```
00010                           NAM     BOOT
00020                           OPT     OBJ
00040                   #WRITTEN BY R. H. UITERWYK

00050          8014    DRVREG  EQU     $8014
00060          8018    COMREG  EQU     $8018
00070          801B    DATREG  EQU     $801B
00080          801A    SECREG  EQU     $801A
00100 0100                     ORG     $0100
00110 0100 4F          START   CLR A
00120 0101 B7 8014  F52g       STA A   DRVREG
00130 0104 CE FFFF            LDX     #$FFFF
00140 0107 08          STARTO  INX
00150 0108 09                  DEX
00160 0109 09                  DEX
00170 010A 26 FB               BNE     STARTO
00180 010C C6 0B               LDA B   #$0B        RESTORE  W/LOAD
00190 010E F7 8018  F53o       STA B   COMREG
00200 0111 8D 2A    F530       BSR     RETURN
00210 0113 F6 8018  LOOP1      LDA B   COMREG
00220 0116 C5 01               BIT B   #1
00230 0118 26 F9               BNE     LOOP1
00240 011A 7F 801A  F532       CLR     SECREG
00250 011D 8D 1E               BSR     RETURN
00260 011F C6 9C               LDA B   #$9C
00270 0121 F7 8018  FF3o       STA B   COMREG
00280 0124 8D 17               BSR     RETURN
00290 0126 CE 2400             LDX     #$2400
00300 0129 C5 02    LOOP2      BIT B   #2
00310 012B 27 06               BEQ     LOOP3
00320 012D B6 801B  F533       LDA A   DATREG
00330 0130 A7 00               STA A   0, X
00340 0132 08       F53o       INX
00350 0133 F6 8018  LOOP3      LDA B   COMREG
00360 0136 C5 01               BIT B   #1
00370 0138 26 EF               BNE     LOOP2
00380 013A 7E 2400             JMP     $2400
00390 013D 39       RETURN     RTS
00400                          END
```

TOTAL ERRORS 00000

```
00030                           OPT    NOGEN
00040                           OPT    OBJECT
00060      8018      COMREG EQU     $8018
00070      801B      DATREG EQU     $801B
00080      2403      RESTRT EQU     $2403
00090      242B      READ   EQU     $242B
00100      242E      READO  EQU     $242E
00110      2523      PRELIM EQU     $2523
00120      255F      WRITE  EQU     $255F
00130      2561      WRITEO EQU     $2561
00140      25AC      DRIVE  EQU     $25AC
00170      0000      TRACK  EQU     $0000
00180      0001      SECTOR EQU     $0001
00190      0004      BMEMH  EQU     $0004
00200      0006      EMEMH  EQU     $0006
00210      0009      SAVEX  EQU     $0009
00220      000B      PROGX  EQU     $000B
00230      000D      NDRIVE EQU     $000D


00250 3000                     ORG    $3000
00260 3000 0002      BUFNXT RMB     2
00270 3002 0002      ENDBUF RMB     2
00280 3004 0050      BUFFER RMB     80
00290 3054 0001      CREFLG RMB     1
00295 3055 0001      DECPNT RMB     1
00300 3056 0001      LIBSEC RMB     1
00310 3057 0001      NEEDNO RMB     1
00320 3058 0001      TYPE   RMB     1
00330 3059 0002      STARTX RMB     2
00340 305B 0002      ENDX   RMB     2
00350 305D 0002      GOX    RMB     2
00360 305F 0002      HILINE RMB     2
00370 3061 0002      TEMPX1 RMB     2
00380 3063 0002      TEMPX2 RMB     2
00390 3065 0002      TEMPX3 RMB     2
00400 3067 0008      NAME   RMB     8
00410 306F 0008      PASSWD RMB     8
00420 3077 0100      DBUFFR RMB     256
00430 3177 0020      OVERFL RMB     32

00450 2600                     ORG    $2600
00470 2600 CE 2986 DOS    LDX    #COPMSG
00472 2603 86 FF          LDA A  #$FF
00474 2605 B7 3055        STA A  DECPNT
00476 2608 BD 289F        JSR    OUTPUT
00478 260B 8E A049 DOS1   LDS    #$A049
00479 260E BD 2A22        JSR    DOSTRT
00480 2611 20 F8          BRA    DOS1
00485 2613 7E E1D1 OUTCHA JMP    OUTEEE
00490      E1D1      OUTEEE EQU     $E1D1
00500 2616 7E E1AC INCH   JMP    INEEE
00510      E1AC      INEEE  EQU     $E1AC
```

```
00511 2619 7E 261C PRNCHA JMP    OUTPIA
00513 261C DF 09   OUTPIA STX    SAVEX
00514 261E CE 801C        LDX    #$801C
00515 2621 A7 00          STA A  0,X
00516 2623 86 36          LDA A  #$36
00517 2625 A7 01          STA A  1,X
00518 2627 86 3E          LDA A  #$3E
00519 2629 A7 01          STA A  1,X
00520 262B 6D 01   OUTPI3 TST    1,X
00521 262D 2A FC          BPL    OUTPI3
00522 262F A6 00          LDA A  0,X
00523 2631 DE 09          LDX    SAVEX
00524 2633 39             RTS
00531 2634 7D 3055 OUTCH  TST    DECPNT
00532 2637 26 DA          BNE    OUTCHA
00533 2639 20 DE          BRA    PRNCHA
00536 263B 7F 3055 PRINT  CLR    DECPNT
00537 263E 7E 2A3A        JMP    READY
00540              ****************
00560 2641 86 03   RLIB   LDA A  #3
00570 2643 20 08          BRA    LIB1
00580 2645 86 02   WLIB   LDA A  #2
00590 2647 7F 3057        CLR    NEEDNO
00600 264A 7F 3054        CLR    CREFLG
00610 264D 36      LIB1   PSH A
00620 264E 86 02          LDA A  #2
00630 2650 97 00          STA A  TRACK
00640 2652 4F             CLR A
00650 2653 97 01          STA A  SECTOR
00660 2655 BD 2523        JSR    PRELIM
00670 2658 96 01   LIB2   LDA A  SECTOR
00680 265A B7 3056        STA A  LIBSEC
00690 265D CE 3176        LDX    #DBUFFR+255
00700 2660 DF 06          STX    EMEMH
00710 2662 CE 3077        LDX    #DBUFFR
00720 2665 BD 242E        JSR    READO
00730 2668 CE 3077        LDX    #DBUFFR
00740 266B 0F             SEI
00750 266C 9F 09          STS    SAVEX
00760 266E C6 10   LIB3   LDA B  #16
00770 2670 FF 3063        STX    TEMPX2
00780 2673 8E 3066        LDS    #NAME-1
00790 2676 A6 00          LDA A  0,X
00800 2678 81 FF          CMP A  #$FF
00810 267A 27 42          BEQ    LIB7
00820 267C 32      LIB4   PUL A
00830 267D A1 00          CMP A  0,X
00840 267F 26 0B          BNE    LIB5
00850 2681 08             INX
00860 2682 5A             DEC B
00870 2683 26 F7          BNE    LIB4
00880 2685 9E 09          LDS    SAVEX
00890 2687 01             NOP
00900 2688 0E             CLI
00910 2689 7E 272D        JMP    LIB8
00920 268C C1 09   LIB5   CMP B  #9
00930 268E 24 05          BCC    LIB55
00940 2690 CE 2817        LDX    #PASERR
```

PAGE 002   DOS

```
00950 2693 20 20          BRA    LIB65
00960 2695 08      LIB55   INX
00970 2696 5A              DEC B
00980 2697 26 FC          BNE    LIB55
00990 2699 C6 10          LDA B  #16
01000 269B 08      LIB57   INX
01010 269C 5A              DEC B
01020 269D 26 FC          BNE    LIB57
01030 269F 09              DEX
01040 26A0 9C 06          CPX    EMEMH
01050 26A2 27 03          BEQ    LIB58
01060 26A4 08              INX
01070 26A5 20 C7          BRA    LIB3
01080 26A7 9E 09  LIB58   LDS    SAVEX
01090 26A9 01              NOP
01100 26AA 0E              CLI
01110 26AB 96 01          LDA A  SECTOR
01140 26AD 81 09          CMP A  #9
01150 26AF 26 A7          BNE    LIB2
01160 26B1 CE 27C5 LIB6   LDX    #DSKFUL
01170 26B4 32              PUL A.
01180 26B5 BD 28AE LIB65  JSR    CRLF
01190 26B8 BD 289F        JSR    OUTPUT
01200 26BB 7E 2403        JMP    RESTRT
01210 26BE 9E 09  LIB7    LDS    SAVEX
01220 26C0 01              NOP
01230 26C1 0E              CLI
01240 26C2 33              PUL B
01250 26C3 C1 03          CMP B  #3          IS IT READ
01260 26C5 26 05          BNE    LIB75
01270 26C7 CE 27D9        LDX    #NOTFND
01280 26CA 20 E9          BRA    LIB65
01290 26CC 37      LIB75   PSH B
01300 26CD 7C 0006        INC    EMEMH
01310 26D0 FF 3063        STX    TEMPX2
01320 26D3 0F              SEI
01330 26D4 9F 09          STS    SAVEX
01340 26D6 8E 3066        LDS    #NAME-1
01350 26D9 C6 10          LDA B  #16
01360 26DB 32      LIB77   PUL A
01370 26DC A7 00          STA A  0, X
01380 26DE 08              INX
01390 26DF 5A              DEC B
01400 26E0 26 F9          BNE    LIB77
01410 26E2 9E 09          LDS    SAVEX
01420 26E4 01              NOP
01430 26E5 0E              CLI
01440 26E6 7D 3057        TST    NEEDNO
01450 26E9 26 0F          BNE    LIB78
01460 26EB B6 305B        LDA A  ENDX
01470 26EE B0 3059        SUB A  STARTX
01480 26F1 4C              INC A
01490 26F2 16              TAB
01500 26F3 54              LSR B
01510 26F4 54              LSR B
01520 26F5 5C              INC B
01530 26F6 1B              ABA
01540 26F7 B7 3057        STA A  NEEDNO
```

```
01550 26FA A6 02   LIB78   LDA A   2, X
01560 26FC E6 03           LDA B   3, X
01570 26FE F0 3057         SUB B   NEEDNO
01580 2701 82 00           SBC A   #00
01590 2703 2B AC           BMI     LIB6
01600 2705 A7 22           STA A   34, X
01610 2707 E7 23           STA B   35, X
01620 2709 6F 02           CLR     2, X
01630 270B F6 3057         LDA B   NEEDNO
01640 270E E7 03           STA B   3, X
01650 2710 EB 01           ADD B   1, X
01660 2712 4F              CLR A
01670 2713 4C      LIB79   INC A
01680 2714 C0 0A           SUB B   #10
01690 2716 24 FB           BCC     LIB79
01700 2718 4A              DEC A
01710 2719 CB 0A           ADD B   #10
01720 271B E7 21           STA B   33, X
01730 271D AB 00           ADD A   0, X
01740 271F A7 20           STA A   32, X
01750 2721 86 FF           LDA A.  #$FF
01760 2723 A7 10           STA A   16, X
01770 2725 B6 3058         LDA A   TYPE
01780 2728 A7 04           STA A   4, X
01790 272A 32              PUL A
01800 272B 20 10           BRA     LIB82
01810 272D 32      LIB8    PUL A
01820 272E 81 02           CMP A   #2      ARE WE WRITING
01830 2730 26 49           BNE     LIB9
01840 2732 7D 3054         TST     CREFLG
01850 2735 27 06           BEQ     LIB82
01860 2737 CE 282B         LDX     #NOTCRE
01870 273A 7E 26B5         JMP     LIB65
01880 273D F6 305B LIB82   LDA B   ENDX
01890 2740 F0 3059         SUB B   STARTX
01900 2743 5C              INC B
01910 2744 E1 03           CMP B   3, X
01920 2746 23 06           BLS     LIB88
01930 2748 CE 27EB         LDX     #FLFULL
01940 274B 7E 26B5         JMP     LIB65
01950 274E C6 08   LIB88   LDA B   #8
01960 2750 0F              SEI
01970 2751 9F 09           STS     SAVEX
01980 2753 8E 3058         LDS     #STARTX-1
01990 2756 32      LIB89   PUL A
02000 2757 A7 05           STA A   5, X
02010 2759 08              INX
02020 275A 5A              DEC B
02030 275B 26 F9           BNE     LIB89
02040 275D 9E 09           LDS     SAVEX
02050 275F 01              NOP
02060 2760 0E              CLI
02070 2761 FE 3063         LDX     TEMPX2
02080 2764 F6 3058         LDA B   TYPE
02090 2767 A6 14           LDA A   20, X
02100 2769 27 03           BEQ     *+5
02110 276B 11              CBA
02120 276C 26 1F           BNE     LIB91
```

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02130  276E  E7 14          STA B   20,X
02140  2770  B6 3056        LDA A   LIBSEC
02150  2773  97 01          STA A   SECTOR
02210  2775  CE 3077 LIB895 LDX     #DBUFFR
02220  2778  BD 2561        JSR     WRITEO
02250  277B  FE 3063 LIB9   LDX     TEMPX2
02260  277E  B6 3058        LDA A   TYPE
02270  2781  81 FF          CMP A   #$FF
02280  2783  27 OE          BEQ     LIB95
02290  2785  6D 14          TST     20,X
02300  2787  27 OA          BEQ     LIB95
02310  2789  A1 14          CMP A   20,X
02320  278B  27 06          BEQ     LIB95
02330  278D  CE 2801 LIB91  LDX     #TYPERR
02340  2790  7E 26B5        JMP     LIB65
02350  2793  EE 1B  LIB95   LDX     27,X
02360  2795  FF 305F        STX     HILINE
02370  2798  FE 3063        LDX     TEMPX2
02380  279B  EE 19          LDX     25,X
02390  279D  FF 305D        STX     GOX
02400  27A0  FE 3063        LDX     TEMPX2
02410  27A3  EE 17          LDX     23,X
02420  27A5  DF 06          STX     EMEMH
02430  27A7  FF 305B        STX     ENDX
02440  27AA  FE 3063        LDX     TEMPX2
02450  27AD  A6 10          LDA A   16,X
02460  27AF  97 00          STA A   TRACK
02470  27B1  A6 11          LDA A   17,X
02480  27B3  97 01          STA A   SECTOR
02490  27B5  A6 14          LDA A   20,X
02500  27B7  B7 3058        STA A   TYPE
02510  27BA  EE 15          LDX     21,X
02520  27BC  FF 3059        STX     STARTX
02530  27BF  DF 04          STX     BMEMH
02540  27C1  FE 3063        LDX     TEMPX2
02550  27C4  39     RETURN  RTS
02560  27C5  44     DSKFUL  FCC     /DISK FULL - PACK/

02570  27D5  OD             FCB     $0D,$0A,$15,4
02580  27D9  46     NOTFND  FCC     /FILE NOT FOUND/

02590  27E7  OD             FCB     $0D,$0A,$15,4
02600  27EB  46     FLFULL  FCC     /FILE FULL - RENAME/

02610  27FD  OD             FCB     $0D,$0A,$15,4
02620  2801  46     TYPERR  FCC     /FILE TYPE MISMATCH/

02630  2813  OD             FCB     $0D,$0A,$15,4
02640  2817  50     PASERR  FCC     /PASSWORD INVALID/

02650  2827  OD             FCB     $0D,$0A,$15,4
02660  282B  46     NOTCRE  FCC     /FILE ALREADY EXISTS/

02670  283E  OD             FCB     $0D,$0A,$15,4
```

```
02690 2842 CE 2896 DEL     LDX     #DELMSG
02700 2845 BD 289F         JSR     OUTPUT
02710 2848 20 0A           BRA     KEYBDO
02730 284A 86 3F  KEYBD    LDA A   #'?
02740 284C BD 2634         JSR     OUTCH
02750 284F 86 20           LDA A   #$20
02760 2851 BD 2634         JSR     OUTCH
02780 2854 CE 3004 KEYBDO  LDX     #BUFFER
02790 2857 BD 2616 KEYBD1  JSR     INCH
02800 285A 4D              TST A
02810 285B 27 FA           BEQ     KEYBD1
02820 285D 81 0A           CMP A   #$0A
02830 285F 27 F6           BEQ     KEYBD1
02840 2861 81 03           CMP A   #$03
02850 2863 26 03           BNE     *+5
02860 2865 7E 2A22         JMP     DOSTRT
02870 2868 81 18           CMP A   #$18    CONTROL X
02880 286A 27 D6           BEQ .   DEL
02890 286C 81 0D           CMP A   #$0D    IS IT C/R
02900 286E 27 1B           BEQ     IEXIT
02910 2870 81 0F           CMP A.  #$0F    CONTROL O
02920 2872 26 0D           BNE     KEYBD2
02930 2874 86 5F           LDA A   #$5F
02940 2876 BD 2634         JSR     OUTCH
02950 2879 8C 3004         CPX     #BUFFER
02960 287C 27 D9           BEQ     KEYBD1
02970 287E 09              DEX
02980 287F 20 D6           BRA     KEYBD1
02990 2881 8C 304C KEYBD2  CPX     #BUFFER+72
03000 2884 27 D1           BEQ     KEYBD1
03010 2886 A7 00           STA A   0,X
03020 2888 08              INX
03030 2889 20 CC           BRA     KEYBD1
03040 288B 86 04  IEXIT    LDA A   #$04
03050 288D A7 00           STA A   0,X
03060 288F FF 3002         STX     ENDBUF
03070 2892 BD 28AE         JSR     CRLF
03080 2895 39              RTS
03100 2896 20     DELMSG   FCC     / DELETED/

03110 289E 04              FCB     4


03140             *UNIVERSAL OUTPUT ROUTINE

03150 289F 8D 06  OUTPUT   BSR     OUTNCR
03160 28A1 20 0B           BRA     CRLF
03170 28A3 BD 2634 OUTPU1  JSR     OUTCH
03180 28A6 08              INX
03190 28A7 A6 00  OUTNCR   LDA A   0,X
03200 28A9 81 04           CMP A   #$04
03210 28AB 26 F6           BNE     OUTPU1
03220 28AD 39              RTS
03240 28AE FF 28C6 CRLF    STX     CRLFXX
03250 28B1 CE 28BA         LDX     #CRLFST
03260 28B4 8D F1           BSR     OUTNCR
03270 28B6 FE 28C6         LDX     CRLFXX
03280 28B9 39              RTS
```

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03300 28BA 0D      CRLFST FCB     $0D, $0A, $15
03310 28BD FF             FCB     $FF, $FF, $FF, $FF
03320 28C1 04             FCB     $04
03330 28C2 FF             FCB     $FF, $FF, $FF, $FF
03350 28C6 0002    CRLFXX RMB     2


03370 28C8 A6 00   SKIPSP LDA A   0, X
03380 28CA 81 20          CMP A   #$20
03390 28CC 26 03          BNE     *+5
03400 28CE 08      INXSKP INX
03410 28CF 20 F7          BRA     SKIPSP
03420 28D1 4D             TST A
03430 28D2 39             RTS
03450 28D3 8D F3   CCODE  BSR     SKIPSP
03460 28D5 FF 3000        STX     BUFNXT
03470 28D8 0F             SEI
03480 28D9 9F 09          STS     SAVEX
03490 28DB CE 2905        LDX     #DOSLIS-1
03500 28DE BE 3000 LOOP3  LDS     BUFNXT
03510 28E1 34             DES
03520 28E2 08      LOOP4  INX
03530 28E3 32             PUL A
03540 28E4 81 20          CMP A   #$20
03550 28E6 27 FB          BEQ     *-3
03560 28E8 E6 00          LDA B   0, X
03570 28EA 27 11          BEQ     OKCODE
03580 28EC 11             CBA
03590 28ED 27 F3          BEQ     LOOP4
03600 28EF 08      LOOP5  INX
03610 28F0 8C 2983        CPX     #COMEND
03620 28F3 27 0C          BEQ     NOCODE
03630 28F5 E6 00          LDA B   0, X
03640 28F7 26 F6          BNE     LOOP5
03650 28F9 08             INX
03660 28FA 08             INX
03670 28FB 20 E1          BRA     LOOP3
03680 28FD 08      OKCODE INX
03690 28FE BF 3000        STS     BUFNXT
03700 2901 9E 09   NOCODE LDS     SAVEX
03710 2903 01             NOP
03720 2904 0E             CLI
03730 2905 39             RTS


03750 2906 4C      DOSLIS FCC     /LOAD/

03760 290A 00             FCB     0
03770 290B 2D3D           FDB     LOAD
03780 290D 52             FCC     /RUN/

03790 2910 00             FCB     0
03800 2911 2D59           FDB     RUN
03810 2913 53             FCC     /SAVE/

03820 2917 00             FCB     0
03830 2918 2D65           FDB     SAVE
03840 291A 45             FCC     /EXIT/
```

```
03850 291E 00           FCB      O
03860 291F EODO         FDB      $EODO
03870 2921 44           FCC      /DOS/

03880 2924 00           FCB      O
03890 2925 2600         FDB      DOS
03892 2927 50           FCC      /PACK/

03894 292B 00           FCB      O
03896 292C 2A52         FDB      PACK
03900 292E 49           FCC      /INIT/

03910 2932 00           FCB      O
03920 2933 2B39         FDB      INIT
03922 2935 54           FCC      /TEST/

03924 2939 00           FCB      O
03926 293A 2F05         FDB      TEST
03930 293C 43           FCC      /CATALOG/

03940 2943 00           FCB      O
03950 2944 2E2B         FDB      CATAL
03960 2946 43           FCC      /CAT/

03970 2949 00           FCB      O
03980 294A 2E2B         FDB      CATAL
03990 294C 46           FCC      /FILES/

04000 2951 00           FCB      O
04010 2952 2E24         FDB      FILES
04014 2954 48           FCC      /HOME/

04016 2958 00           FCB      O
04018 2959 2CB5         FDB      HOME
04020 295B 43           FCC      /CREATE/

04030 2961 00           FCB      O
04040 2962 2C7D         FDB      CREATE
04042 2964 50           FCC      /PRINT/

04044 2969 00           FCB      O
04046 296A 263B         FDB      PRINT
04050 296C 52           FCC      /RENAME/

04060 2972 00           FCB      O
04070 2973 2CBE         FDB      RENAME
04072 2975 44           FCC      /DELETE/

04073 297B 00           FCB      O
04074 297C 2CF6         FDB      PURGE
04080 297E 50           FCC      /PURGE/

04090 2983 00    COMEND FCB      O
04100 2984 2CF6         FDB      PURGE
```

```
04115 2986 53        COPMSG FCC    /SWTPC V1.0 (C) 1977/

04117 2999 04               FCB    4
04120 299A 0D        RDYMSG FCB    $0D, $0A, $15, $FF, $FF
04130 299F 46               FCC    /FDOS READY/

04117 2999 04               FCB    4
04120 299A 0D        RDYMSG FCB    $0D, $0A, $15, $FF, $FF
04130 299F 46               FCC    /FDOS READY/

04140 29A9 04               FCB    4
04150 29AA 46        NAMMSG FCC    /FILE NAME/

04160 29B3 04               FCB    4
04170 29B4 46        FIRADD FCC    /FIRST ADDRESS/

04180 29C1 04               FCB    4
04190 29C2 4C        LASADD FCC    /LAST ADDRESS /

04200 29CF 04               FCB    4
04210 29D0 50        PSTART FCC    /PROGRAM START/

04220 29DD 04               FCB    4
04230 29DE 23        SECNUM FCC    /# OF SECTORS ( HEX )/

04240 29F0 04               FCB    4
04250 29F1 41        SURMSG FCC    /ARE YOU SURE/

04260 29FD 04               FCB    4
04270 29FE 42        TRKMSG FCC    /BAD TRACK & SECTOR #/

04280 2A12 04               FCB    4
04290 2A13 4E        NEWMSG FCC    /NEW /

04300 2A17 04               FCB    4
04302 2A18 54        TSTDON FCC    /TEST DONE/

04304 2A21 04               FCB    4

04320 2A22 8E A045 DOSTRT LDS    #$A045
04330 2A25 CE 2A22        LDX    #DOSTRT
04340 2A28 DF 0B          STX    PROGX
04341 2A2A CE 801C        LDX    #$801C
04342 2A2D C6 FF          LDA B  #$FF
04343 2A2F E7 00          STA B  0,X
04344 2A31 C6 3E          LDA B  #$3E
04345 2A33 E7 01          STA B  1,X
04346 2A35 86 FF          LDA A  #$FF
04347 2A37 B7 3055        STA A  DECPNT
04350 2A3A CE 299A READY  LDX    #RDYMSG
04360 2A3D BD 289F        JSR    OUTPUT
04370 2A40 BD 2854 DOSTR2 JSR    KEYBDO
04380 2A43 CE 3004        LDX    #BUFFER
04390 2A46 BD 28D3        JSR    CCODE
04400 2A49 8C 2983        CPX    #COMEND
04410 2A4C 27 07          BEQ    RUNCOM
04420 2A4E EE 00          LDX    0,X
04430 2A50 6E 00          JMP    0,X
```

```
04435  2A52  BD 2A72  PACK    JSR     SELECT
04440  2A55  CE 3004  RUNCOM  LDX     #BUFFER
04450  2A58  BD 28C8          JSR     SKIPSP
04460  2A5B  81 04            CMP A   #$04
04470  2A5D  27 E1            BEQ     DOSTR2
04480  2A5F  09               DEX
04490  2A60  86 24            LDA A   #'$
04500  2A62  A7 00            STA A   0,X
04510  2A64  FF 3000          STX     BUFNXT
04520  2A67  BD 2AF0          JSR     CLRPAS
04530  2A6A  86 11            LDA A   #$11
04540  2A6C  B7 3058          STA A   TYPE
04550  2A6F  7E 2D5E          JMP     RUNO

04570  2A72  FE 3000  SELECT  LDX     BUFNXT
04580  2A75  BD 28C8          JSR     SKIPSP
04590  2A78  81 30            CMP A   #$30
04600  2A7A  2B 04            BMI     NOSEL
04610  2A7C  81 39            CMP A   #$39
04620  2A7E  2F 05            BLE     OKSEL
04630  2A80  4F       NOSEL   CLR A
04640  2A81  BD 25AC          JSR     DRIVE
04650  2A84  39               RTS
04660  2A85  80 30    OKSEL   SUB A   #$30
04670  2A87  81 03            CMP A   #$03
04680  2A89  2F 06            BLE     OKSEL1
04690  2A8B  CE 2AA1          LDX     #DRVERR
04700  2A8E  7E 26B5          JMP     LIB65
04710  2A91  BD 25AC  OKSEL1  JSR     DRIVE
04720  2A94  08               INX
04730  2A95  BD 28C8          JSR     SKIPSP
04740  2A98  81 2C            CMP A   #',
04750  2A9A  26 01            BNE     SELEX
04760  2A9C  08               INX
04770  2A9D  FF 3000  SELEX   STX     BUFNXT
04780  2AA0  39               RTS
04800  2AA1  44       DRVERR  FCC     /DRIVE ERROR/

04810  2AAC  04               FCB     4

04830  2AAD  CE 306F  GETPAS  LDX     #PASSWD
04840  2AB0  20 03            BRA     GETNAO
04850  2AB2  CE 3067  GETNAM  LDX     #NAME
04860  2AB5  FF 3061  GETNAO  STX     TEMPX1
04870  2AB8  C6 08            LDA B   #8
04880  2ABA  86 20            LDA A   #$20
04890  2ABC  A7 00    GETNO5  STA A   0,X
04900  2ABE  08               INX
04910  2ABF  5A               DEC B
04920  2AC0  26 FA            BNE     GETNO5
04930  2AC2  FE 3000          LDX     BUFNXT
04940  2AC5  A6 00    GETNA1  LDA A   0,X
04950  2AC7  08               INX
04960  2AC8  FF 3000          STX     BUFNXT
04970  2ACB  81 20            CMP A   #$20
04980  2ACD  27 20            BEQ     GETNEX
04990  2ACF  81 04            CMP A   #$04
05000  2AD1  27 1C            BEQ     GETNEX
05010  2AD3  81 2C            CMP A   #',
```

```
05020  2AD5  27  18              BEQ      GETNEX
05030  2AD7  FE  3061            LDX      TEMPX1
05040  2ADA  A7  00              STA A    0, X
05050  2ADC  08                  INX
05060  2ADD  8C  306F            CPX      #NAME+8
05070  2AE0  27  0D              BEQ      GETNEX
05080  2AE2  8C  3077            CPX      #PASSWD+8
05090  2AE5  27  08              BEQ      GETNEX
05100  2AE7  FF  3061            STX      TEMPX1
05110  2AEA  FE  3000            LDX      BUFNXT
05120  2AED  20  D6              BRA      GETNA1
05130  2AEF  39         GETNEX   RTS
05150  2AF0  36         CLRPAS   PSH A
05160  2AF1  C6  08              LDA B    #8
05170  2AF3  FF  3061            STX      TEMPX1
05180  2AF6  CE  306F            LDX      #PASSWD
05190  2AF9  86  20              LDA A    #$20
05200  2AFB  A7  00     CLRPA1   STA A    0, X
05210  2AFD  08                  INX
05220  2AFE  5A                  DEC B
05230  2AFF  26  FA              BNE      CLRPA1
05240  2B01  FE  3061            LDX      TEMPX1
05250  2B04  32                  PUL A
05260  2B05  39                  RTS

05280  2B06  BD  2A72  MAKNAM    JSR      SELECT
05290  2B09  BD  28C8  MAKN      JSR      SKIPSP
05300  2B0C  81  04              CMP A    #$04
05310  2B0E  27  0A              BEQ      MAKNA0
05320  2B10  81  30              CMP A    #$30
05330  2B12  25  17              BCS      MAKNU1
05340  2B14  81  3A              CMP A    #$3A
05350  2B16  24  13              BCC      MAKNU1
05360  2B18  20  EC              BRA      MAKNAM
05370  2B1A  CE  29AA  MAKNA0    LDX      #NAMMSG
05380  2B1D  BD  28A7            JSR      OUTNCR
05390  2B20  BD  284A            JSR      KEYBD
05400  2B23  CE  3004            LDX      #BUFFER
05410  2B26  FF  3000            STX      BUFNXT
05420  2B29  20  DE              BRA      MAKN
05430  2B2B  BD  2AB2  MAKNU1    JSR      GETNAM
05440  2B2E  BD  2AF0            JSR      CLRPAS
05450  2B31  81  2C              CMP A    #',
05460  2B33  26  03              BNE      *+5
05470  2B35  BD  2AAD            JSR      GETPAS
05480  2B38  39                  RTS

05500  2B39  BD  2A72  INIT      JSR      SELECT
05510  2B3C  CE  29F1            LDX      #SURMSG
05520  2B3F  BD  28A7            JSR      OUTNCR
05530  2B42  BD  284A            JSR      KEYBD
05540  2B45  CE  3004            LDX      #BUFFER
05550  2B48  BD  28C8            JSR      SKIPSP
05560  2B4B  81  59              CMP A    #'Y
05570  2B4D  27  03              BEQ      *+5
05580  2B4F  7E  2A22            JMP      DOSTRT
05590  2B52  BD  2523            JSR      PRELIM
05600  2B55  4F                  CLR A
```

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05610  2B56  97 00           STA A    TRACK
05620  2B58  97 01           STA A    SECTOR
05630  2B5A  D6 00    INIT1   LDA B    TRACK
05640  2B5C  F7 801B          STA B    DATREG
05650  2B5F  C6 1B            LDA B    #$1B       SEEK, LOAD, NOVERIFY
05660  2B61  F7 8018          STA B    COMREG
05670  2B64  BD 27C4          JSR      RETURN
05680  2B67  BD 27C4          JSR      RETURN
05690  2B6A  F6 8018  INIT11  LDA B    COMREG
05700  2B6D  C5 01            BIT B    #1
05710  2B6F  26 F9            BNE      INIT11
05720  2B71  C6 F4            LDA B    #$F4    2 WRITE TRACK
05730  2B73  F7 8018          STA B    COMREG 5
05740  2B76  C6 2E            LDA B    #46 2
05750  2B78  4F               CLR A           2
05760  2B79  BD 2C70  INIT2   JSR      UNPACK 9
05770  2B7C  5A               DEC B
05780  2B7D  26 FA            BNE      INIT2
05790  2B7F  86 FC            LDA A    #$FC
05800  2B81  BD 2C70          JSR      UNPACK
05810  2B84  C6 0B            LDA B    #11
05820  2B86  4F               CLR A
05830  2B87  BD 2C70  INIT22  JSR      UNPACK
05840  2B8A  5A               DEC B
05850  2B8B  26 FA            BNE      INIT22
05860  2B8D  C6 06    INIT3   LDA B    #6
05870  2B8F  4F               CLR A
05880  2B90  BD 2C70  INIT31  JSR      UNPACK
05890  2B93  5A               DEC B
05900  2B94  26 FA            BNE      INIT31
05910  2B96  86 FE            LDA A    #$FE
05920  2B98  BD 2C70          JSR      UNPACK
05930  2B9B  96 00            LDA A    TRACK
05940  2B9D  BD 2C70          JSR      UNPACK
05950  2BA0  4F               CLR A
05960  2BA1  BD 2C70          JSR      UNPACK
05970  2BA4  96 01            LDA A    SECTOR
05980  2BA6  BD 2C70          JSR      UNPACK
05990  2BA9  86 01            LDA A    #$01
06000  2BAB  BD 2C70          JSR      UNPACK
06010  2BAE  86 F7            LDA A    #$F7
06020  2BB0  BD 2C70          JSR      UNPACK
06030  2BB3  C6 11            LDA B    #17
06040  2BB5  4F               CLR A
06050  2BB6  BD 2C70  INIT33  JSR      UNPACK
06060  2BB9  5A               DEC B
06070  2BBA  26 FA            BNE      INIT33
06080  2BBC  86 FB            LDA A    #$FB
06090  2BBE  BD 2C70          JSR      UNPACK
06100  2BC1  5F               CLR B
06110  2BC2  86 E5            LDA A    #$E5
06120  2BC4  BD 2C70  INIT35  JSR      UNPACK
06130  2BC7  5A               DEC B
06140  2BC8  26 FA            BNE      INIT35
06150  2BCA  86 F7            LDA A    #$F7
06160  2BCC  BD 2C70          JSR      UNPACK
06170  2BCF  C6 0B            LDA B    #11
06180  2BD1  4F               CLR A
```

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06190  2BD2  BD 2C70  INIT37  JSR      UNPACK
06200  2BD5  5A               DEC  B
06210  2BD6  26 FA            BNE      INIT37
06220  2BD8  D6 01            LDA  B   SECTOR
06230  2BDA  5C               INC  B
06240  2BDB  D7 01            STA  B   SECTOR
06250  2BDD  C1 0A            CMP  B   #10
06260  2BDF  26 AC            BNE      INIT3
06270  2BE1  F6 8018  INIT4   LDA  B   COMREG
06280  2BE4  C5 01            BIT  B   #1
06290  2BE6  27 02            BEQ      INIT45
06300  2BE8  20 F7            BRA      INIT4
06310  2BEA  4F       INIT45  CLR  A
06320  2BEB  97 01            STA  A   SECTOR
06330  2BED  96 00            LDA  A   TRACK
06340  2BEF  4C               INC  A
06350  2BF0  97 00            STA  A   TRACK
06360  2BF2  81 23            CMP  A   #35
06370  2BF4  27 03            BEQ      INIT5
06380  2BF6  7E 2B5A          JMP      INIT1
06390  2BF9  4F       INIT5   CLR  A'
06400  2BFA  97 00            STA  A   TRACK
06410  2BFC  97 01            STA  A   SECTOR
06420  2BFE  CE 2FFF          LDX      #$2FFF
06430  2C01  DF 06            STX      EMEMH
06440  2C03  CE 2400          LDX      #$2400
06450  2C06  BD 255F          JSR      WRITE
06460  2C09  4F               CLR  A
06470  2C0A  97 01            STA  A   SECTOR
06480  2C0C  86 02            LDA  A   #2
06490  2C0E  97 00            STA  A   TRACK
06500  2C10  CE 3176          LDX      #DBUFFR+255
06510  2C13  DF 06            STX      EMEMH
06520  2C15  CE 3077          LDX      #DBUFFR
06521  2C18  86 24            LDA  A   #'$
06522  2C1A  A7 00            STA  A   0, X
06523  2C1C  08               INX
06524  2C1D  86 44            LDA  A   #'D
06525  2C1F  A7 00            STA  A   0, X
06526  2C21  08               INX
06527  2C22  86 4F            LDA  A   #'O
06528  2C24  A7 00            STA  A   0, X
06529  2C26  08               INX
06530  2C27  86 53            LDA  A   #'S
06531  2C29  A7 00            STA  A   0, X
06532  2C2B  C6 0C            LDA  B   #12
06533  2C2D  86 20            LDA  A   #$20
06534  2C2F  08               INX
06535  2C30  A7 00    INIT51  STA  A   0, X
06536  2C32  08               INX
06537  2C33  5A               DEC  B
06538  2C34  26 FA            BNE      INIT51
06539  2C36  6F 01            CLR      1, X
06540  2C38  6F 02            CLR      2, X
06541  2C3A  6F 04            CLR      4, X
06542  2C3C  86 14            LDA  A   #20
06543  2C3E  A7 03            STA  A   3, X
06544  2C40  86 FF            LDA  A   #$FF
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06546  2C42  A7 10              STA A   16, X
06550  2C44  86 03              LDA A   #$03
06560  2C46  A7 20              STA A   32, X
06570  2C48  4F                 CLR A
06580  2C49  A7 21              STA A   33, X
06590  2C4B  A7 24              STA A   36, X
06592  2C4D  6F 00              CLR     0, X
06593  2C4F  9F 09              STS     SAVEX
06594  2C51  8E 2400            LDS     #$2400
06595  2C54  AF 05              STS     5, X
06596  2C56  8E 2FFF            LDS     #$2FFF
06597  2C59  AF 07              STS     7, X
06598  2C5B  8E 2600            LDS     #$2600
06599  2C5E  AF 09              STS     9, X
06600  2C60  8E 014A            LDS     #$014A      NUMBER OF SECOTRS
06610  2C63  AF 22              STS     34, X
06620  2C65  9E 09              LDS     SAVEX
06635  2C67  CE 3077            LDX     #DBUFFR
06640  2C6A  BD 2561            JSR     WRITEO
06650  2C6D  7E 2A22            JMP     DOSTRT
06670  2C70  37         UNPACK  PSH B
06680  2C71  F6 8018    UNPAC1  LDA B   COMREG
06690  2C74  C5 02              BIT B   #2
06700  2C76  27 F9              BEQ     UNPAC1
06710  2C78  B7 801B            STA A   DATREG
06720  2C7B  33                 PUL B
06730  2C7C  39                 RTS
06750  2C7D  4F         CREATE  CLR A
06760  2C7E  B7 3058            STA A   TYPE
06770  2C81  BD 2B06            JSR     MAKNAM
06780  2C84  CE 29DE    CREAT2  LDX     #SECNUM
06790  2C87  BD 28A7            JSR     OUTNCR
06800  2C8A  BD 284A            JSR     KEYBD
06810  2C8D  CE 3004            LDX     #BUFFER
06820  2C90  BD 2DFB            JSR     BYTE
06830  2C93  25 EF              BCS     CREAT2
06840  2C95  B7 3057            STA A   NEEDNO
06850  2C98  CE 0000            LDX     #$0000
06860  2C9B  FF 3059            STX     STARTX
06880  2C9E  FF 305B            STX     ENDX
06890  2CA1  CE 2600            LDX     #DOS
06900  2CA4  FF 305D            STX     GOX
06910  2CA7  FF 305F            STX     HILINE
06920  2CAA  86 02              LDA A   #2
06930  2CAC  B7 3054            STA A   CREFLG
06940  2CAF  BD 264D            JSR     LIB1
06950  2CB2  7E 2A22            JMP     DOSTRT
06952  2CB5  BD 2A72    HOME    JSR     SELECT
06954  2CB8  BD 2523            JSR     PRELIM
06956  2CBB  7E 2A22            JMP     DOSTRT
```

```
06970  2CBE  86  FF      RENAME  LDA  A   #$FF
06980  2CC0  B7  3058            STA  A   TYPE
06990  2CC3  BD  2B06            JSR      MAKNAM
07000  2CC6  BD  2641            JSR      RLIB
07010  2CC9  86  02              LDA  A   #$02
07020  2CCB  97  00              STA  A   TRACK
07030  2CCD  B6  3056            LDA  A   LIBSEC
07040  2CD0  97  01              STA  A   SECTOR
07050  2CD2  FF  3063            STX      TEMPX2
07060  2CD5  CE  2A13            LDX      #NEWMSG
07070  2CD8  BD  28A7            JSR      OUTNCR
07080  2CDB  BD  2B1A            JSR      MAKNAO
07090  2CDE  C6  10              LDA  B   #16
07100  2CE0  FE  3063            LDX      TEMPX2
07110  2CE3  9F  09              STS      SAVEX
07120  2CE5  0F                  SEI
07130  2CE6  8E  3066            LDS      #NAME-1
07140  2CE9  32      REN2        PUL  A
07150  2CEA  A7  00              STA  A   0,X
07160  2CEC  08                  INX
07170  2CED  5A                  DEC  B
07180  2CEE  26  F9              BNE      REN2
07190  2CF0  9E  09              LDS      SAVEX
07200  2CF2  01                  NOP
07210  2CF3  0E                  CLI
07220  2CF4  20  2A              BRA      PURGE3

07240  2CF6  86  FF      PURGE   LDA  A   #$FF
07250  2CF8  B7  3058            STA  A   TYPE
07260  2CFB  BD  2B06            JSR      MAKNAM
07270  2CFE  B6  3067  PURGE1    LDA  A   NAME
07280  2D01  81  24              CMP  A   #'$
07290  2D03  26  03              BNE      *+5
07300  2D05  7E  2DA5            JMP      GOAWAY
07310  2D08  BD  2641            JSR      RLIB
07320  2D0B  86  02              LDA  A   #$02
07330  2D0D  97  00              STA  A   TRACK
07340  2D0F  B6  3056            LDA  A   LIBSEC
07350  2D12  97  01              STA  A   SECTOR
07360  2D14  6F  14              CLR      20,X
07370  2D16  C6  10              LDA  B   #16
07380  2D18  86  20              LDA  A   #$20
07390  2D1A  A7  00    PURGE2    STA  A   0,X
07400  2D1C  08                  INX
07410  2D1D  5A                  DEC  B
07420  2D1E  26  FA              BNE      PURGE2
07430  2D20  DE  0B    PURGE3    LDX      PROGX
07440  2D22  FF  3065            STX      TEMPX3
07450  2D25  CE  2D2A            LDX      #PURGE4
07460  2D28  DF  0B              STX      PROGX
07470  2D2A  CE  3176  PURGE4    LDX      #DBUFFR+255
07480  2D2D  DF  06              STX      EMEMH
07490  2D2F  CE  3077            LDX      #DBUFFR
07500  2D32  BD  255F            JSR      WRITE
07510  2D35  FE  3065            LDX      TEMPX3
07520  2D38  DF  0B              STX      PROGX
07530  2D3A  7E  2A22            JMP      DOSTRT
```

```
07550  2D3D  86 22     LOAD    LDA A   #$22
07560  2D3F  B7 3058           STA A   TYPE
07570  2D42  8D 03             BSR     LOAD0
07580  2D44  7E 2A22           JMP     DOSTRT
07600  2D47  BD 2B06   LOAD0   JSR     MAKNAM
07610  2D4A  BD 2641           JSR     RLIB
07620  2D4D  DE 04     LOAD3   LDX     BMEMH
07630  2D4F  BD 242E           JSR     READ0
07640  2D52  FE 305D           LDX     GOX
07650  2D55  FF A048           STX     $A048
07660  2D58  39                RTS
07680  2D59  86 22     RUN     LDA A   #$22
07690  2D5B  B7 3058           STA A   TYPE
07700  2D5E  8D E7     RUN0    BSR     LOAD0
07710  2D60  8E A049           LDS     #$A049
07720  2D63  6E 00             JMP     0,X

07740  2D65  86 22     SAVE    LDA A   #$22
07750  2D67  B7 3058           STA A   TYPE
07760  2D6A  BD 2B06           JSR     MAKNAM
07770  2D6D  CE 29B4   SAVE2   LDX     #FIRADD
07780  2D70  BD 2DD5           JSR     GET4
07790  2D73  FF 3059           STX     STARTX
07800  2D76  CE 29C2           LDX     #LASADD
07810  2D79  BD 2DD5           JSR     GET4
07820  2D7C  FF 305B           STX     ENDX
07830  2D7F  CE 29D0           LDX     #PSTART
07840  2D82  BD 2DD5           JSR     GET4
07850  2D85  FF 305D           STX     GOX
07860  2D88  B6 3067           LDA A   NAME
07870  2D8B  81 24             CMP A   #'$
07880  2D8D  26 1F             BNE     SAVE3
07890  2D8F  86 11             LDA A   #$11
07900  2D91  B7 3058           STA A   TYPE
07910  2D94  BD 284A           JSR     KEYBD
07920  2D97  B6 3004           LDA A   BUFFER
07930  2D9A  81 24             CMP A   #'$
07940  2D9C  26 07             BNE     GOAWAY
07950  2D9E  B6 3005           LDA A   BUFFER+1
07960  2DA1  81 24             CMP A   #'$
07970  2DA3  27 09             BEQ     SAVE3
07980  2DA5  CE 2DB9   GOAWAY  LDX     #NOSIR
07990  2DA8  BD 289F           JSR     OUTPUT
08000  2DAB  7E 2A22           JMP     DOSTRT
08010  2DAE  BD 2645   SAVE3   JSR     WLIB
08020  2DB1  DE 04             LDX     BMEMH
08030  2DB3  BD 2561           JSR     WRITE0
08040  2DB6  7E 2A22           JMP     DOSTRT
08060  2DB9  53        NOSIR   FCC     /SYSTEM FILE - ACCESS DENIED/

08070  2DD4  04                FCB     4
08090  2DD5  FF 3061   GET4    STX     TEMPX1
08100  2DD8  FE 3061   GET40   LDX     TEMPX1
08110  2DDB  BD 28A7           JSR     OUTNCR
08120  2DDE  BD 284A           JSR     KEYBD
08130  2DE1  CE 3004           LDX     #BUFFER
08140  2DE4  BD 28C8           JSR     SKIPSP
08150  2DE7  8D 12             BSR     BYTE
08160  2DE9  25 ED             BCS     GET40
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08170 2DEB B7 2DF9          STA A  XHI
08180 2DEE 8D 0B            BSR    BYTE
08190 2DF0 25 E6            BCS    GET40
08200 2DF2 B7 2DFA          STA A  XLO
08210 2DF5 FE 2DF9          LDX    XHI
08220 2DF8 39               RTS
08230 2DF9 0001      XHI    RMB    1
08240 2DFA 0001      XLO    RMB    1
08260 2DFB 8D 0E     BYTE   BSR    INHEX
08270 2DFD 25 0B            BCS    OUTBYT
08280 2DFF 48               ASL A
08290 2E00 48               ASL A
08300 2E01 48               ASL A
08310 2E02 48              `ASL A
08320 2E03 16               TAB
08330 2E04 8D 05            BSR    INHEX
08340 2E06 25 02            BCS    OUTBYT
08350 2E08 1B               ABA •
08360 2E09 0C               CLC
08370 2E0A 39        OUTBYT RTS
08390 2E0B A6 00     INHEX  LDA A. 0, X
08400 2E0D 08               INX
08410 2E0E 80 30            SUB A  #$30
08420 2E10 2B 10            BMI    NOTHEX
08430 2E12 81 09            CMP A  #$09
08440 2E14 2F 0A            BLE    YESHEX
08450 2E16 81 11            CMP A  #$11
08460 2E18 2B 08            BMI    NOTHEX
08470 2E1A 81 16            CMP A  #$16
08480 2E1C 2E 04            BGT    NOTHEX
08490 2E1E 80 07            SUB A  #7
08500 2E20 0C       YESHEX  CLC
08510 2E21 39               RTS
08520 2E22 0D       NOTHEX  SEC
08530 2E23 39               RTS
08550 2E24 C6 FF     FILES  LDA B  #$FF
08560 2E26 F7 3054          STA B  CREFLG
08570 2E29 20 03            BRA    CATALO
08580 2E2B 7F 3054  CATAL   CLR    CREFLG
08590 2E2E BD 2A72  CATALO  JSR    SELECT
08600 2E31 86 02            LDA A  #2
08610 2E33 97 00            STA A  TRACK
08620 2E35 4F               CLR A
08630 2E36 97 01            STA A  SECTOR
08640 2E38 BD 2523          JSR    PRELIM
08650 2E3B 86 10            LDA A  #$10
08660 2E3D BD 2634          JSR    OUTCH
08670 2E40 86 16            LDA A  #$16
08680 2E42 BD 2634          JSR    OUTCH
08690 2E45 C6 03            LDA B  #3
08700 2E47 37               PSH B
08710 2E48 CE 3176  CATAL1  LDX    #DBUFFR+255
08720 2E4B DF 06            STX    EMEMH
08730 2E4D CE 3077          LDX    #DBUFFR
08740 2E50 BD 242E          JSR    READO
08750 2E53 CE 3077          LDX    #DBUFFR
08770 2E56 A6 00    CATAL2  LDA A  0, X
08780 2E58 81 FF            CMP A  #$FF
```

```
08790  2E5A  27 4D              BEQ        CATEX
08800  2E5C  C6 08              LDA B      #8
08810  2E5E  A6 00    CATAL3    LDA A      0,X
08820  2E60  BD 2634            JSR        OUTCH
08830  2E63  08                 INX
08840  2E64  5A                 DEC B
08850  2E65  26 F7              BNE        CATAL3
08860  2E67  C6 08              LDA B      #8
08870  2E69  08       CATAL4    INX
08880  2E6A  5A                 DEC B
08890  2E6B  26 FC              BNE        CATAL4
08900  2E6D  86 20              LDA A      #$20
08905  2E6F  BD 2634            JSR        OUTCH
08910  2E72  7D 3054            TST        CREFLG
08920  2E75  27 16              BEQ        CATA45
08940  2E77  8D 74              BSR        OUT2HS
08950  2E79  8D 72              BSR        OUT2HS
08960  2E7B  08                 INX
08970  2E7C  8D 6F              BSR        OUT2HS
08980  2E7E  8D 6D              BSR        OUT2HS
08990  2E80  8D 69              BSR        OUT4HS
09000  2E82  8D 67              BSR        OUT4HS
09010  2E84  8D 65              BSR        OUT4HS
09020  2E86  BD 28AE            JSR        CRLF
09030  2E89  C6 05              LDA B      #5
09040  2E8B  20 10              BRA        CATAL6
09050  2E8D  33       CATA45    PUL B
09060  2E8E  5A                 DEC B
09070  2E8F  26 05              BNE        CATA46
09080  2E91  BD 28AE            JSR        CRLF
09090  2E94  C6 03              LDA B      #3
09100  2E96  37       CATA46    PSH B
09110  2E97  C6 10              LDA B      #16
09120  2E99  20 02              BRA        CATAL6
09130  2E9B  C6 20    CATAL5    LDA B      #32
09140  2E9D  08       CATAL6    INX
09150  2E9E  5A                 DEC B
09160  2E9F  26 FC              BNE        CATAL6
09170  2EA1  09                 DEX
09180  2EA2  9C 06              CPX        EMEMH
09190  2EA4  27 A2              BEQ        CATAL1
09200  2EA6  08                 INX
09210  2EA7  20 AD              BRA        CATAL2
09220  2EA9  FF 3061  CATEX     STX        TEMPX1
09230  2EAC  33                 PUL B
09250  2EAD  BD 28AE            JSR        CRLF
09260  2EB0  CE 2EC8            LDX        #REMMSG
09270  2EB3  BD 28A7            JSR        OUTNCR
09280  2EB6  FE 3061            LDX        TEMPX1
09290  2EB9  C6 12              LDA B      #18
09300  2EBB  08       CATEX1    INX
09310  2EBC  5A                 DEC B
09320  2EBD  26 FC              BNE        CATEX1
09330  2EBF  BD 2EEB            JSR        OUT4HS
09340  2EC2  BD 28AE            JSR        CRLF
09350  2EC5  7E 2A22            JMP        DOSTRT
09370  2EC8  53       REMMSG    FCC        /SECTORS REMAINING ( HEX )  /
```

```
09380  2EE1  04                   FCB      4
09400  2EE2  A6  00      OUT2H     LDA  A   0,X
09410  2EE4  8D  0E      OUT2HA    BSR      OUTHL
09420  2EE6  A6  00                LDA  A   0,X
09430  2EE8  08                    INX
09440  2EE9  20  0D                BRA      OUTHR
09460  2EEB  8D  F5      OUT4HS    BSR      OUT2H
09470  2EED  8D  F3      OUT2HS    BSR      OUT2H
09480  2EEF  86  20      OUTS      LDA  A   #$20
09490  2EF1  7E  2634              JMP      OUTCH
09510  2EF4  44          OUTHL     LSR  A
09520  2EF5  44                    LSR  A
09530  2EF6  44                    LSR  A
09540  2EF7  44                    LSR  A
09560  2EF8  84  0F      OUTHR     AND  A   #$F
09570  2EFA  8B  30                ADD  A   #$30
09580  2EFC  81  39                CMP  A   #$39
09590  2EFE  23  02                BLS      OUTHHH
09600  2F00  8B  07                ADD  A   #$7
09610  2F02  7E  2634    OUTHHH    JMP      OUTCH
09630  2F05  BD  2A72    TEST      JSR      SELECT
09640  2F08  BD  2523              JSR      PRELIM
09650  2F0B  CE  2F30              LDX      #TEST2
09660  2F0E  DF  0B                STX      PROGX
09670  2F10  86  00                LDA  A   #0
09680  2F12  97  00                STA  A   TRACK
09690  2F14  97  01                STA  A   SECTOR
09700  2F16  CE  19FF              LDX      #$19FF
09710  2F19  DF  06                STX      EMEMH
09720  2F1B  CE  1000    TEST1     LDX      #$1000
09730  2F1E  BD  242E              JSR      READO
09740  2F21  96  00                LDA  A   TRACK
09750  2F23  81  23                CMP  A   #35
09760  2F25  26  F4                BNE      TEST1
09770  2F27  CE  2A18              LDX      #TSTDON
09780  2F2A  BD  289F              JSR      OUTPUT
09790  2F2D  7E  2A22              JMP      DOSTRT
09800  2F30  96  01      TEST2     LDA  A   SECTOR
09810  2F32  4C                    INC  A
09820  2F33  81  0A                CMP  A   #10
09830  2F35  26  04                BNE      TEST3
09840  2F37  4F                    CLR  A
09850  2F38  7C  0000              INC      TRACK
09855  2F3B  97  01      TEST3     STA  A   SECTOR
09860  2F3D  20  DC                BRA      TEST1
09870                              END
```

TOTAL ERRORS 00000

```
00010                          NAM     SWTPIO
00020                    **********VERSION 1.0 ************

00030                    *WRITTEN BY R. H. UITERWYK

00040                               OPT     NOG
00050                               OPT     OBJ
00070          2600      DOS     EQU     $2600
00080          8014      DRVREG  EQU     $8014
00090          8018      COMREG  EQU     $8018
00100          8019      TRKREG  EQU     $8019
00110          801A      SECREG  EQU     $801A
00120          801B      DATREG  EQU     $801B
00150  0000                      ORG     $0000
00160  0000  0001        TRACK   RMB     1
00170  0001  0001        SECTOR  RMB     1
00180  0002  0001        STATUS  RMB     1
00190  0003  0001        ERRCNT  RMB     1
00200  0004  0001        BMEMH   RMB     1
00210  0005  0001        BMEML   RMB     1
00220  0006  0001        EMEMH   RMB     1
00230  0007  0001        EMEML   RMB     1
00240  0008  0001        NOSECT  RMB     1
00250  0009  0002        SAVEX   RMB     2
00260  000B  0002        PROGX   RMB     2
00270  000D  0001        NDRIVE  RMB     1
00280  000E  0004        ATRACK  RMB     4
00290  0012  0002        PRELEX  RMB     2


00310  2400                      ORG     $2400
00320  2400  BD 240C     START   JSR     BOOT
00330  2403  DE 0B       RESTRT  LDX     PROGX
00340  2405  8E A049             LDS     #$A049
00350  2408  AD 00               JSR     0,X
00360  240A  20 F7               BRA     RESTRT
00370  240C  CE 240C     BOOT    LDX     #BOOT
00380  240F  DF 0B               STX     PROGX
00390  2411  4F                  CLR A
00400  2412  97 0D               STA A   NDRIVE
00410  2414  97 00               STA A   TRACK
00420  2416  86 02               LDA A   #2
00430  2418  97 01               STA A   SECTOR
00440  241A  CE 2FFF             LDX     #$2FFF
00450  241D  DF 06               STX     EMEMH
00460  241F  CE 2600             LDX     #DOS
00470  2422  8D 07               BSR     READ
00480  2424  CE 2600             LDX     #DOS
00490  2427  DF 0B               STX     PROGX
00500  2429  6E 00               JMP     0,X
00520  242B  BD 2523     READ    JSR     PRELIM
00530  242E  BD 250E     READ0   JSR     SEEK
00540  2431  DF 04       READ2   STX     BMEMH
00550  2433  7F 0003             CLR     ERRCNT
00560  2436  DE 04       READ3   LDX     BMEMH
00570  2438  D6 01               LDA B   SECTOR
00580  243A  F7 801A             STA B   SECREG
```

```
00590 243D BD 2489            JSR     RETURN
00600 2440 C6 9C              LDA B   #$9C        MULTIPLE READ W/LOAD IBM FORM
00610 2442 F7 8018            STA B   COMREG
00620 2445 BD 2489            JSR     RETURN      DELAY 14 CYCLES
00630 2448 BD 2489            JSR     RETURN
00640 244B BD 2489            JSR     RETURN
00650 244E F6 8018 READ4 LDA B   COMREG 4
00660 2451 C5 01              BIT B   #1        2  BUSY FLAG
00670 2453 27 10              BEQ     READ6    4
00680 2455 C5 02  READ5 BIT B   #2        2  DRQ FLAG
00690 2457 27 F5              BEQ     READ4   4
00700 2459 B6 801B            LDA A   DATREG 4
00710 245C A7 00              STA A   0,X       5
00720 245E 9C 06              CPX     EMEMH   6
00730 2460 27 0C              BEQ     READ7  4
00740 2462 08                 INX               4
00750 2463 20 E9              BRA     READ4  4
00760 2465 8D 0F  READ6 BSR     CHKERR
00770 2467 26 CD              BNE     READ3
00780 2469 BD 24F8            JSR     INCSEC
00790 246C 20 C0              BRA     READ0
00800 246E 8D 06  READ7 BSR     CHKERR
00810 2470 26 C4              BNE     READ3
00820 2472 BD 24F8            JSR     INCSEC
00830 2475 39                 RTS
00850 2476 F6 8018 CHKERR LDA B   COMREG
00860 2479 D7 02              STA B   STATUS
00870 247B 86 D0              LDA A   #$D0        FORCE INTERRUPT
00880 247D B7 8018            STA A   COMREG
00890 2480 BD 25D7            JSR     DONE
00900 2483 D6 02              LDA B   STATUS
00910 2485 C4 1C              AND B   #$1C
00920 2487 26 01              BNE     CHKER1
00930 2489 39       RETURN RTS
00940 248A C4 10  CHKER1 AND B   #$10
00950 248C 27 09              BEQ     CHKER3
00960 248E F6 801A            LDA B   SECREG
00970 2491 C1 0A              CMP B   #10
00980 2493 26 02              BNE     CHKER3
00990 2495 5F                 CLR B
01000 2496 39                 RTS
01010 2497 D6 03  CHKER3 LDA B   ERRCNT
01020 2499 5C                 INC B
01030 249A D7 03              STA B   ERRCNT
01040 249C C1 06              CMP B   #6
01050 249E 26 E9              BNE     RETURN
01060 24A0 F6 801A            LDA B   SECREG
01070 24A3 D7 01              STA B   SECTOR
01080 24A5 CE 0000            LDX     #TRACK
01090 24A8 8D 4B              BSR     OUT4HS
01100 24AA 8D 49              BSR     OUT4HS
01110 24AC CE 24D4            LDX     #CRLF
01120 24AF 8D 41              BSR     FDATA
01130 24B1 CE 24BE            LDX     #CHKMSG
01140 24B4 8D 3C  ERROR BSR     FDATA
01150 24B6 CE 24C7            LDX     #ERRMSG
01160 24B9 8D 37              BSR     FDATA
01170 24BB 7E 2403            JMP     RESTRT
```

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01190 24BE 0D      CHKMSG FCB     $0D, $0A, $15
01200 24C1 43             FCC     /CHECK/

01210 24C6 04             FCB     4
01220 24C7 20      ERRMSG FCC     / - DISK ERROR/

01230 24D4 0D      CRLF   FCB     $0D, $0A, $15, 4
01240 24D8 0D      RDYMSG FCB     $0D, $0A, $15
01250 24DB 4E             FCC     /NOT READY/

01260 24E4 04             FCB     4
01270 24E5 0D      PROMSG FCB     $0D, $0A, $15
01280 24E8 50             FCC     /PROTECTED/

01290 24F1 04             FCB     4
01300 24F2 7E E07E FDATA  JMP     $E07E
01310 24F5 7E E0C8 OUT4HS JMP     $E0C8
01330 24F8 37      INCSEC PSH B
01340 24F9 F6 801A        LDA B   SECREG
01350 24FC C1 0A          CMP B   #10
01360 24FE 26 07          BNE     INCSE2
01370 2500 7C 0000        INC     TRACK
01380 2503 BD 250E        JSR     SEEK
01390 2506 5F             CLR B
01400 2507 D7 01   INCSE2 STA B   SECTOR
01410 2509 F7 801A        STA B   SECREG
01420 250C 33             PUL B
01430 250D 39             RTS
01450 250E D6 00   SEEK   LDA B   TRACK
01460 2510 F7 801B        STA B   DATREG
01470 2513 BD 2489        JSR     RETURN
01480 2516 C6 1B          LDA B   #$1B       LOAD & SEEK
01490 2518 F7 8018        STA B   COMREG
01510 251B BD 25D7        JSR     DONE
01520 251E C5 10          BIT B   #$10
01530 2520 26 EC          BNE     SEEK
01540 2522 39             RTS
01560 2523 36      PRELIM PSH A
01570 2524 96 0D          LDA A   NDRIVE
01580 2526 BD 25AC        JSR     DRIVE
01590 2529 32             PUL A
01600 252A DF 12          STX     PRELEX
01610 252C F6 8018        LDA B   COMREG
01620 252F CE 4FFF        LDX     #$4FFF
01630 2532 08      PREL25 INX
01640 2533 09             DEX
01650 2534 09             DEX
01660 2535 26 FB          BNE     PREL25
01670 2537 C6 0B          LDA B   #$0B       LOAD + RESTORE
01680 2539 F7 8018        STA B   COMREG
01690 253C BD 25D7        JSR     DONE
01700 253F CE 4000        LDX     #$4000
01710 2542 F6 8018 PREL35 LDA B   COMREG
01720 2545 09             DEX
01730 2546 27 11          BEQ     PREL4
01740 2548 C5 02          BIT B   #$02
01750 254A 26 F6          BNE     PREL35
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01760  254C  F6 8018  FREL36  LDA B    COMREG
01770  254F  09               DEX
01780  2550  27 07            BEQ      FREL4
01790  2552  C5 02            BIT B    #$02
01800  2554  27 F6            BEQ      FREL36
01810  2556  DE 12            LDX      PRELEX
01820  2558  39               RTS
01830  2559  CE 24D8  FREL4   LDX      #RDYMSG
01840  255C  7E 24B4  FREL45  JMP      ERROR
01880  255F  8D C2    WRITE   BSR      PRELIM
01890  2561  8D AB    WRITE0  BSR      SEEK
01900  2563  7F 0003  WRITE1  CLR      ERRCNT
01910  2566  DF 04            STX      BMEMH
01920  2568  DE 04    WRITE2  LDX      BMEMH
01930  256A  D6 01            LDA B    SECTOR
01940  256C  F7 801A          STA B    SECREG
01950  256F  BD 2489          JSR      RETURN
01960  2572  C6 BC            LDA B    #$BC          MULTIPLE WRITE W/LOAD IBM FOR
01970  2574  F7 8018          STA B    COMREG
01980  2577  BD 2489          JSR      RETURN
01990  257A  BD 2489          JSR      RETURN
02000  257D  BD 2489          JSR      RETURN
02010  2580  F6 8018  WRITE3  LDA B    COMREG
02020  2583  C5 01            BIT B    #1            BUSYFLAG
02030  2585  27 10            BEQ      WRITE6
02040  2587  C5 02    WRITE4  BIT B    #2            DRQ FLAG
02050  2589  27 F5            BEQ      WRITE3
02060  258B  A6 00            LDA A    0,X
02070  258D  B7 801B          STA A    DATREG
02080  2590  9C 06            CPX      EMEMH
02090  2592  27 11            BEQ      WRITE7
02100  2594  08               INX
02110  2595  20 E9            BRA      WRITE3
02120  2597  C5 40    WRITE6  BIT B    #$40
02130  2599  27 05            BEQ      *+7
02140  259B  CE 24E5          LDX      #PROMSG
02150  259E  20 BC            BRA      FREL45
02160  25A0  BD 24F8          JSR      INCSEC
02170  25A3  20 BE            BRA      WRITE1
02180  25A5  BD 25D7  WRITE7  JSR      DONE
02190  25A8  BD 24F8          JSR      INCSEC
02200  25AB  39               RTS
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02220  25AC  84  03     DRIVE   AND  A   #$03
02230  25AE  36                 PSH  A
02240  25AF  DF  12             STX      PRELEX
02250  25B1  CE  000D           LDX      #ATRACK-1
02260  25B4  4C               INC  A
02270  25B5  16                 TAB
02280  25B6  96  0D             LDA  A   NDRIVE
02290  25B8  4C                 INC  A
02300  25B9  08     DRIVEO  INX
02310  25BA  4A                 DEC  A
02320  25BB  26  FC             BNE      DRIVEO
02330  25BD  B6  8019           LDA  A   TRKREG
02340  25C0  A7  00             STA  A   0, X
02350  25C2  CE  000D           LDX      #ATRACK-1
02360  25C5  08     DRIVE1  INX
02370  25C6  5A                 DEC  B
02380  25C7  26  FC             BNE      DRIVE1
02390  25C9  A6  00             LDA  A   0, X
02400  25CB  B7  8019           STA  A   TRKREG
02410  25CE  32                 PUL  A
02420  25CF  97  0D             STA  A   NDRIVE
02430  25D1  B7  8014           STA  A   DRVREG
02440  25D4  DE  12             LDX      PRELEX
02450  25D6  39                 RTS
02470  25D7  BD  2489  DONE     JSR      RETURN
02480  25DA  BD  2489           JSR      RETURN
02490  25DD  F6  8018           LDA  B   COMREG
02500  25E0  C5  01             BIT  B   #1
02510  25E2  26  F3             BNE      DONE
02520  25E4  39                 RTS
02540                           END

TOTAL ERRORS 00000
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