| 00337 | 046D | 27 | 08   |      | BEQ   | CCI1     |
| 00338 | 046F | A6 | 00   |      | LDA A | 0,X      |
| 00339 | 0471 | 08 |      |      | INX   |          |
| 00340 | 0472 | DF | 3C   |      | STX   | BFRPTR   |
| 00341 | 0474 | DE | E5   |      | LDX   | XTMP1    |
| 00342 | 0476 | 39 |      |      | RTS   |          |
| 00343 | 0477 | 37 |      | CCI1 | PSH B |          |
| 00344 | 0478 | DE | 3E   |      | LDX   | BFRSZE   |
| 00345 | 047A | DF | 3C   |      | STX   | BFRPTR   |
| 00346 | 047C | D6 | F0   |      | LDA B | BLKLEN   |
| 00347 | 047E | 96 | F1   |      | LDA A | BLKLEN+1 |
| 00348 | 0480 | 9B | 3F   |      | ADD A | BFRSZE+1 |

|       |      |    |      |      |     |   |          |
|-------|------|----|------|------|-----|---|----------|
| 00349 | 0482 | D9 | 3E   |      | ADC | B | BFRSZE   |
| 00350 | 0484 | 97 | 3F   |      | STA | A | BFRSZE+1 |
| 00351 | 0486 | D7 | 3E   |      | STA | B | BFRSZE   |
| 00352 | 0488 | 33 |      |      | PUL | B |          |
| 00353 | 0489 | BD | FB91 |      | JSR |   | RDBLK    |
| 00354 | 048C | 7D | 0009 |      | TST |   | CSTATS   |
| 00355 | 048F | 27 | 22   |      | BEQ |   | CCI5     |
| 00356 | 0491 | 96 | 09   |      | LDA | A | CSTATS   |
| 00357 | 0493 | 81 | 43   |      | CMP | A | #\$43    |
| 00358 | 0495 | 26 | 08   |      | BNE |   | CCI2     |
| 00359 | 0497 | CE | 070F |      | LDX |   | #ERRCHK  |
| 00360 | 049A | BD | 0644 |      | JSR |   | MSGOUT   |
| 00361 | 049D | 20 | 12   |      | BRA |   | CCI4     |
| 00362 | 049F | 81 | 54   | CCI2 | CMP | A | #\$54    |
| 00363 | 04A1 | 26 | 08   |      | BNE |   | CCI3     |
| 00364 | 04A3 | CE | 071F |      | LDX |   | #ERRCNT  |
| 00365 | 04A6 | BD | 0644 |      | JSR |   | MSGOUT   |
| 00366 | 04A9 | 20 | 06   |      | BRA |   | CCI4     |
| 00367 | 04AB | CE | 0731 | CCI3 | LDX |   | #ERRUNK  |
| 00368 | 04AE | BD | 0644 |      | JSR |   | MSGOUT   |
| 00369 | 04B1 | 20 | C4   | CCI4 | BRA |   | CCI1     |
| 00370 | 04B3 | DE | 33   | CCI5 | LDX |   | BLKNAM   |
| 00371 | 04B5 | FF | E07E |      | STX |   | #\$E07E  |
| 00372 | 04B8 | 08 |      |      | INX |   |          |
| 00373 | 04B9 | DF | 33   |      | STX |   | BLKNAM   |
| 00374 | 04BB | 20 | AA   |      | BRA |   | CCI      |
| 00375 |      |    |      | *    |     |   |          |
| 00376 |      |    |      | *    |     |   |          |
| 00377 | 04BD | DF | E5   | DCI  | STX |   | XTMP1    |
| 00378 | 04BF | 37 |      |      | PSH | B |          |
| 00379 | 04C0 | BD | FC09 |      | JSR |   | XRI      |
| 00380 | 04C3 | 24 | 03   |      | BCC |   | DCI1     |
| 00381 | 04C5 | 7C | 00F5 |      | INC |   | DSWT     |
| 00382 | 04C8 | 33 |      | DCI1 | PUL | B |          |
| 00383 | 04C9 | DE | E5   |      | LDX |   | XTMP1    |
| 00384 | 04CB | 39 |      |      | RTS |   |          |
| 00385 |      |    |      | *    |     |   |          |
| 00386 |      |    |      | *    |     |   |          |
| 00387 | 04CC | 39 |      | MCI  | RTS |   |          |
| 00388 |      |    |      | *    |     |   |          |
| 00389 |      |    |      | *    |     |   |          |
| 00390 |      |    |      | *    |     |   |          |
| 00391 |      |    |      | *    |     |   |          |
| 00392 | 04CD | DF | E5   | CO   | STX |   | XTMP1    |
| 00393 | 04CF | 36 |      |      | PSH | A |          |
| 00394 | 04D0 | DE | F7   |      | LDX |   | CUSPNT   |
| 00395 | 04D2 | 81 | 0D   |      | CMP | A | #CR      |
| 00396 | 04D4 | 27 | 0E   |      | BEQ |   | CO1      |
| 00397 | 04D6 | 81 | 08   |      | CMP | A | #LF      |
| 00398 | 04D8 | 27 | 23   |      | BEQ |   | CO4      |
| 00399 | 04DA | A7 | 00   |      | STA | A | 0, X     |
| 00400 | 04DC | 08 |      |      | INX |   |          |
| 00401 | 04DD | DF | F7   |      | STX |   | CUSPNT   |
| 00402 | 04DF | 8C | E200 |      | CPX |   | #VIDE    |
| 00403 | 04E2 | 26 | 19   |      | BNE |   | CO4      |
| 00404 | 04E4 | CE | E000 | CO1  | LDX |   | #VIDB    |
| 00405 | 04E7 | A6 | 20   | CO2  | LDA | A | 32, X    |
| 00406 | 04E9 | A7 | 00   |      | STA | A | 0, X     |

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00407 04EB 08      INX
00408 04EC 8C E1E0  CPX      #VIDC
00409 04EF 26 F6    BNE      C02
00410 04F1 DF F7    STX      CUSPNT
00411 04F3 86 20    LDA A    #SP
00412 04F5 A7 00    C03     STA A    0,X
00413 04F7 08      INX
00414 04F8 8C E200  CPX      #VIDE
00415 04FB 26 F8    BNE      C03
00416 04FD 32      C04     PUL A
00417 04FE DE E5    LDX      XTMP1
00418 0500 39      RTS
00419
00420
00421 0501 36      *      TCO     PSH A
00422 0502 86 02    LDA A    #2
00423 0504 B5 F050  T01     BIT A    CMTPD
00424 0507 27 FB    BEQ      T01
00425 0509 32      PUL A
00426 050A B7 F051  STA A    CMTPC
00427 050D 39      RTS
00428
00429
00430 050E 36      *      PCO     PSH A
00431 050F 81 0D    CMP A    #CR
00432 0511 27 0F    BEQ      CARET
00433 0513 81 0A    CMP A    #LF
00434 0515 27 1E    BEQ      LINF
00435 0517 B7 F08E    STA A    LPDOD
00436 051A 7A 00ED  DEC      CHRCNT
00437 051D 27 46    BEQ      PRT
00438 051F 32      PUL A
00439 0520 39      RTS
00440 0521 32      CAR     PUL A
00441 0522 7D 00F6  CARET   TST      SWT
00442 0525 27 34    BEQ      BCK
00443 0527 97 F6    STA A    SWT
00444 0529 86 20    SPL     LDA A    #SP
00445 052B B7 F08E  SPL00P  STA A    LPDOD
00446 052E 7A 00ED  DEC      CHRCNT
00447 0531 26 F8    BNE      SPLOOP
00448 0533 20 33    BRA      PRINT
00449 0535 36      LINF    PSH A
00450 0536 DF E3      STX      XBUF2
00451 0538 CE 1D00  LDX      #$1D00  86 MILSEC APPROX
00452 053B 09      LINLOP  DEX
00453 053C 26 FD    BNE      LINLOP
00454 053E DE E3    LDX      XBUF2
00455 0540 86 50    LDA A    #80
00456 0542 91 ED    CMP A    CHRCNT
00457 0544 26 DB    BNE      CAR
00458 0546 32      PUL A
00459 0547 91 F6    CMP A    SWT
00460 0549 27 04    BEQ      PASS
00461 054B 97 F6    STA A    SWT
00462 054D 32      PUL A
00463 054E 39      RTS
00464 054F 86 30    PASS   LDA A    #$30

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|       |      |    |             |     |   |                     |         |
|-------|------|----|-------------|-----|---|---------------------|---------|
| 00465 | 0551 | B7 | F08D        | STA | A | LPDIC               |         |
| 00466 | 0554 | 86 | 38          | LDA | A | #\$38               |         |
| 00467 | 0556 | B7 | F08D        | STA | A | LPDIC               |         |
| 00468 | 0559 | 32 |             | PUL | A |                     |         |
| 00469 | 055A | 39 |             | RTS |   |                     |         |
| 00470 | 055B | 97 | F6 BCK      | STA | A | SWT                 |         |
| 00471 | 055D | 86 | 50          | LDA | A | #\$80               |         |
| 00472 | 055F | 91 | ED          | CMP | A | CHRCNT              |         |
| 00473 | 0561 | 26 | C6          | BNE |   | SPL                 |         |
| 00474 | 0563 | 20 | 2A          | BRA |   | BACK                |         |
| 00475 | 0565 | 4F | PRT         | CLR | A |                     |         |
| 00476 | 0566 | 97 | F6          | STA | A | SWT                 |         |
| 00477 | 0568 | B6 | F08C PRINT  | LDA | A | LPDIC               |         |
| 00478 | 056B | 86 | 3C          | LDA | A | #\$3C               |         |
| 00479 | 056D | B7 | F08D        | STA | A | LPDIC               |         |
| 00480 | 0570 | 86 | 03 MOVE     | LDA | A | #\$03               |         |
| 00481 | 0572 | DF | E1          | STX |   | XBUF1               |         |
| 00482 | 0574 | CE | FFFF MOVE1  | LDX |   | #\$FFFF             |         |
| 00483 | 0577 | 7D | F08D TIME   | TST |   | LPDIC               |         |
| 00484 | 057A | 28 | 06          | BMI |   | OUT                 |         |
| 00485 | 057C | 09 |             | DEX |   |                     |         |
| 00486 | 057D | 26 | F8          | BNE |   | TIME                |         |
| 00487 | 057F | 4A |             | DEC | A |                     |         |
| 00488 | 0580 | 26 | F2          | BNE |   | MOVE1               |         |
| 00489 | 0582 | B6 | F08C OUT    | LDA | A | LPDIC               |         |
| 00490 | 0585 | 44 |             | LSR | A |                     |         |
| 00491 | 0586 | 25 | 14          | BCS |   | JAM                 |         |
| 00492 | 0588 | 44 |             | LSR | A |                     |         |
| 00493 | 0589 | 25 | 16          | BCS |   | PO                  |         |
| 00494 | 058B | 84 | 20          | AND | A | #\$20               |         |
| 00495 | 058D | 26 | 17          | BNE |   | OFFLIN              |         |
| 00496 | 058F | 86 | 3E BACK     | LDA | A | #\$3E               |         |
| 00497 | 0591 | B7 | F08D        | STA | A | LPDIC               |         |
| 00498 | 0594 | 86 | 50          | LDA | A | #\$80               | COLUMNS |
| 00499 | 0596 | 97 | ED          | STA | A | CHRCNT              |         |
| 00500 | 0598 | DE | E1          | LDX |   | XBUF1               |         |
| 00501 | 059A | 32 |             | PUL | A |                     |         |
| 00502 | 059B | 39 |             | RTS |   |                     |         |
| 00503 | 059C | CE | 05BE JAM    | LDX |   | msgid               |         |
| 00504 | 059F | 20 | 08          | BRA |   | MSGP                |         |
| 00505 | 05A1 | CE | 05CE PO     | LDX |   | msgid               |         |
| 00506 | 05A4 | 20 | 03          | BRA |   | MSGP                |         |
| 00507 | 05A6 | CE | 05DE OFFLIN | LDX |   | msgid               |         |
| 00508 | 05A9 | A6 | 00 MSGP     | LDA | A | 0,X                 |         |
| 00509 | 05AB | 81 | 03          | CMP | A | #\$03               |         |
| 00510 | 05AD | 27 | 0A          | BEQ |   | MSGP1               |         |
| 00511 | 05AF | DF | E3          | STX |   | XBUF2               |         |
| 00512 | 05B1 | BD | 04CD        | JSR |   | CO -                |         |
| 00513 | 05B4 | DE | E3          | LDX |   | XBUF2               |         |
| 00514 | 05B6 | 08 |             | INX |   |                     |         |
| 00515 | 05B7 | 20 | F0          | BRA |   | MSGP                |         |
| 00516 | 05B9 | BD | 0425 MSGP1  | JSR |   | CI -                |         |
| 00517 | 05BC | 20 | D1          | BRA |   | BACK                |         |
| 00518 | 05BE | 46 | MSG1        | FCC |   | 15, FIX PAPER JAM   |         |
| 00519 | 05CD | 03 |             | FCB |   | #\$03               |         |
| 00520 | 05CE | 4F | MSG2        | FCC |   | 15, OUT OF PAPER    |         |
| 00521 | 05DD | 03 |             | FCB |   | #\$03               |         |
| 00522 | 05DE | 50 | MSG3        | FCC |   | 15, PRINTER OFFLINE |         |

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00523 05ED 03          FCB      $03
00524
00525
00526 05EE DF E5      CCO      STX      XTMP1
00527 05F0 37          PSH B
00528 05F1 36          PSH A
00529 05F2 DE 3C      LDX      BFRPTR
00530 05F4 9C 3E      CPX      BFRSZE
00531 05F6 27 0A      BEQ      CCO1
00532 05F8 A7 00      STA A    0,X
00533 05FA 08          INX
00534 05FB DF 3C      STX      BFRPTR
00535 05FD 32          PUL A
00536 05FE 33          PUL B
00537 05FF DE E5      LDX      XTMP1
00538 0601 39          RTS
00539 0602 DE 3E      CCO1    LDX      BFRSZE
00540 0604 DF 3C      STX      BFRPTR
00541 0606 BD FB2D    JSR      WRTBLK
00542 0609 96 F0      LDA A    BLKLEN
00543 060B D6 F1      LDA B    BLKLEN+1
00544 060D DB 3F      ADD B    BFRSZE+1
00545 060F 99 3E      ADC A    BFRSZE
00546 0611 97 3E      STA A    BFRSZE
00547 0613 D7 3F      STA B    BFRSZE+1
00548 0615 DE 33      LDX      BLKNAM
00549 0617 FF E07E    STX      $E07E..
00550 061A 08          INX
00551 061B DF 33      STX      BLKNAM
00552 061D 32          PUL A
00553 061E 20 CE      BRA      CCO
00554
00555
00556 0620 DF E5      DCO      STX      XTMP1
00557 0622 37          PSH B
00558 0623 36          PSH A
00559 0624 BD FC0C    JSR      XWRT
00560 0627 32          PUL A
00561 0628 33          PUL B
00562 0629 DE E5      LDX      XTMP1
00563 062B 39          RTS
00564
00565
00566 062C 39          MCO      RTS
00567
00568
00569
00570 062D 37          GETDAT  PSH B
00571 062E BD 0425    JSR      CI
00572 0631 36          PSH A
00573 0632 BD 04CD    JSR      CO
00574 0635 32          PUL A
00575 0636 33          PUL B
00576 0637 81 0D      CMP A    #$0D
00577 0639 27 05      BEQ      GET1
00578 063B D7 EB      STA B    BTMP2
00579 063D 16          TAB
00580 063E 20 ED      BRA      GETDAT

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00581 0640 17      GET1   TBA
00582 0641 D6 EB      LDA B  BTMP2
00583 0643 39      RTS
00584
00585 0644 A6 00      *
MSGOUT LDA A  0,X
00586 0646 27 0A      BEQ   NEXIT
00587 0648 DF E7      STX   XTMP2
00588 064A BD 04CD     JSR   CO
00589 064D DE E7      LDX   XTMP2
00590 064F 08
00591 0650 20 F2      BRA   MSGOUT
00592 0652 39      MEXIT RTS
00593
00594 0653 BD 0425     *
GETADR JSR   CI
00595 0656 BD 04CD     JSR   CO
00596 0659 81 0D      CMP A #CR
00597 065B 27 14      BEQ   GA2
00598 065D BD 0672     JSR   CHEX
00599 0660 25 F1      BCS  GETADR
00600 0662 C6 04      LDA B #$04
00601 0664 78 00E0     GA1  ASL   STMP+1
00602 0667 79 00DF     ROL   STMP
00603 066A 5A          DEC B
00604 066B 26 F7      BNE  GA1
00605 066D 9B E0      ADD A STMP+1
00606 066F 97 E0      STA A STMP+1
00607 0671 39      GA2  RTS
00608
00609 0672 80 30      *
CHEX  SUB A  #$30
00610 0674 25 0F      BCS  CHEX2
00611 0676 8B E9      ADD A #$E9
00612 0678 25 0B      BCS  CHEX2
00613 067A 8B 06      ADD A #$06
00614 067C 2A 04      BPL  CHEX1
00615 067E 8B 07      ADD A #$07
00616 0680 25 03      BCS  CHEX2
00617 0682 8B 0A      CHEX1 ADD A  #$0A
00618 0684 0C          CLC
00619 0685 39      CHEX2 RTS
00620
00621
00622 0686 00      *
DRIVEM FCC  $0D
00623 0687 45      FCC  /ENTER DRIVE (1=CAS1 2=CAS2)/
00624 06A2 0D00     FDB  $0D00
00625 06A4 45      NAMBLK FCC /ENTER FIRST BLOCK NAME/
00626 06BA 0D00     FDB  $0D00
00627 06BC 45      BLKLST FCC /ENTER LAST BLOCK NAME/
00628 06D1 0D00     FDB  $0D00
00629 06D3 45      DATSTR FCC /ENTER START ADDRESS/
00630 06E6 0D00     FDB  $0D00
00631 06E8 45      DATFIN FCC /ENTER END ADDRESS/
00632 06F9 0D00     FDB  $0D00
00633 06FB 45      BLKLNK FCC /ENTER BLOCK LENGTH/
00634 070D 0D00     FDB  $0D00
00635 070F 43      ERRCHK FCC /CHECKSUM ERROR/
00636 071D 0D00     FDB  $0D00
00637 071F 44      ERRCNT FCC /DATA COUNT ERROR/
00638 072F 0D00     FDB  $0D00

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00639 0731 55      ERRUNK FCC      /UNKNOWN ERROR/
00640 073E 0D00      FDB      $0D00
00641 0740 46      LDFILE FCC      /FILE IS LOADING/
00642 074F 0D00      FDB      $0D00
00643 0751 44      WTFILE FCC      /DATA WRITING ON FILE/
00644 0765 0D00      FDB      $0D00
00645 *
00646 *
00647 *
00648 0767 37      FIXFLE PSH B
00649 0768 84 0F      AND A    #$0F
00650 076A C6 08      LDA B    #$08
00651 076C D7 EC      STA B    CNT
00652 076E 5F      CLR B
00653 076F 44      LSR A
00654 0770 24 02      FIX1    BCC      FIX2
00655 0772 CB 09      ADD B    #$09
00656 0774 56      FIX2    ROR B
00657 0775 46      ROR A
00658 0776 7A 00EC    DEC      CNT
00659 0779 26 F5      BNE      FIX1
00660 077B 8B 05      ADD A    #$05
00661 077D 33      PUL B
00662 077E 39      RTS
00663 *
00664 077F 37      FLESZE PSH B
00665 0780 D6 F4      LDA B    PORTB
00666 0782 C5 10      BIT B    #$10
00667 0784 26 02      BNE      FS0
00668 0786 33      PUL B
00669 0787 39      RTS
00670 0788 36      FS0     PSH A
00671 0789 86 20      LDA A    #$20
00672 078B D6 0D      FS01    LDA B    OCNTR
00673 078D 27 05      BEQ      FS02
00674 078F BD 0620    JSR      DCO
00675 0792 20 F7      BRA      FS01
00676 0794 96 0A      FS02    LDA A    OSIZE+1
00677 0796 36      PSH A
00678 0797 96 E9      LDA A    ATMP1
00679 0799 84 0F      AND A    #$0F
00680 079B 8B 0E      ADD A    #$0E
00681 079D D6 EA      LDA B    BTMP1
00682 079F C1 31      CMP B    #$31
00683 07A1 26 02      BNE      FS1
00684 07A3 8A 40      ORA A    #$40
00685 07A5 97 0C      FS1     STA A    OSCTR
00686 07A7 4F      CLR A
00687 07A8 97 09      STA A    OSIZE
00688 07AA 97 0B      STA A    OTRK
00689 07AC 97 0D      STA A    OCNTR
00690 07AE 86 02      LDA A    #$02
00691 07B0 97 0A      STA A    OSIZE+1
00692 07B2 33      PUL B
00693 07B3 86 EB      LDA A    #$EB
00694 07B5 10      SBR
00695 07B6 BD FC0C    JSR      XWRT

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00696 07B9 D6 0D FS2 LDAB OCNTR



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PAGE 013 IOHANDLR

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00697 07BB 27 06      BEQ      F53
00698 07BD 4F          CLR      A
00699 07BE BD FC0C     JSR      XWRT
00700 07C1 20 F6      BRA      F52
00701 07C3 32      F53     PUL      A
00702 07C4 33          PUL      B
00703 07C5 39          RTS
00704                *
00705                *
00706 07C6 96 F3     INPHLR  LDA      A  PORTA
00707 07C8 81 4B     CMP      A  #'K
00708 07CA 27 10     BEQ      INP1
00709 07CC 81 54     CMP      A  #'T
00710 07CE 27 10     BEQ      INP2
00711 07D0 81 43     CMP      A  #'C
00712 07D2 27 10     BEQ      INP3
00713 07D4 81 44     CMP      A  #'D
00714 07D6 26 0F     BNE      INP4
00715 07D8 BD 048D   JSR      DCI
00716 07DB 39          RTS
00717 07DC BD 0425   INP1     JSR      CI
00718 07DF 39          RTS
00719 07E0 BD 0446   INP2     JSR      TCI
00720 07E3 39          RTS
00721 07E4 BD 0467   INP3     JSR      CCI
00722 07E7 39      INP4     RTS
00723                *
00724 07E8 37      OTPHLR  PSH      B
00725 07E9 D6 F4     LDA      B  PORTB
00726 07EB C5 01     BIT      B  #'01
00727 07ED 27 03     BEQ      OTP1
00728 07EF BD 04CD   JSR      CO
00729 07F2 C5 02     OTP1     BIT      B  #'02
00730 07F4 27 03     BEQ      OTP2
00731 07F6 BD 0501   JSR      TCO
00732 07F9 C5 04     OTP2     BIT      B  #'04
00733 07FB 27 03     BEQ      OTP3
00734 07FD BD 050E   JSR      PCO
00735 0800 C5 08     OTP3     BIT      B  #'08
00736 0802 27 03     BEQ      OTP4
00737 0804 BD 05EE   JSR      CCO
00738 0807 C5 10     OTP4     BIT      B  #'10
00739 0809 27 03     BEQ      OTP5
00740 080B BD 0620   JSR      DCO
00741 080E 33      OTP5     PUL      B
00742 080F 39          RTS
00743                *
00744 0810 45      DSKFLI  FCC      /ENTER INPUT FILE #/
00745 0822 0D00     FDB      $0D00
00746 0824 45      DSKFLO  FCC      /ENTER OUTPUT FILE #/
00747 0837 0D00     FDB      $0D00
00748                *
00749      0839     IOFIN   EQU      *
00750                *
00751                *-----SAMPLE-----
00752 0839 BD 07C6   BEGIN  JSR      INPHLR
00753 083C 7D 08F5     TST     DSWT
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00754 083F 26 07 BNE BG1

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E 014 IOHANDLR

00755 0841 BD 07E8 JSR OPHLR  
00756 0844 81 04 CMP A #\$04  
00757 0846 26 F1 BNE BEGIN  
00758 0848 BD 077F B01 JSR FLESZE  
00759 084B 3F SWI

00760 \*  
00761 \*76-04-16 12:20

00762 END

TOTAL ERRORS 00000