```
000.000                1  H84IO   EQU     0                       ASSEMBLE FOR 8250 INTERFACE
                       3  ***     DBDVD   -  DIABLO DEVICE DRIVER
                       4  *
                       5  *       G. Chandler                             /79.07.17/
                       6  *
                       7  *       COPYRIGHT JULY 17, 1979 FOR:
                       8  *
                       9  *               HEATH CO.
                      10  *               BENTON HARBOR, MI
                      11  *               49022
                      12  *
                      13  *
                      14  *       Copyright November 1979                 /79.11.sc/
                      15  *


                      17  **      DBDVD IS THE DEVICE DRIVER FOR DEVICE
                      18  *
                      19  *               DB:
                      20  *
                      21  *       DB: IS A DIABLO PRINTER INTERFACED VIA AN H88-3, H-8-4
                      22  *


000.000               24          XTEXT   FILDEF


                      26X **      FILDEF - FILE TYPE DEFINITIONS.
                      27X *
                      28X *       DB      377Q,FT.XXX
                      29X
                      30X
000.000               31X FT.ABS  EQU     0               ABSOLUTE BINARY
000,001               32X FT.PIC  EQU     1               POSITION INDEPENDANT CODE
000.002               33X FT.REL  EQU     2               RELOCATABLE CODE
000,003               34X FT.BAC  EQU     3               COMPILED BASIC CODE
000.000               35          XTEXT   PICDEF


                      37X **      PIC FORMAT EQUIVALENCES.
                      38X
000.000               39X         ORG     0
                      40X
000.000               41X PIC.ID  DS      1               377Q = BINARY FILE FLAG
000,001               42X         DS      1               FILE TYPE (FT.PIC)
000.002               43X PIC.LEN DS      2               LENGTH OF ENTIRE RECORD
000,004               44X PIC.PTR DS      2               INDEX OF START OF PIC TABLE
                      45X
000,006               46X PIC.COD DS      0               CODE STARTS HERE
```

```
000.006                 47          XTEXT   DIRDEF


                        49X **      DIRECTORY ENTRY FORMAT.
                        50X
000.000                 51X         ORG     0
                        52X
                        53X
000.377                 54X DF.EMP  EQU     377Q        FLAGS ENTRY EMPTY
000.376                 55X DF.CLR  EQU     376Q        FLAGS ENTRY EMPTY, REST OF DIR ALSO CLEAR
                        56X
000.000                 57X DIR.NAM DS      8           NAME
000.010                 58X DIR.EXT DS      3           EXTENSION
000.013                 59X DIR.PRO DS      1           PROJECT
000.014                 60X DIR.VER DS      1           VERSION
000.015                 61X DIRIDL  EQU     *           FILE IDENTIFICATION LENGTH
                        62X
000.015                 63X DIR.CLU DS      1           CLUSTER FACTOR
000.016                 64X DIR.FLG DS      1           FLAGS
000.017                 65X         DS      1           RESERVED
000.020                 66X DIR.FGN DS      1           FIRST GROUP NUMBER
000.021                 67X DIR.LGN DS      1           LAST GROUP NUMBER
000.022                 68X DIR.LSI DS      1           LAST SECTOR INDEX (IN LAST GROUP)
000.023                 69X DIR.CRD DS      2           CREATION DATE
000.025                 70X DIR.ALD DS      2           LAST ALTERATION DATE
                        71X
000.027                 72X DIRELEN EQU     *           DIRECTORY ENTRY LENGTH
000.027                 73          XTEXT   HOSEQU


                        75X **      HDOS SYSTEM EQUIVALENCES.
                        76X *
                        77X
024.000                 78X S.GRT0  EQU     24000A      SYSTEM AREA FOR  GRT0
025.000                 79X S.GRT1  EQU     25000A      SYSTEM AREA FOR  GRT1
026.000                 80X S.GRT2  EQU     26000A      SYSTEM AREA FOR  GRT2
                        81X
030.000                 82X ROMBOOT EQU     30000A      ROM BOOT ENTRY
                        83X
040.100                 84X         ORG     40100A      FREE SPACE FROM PAM-8
                        85X
040.100                 86X         DS      8           JUMP TO SYSTEM EXIT
040.110                 87X D.CON   DS      16          DISK CONSTANTS
040.130                 88X SYDD    EQU     *           SYSTEM DISK ENTRY POINT
040.130                 89X D.VEC   DS      24*3        SYSTEM ROM ENTRY VECTORS
040.240                 90X D.RAM   DS      31          SYSTEM ROM WORK AREA
040.277                 91X S.VAL   DS      36          SYSTEM VALUES
040.343                 92X S.INT   DS      115         SYSTEM INTERNAL WORK AREAS
041.126                 93X         DS      16
041.146                 94X S.SOVR  DS      2           STACK OVERFLOW WARNING
041.150                 95X         DS      A2200A-*    SYSTEM STACK
001.032                 96X STACKL  EQU     *-S.SOVR    STACK SIZE
                        97X
```

```
042.200                98X STACK   EQU     *               LWA+1 SYSTEM STACK
042.200                99X USERFWA EQU     *               USER FWA
042.200               100          XTEXT   ESINT


                      102X **       S.INT - SYSTEM INTERNAL WORKAREA DEFINITIONS.
                      103X *
                      104X *        THESE CELLS ARE REFERENCED BY OVERLAYS AND MAIN CODE, AND
                      105X *        MUST THEREFORE RESIDE IN FIXED LOW MEMORY.
                      106X
                      107X
040.343               108X          ORG     S.INT
                      109X
                      110X **       CONSOLE STATUS FLAGS
                      111X
040.343               112X S.CDB    DS      1               CONSOLE DESCRIPTOR BYTE
000.000               113X CDB.H85  EQU     00000000B
000.001               114X CDB.H84  EQU     00000001B       =0 IF H8-5, =1 IF H8-4
040.344               115X S.BAUD   DS      2               [0-14]  H8-4 BAUD RATE, =0 IF H8-5
                      116X *                                [15]    =1 IF BAUD RATE => 2 STOP BITS
                      117X
                      118X **       TABLE ADDRESS WORDS
                      119X
040.346               120X S.DLINK  DS      2               ADDRESS OF DATA IN HDOS CODE
040.350               121X S.OFWA   DS      2               FWA  OVERLAY  TABLE
040.352               122X S.CFWA   DS      2               FWA  CHANNEL  TABLE
040.354               123X S.DFWA   DS      2               FWA  DEVICE   TABLE
040.356               124X S.RFWA   DS      2               FWA  RESIDENT HDOS CODE
                      125X
                      126X **       DEVICE DRIVER DELAYED LOAD FLAGS
                      127X
040.360               128X S.DDLDA  DS      2               DRIVER LOAD ADDRESS (HIGH BYTE=0 IF NO LOAD PENDING)
040.362               129X S.DDLEN  DS      2               CODE LENGTH IN BYTES
040.364               130X S.DDGRP  DS      1               GROUP NUMBER FOR DRIVER
040.365               131X          DS      1               HOLD PLACE
                      132X *S.DDSEC         DS      2               SECTOR NUMBER FOR DRIVER ( * OBSOLETE ! * )
040.366               133X S.DDDTA  DS      2               DEVICE'S ADDRESS IN DEVLST +DEV.RES
040.370               134X S.DDOPC  DS      1               OPEN OPCODE PENDEDING
                      135X
                      136X **       OVERLAY MANAGEMENT FLAGS
                      137X
000.001               138X OVL.IN   EQU     00000001B       IN MEMORY
000.002               139X OVL.RES  EQU     00000010B       PERMINANTLY RESIDENT
000.014               140X OVL.NUM  EQU     00001100B       OVERLAY NUMBER MASK
000.200               141X OVL.UCS  EQU     10000000B       USER CODE SWAPPED FOR OVERLAY
                      142X
040.371               143X S.OVLFL  DS      1               OVERLAY FLAG
040.372               144X S.UCSF   DS      2               FWA SWAPPED USER CODE
040.374               145X S.UCSL   DS      2               LENGTH SWAPPED USER CODE
040.376               146X S.OVLS   DS      2               SIZE OF OVERLAY CODE
041.000               147X S.OVLE   DS      2               ENTRY POINT OF OVERLAY CODE
                      148X
041.002               149X S.SSN    DS      2               SWAP AREA SECTOR NUMBER
041.004               150X S.OSN    DS      2               OVERLAY SECTOR NUMBER
```

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                        151X
                        152X *       SYSCALL PROCESSING WORK AREAS
                        153X
041.006                 154X S.CACC  DS      1           (ACC) UPON SYSCALL
041.007                 155X S.CODE  DS      1           SYSCALL INDEX IN PROGRESS
                        156X
                        157X *       JUMPS TO ROUTINES IN RESIDENT HDOS CODE
                        158X
041.010                 159X S.JUMPS DS      0           START OF DUMP VECTORS
041.010                 160X S.SDD   DS      3           JUMP TO STAND-IN DEVICE DRIVER
041.013                 161X S.FASER DS      3           JUMP TO FATSERR (FATAL SYSTEM ERROR)
041.016                 162X S.DIREA DS      3           JUMP TO DIREAD (DISK FILE READ)
041.021                 163X S.FCI   DS      3           JUMP TO FCI (FETCH CHANNEL INFO)
041.024                 164X S.SCI   DS      3           JUMP TO SCI (STORE CHANNEL INFO)
041.027                 165X S.GUP   DS      3           JUMP TO GUP (GET UNIT POINTER)
                        166X
041.032                 167X S.MOUNT DS      1           <>0 IF THE SYSTEM DISK IS MOUNTED
041.033                 168X S.DCS   DS      1           DEFAULT CLUSTER SIZE-1
                        169X
041.034                 170X S.BOOTF DS      1           BOOT FLAGS
000.001                 171X BOOT.P  EQU     00000001B   EXECUTE PROLOGUE UPON BOOTUP
                        172X
                        173X *       STACK VALUE SAVED FOR OVERLAY SYSCALLS
                        174X
041.035                 175X S.OVSTK DS      2           VALUE OF SP UPON SYSCALLS USING OVERLAY
                        176X
041.037                 177X         DS      1           RESERVED


                        179X **      ACTIVE I/O AREA.
                        180X *
                        181X *       THE AIO.XXX AREA CONTAINS INFORMATION ABOUT THE I/O OPERATION
                        182X *       CURRENTLY BEING PERFORMED. THE INFORMATION IS OBTAINED FROM
                        183X *       THE CHANNEL TABLE, AND WILL BE RESTORED THERE WHEN DONE.
                        184X *
                        185X *       NORMALLY, THE AIO.XXX INFORMATION WOULD BE OBTAINED DIRECTLY
                        186X *       FROM VARIOUS SYSTEM TABLES VIA POINTER REGISTERS. SINCE THE
                        187X *       8080 HAS NO GOOD INDEXED ADDRESSING, THE DATA IS MANUALLY
                        188X *       COPIED INTO THE AIO.XXX CELLS BEFORE PROCESSING, AND
                        189X *       BACKDATED AFTER PROCESSING.
                        190X
041.040                 191X AIO.VEC DS      3           JUMP INSTRUCTION
041.041                 192X AIO.DDA EQU     *-2         DEVICE DRIVER ADDRESS
041.043                 193X AIO.FLG DS      1           FLAG BYTE
041.044                 194X AIO.GRT DS      2           ADDRESS OF GROUP RESERV TABLE
041.046                 195X AIO.SPG DS      1           SECTORS PER GROUP
041.047                 196X AIO.CGN DS      1           CURRENT GROUP NUMBER
041.050                 197X AIO.CSI DS      1           CURRENT SECTOR INDEX
041.051                 198X AIO.LGN DS      1           LAST GROUP NUMBER
041.052                 199X AIO.LSI DS      1           LAST SECTOR INDEX
041.053                 200X AIO.DTA DS      2           DEVICE TABLE ADDRESS
041.055                 201X AIO.DES DS      2           DIRECTORY SECTOR
041.057                 202X AIO.DEV DS      2           DEVICE CODE
041.061                 203X AIO.UNI DS      1           UNIT NUMBER (0-9)
```

```
                        204X
041,062                 205X AIO.DIR DS     DIRELEN         DIRECTORY ENTRY
                        206X
041,111                 207X AIO.CNT DS     1               SECTOR COUNT
041.112                 208X AIO.EOM DS     1               END OF MEDIA FLAG
041,113                 209X AIO.EOF DS     1               END OF FILE FLAG
041.114                 210X AIO.TFP DS     2               TEMP FILE POINTERS
041.116                 211X AIO.CHA DS     2               ADDRESS OF CHANNEL BLOCK (IOC.DDA)


041.120                 213X S.SCR   DS     2               SYSTEM SCRATCH AREA ADDRESS
041.122                 214          XTEXT  ESVAL


                        216X **      S.VAL - SYSTEM VALUE DEFINTIONS.
                        217X *
                        218X *       THESE VALUES ARE SET AND MAINTAINED BY THE SYSTEM.
                        219X *
                        220X *       THE DECK HOSEQU MUST BE MODIFIED WHEN THIS IS MODIFIED.
                        221X
                        222X
040.277                 223X         ORG    S.VAL
                        224X
040.277                 225X S.DATE  DS     9               SYSTEM DATE (IN ASCII)
040.310                 226X S.DATC  DS     2               CODED DATE
040.312                 227X S.TIME  DS     4               TIME FROM MIDNIGHT (IN TICS)
040.316                 228X S.HIMEM DS     2               HARDWARE HIGH MEMORY ADRESS+1
                        229X
040.320                 230X S.SYSM  DS     2               FWA RESIDENT SYSTEM
                        231X
040.322                 232X S.USRM  DS     2               LWA USER MEMORY
                        233X
040.324                 234X S.OMAX  DS     2               MAX OVERLAY SIZE FOR SYSTEM
                        235X
                        236X
                        237X **      THE FOLLOWING FIVE CELLS SHOULD BE MODIFIED/READ ONLY VIA THE .CONSL SYSCALL
                        238X
000,200                 239X CSL.ECH EQU    10000000B       SUPPRESS ECHO
000.002                 240X CSL.WRP EQU    00000010B       WRAP LINES AT WIDTH
000,001                 241X CSL.CHR EQU    00000001B       OPERATE IN CHARACTER MODE
                        242X
000.000                 243X I.CSLMD EQU    0               S.CSLMD IS FIRST BYTE
040.326                 244X S.CSLMD DS     1               CONSOLE MODE
                        245X
000.200                 246X CTP.BKS EQU    10000000B       TERMINAL PROCESSES BACKSPACES
000,040                 247X CTP.MLI EQU    00100000B       MAP LOWER CASE TO UPPER ON INPUT
000.020                 248X CTP.MLO EQU    00010000B       MAP LOWER CASE TO UPPER ON OUTPUT
000,010                 249X CTP.2SB EQU    00001000B       TERMINAL NEEDS TWO STOP BITS
000.002                 250X CTP.BKM EQU    00000010B       MAP BKSP (UPON INPUT) TO RUBOUT
000,001                 251X CTP.TAB EQU    00000001B       TERMINAL SUPPORTS TAB CHARACTERS
                        252X
000,001                 253X I.CONTY EQU    1               S.CONTY IS 2ND BYTE
```

```
000.000                 254X            ERRNZ   *-S.CSLMD-I.CONTY
040.327                 255X S.CONTY    DS      1               CONSOLE TYPE FLAGS
000.002                 256X I.CUSOR    EQU     2               S.CUSOR IS 3RD BYTE
000.000                 257X            ERRNZ   *-S.CSLMD-I.CUSOR
040.330                 258X S.CUSOR    DS      1               CURRENT CURSOR POSITION
000.003                 259X I.CONWI    EQU     3               S.CONWI IS 4TH BYTE
000.000                 260X            ERRNZ   *-S.CSLMD-I.CONWI
040.331                 261X S.CONWI    DS      1               CONSOLE WIDTH
                        262X
000.001                 263X CO.FLG     EQU     00000001B       CTL-O FLAG
000.200                 264X CS.FLG     EQU     10000000B       CTL-S FLAG
                        265X
000.004                 266X I.CONFL    EQU     4               S.CONFL IS 5TH BYTE
000.000                 267X            ERRNZ   *-S.CSLMD-I.CONFL
040.332                 268X S.CONFL    DS      1               CONSOLE FLAGS
                        269X
040.333                 270X S.CAADR    DS      2               ADDRESS FOR ABORT PROCESSING (>256 IF VALID)
040.335                 271X S.CCTAB    DS      6               ADDR FOR CTL-A, CTL-B, CTL-C PROCESSING
                        272
040.343                 273             XTEXT   ASCII


                        275X **         ASCII CHARACTER EQUIVALENCES.
                        276X
000.015                 277X CR         EQU     13              CARRIAGE RETURN
000.012                 278X LF         EQU     10              LINE FEED
000.200                 279X NULL       EQU     200Q            PAD CHARACTER
000.000                 280X NUL2       EQU     0
000.007                 281X BELL       EQU     7               BELL CHARACTER
000.177                 282X RUBOUT     EQU     177Q
000.010                 283X BKSP       EQU     10Q             CTL-H
000.026                 284X C.SYN      EQU     26Q             SYNC
000.002                 285X C.STX      EQU     2               STX
000.047                 286X QUOTE      EQU     47Q
000.011                 287X TAB        EQU     11Q
000.033                 288X ESC        EQU     33Q
000.012                 289X NL         EQU     12Q             NEW LINE (HDOS SYSTEMS)
000.212                 290X ENL        EQU     NL+200Q         NL + END-OF-LINE-FLAG
000.014                 291X FF         EQU     14Q             FORM FEED
000.001                 292X CTLA       EQU     01Q             CTL-A
000.002                 293X CTLB       EQU     02Q             CTL-B
000.003                 294X CTLC       EQU     03Q             CTL-C
000.004                 295X CTLD       EQU     04Q             CTL-D
000.017                 296X CTLO       EQU     17Q             CTL-O
000.020                 297X CTLP       EQU     20Q             CTL-P
000.021                 298X CTLQ       EQU     21Q             CTL-Q
000.023                 299X CTLS       EQU     23Q             CTL-S
000.032                 300X CTLZ       EQU     32Q             CTL-Z
040.343                 301             XTEXT   DDDEF
```

```
                        303X **     DEVICE DRIVER COMMUNICATION FLAGS.
                        304X *
                        305X
000.000                 306X        ORG     0
                        307X
000.000                 308X DC.REA DS      1           READ
000.001                 309X DC.WRI DS      1           WRITE
000.002                 310X DC.RER DS      1           READ REGARDLESS
000.003                 311X DC.OPR DS      1           OPEN FOR READ
000.004                 312X DC.OPW DS      1           OPEN FOR WRITE
000.005                 313X DC.OPU DS      1           OPEN FOR UPDATE
000.006                 314X DC.CLO DS      1           CLOSE
000.007                 315X DC.ABT DS      1           ABORT
000.010                 316X DC.MOU DS      1           MOUNT DEVICE
000.011                 317X DC.LOD DS      1           LOAD DEVICE DRIVER
000.012                 318X DC.MAX DS      1           MAXIMUM ENTRY INDEX
000.013                 319         XTEXT   DEVDEF


                        321X **     DEVICE TABLE ENTRYS.
                        322X
000.000                 323X        ORG     0
                        324X
000.000                 325X DEV.NAM DS     2           DEVICE NAME
000.000                 326X DV.EL  EQU     00000000B   END OF DEVICE LIST FLAG
000.001                 327X DV.NU  EQU     00000001B   DEVICE ENTRY NOT IN USE
                        328X
000.002                 329X DEV.RES DS     1           DRIVER RESIDENSE CODE
000.001                 330X DR.IM  EQU     00000001B   DRIVER IN MEMORY
000.002                 331X DR.PR  EQU     00000010B   DRIVER PERMINANTLY RESIDENT
                        332X
000.003                 333X DEV.JMP DS     1           JMP TO PROCESSOR
000.004                 334X DEV.DDA DS     2           DRIVER ADDRESS
000.006                 335X DEV.FLG DS     1           FLAG BYTE
000.001                 336X DT.DD  EQU     00000001B   DIRECTORY DEVICE
000.002                 337X DT.CR  EQU     00000010B   CAPABLE OF READ OPERATION
000.004                 338X DT.CW  EQU     00000100B   CAPABLE OF WRITE OPERATION
                        339X
000.007                 340X DEV.SPG DS     1           SECTORS PER GROUP THIS DEVICE
000.010                 341X DEV.MUM DS     1           MOUNTED UNIT MASK
000.011                 342X DEV.MNU DS     1           MAXIMUM NUMBER OF UNITS
000.012                 343X DEV.UNT DS     2           ADDRESS OF UNIT SPECIFIC DATA TABLE
                        344X
000.014                 345X DEV.DVL DS     2           DRIVER BYTE LENGTH
000.016                 346X DEV.DVG DS     1           DRIVER ROUTINE GROUP ADDRESS
                        347X
000.017                 348X DEVELEN EQU    *           DEVICE TABLE ENTRY LENGTH
```

```
                        350X **     UNIT SPECIFIC DEVICE DATA TABLE ENTRIES
                        351X
000.000                 352X        ORG     0
                        353X
000.000                 354X UNT.FLG DS     1           UNIT SPECIFIC  *DEV.FLG*
000.001                 355X UNT.GRT DS     2           ADDRESS OF GROUP RESERVATION TABLE (IF DT.DD)
000.003                 356X UNT.GTS DS     2           GRT SECTOR NUMBER
000.005                 357X UNT.DIS DS     2           DIRECTORY FIRST SECTOR NUMBER
                        358X
000.007                 359X UNT.SIZ EQU    *           SIZE OF UNIT SPECIFIC DATA TABLE PER UNIT
000.007                 360         XTEXT   DVDDEF


                        362X **     DEVICE DRIVER EQUIVALENCES.
                        363X
000.307                 364X DVDFLV  EQU    307Q        DEVICE DRIVER FLAG VALUE
                        365X
000.006                 366X        ORG     PIC.COD     STARTS AT PIC CODE AREA
                        367X
000.006                 368X DVD.DVD DS     1           MUST BE DVDFLV, FLAGS TO HDOS AS DRIVER
000.007                 369X DVD.CAP DS     1           DEVICE CAPABILITY FLAG
000.010                 370X DVD.MUM DS     1           MOUNTED UNIT MASK
000.011                 371X DVD.MNU DS     1           MAXIMUM NUMBER OF UNITS
000.012                 372X DVD.UFL DS     8           UNIT SUB-CAPABILITY FLAGS FOR UNITS 0-7
000.022                 373X DVD.SET DS     1           = DVDFLV IFF DRIVER WILL TAKE SET OPTIONS
000.023                 374X        DS      24          RESERVED, MUST BE 0
000.053                 375X DVD.STE EQU    *           ENTRY FOR 'SET' INVOCATION
                        376X
002.000                 377X DVD.ENT EQU    2000A       DRIVER ENTRY POINT (MUST BE MULT OF 256)
000.053                 378         XTEXT   ECDEF


                        380X **     ERROR CODE DEFINITIONS.
                        381X
000.000                 382X        ORG     0
000.000                 383X        DS      1           NO ERROR #0
000.001                 384X EC.EOF  DS      1           END OF FILE
000.002                 385X EC.EOM  DS      1           END OF MEDIA
000.003                 386X EC.ILC  DS      1           ILLEGAL SYSCALL CODE
000.004                 387X EC.CNA  DS      1           CHANNEL NOT AVAILABLE
000.005                 388X EC.DNS  DS      1           DEVICE NOT SUITABLE
000.006                 389X EC.IDN  DS      1           ILLEGAL DEVICE NAME
000.007                 390X EC.IFN  DS      1           ILLEGAL FILE NAME
000.010                 391X EC.NRD  DS      1           NO ROOM FOR DEVICE DRIVER
000.011                 392X EC.FNO  DS      1           CHANNEL NOT OPEN
000.012                 393X EC.ILR  DS      1           ILLEGAL REQUEST
000.013                 394X EC.FUC  DS      1           FILE USAGE CONFLICT
000.014                 395X EC.FNF  DS      1           FILE NAME NOT FOUND
000.015                 396X EC.UND  DS      1           UNKNOWN DEVICE
000.016                 397X EC.ICN  DS      1           ILLEGAL CHANNEL NUMBER
000.017                 398X EC.DIF  DS      1           DIRECTORY FULL
000.020                 399X EC.IFC  DS      1           ILLEGAL FILE CONTENTS
000.021                 400X EC.NEM  DS      1           NOT ENOUGH MEMORY
```

```
000.022                 401X EC.RF    DS      1               READ FAILURE
000.023                 402X EC.WF    DS      1               WRITE FAILURE
000.024                 403X EC.WPV   DS      1               WRITE PROTECTION VIOLATION
000.025                 404X EC.WP    DS      1               DISK WRITE PROTECTED
000.026                 405X EC.FAP   DS      1               FILE ALREADY PRESENT
000.027                 406X EC.DDA   DS      1               DEVICE DRIVER ABORT
000.030                 407X EC.FL    DS      1               FILE LOCKED
000.031                 408X EC.FAO   DS      1               FILE ALREADY OPEN
000.032                 409X EC.IS    DS      1               ILLEGAL SWITCH
000.033                 410X EC.UUN   DS      1               UNKNOWN UNIT NUMBER
000.034                 411X EC.FNR   DS      1               FILE NAME REQUIRED
000.035                 412X EC.DIW   DS      1               DEVICE IS NOT WRITABLE (OR WRITE LOCKED)
000.036                 413X EC.UNA   DS      1               UNIT NOT AVAILABLE
000.037                 414X EC.ILV   DS      1               ILLEGAL VALUE
000.040                 415X EC.ILO   DS      1               ILLEGAL OPTION
000.041                 416X EC.VPM   DS      1               VOLUME PRESENTLY MOUNTED ON DEVICE
000.042                 417X EC.NVM   DS      1               NO VOLUME PRESENTLY MOUNTED
000.043                 418X EC.FOD   DS      1               FILE OPEN ON DEVICE
000.044                 419X EC.NPM   DS      1               NO PROVISIONS MADE FOR REMOUNTING MORE DISKS
000.045                 420X EC.DNI   DS      1               DISK NOT INITIALIZED
000.046                 421X EC.DNR   DS      1               DISK IS NOT READABLE
000.047                 422X EC.DSC   DS      1               DISK STRUCTURE IS CORRUPT
000.050                 423X EC.NCV   DS      1               NOT CORRECT VERSION OF HDOS
000.051                 424X EC.NOS   DS      1               NO OPERATING SYSTEM MOUNTED
000.052                 425X EC.IOI   DS      1               ILLEGAL OVERLAY INDEX
000.053                 426X EC.OTL   DS      1               OVERLAY TO LARGE
000.054                 427           XTEXT   HOSDEF

                        429X **       HOSDEF - DEFINE HOS PARAMETER.
                        430X *
                        431X
                        432X
000.026                 433X VERS     EQU     1*16+6          VERSION 1.6
                        434X
000.377                 435X SYSCALL  EQU     3770            SYSCALL INSTRUCTION
                        436X
                        437X
000.000                 438X          ORG     0
                        439X
                        440X *        RESIDENT FUNCTIONS
                        441X
000.000                 442X .EXIT    DS      1               EXIT (MUST BE FIRST)
000.001                 443X .SCIN    DS      1               SCIN
000.002                 444X .SCOUT   DS      1               SCOUT
000.003                 445X .PRINT   DS      1               PRINT
000.004                 446X .READ    DS      1               READ
000.005                 447X .WRITE   DS      1               WRITE
000.006                 448X .CONSL   DS      1               SET/CLEAR CONSOLE OPTIONS
000.007                 449X .CLRCO   DS      1               CLEAR CONSOLE BUFFER
000.010                 450X .LOADO   DS      1               LOAD AN OVERLAY
000.011                 451X .VERS    DS      1               RETURN HDOS VERSION NUMBER
000.012                 452X .SYSRES  DS      1               PRECEDING FUNCTIONS ARE RESIDENT
                        453X
                        454X
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                        455X *      *HDOSOVL0.SYS*  FUNCTIONS
                        456X
000.040                 457X        ORG     40A
                        458X
000.040                 459X .LINK  DS      1           LINK  (MUST BE FIRST)
000.041                 460X .CTLC  DS      1           CTL-C
000.042                 461X .OPENR DS      1           OPENR
000.043                 462X .OPENW DS      1           OPENW
000.044                 463X .OPENU DS      1           OPENU
000.045                 464X .OPENC DS      1           OPENC
000.046                 465X .CLOSE DS      1           CLOSE
000.047                 466X .POSIT DS      1           POSITION
000.050                 467X .DELET DS      1           DELETE
000.051                 468X .RENAM DS      1           RENAME
000.052                 469X .SETTP DS      1           SETTOP
000.053                 470X .DECODE DS     1           NAME DECODE
000.054                 471X .NAME  DS      1           GET FILE NAME FROM CHANNEL
000.055                 472X .CLEAR DS      1           CLEAR CHAN
000.056                 473X .CLEARA DS     1           CLEAR ALL CHANS
000.057                 474X .ERROR DS      1           LOOKUP ERROR
000.060                 475X .CHFLG DS      1           CHANGE FLAGS
000.061                 476X .DISMT DS      1           FLAG SYSTEM DISK DISMOUNTED
000.062                 477X .LOADD DS      1           LOAD DEVICE DRIVER
                        478X
                        479X
                        480X *      *HDOSOVL1.SYS*  FUNCTIONS
                        481X
000.200                 482X        ORG     2000
                        483X
000.200                 484X .MOUNT DS      1           MOUNT  (MUST BE FIRST)
000.201                 485X .DMOUN DS      1           DISMOUNT
000.202                 486X .MONMS DS      1           MOUNT/NO MESSAGE
000.203                 487X .DMNMS DS      1           DISMOUNT/NO MESSAGE
000.204                 488X .RESET DS      1           RESET = DISMOUNT/MOUNT OF UNIT
000.205                 489         XTEXT   NTR
```

```
                        492X **     MTR - PAM/8 EQUIVALENCES.
                        493X *
                        494X *      THIS DECK CONTAINS SYMBOLIC DEFINITIONS USED TO
                        495X *      MAKE USE OF THE PAM/8 CODE AND CONTROL BYTES.


                        497X **     IO PORTS
                        498X
000.360                 499X IP.PAD EQU     360Q            PAD INPUT PORT
000.360                 500X OP.CTL EQU     360Q            CONTROL OUTPUT PORT
000.360                 501X OP.DIG EQU     360Q            DIGIT SELECT OUTPUT PORT
000.361                 502X OP.SEG EQU     361Q            SEGMENT SELECT OUTPUT PORT


                        504X **     FRONT PANEL CONTROL BITS.
                        505X
000.020                 506X CB.SSI EQU     00010000B       SINGLE STEP INTERRUPT
000.040                 507X CB.MTL EQU     00100000B       MONITOR LIGHT
000.100                 508X CB.CLI EQU     01000000B       CLOCK INTERRUPT ENABLE
000.200                 509X CB.SPK EQU     10000000B       SPEAKER ENABLE


                        511X **     MONITOR MODE FLAGS.
                        512X
000.000                 513X DM.MR  EQU     0               MEMORY READ
000.001                 514X DM.MW  EQU     1               MEMORY WRITE
000.002                 515X DM.RR  EQU     2               REGISTER READ
000.003                 516X DM.RW  EQU     3               REGISTER WRITE


                        518X **     USER OPTION BITS.
                        519X *
                        520X *      THESE BITS ARE SET IN CELL .MFLAG.
                        521X
000.200                 522X UO.HLT EQU     10000000B       DISABLE HALT PROCESSING
000.100                 523X UO.NFR EQU     CB.CLI          NO REFRESH OF FRONT PANEL
000.002                 524X UO.DDU EQU     00000010B       DISABLE DISPLAY UPDATE
000.001                 525X UO.CLK EQU     00000001B       ALLOW PRIVATE INTERRUPT PROCESSING


                        527X **     MONITOR IDENTIFICATION FLAGS
                        528X *
                        529X *      THESE BYTES IDENTIFY THE ROM MONITOR.
                        530X *      THEY ARE THE VARIOUS VALUES OF LOCATION .IDENT
                        531X
000.021                 532X M.PAM8 EQU     021Q            'LXI' INSTRUCTION AT 000.000 IN PAM-8
000.303                 533X M.FOX  EQU     303Q            'JMP' INSTRUCTION AT 000.000 IN FOX ROM
```

```
                        535X **     ROUTINE ENTRY POINTS.
                        536X *
                        537X
000.000                 538X .IDENT  EQU   0000A     IDENTIFICATION LOCATION
000.053                 539X .DLY    EQU   0053A     DELAY
001.267                 540X .LOAD   EQU   1267A     TAPE LOAD
001.374                 541X .DUMP   EQU   1374A     TAPE DUMP
002.136                 542X .ALARM  EQU   2136A     ALARM ROUTINE
002.140                 543X .HORN   EQU   2140A     HORN
002.172                 544X .CTC    EQU   2172A     CHECK TAPE CHECKSUM
002.205                 545X .TPERR  EQU   2205A     TAPE ERROR ROUTINE
002.264                 546X .PCHL   EQU   2264A     PCHL INSTRUCTION
002.265                 547X .SRS    EQU   2265A     SCAN RECORD START
002.325                 548X .RNP    EQU   2325A     READ NEXT PAIR
002.331                 549X .RNB    EQU   2331A     READ NEXT BYTE
002.347                 550X .CRC    EQU   2347A     CRC-16 CALCULATOR
003.017                 551X .WNP    EQU   3017A     WRITE NEXT PAIR
003.024                 552X .WNB    EQU   3024A     WRITE NEXT BYTE
003.122                 553X .DOD    EQU   3122A     DECODE FOR OCTAL DISPLAY
003.260                 554X .RCK    EQU   3260A     READ CONSOLE KEYSET
003.356                 555X .DODA   EQU   3356A     SEGMENT CODE TABLE


                        557X **     RAM CELLS USED BY H8MTR.
                        558X *
                        559X
040.000                 560X .START  EQU   40000A    START DUMP ADDRESS
040.002                 561X .IOWRK  EQU   40002A    IN OR OUT INSTRUCTION
040.005                 562X .REGI   EQU   40005A    DISPLAYED REGISTER INDEX
040.006                 563X .DSPROT EQU   40006A    PERIOD FLAG BYTE
040.007                 564X .DSPMOD EQU   40007A    DISPLAY MODE
040.010                 565X .MFLAG  EQU   40010A    USER OPTION BYTE
040.011                 566X .CTLFLG EQU   40011A    PANEL CONTROL BYTE
040.013                 567X .ALEDS  EQU   40013A    ABUSS LEDS
040.021                 568X .DLEDS  EQU   40021A    DBUSS LEDS
040.024                 569X .ABUSS  EQU   40024A    ABUSS REGISTER
040.027                 570X .CRCSUM EQU   40027A    CRCSUM WORD
040.031                 571X .TPERRX EQU   40031A    TAPE ERROR EXIT VECTOR
040.033                 572X .TICCNT EQU   40033A    CLOCK TICK COUNTER
040.035                 573X .REGPTR EQU   40035A    REGISTER POINTER
040.037                 574X .UIVEC  EQU   40037A    USER INTERRUPT VECTORS
000.205                 575         XTEXT  SETCAL


                        577X **     SETCAL - FIXED ADDRESS ROUTINES IN SET
                        578X *
                        579X *      THESE VECTORS ARE FIXED ENTRY POINTS INTO THE
                        580X *      SET PROGRAM TO UTILIZED BY DEVICE DRIVERS IN
                        581X *      PROCESSING SET COMMANDS.
                        582X *
                        583X
042.201                 584X        ORG    USERFWA+1
                        585X
```

```
042.201                 586X $SNA     DS      3
                        587X
042.204                 588X $DCS     DS      3
                        589X
042.207                 590X $CNA     DS      3
                        591X
042.212                 592X $FST     DS      3
                        593X
042.215                 594X $TBLS    DS      3
                        595X
042.220                 596X $WTBLS   DS      3
                        597X
042.223                 598X $LBD     DS      3
                        599X
042.226                 600X $SOP     DS      3
                        601X
042.231                 602X $PBF     DS      3
                        603X
042.234                 604X $PBV     DS      3
                        605X
042.237                 606X          DS      60      RESERVED
042.333                 607           XTEXT   U8250


                        609X **       8250 UART CONTROL AND BIT DEFINITIONS.
                        610X
000.350                 611X SC.ACE   EQU     350Q            SYSTEM CONSOLE PORT IF 8250 ACE
000.156                 612X AC.DLY   EQU     110             220 MIL. SEC. DELAY FOR 8250
                        613X
000.000                 614X UR.RBR   EQU     0               RECEIVER BUFFER REGISTER (READ ONLY)
                        615X
000.000                 616X UR.THR   EQU     0               TRANSMITTER HOLDING REGISTER (WRITE ONLY)
                        617X
000.000                 618X UR.DLL   EQU     0               DIVISOR LATCH (LEAST SIGNIFICANT)
                        619X
000.001                 620X UR.DLM   EQU     1               DIVISOR LATCH (MOST SIGNIFICANT)
                        621X
000.001                 622X UR.IER   EQU     1               INTERRUPT ENABLE REGISTER
000.001                 623X UC.EDA   EQU     00000001B        ENABLE RECEIVED DATA AVAILABLE INTERRUPT
000.002                 624X UC.TRE   EQU     00000010B        ENABLE TRANSMIT HOLD REGISTER EMPTY INTERRUPT
000.004                 625X UC.RSI   EQU     00000100B        ENABLE RECEIVE STATUS INTERRUPT
000.010                 626X UC.MSI   EQU     00001000B        ENABLE MODEM STATUS INTERRUPT
                        627X
000.002                 628X UR.IIR   EQU     2               INTERRUPT IDENTIFICATION REGISTER
000.001                 629X UC.IIP   EQU     00000001B        INVERTED INTERRUPT PENDING (0 MEANS PENDING)
000.006                 630X UC.IID   EQU     00000110B        INTERRUPT ID
                        631X
000.003                 632X UR.LCR   EQU     3               LINE CONTROL REGISTER
000.000                 633X UC.5BW   EQU     00000000B        5 BIT WORDS
000.001                 634X UC.6BW   EQU     00000001B        6 BIT WORDS
000.002                 635X UC.7BW   EQU     00000010B        7 BIT WORDS
000.003                 636X UC.8BW   EQU     00000011B        8 BIT WORDS
000.004                 637X UC.2SB   EQU     00000100B        TWO STOP BITS SELECTED
000.010                 638X UC.PEN   EQU     00001000B        PARITY COMPUTATION ENABLED
```

```
000.020                 639X UC.EPS  EQU     00010000B       EVEN PARITY SELECT
000.040                 640X UC.SKP  EQU     00100000B       STICK PARITY
000.100                 641X UC.SB   EQU     01000000B       SET BREAK
000.200                 642X UC.DLA  EQU     10000000B       DIVISOR LATCH ACCESS
                        643X
000.004                 644X UR.MCR  EQU     4               MODEM CONTROL REGISTER
000.001                 645X UC.DTR  EQU     00000001B       DATA TERMINAL READY
000.002                 646X UC.RTS  EQU     00000010B       REQUEST TO SEND
000.004                 647X UC.OU1  EQU     00000100B       OUT 1
000.010                 648X UC.OU2  EQU     00001000B       OUT 2
000.020                 649X UC.LOO  EQU     00010000B       LOOP
                        650X
000.005                 651X UR.LSR  EQU     5               LINE STATUS REGISTER
000.001                 652X UC.DR   EQU     00000001B       DATA READY
000.002                 653X UC.OR   EQU     00000010B       OVERRUN
000.004                 654X UC.PE   EQU     00000100B       PARITY ERROR
000.010                 655X UC.FE   EQU     00001000B       FRAMING ERROR
000.020                 656X UC.BI   EQU     00010000B       BREAK INTERRUPT
000.040                 657X UC.THE  EQU     00100000B       TRANSMITTER HOLDING REGISTER EMPTY
000.100                 658X UC.TSE  EQU     01000000B       TRANSMITTER SHIFT REGISTER EMPTY
                        659X
000.006                 660X UR.MSR  EQU     6               MODEM STATUS REGISTER
000.001                 661X UC.DCS  EQU     00000001B       DELTA CLEAR TO SEND
000.002                 662X UC.DDR  EQU     00000010B       DELTA DATA SET READY
000.004                 663X UC.TER  EQU     00000100B       TRAILING EDGE OF RING
000.010                 664X UC.DRL  EQU     00001000B       DELTA RECEIVE LINE SIGNAL DETECT
000.020                 665X UC.CTS  EQU     00010000B       CLEAR TO SEND
000.040                 666X UC.DSR  EQU     00100000B       DATA SET READY
000.100                 667X UC.RI   EQU     01000000B       RING INDICATOR
000.200                 668X UC.RLS  EQU     10000000B       RECEIVED LINE SIGNAL DETECT
                        669          CODE    PIC
                        670
                        671  *       CODE HEADER
                        672
000.006  307           673          DB      DVDFLV
000.007  004           674          DB      DT.CW                   DEVICE CAPABILITY: WRITE
000.010  001           675          DB      00000001B               MOUNTED UNIT MASK
000.011  001           676          DB      1                       MAXIMUM OF ONE UNIT
000.012  004           677          DB      DT.CW                   0:    CAPABLE OF WRITE
000.013                 678          DS      7                       1-7:  IGNORED
000.022  307           679          DB      DVDFLV
000.000                 680          ERRNZ   *-023Q
000.023                 681          DS      DVD.STE-023Q            RESERVED AREAS
```

```
                        684  ***     ASSEMBLY CONSTANTS
                        685  *
                        686  *
                        687
000.303                 688  MI.JMP  EQU     303Q            JUMP
000.302                 689  MI.JNZ  EQU     302Q            JUMP-NON-ZERO
000.315                 690  MI.CALL EQU     315Q            UNCONDITIONAL CALL
000.314                 691  MI.CZ   EQU     314Q            CALL-ZERO


                        693  **      FLAG DEFINITIONS
                        694  *
                        695
000.001                 696  F.FORM  EQU     00000001B       FORM-FEED UPON CLOSE


                        698  **      DEFAULT DEVICE DEFINITIONS
                        699  *
                        700
000.340                 701  DFLT.PN EQU     340Q            DEFAULT DBO: ADDRESS
000.140                 702  DFLT.BD EQU     000140A         1200 BAUD
                        703
000.001                 704  DFLT.FG EQU     F.FORM          DEFAULT FLAG:  FORM
000.006                 705  DFLT.LI EQU     6               LINES/INCH
000.120                 706  DFLT.WD EQU     80              WIDTH
000.074                 707  DFLT.LP EQU     60              LINES/PAGE


                        709  **      SPECIAL CHARACTERS
                        710  *
                        711
000.003                 712  ETX     EQU     3               DIABLO END-OF-TEXT HANDSHAKE
000.006                 713  ACK     EQU     6               DIABLO ACKNOWLEDGE HANDSHAKE
000.040                 714  BURST   EQU     32              DIABLO BURST COUNT
```

```
                                717  ***     SET ENTRY
                                718  *
                                719  *       SET COMMANDS ENTER HERE
                                720  *
                                721  *       ENTRY:  (DE)    = LINE POINTER
                                722  *               (A)     = UNIT NUMBER
                                723  *
                                724  *       EXIT:   (PSW)   = 'C' CLEAR IF NO ERROR
                                725  *                         = 'C' SET   IF    ERROR
                                726  *                           (A) = ERROR CODE
                                727  *
                                728  *       USES:   ALL
                                729  *
                                730
000.053                         731  SETNTR  EQU     *
000.000                         732          ERRNZ   *-DVD.STE
000.053  247                    733          ANA     A
000.054  302 103 000            734          JNZ     SET1            ALLOW ONLY UNIT 0
                                735
000.057  102                    736          MOV     B,D
000.060  113                    737          MOV     C,E
000.061  021 367 001            738          LXI     D,PRCTAB
000.064  041 170 001            739          LXI     H,OPTTAB
000.067  315 226 042            740          CALL    $SOP
000.072  330                    741          RC                      ERROR
000.073  315 201 042            742          CALL    $SNA
000.076  310                    743          RZ                      AT THE END OF THE LINE
                                744
000.077  076 040                745          MVI     A,EC.ILO        ILLEGAL OPTION
000.101  067                    746          STC
000.102  311                    747          RET
                                748
000.103  076 033                749  SET1    MVI     A,EC.UUN
000.105  067                    750          STC
000.106  311                    751          RET
```

```
                                755  **      FLAG    -  PROCESS FLAG OPTIONS
                                756  *
                                757  *       PROCESS FLAG TYPE OPTION SPECIFICATIONS
                                758  *
                                759  *
                                760  *       ENTRY, EXIT, AND USE SAME AS PBF
                                761  *
                                762
042.231                         763  FLAG    EQU     $PBF



                                765  **      VAL     -  PROCESS VALUE OPTIONS
                                766  *
                                767  *       PROCESS BYTE VALUE OPTIONS
                                768  *
                                769  *
                                770  *       ENTRY, EXIT, AND USE SAME AS PBV
                                771  *
                                772
042.234                         773  VAL     EQU     $PBV



                                775  **      BAUD    -  PROCESS BAUD RATE OPTION
                                776  *
                                777  *       PROCESS BAUD RATE OPTION SPECIFICATION
                                778  *
                                779  *       ENTRY:  (BC)    = TEXT ADDRESS
                                780  *               (PSW)   = 'C' CLEAR IF NO ERROR
                                781  *                         'C' SET   IF    ERROR
                                782  *                          (A) = ERROR CODE
                                783  *
                                784  *       EXIT:   (BC)    = UPDATED TEXT ADDRESS
                                785  *
                                786  *       USES:   ALL
                                787  *
                                788
000.107  076 012               789  BAUD    MVI     A,10            DEFAULT RADIX IS 10
000.111  315 207 042           790          CALL    $CNA            GET BAUD RATE
000.114  076 037               791          MVI     A,EC.ILV        ASSUME ILLEGAL VALUE
000.116  330                   792          RC                      THERE WAS AN ERROR GETTING VALUE
                                793
000.117  353                   794          XCHG                    (DE) = BAUD RATE
000.120  315 223 042           795          CALL    $LBD            (HL) = BAUD RATE DIVISOR
000.123  076 037               796          MVI     A,EC.ILV        ASSUME ILLEGAL VALUE
000.125  067                   797          STC
000.126  300                   798          RNZ                     THE BAUD RATE WAS NOT FOUND IN THE TABLE
                                799
000.127  042 052 004           800          SHLD    D.BAUD          SET UP THE BAUD RATE IN THE TABLE
000.132  257                   801          XRA     A               CLEAR THE CARRY, ETC.
000.133  311                   802          RET
```

```
                                804  **      HELP    -  PROCESS HELP SET OPTION
                                805  *
                                806  *       LIST THE VALID SET OPTIONS FOR THIS DEVICE ON THE
                                807  *       SYSTEM CONSOLE.
                                808  *
                                809  *       ENTRY:  NONE
                                810  *
                                811  *       EXIT:   NONE
                                812  *
                                813  *       USES:   (PSW)
                                814  *
                                815
000.134                         816  HELP    EQU     *
000.134  315 136 031            817          CALL    $TYPTX
000.137  012 012 123            818          DB      NL,NL,'Set Options:',NL,NL
000.157  101 125 124            819          DB      'AUTO-CR                Map Newline Character to <CR><LF>',NL
000.232  106 117 122            820          DB      'FORM                   Form-Feed at Close',NL
000.263  124 101 102            821          DB      'TABX                   Expand Tabs',NL
000.305  012 116 157            822          DB      NL,'Note:               The above options may be preceded',NL
000.356  011 142 171            823          DB      '       by NO to cancel their effect.',NL,NL
001.016  102 101 125            824          DB      'BAUD   n       Baud Rate',NL
001.037  110 105 114            825          DB      'HELP           Type this Text',NL
001.064  120 101 107            826          DB      'PAGE   n       Lines/Page',NL
001.106  120 117 122            827          DB      'PORT   n       Port Number',NL
001.131  127 111 104            828          DB      'WIDTH  n       Chars/Line [0-158]',NL
001.164  012 212                829          DB      NL,ENL
001.166  257                    830          XRA     A               CLEAR CARRY
001.167  311                    831          RET
```

```
                                834  ***     TABLES
                                835  *
                                836  *


                                838  **      OPTTAB  -  OPTION TABLE
                                839  *
                                840
001.170  366 001                841  OPTTAB  DW      OPTTABE
001.172  006                    842          DB      6
                                843
001.173  101 125 124            844          DB      'AUTO-C','R'+200Q,FLAGI
001.203  377 302                845          DB      377Q,MI,JNZ
001.205  027 003                846          DW      DBOA
001.207  000                    847          DB      0
                                848
001.210  116 117 101            849          DB      'NOAUTO-C','R'+200Q,FLAGI
001.222  377 303                850          DB      377Q,MI,JMP
001.224  027 003                851          DW      DBOA
001.226  000                    852          DB      0
                                853
001.227  106 117 122            854          DB      'FOR','M'+200Q,FLAGI,F,FORM,F,FORM
001.236  051 004                855          DW      D.FLAG
001.240  000                    856          DB      0
                                857
001.241  116 117 106            858          DB      'NOFOR','M'+200Q,FLAGI,F,FORM,0
001.252  051 004                859          DW      D.FLAG
001.254  000                    860          DB      0
                                861
001.255  124 101 102            862          DB      'TAB','X'+200Q,FLAGI,377Q,MI,JNZ
001.264  376 002                863          DW      DBOB
001.266  000                    864          DB      0
                                865
001.267  116 117 124            866          DB      'NOTAB','X'+200Q,FLAGI,377Q,MI,JMP
001.300  376 002                867          DW      DBOB
001.302  000                    868          DB      0
                                869
001.303  120 101 107            870          DB      'PAG','E'+200Q,VALI,10,0,255
001.313  060 004                871          DW      D.LNPG
                                872
001.315  120 117 122            873          DB      'POR','T'+200Q,VALI,8,0,377Q
001.325  055 004                874          DW      D.PORT
                                875
001.327  127 111 104            876          DB      'WIDT','H'+200Q,VALI,10,0,158
001.340  057 004                877          DW      D.WID
                                878
001.342  102 101 125            879          DB      'BAU','D'+200Q,BAUDI
001.347  000 000 000            880          DB      0,0,0,0,0
                                881
001.354  110 105 114            882          DB      'HEL','P'+200Q,HELPI
001.361  000 000 000            883          DB      0,0,0,0,0
                                884
001.366  000                    885  OPTTABE DB      0
```

```
                        887  **      PRCTAB  -  PROCESSOR TABLE
                        888  *
                        889
001.367                 890  PRCTAB  DS      0
                        891
000.000                 892  BAUDI   EQU     *-PRCTAB/2
001.367  107 000        893          DW      BAUD
                        894
000.001                 895  FLAGI   EQU     *-PRCTAB/2
001.371  231 042        896          DW      FLAG
                        897
000.002                 898  HELPI   EQU     *-PRCTAB/2
001.373  134 000        899          DW      HELP
                        900
000.003                 901  VALI    EQU     *-PRCTAB/2
001.375  234 042        902          DW      VAL


001.377                 904  .       SET     1377A
000.000                 905          ERRNZ   *-.
001.377                 906          DS      DVD.ENT-.
```

```
                                909  ***     DBDVD ENTRY POINT
                                910  *
                                911  *       ENTRY:  (A)     = PROCESS CODE
                                912  *               (BC)    = BYTE COUNT
                                913  *               (DE)    = BUFFER ADDRESS
                                914  *
                                915  *       EXIT:   (PSW)   = 'C' CLEAR IF NO ERROR
                                916  *                       = 'C' SET   IF    ERROR
                                917  *                         (A) = ERROR CODE
                                918  *
                                919  *       USES:   ALL
                                920  *
                                921
002.000                         922  DBDVD   EQU     *
000.000                         923          ERRNZ   *-DVD.ENT
002.000  376 011                924          CPI     9
002.002  322 022 002            925          JNC     DBDI                ILLEGAL PROCESS CODE
                                926
002.005  315 076 031            927          CALL    $TBRA               ENTRY PROCESSOR
002.010  016                    928          DB      NSUIT-*             READ
002.011  154                    929          DB      WRITE-*             WRITE
002.012  014                    930          DB      NSUIT-*             READR
002.013  013                    931          DB      NSUIT-*             OPENR
002.014  023                    932          DB      OPENW-*             OPENW
002.015  011                    933          DB      NSUIT-*             OPENU
002.016  113                    934          DB      CLOSE-*             CLOSE
002.017  013                    935          DB      ABORT-*             ABORT
002.020  006                    936          DB      NSUIT-*             MOUNT
002.021  014                    937          DB      LOADD-*             LOADD
                                938
002.022  076 012                939  DBDI    MVI     A,EC.ILR            ILLEGAL REQUEST
002.024  067                    940          STC
002.025  311                    941          RET
```

```
                                    944  ***     NSUIT   -  NOT SUITABLE
                                    945  *
                                    946  *       ROUTINE TO HANDLE UNSUITABLE DEVICE DRIVER REQUESTS.
                                    947  *
                                    948  *       ENTRY:  NONE
                                    949  *
                                    950  *       EXIT:   (PSW)   = 'C' SET TO FLAG ERROR
                                    951  *                         (A) = ILLEGAL REQUEST ERROR CODE
                                    952  *
                                    953  *       USES:   (PSW)
                                    954  *
                                    955
002.026                             956  NSUIT   EQU     *
002.026  076 005                    957          MVI     A,EC.DNS        DEVICE NOT SUITABLE
002.030  067                       958          STC
002.031  311                       959          RET


                                    961  ***     ABORT   -  ABORT DEVICE
                                    962  *
                                    963  *       ROUTINE TO HANDLE ABORT DEVICE DRIVER REQUESTS.
                                    964  *
                                    965  *       ENTRY:  NONE
                                    966  *
                                    967  *       EXIT:   NONE
                                    968  *
                                    969  *       USES:   (PSW)
                                    970  *
                                    971
002.032                             972  ABORT   EQU     *
002.032  303 131 002                973          JMP     CLOSE


                                    975  ***     LOADD   -  LOAD DEVICE DRIVER
                                    976  *
                                    977  *       LOADD PROCESSES THE DEVICE DRIVER LOAD
                                    978  *
                                    979  *       ENTRY:  NONE
                                    980  *
                                    981  *       EXIT:   NONE
                                    982  *
                                    983  *       USES:   (PSW)
                                    984  *
                                    985
002.035  247                       986  LOADD   ANA     A
002.036  311                       987          RET
```

```
                                990  ***     OPENW   -  OPEN DEVICE FOR WRITE
                                991  *
                                992  *       SET UP DEVICE AND NECESSARY FLAGS FOR WRITE, THIS INCLUDES
                                993  *       INITIALIZING THE 8250/8251.
                                994  *
                                995  *       ENTRY:  NONE
                                996  *
                                997  *       EXIT:   NONE
                                998  *
                                999  *       USES:   ALL
                               1000
002.037                        1001  OPENW   EQU     *
002.037  315 042 004           1002          CALL    UAS
002.042  076 036               1003          MVI     A,EC.UNA        UNIT NOT AVAILABLE
002.044  067                   1004          STC
002.045  300                   1005          RNZ                     UNIT ALREADY ASSIGNED
                               1006
                               1007  *       FLAG ASSIGNED, INITIALIZE INDICES, ETC.
                               1008
002.046  072 050 004           1009          LDA     D.ASGN
002.051  366 200               1010          ORI     10000000B
002.053  062 050 004           1011          STA     D.ASGN          FLAG DEVICE ASSIGNED
                               1012
002.056  257                   1013          XRA     A
002.057  062 064 004           1014          STA     D.NOC           ZERO NEED ONE ESC. SEQ. CHAR. FLAG
002.062  062 063 004           1015          STA     D.LWE           ZERO LAST CHAR. WAS ESCAPE FLAG
                               1016
002.065  076 040               1017          MVI     A,BURST
002.067  062 065 004           1018          STA     D.BURC          INITIALIZE BURST COUNTER
                               1019
                               1020  *       INITIALIZE UART
                               1021
002.072  072 055 004           1022          LDA     D.PORT
002.075  052 052 004           1023          LHLD    D.BAUD
                               1024
002.100  315 310 003           1025          CALL    I8250
002.103  072 055 004           1026          LDA     D.PORT
002.106  147                   1027          MOV     H,A
002.107  056 004               1028          MVI     L,UR.MCR
002.111  076 013               1029          MVI     A,UC.DTR+UC.RTS+UC.OU2  SET DATA TERM. READY, REQ. SEND, RSLD
002.113  315 030 004           1030          CALL    OUT
                               1031
                               1032  *       INITIALIZE CARRIAGE INDICES
                               1033
002.116  076 001               1034          MVI     A,1
002.120  062 061 004           1035          STA     D.LINX          INITIALIZE LINE INDEX
002.123  076 015               1036          MVI     A,CR
002.125  315 355 002           1037          CALL    DBOUT           RETURN HEAD, AND INITIALIZE COLUMN COUNTER
                               1038
002.130  311                   1039          RET
```

```
                                1042  ***     CLOSE   -  CLOSE THE OUTPUT DEVICE
                                1043  *
                                1044  *       UNASSIGN THE DEVICE
                                1045  *
                                1046  *       ENTRY:  NONE
                                1047  *
                                1048  *       EXIT:   (PSW)   = 'C' CLEAR IF NO ERROR
                                1049  *                       = 'C' SET   IF   ERROR
                                1050  *                         (A) = ERROR CODE
                                1051  *
                                1052  *       USES:   ALL
                                1053  *
                                1054
002.131                         1055  CLOSE   EQU     *
002.131  315 042 004            1056          CALL    UAS
002.134  076 036                1057          MVI     A,EC.UNA        UNIT NOT AVAILABLE
002.136  067                    1058          STC
002.137  310                    1059          RZ                      UNIT WAS NOT ASSIGNED
                                1060
002.140  072 050 004            1061          LDA     D.ASGN
002.143  346 177                1062          ANI     01111111B
002.145  062 050 004            1063          STA     D.ASGN          FLAG UNIT AVAILABLE
                                1064
002.150  072 051 004            1065          LDA     D.FLAG
002.153  346 001                1066          ANI     F.FORM
002.155  310                    1067          RZ                      NO FORM-FEED AT CLOSE
                                1068
002.156  076 014                1069          MVI     A,FF
002.160  315 355 002            1070          CALL    DBOUT
002.163  247                    1071          ANA     A               CLEAR ERROR FLAG
002.164  311                    1072          RET
```

```
                                1075  ***     WRITE   -  WRITE TO DEVICE
                                1076  *
                                1077  *       WRITE A BUFFER FULL OF CHARACTERS TO THE OUTPUT DEVICE
                                1078  *
                                1079  *       ENTRY:  (BC)    = BYTE COUNT
                                1080  *               (DE)    = ADDRESS OF DATA BUFFER
                                1081  *
                                1082  *       EXIT:   (PSW)   = 'C' CLEAR IF NO ERROR
                                1083  *                         'C' SET   IF    ERROR
                                1084  *                          (A)  = ERROR CODE
                                1085  *                          (BC) = UNUSED BYTE COUNT
                                1086  *                          (DE) = ADDRESS OF NEXT BYTE TO BE WRITTEN
                                1087  *
                                1088  *       USES:   ALL
                                1089  *
                                1090
002.165                         1091  WRITE   EQU     *
002.165  315 042 004            1092          CALL    UAS
002.170  076 036                1093          MVI     A,EC.UNA        UNIT NOT AVAILABLE
002.172  067                    1094          STC
002.173  310                    1095          RZ                      UNIT WAS NOT ASSIGNED
                                1096
002.174  170                    1097  WRI1    MOV     A,B
002.175  261                    1098          ORA     C
002.176  310                    1099          RZ                      THE LAST BYTE HAS BEEN WRITTEN
                                1100
002.177  315 202 003            1101          CALL    CFA
002.202  302 032 002            1102          JNZ     ABORT           AN ABORT WAS HIT ON THE CONSOLE
                                1103
002.205  315 213 002            1104          CALL    WRI2
002.210  303 174 002            1105          JMP     WRI1


                                1107  **      WRI2
                                1108  *
                                1109  *       (DE) = BUFFER
                                1110  *       (BC) = COUNT
                                1111
002.213  315 230 002            1112  WRI2    CALL    CES             CHECK ESCAPE SEQUENCE FLAGS AND CHARS.
002.216  032                    1113          LDAX    D               (A) = CHARACTER TO OUTPUT
002.217  315 355 002            1114          CALL    DBOUT
002.222  013                    1115          DCX     B               *** THIS RETURNING COUNT MAY NOT BE GOOD ***
002.223  023                    1116          INX     D               *** IF AN ABORT CHARACTER IS HIT AT  THE ***
002.224  315 302 002            1117          CALL    CHP             *** CORRECT TIME.                       ***
002.227  311                    1118          RET
```

```
                                1120  **      CES     -  CHECK ESCAPE SEQUENCES
                                1121  *
                                1122  *       SET THE ESCAPE SEQUENCE MONITORING FLAGS
                                1123  *
                                1124  *       ENTRY:  (DE)    = BUFFER POINTER
                                1125  *
                                1126  *       EXIT:   NONE
                                1127  *
                                1128  *       USES:   PSW
                                1129  *
                                1130
002,230  072 063 004            1131  CES     LDA     D.LWE
002,233  247                    1132          ANA     A
002,234  302 263 002            1133          JNZ     CES2            LAST CHARACTER WAS ESCAPE
                                1134
002,237  072 064 004            1135          LDA     D.NOC
002,242  247                    1136          ANA     A
002,243  302 256 002            1137          JNZ     CES1            NEED ONE CHARACTER
                                1138
002,246  032                    1139          LDAX    D
002,247  376 033                1140          CPI     ESC
002,251  300                    1141          RNZ                     LET A NORMAL CHARACTER SLIP THROUGH
                                1142
002,252  062 063 004            1143          STA     D.LWE           FLAG LAST CHARACTER AS ESCAPE
002,255  311                    1144          RET
                                1145
002,256  257                    1146  CES1    XRA     A
002,257  062 064 004            1147          STA     D.NOC           ZERO NEED ONE CHARACTER FLAG
002,262  311                    1148          RET
                                1149
002,263  032                    1150  CES2    LDAX    D
002,264  376 040                1151          CPI     ' '
002,266  332 272 002            1152          JC      CES3
002,271  257                    1153          XRA     A
002,272  062 064 004            1154  CES3    STA     D.NOC           SET NOC FLAG, TRUE FOR ESC. SEQ. < ' '
002,275  257                    1155          XRA     A
002,276  062 063 004            1156          STA     D.LWE           ZERO LAST CHARACTER WAS ESCAPE FLAG
002,301  311                    1157          RET


                                1159  **      CHP     -  CHECK HANDSHAKE PROTOCOL
                                1160  *
                                1161  *       WAIT ON THE HANDSHAKE PROTOCOL IF TIME TO TRY, AND NOT IN ESCAPE
                                1162  *       SEQUENCE.
                                1163  *
                                1164  *       ENTRY:  NONE
                                1165  *
                                1166  *       EXIT:   (PSW)   = 'Z' CLEAR IF EXITED VIA AN ABORT
                                1167  *                         'Z' SET   IF HANDSHAKE RECEIVED
                                1168  *
                                1169  *       USES:   (PSW)
                                1170  *
                                1171
002,302  072 065 004            1172  CHP     LDA     D.BURC
```

```
002.305  247                ANA     A                                                /79.12.GC/
                      *     DCR     A
                      *     STA     D.BURC          UPDATE THE NUMBER OF CHARACTERS OUTPUT
002.306  360                RP                      NOT TIME TO SEND ETX          /JWT 06SEP79/
000.142                     ERRMI   130-BURST       BURST MUST BE <= 130 TO INSURE IT IS POSITIVE

002.307  072 064 004        LDA     D.NOC
002.312  247                ANA     A
002.313  300                RNZ                     NEED ONE MORE CHAR. FOR ESC. SEQ.

002.314  072 063 004        LDA     D.LWE
002.317  247                ANA     A
002.320  300                RNZ                     LAST CHAR. WAS START OF ESC. SEQ.

002.321  076 003            MVI     A,ETX
002.323  315 355 002        CALL    DBOUT

002.326  315 202 003  CHP1  CALL    CFA
002.331  300                RNZ                     RETURN IF ABORT CHARACTER WAS HIT

002.332  315 210 003        CALL    INCHAR
002.335  312 326 002        JZ      CHP1            NO CHARACTER HAS BEEN RECEIVED YET

002.340  346 177            ANI     7FH             STRIP PARITY
002.342  376 006            CPI     ACK
002.344  302 326 002        JNZ     CHP1            WAIT FOR AN  *ACK*  CHARACTER

002.347  076 037            MVI     A,BURST-1                                     /JWT 06SEP79/
002.351  062 065 004        STA     D.BURC          RESET BURST COUNTER
002.354  311                RET


                      **    DBOUT   -  DIABLO OUTPUT ROUTINE
                      *
                      *     MAP HDOS FORMAT TO DIABLO FORMAT IN OUTPUTING CHARACTERS TO THE
                      *     DIABLO.
                      *
                      *     ENTRY:  (A)     = CHARACTER
                      *
                      *     EXIT:   NONE
                      *
                      *     USES:   (PSW)
                      *

002.355               DBOUT EQU     *

002.355  376 015            CPI     CR
002.357  302 374 002        JNZ     DBO1
002.362  076 001            MVI     A,1
002.364  062 062 004        STA     D.COLX          SET COLUMN INDEX TO 1
002.367  076 015            MVI     A,CR
002.371  303 075 003        JMP     DBO.

002.374  376 011      DBO1  CPI     TAB
```

```
002.376  302 025 003  1226          JNZ     DB03
002.376               1227  DB0B    EQU     *-3             MODIFIER TO CHANGE /TAB/ PROCESSING
003.001  076 040      1228          MVI     A,' '
003.003  315 355 002  1229          CALL    DBOUT
003.006  072 062 004  1230  DB02    LDA     D.COLX
003.011  075         1231          DCR     A
003.012  346 007      1232          ANI     7
003.014  310         1233          RZ
                      1234
003.015  076 040      1235          MVI     A,' '
003.017  315 355 002  1236          CALL    DBOUT           OUTPUT ANOTHER SPACE
003.022  303 006 003  1237          JMP     DB02
                      1238
                      1239
003.025  376 012      1240  DB03    CPI     NL
003.027  302 053 003  1241          JNZ     DB04
003.027               1242  DB0A    EQU     *-3             TO CHANGE 'NL' PROC., (CHANGE TO JMP)
003.032  076 015      1243          MVI     A,CR
003.034  315 355 002  1244          CALL    DBOUT
003.037  072 061 004  1245          LDA     D.LINX
003.042  074         1246          INR     A
003.043  062 061 004  1247          STA     D.LINX          NOTE:  IF NOAUTO-CR IS SET, THE LINE COUNT
003.046  076 012      1248          MVI     A,NL                   WILL BE MESSED UP.
003.050  303 075 003  1249          JMP     DB0.
                      1250
003.053  376 014      1251  DB04    CPI     FF
003.055  302 075 003  1252          JNZ     DB05
003.060  076 001      1253          MVI     A,1
003.062  062 062 004  1254          STA     D.COLX
003.065  062 061 004  1255          STA     D.LINX
003.070  076 014      1256          MVI     A,FF
003.072  303 075 003  1257          JMP     DB0.
                      1258
003.075               1259  DB05    EQU     *
                      1260
003.075  376 040      1261  DB0.    CPI     ' '
003.077  332 142 003  1262          JC      DB09            NON-PRINTING CHARACTER
003.102  376 177      1263          CPI     RUBOUT
003.104  322 142 003  1264          JNC     DB09            NON-PRINTING CHARACTER
                      1265
003.107  365         1266          PUSH    PSW
003.110  345         1267          PUSH    H
                      1268
003.111  072 057 004  1269          LDA     D.WID
003.114  247         1270          ANA     A
003.115  312 131 003  1271          JZ      DB0B            DON'T WRAP AT ALL
                      1272
003.120  041 062 004  1273          LXI     H,D.COLX
003.123  276         1274          CMP     M
003.124  076 012      1275          MVI     A,NL
003.126  334 355 002  1276          CC      DBOUT           OUTPUT NEWLINE IF  WIDTH < INDEX
                      1277
003.131  041 062 004  1278  DB0B    LXI     H,D.COLX
003.134  064         1279          INR     M
                      1280
003.135  315 157 003  1281          CALL    DB010           CHECK FOR PAGE WRAP (ONLY IF NON-PRINTING)
```

```
                                1282
003.140  341                   1283            POP     H
003.141  361                   1284            POP     PSW
                                1285
003.142  346 177               1286    DB09    ANI     177Q            MAP OUT HIGH ORDER BIT, POSSIBLY SET FOR QUOTE
003.144  315 242 003           1287            CALL    OUTCHAR
                                1288
003.147  072 065 004           1289            LDA     D.BURC
003.152  075                   1290            DCR     A
003.153  062 065 004           1291            STA     D.BURC          DECREMENT BURST COUNT (HERE FOR ALL CHARS.!)
                                1292
003.156  311                   1293            RET
                                1294
003.157  345                   1295    DB010   PUSH    H
003.160  072 060 004           1296            LDA     D.LNPG
003.163  247                   1297            ANA     A
003.164  312 200 003           1298            JZ      DB011           DON'T DO ANY FORM-FEED STUFF
003.167  041 061 004           1299            LXI     H,D.LINX
003.172  276                   1300            CMP     M
003.173  076 014               1301            MVI     A,FF
003.175  334 355 002           1302            CC      DBOUT           OUTPUT FORM-FEED IF  LINES/PAGE < INDEX
003.200  341                   1303    DB011   POP     H
003.201  311                   1304            RET
```

```
                                1308  **      CFA     -  CHECK FOR ABORT
                                1309  *
                                1310  *       CHECK FOR AN ABORT CHARACTER STRUCK UPON THE CONSOLE
                                1311  *
                                1312  *       ENTRY:  NONE
                                1313  *
                                1314  *       EXIT:   (PSW)   = 'Z' SET   IF ABORT NOT STRUCK
                                1315  *                         'Z' CLEAR IF ABORT STRUCK
                                1316  *
                                1317  *       USES:   (PSW)
                                1318  *
                                1319
003.202  072 334 040           1320  CFA     LDA     S.CAADR+1
003.205  247                   1321          ANA     A               SET/RESET THE ZERO FLAG
003.206  311                   1322          RET


                                1324  **      WAIT    -  WAIT FOR HANDSHAKE
                                1325  *
                                1326  *       DUMMY WAIT FOR HANDSHAKE ROUTINE.
                                1327  *
                                1328
003.207                         1329  WAIT    EQU     *
003.207  311                   1330          RET
003.210                         1331          XTEXT   DVDIO


                                1333X **      INCHAR - INPUT CHARACTER
                                1334X *
                                1335X *       INPUT CHARACTER FROM SPECIFIED DEVICE
                                1336X *
                                1337X *       ENTRY   NONE
                                1338X *
                                1339X *       EXIT    (PSW) = 'Z' CLEAR IF THERE IS A CHARACTER
                                1340X *                       (A) = CHARACTER
                                1341X *                     = 'Z' SET   IF THERE IS NOT A CHARACTER
                                1342X *
                                1343X *       USES    (PSW)
                                1344X *
                                1345X
003.210                         1346X INCHAR  EQU     *
003.210  345                    1347X         PUSH    H
003.211  072 055 004           1348X         LDA     D.PORT
003.214  147                    1349X         MOV     H,A
                                1350X
                                1351X *       CHECK FOR DATA
                                1352X
000.000                         1353X         IF      H84IO
                                1354X
003.215  056 005                1355X         MVI     L,UR.LSR
003.217  315 020 004           1356X         CALL    IN
003.222  346 001               1357X         ANI     UC.DR                   'Z' SET IF THERE IS DATA
```

```
003.224  312 237 003  1358X          JZ     INC1                          NO DATA
003.227  056 000      1359X          MVI    L,UR.RBR
003.231  315 020 004  1360X          CALL   IN
003.234  303 240 003  1361X          JMP    INC2
                      1362X
                      1363X          ELSE
                      1364X
                      1365X          MVI    L,USR
                      1366X          CALL   IN
                      1367X          ANI    USR.RXR                       'Z' SET IF THERE IS NO DATA
                      1368X          JZ     INC1                          NO DATA
                      1369X          MVI    L,UDR
                      1370X          CALL   IN
                      1371X          ANA    A                             IGNORE NULL CHARACTERS
                      1372X          JMP    INC2
                      1373X
                      1374X          ENDIF
                      1375X
003.237  067          1376X INC1     STC
                      1377X
003.240  341          1378X INC2     POP    H
003.241  311          1379X          RET


                      1381X **       OUTCHAR - OUTPUT CHARACTER
                      1382X *
                      1383X *        OUTPUT CHARACTER TO SPECIFIED DEVICE
                      1384X *
                      1385X *        ENTRY    (A)    = CHARACTER
                      1386X *
                      1387X *        EXIT     NONE
                      1388X *
                      1389X *        USES     (PSW)
                      1390X *
                      1391X
003.242               1392X OUTCHAR  EQU    *
003.242  345          1393X          PUSH   H
                      1394X
003.243  365          1395X          PUSH   PSW
003.244  072 055 004  1396X          LDA    D.PORT
003.247  147          1397X          MOV    H,A
                      1398X
000.000               1399X          IF       H84IO
                      1400X
003.250  056 005      1401X          MVI    L,UR.LSR
003.252  315 207 003  1402X          CALL   WAIT                    WAIT FOR THE HAND-SHAKE!/79.11.GC/
003.255  072 334 040  1403X OUTCO    LDA    S.CAADR+1
003.260  247          1404X          ANA    A
003.261  302 305 003  1405X          JNZ    OUTC1                 IF  CTL-Z,-A,-B,-C HIT
003.264  315 020 004  1406X          CALL   IN
003.267  346 040      1407X          ANI    UC.THE
003.271  312 255 003  1408X          JZ     OUTCO                 IF  NOT READY FOR TRANSMIT
003.274  361          1409X          POP    PSW
003.275  056 000      1410X          MVI    L,UR.THR
```

```
003.277  315 030 004  1411X          CALL  OUT
003.302  303 306 003  1412X          JMP   OUTC2
                      1413X
                      1414X          ELSE
                      1415X
                      1416X          MVI   L,USR
                      1417X          CALL  WAIT                    WAIT FOR THE HAND-SHAKE /79.11.GC/
                      1418X OUTCO    LDA   S.CAADR+1
                      1419X          ANA   A
                      1420X          JNZ   OUTC1                   IF CTL-Z,-A,-B,-C.HIT
                      1421X          CALL  IN
                      1422X          ANI   USR.TXR
                      1423X          JZ    OUTCO                   IF  NOT READY FOR TRANSMIT
                      1424X          POP   PSW
                      1425X          MVI   L,UDR
                      1426X          CALL  OUT
                      1427X          JMP   OUTC2
                      1428X
                      1429X          ENDIF
                      1430X
003.305  361          1431X OUTC1    POP   PSW
                      1432X
003.306  341          1433X OUTC2    POP   H
003.307  311          1434X          RET
000.000                1435X          IF      H84IO


                      1437X **       I8250 - INITIALIZE 8250
                      1438X *
                      1439X *        INITIALIZE AN 8250 PORT.  STOLEN AS CAP FROM CONSL. DRIVER.
                      1440X *
                      1441X *        ENTRY   (A)          =  PORT ADDRESS
                      1442X *                (HL)[0-14]   =  NEW BAUD RATE
                      1443X *                (HL)[15]     =  1 IF TWO STOP BITS
                      1444X *
                      1445X *        EXIT    NONE
                      1446X *
                      1447X *        USES    (A)
                      1448X *
                      1449X
003.310                1450X I8250    EQU   *
003.310  325           1451X          PUSH  D
                      1452X
003.311  353          1453X          XCHG
003.312  147          1454X          MOV   H,A
003.313  056 001      1455X          MVI   L,UR.IER                                    /79.02.GC/
003.315  257          1456X          XRA   A                                           /79.02.GC/
003.316  315 030 004  1457X          CALL  OUT                                         /79.02.GC/
003.321  056 004      1458X          MVI   L,UR.MCR                                    /79.01.GC/
003.323  076 020      1459X          MVI   A,UC.LOO                                    /79.01.GC/
003.325  315 030 004  1460X          CALL  OUT                 SET LOOP-BACK           /79.01.GC/
003.330  056 003      1461X          MVI   L,UR.LCR
003.332  076 200      1462X          MVI   A,UC.DLA
003.334  315 030 004  1463X          CALL  OUT
```

```
003.337  056 000      1464X          MVI   L,UR.DLL
003.341  173          1465X          MOV   A,E
003.342  315 030 004  1466X          CALL  OUT
003.345  056 001      1467X          MVI   L,UR.DLM
003.347  172          1468X          MOV   A,D
003.350  346 177      1469X          ANI   177Q
003.352  315 030 004  1470X          CALL  OUT
003.355  056 003      1471X          MVI   L,UR.LCR
003.357  172          1472X          MOV   A,D
003.360  007          1473X          RLC
003.361  007          1474X          RLC
003.362  007          1475X          RLC
000.000               1476X          ERRNZ UC.2SB-4
003.363  346 004      1477X          ANI   UC.2SB
003.365  366 003      1478X          ORI   UC.8BW                          8 BIT WORDS
003.367  315 030 004  1479X          CALL  OUT
003.372  056 000      1480X          MVI   L,UR.RBR
003.374  315 020 004  1481X          CALL  IN                              REMOVE GARBAGE
003.377  076 156      1482X          MVI   A,AC.DLY                                    /79.01.GC/
004.001  315 053 000  1483X          CALL  .DLY                                        /79.01.GC/
004.004  056 004      1484X          MVI   L,UR.MCR                                    /79.01.GC/
004.006  315 020 004  1485X          CALL  IN                                          /79.01.GC/
004.011  346 357      1486X          ANI   377Q-UC.LOO                                 /79.01.GC/
004.013  315 030 004  1487X          CALL  OUT             TURN OFF LOOP-BACK          /79.01.GC/
                      1488X
004.016  321          1489X          POP   D
004.017  311          1490X          RET
                      1491X          ELSE
                      1492X I8251    SPACE 4,10
                      1493X **       I8251 - INITIALIZE 8251
                      1494X *
                      1495X *        INITIALIZE AN 8251 PORT
                      1496X *
                      1497X *        ENTRY   (A)      = PORT ADDRESS
                      1498X *                (HL)[15] = 1 IF TWO STOP BITS
                      1499X *
                      1500X *        EXIT    NONE
                      1501X *
                      1502X *        USES    ALL
                      1503X *
                      1504X
                      1505X I8251    EQU   *
                      1506X          XCHG
                      1507X          MOV   H,A
                      1508X          MVI   L,USR
                      1509X          MOV   A,D
                      1510X          ANI   200Q                            (A) = 200Q IF TWO STOP BITS
                      1511X          ERRNZ   200Q+UMI.1B-UMI.2B
                      1512X          ORI   UMI.1B+UMI.L8+UMI.16X
                      1513X          STA   I8251.B
                      1514X          LXI   B,I8251.A
                      1515X I8251.1  LDAX  B
                      1516X          CPI   #377Q
                      1517X          JZ    I8251.2
                      1518X          CALL  OUT
                      1519X          INX   B
```

```
                        1520X           JMP     I8251.1
                        1521X I8251.2   MVI     A,UCI.ER+UCI.TE+UCI.RE
                        1522X           CALL    OUT
                        1523X           MVI     L,UDR
                        1524X           CALL    IN
                        1525X           RET
                        1526X I8251.A   DB      0,0,0,0,0,0
                        1527X           DB      UCI.IR
                        1528X I8251.B   DB      0                       CONFIGURATION BYTE
                        1529X           DB      377Q
                        1530X           ENDIF


                        1532X **        IN - INPUT
                        1533X *
                        1534X *         INPUT BYTE FROM SPECIFIED PORT
                        1535X *
                        1536X *         ENTRY   (H)   = PORT ADDRESS
                        1537X *                 (L)   = OFFSET
                        1538X *
                        1539X *         EXIT    (A)   = BYTE READ
                        1540X *
                        1541X *         USES    (PSW)
                        1542X *
                        1543X
004.020                 1544X IN        EQU     *
004.020 174             1545X           MOV     A,H
004.021 205             1546X           ADD     L
004.022 062 026 004     1547X           STA     IN.ADD
004.025 333 000         1548X           IN      *-*
004.026                 1549X IN.ADD    EQU     *-1
004.027 311             1550X           RET


                        1552X **        OUT - OUTPUT
                        1553X *
                        1554X *         OUTPUT BYTE TO SPECIFIED PORT
                        1555X *
                        1556X *         ENTRY   (A)   = BYTE TO BE WRITTEN
                        1557X *                 (H)   = PORT ADDRESS
                        1558X *                 (L)   = OFFSET
                        1559X *
                        1560X *         EXIT    NONE
                        1561X *
                        1562X *         USES    NONE
                        1563X *
                        1564X
004.030                 1565X OUT       EQU     *
004.030 365             1566X           PUSH    PSW
004.031 174             1567X           MOV     A,H
004.032 205             1568X           ADD     L
004.033 062 040 004     1569X           STA     OUT.ADD
```

```
004.036  361          1570X          POP   PSW
004.037  323 000      1571X          OUT   *-*
004.040               1572X OUT.ADD  EQU   *-1
004.041  311          1573X          RET


                      1575  **       UAS     -  UNIT ASSIGNED?
                      1576  *
                      1577  *        CHECK TO SEE IF THE UNIT IS ASSIGNED
                      1578  *
                      1579  *        ENTRY   NONE
                      1580  *
                      1581  *        EXIT    (PSW)   = 'Z' CLEAR IF UNIT     ASSIGNED
                      1582  *                          'Z' SET   IF UNIT NOT ASSIGNED
                      1583  *
                      1584  *        USES    (PSW)
                      1585  *
                      1586
004.042  072 050 004  1587  UAS     LDA     D.ASGN
004.045  346 200      1588          ANI     10000000B               D.AS.[7]=1  =>  ASSIGNED
004.047  311          1589          RET
```

```
004.050                 1592            XTEXT   TBRA


                        1594X **        $TBRA - BRANCH RELATIVE THOUGH TABLE.
                        1595X *
                        1596X *         $TBRA USES THE SUPPLIED INDEX TO SELECT A BYTE FROM THE
                        1597X *         JUMP TABLE. THE CONTENTS OF THIS BYTE ARE ADDED TO THE
                        1598X *         ADDRESS OF THE BYTE, YEILDING THE PROCESSOR ADDRESS.
                        1599X *
                        1600X *         CALL    $TBRA
                        1601X *         DB      LAB1-*          INDEX = 0 FOR LAB1
                        1602X *         DB      LAB2-*          INDEX = 1 FOR LAB2
                        1603X *         DB      LABN-*          INDEX = N-1 FOR LABN
                        1604X *
                        1605X *         ENTRY   (A) = INDEX
                        1606X *                 (RET) = TABLE FWA
                        1607X *         EXIT    TO COMPUTED ADDRESS
                        1608X *         USES    F,H,L
                        1609X
                        1610X
031.076                 1611X $TBRA     EQU     31076A          IN H17 ROM
004.050                 1612            XTEXT   TYPTX


                        1614X **        $TYPTX - TYPE TEXT.
                        1615X *
                        1616X *         $TYPTX IS CALLED TO TYPE A BLOCK OF TEXT ON THE SYSTEM CONSOLE.
                        1617X *
                        1618X *         IMBEDDED ZERO BYTES INDICATE A CARRIAGE RETURN LINE FEED,
                        1619X *         A BYTE WITH THE 200Q BIT SET IS THE LAST BYTE IN THE MESSAGE.
                        1620X *
                        1621X *         ENTRY   (RET) = TEXT
                        1622X *         EXIT    TO (RET+LENGTH)
                        1623X *         USES    A,F
                        1624X
                        1625X
031.136                 1626X $TYPTX    EQU     31136A          IN H17 ROM
                        1627X
031.144                 1628X $TYPTX.   EQU     31144A          IN H17 ROM
                        1630  ***       TABLE OF DEVICE AND UNIT VARIABLES
                        1631  *
                        1632
004.050  000            1633  D.UNIT    DB      0                       [6-0] ::= UNIT NUMBER
                        1634
004.050                 1635  D.ASGN    EQU     D.UNIT                  [7]   ::= UNIT ASSIGNED FLAG
                        1636
004.051  001            1637  D.FLAG    DB      DFLT.FG                 FLAGS
                        1638
004.052  140 000        1639  D.BAUD    DW      DFLT.BD                 BAUD RATE, [15] ::= TWO STOP BIT FLAG
                        1640
004.054  000            1641  D.WAIT    DB      0                       WAIT FOR I/O FLAG
                        1642
```

004.055	340	1643	D.PORT	DB	DFLT.PN	PORT NUMBER
		1644				
004.056	006	1645	D.LPI	DB	DFLT.LI	LINES/INCH
		1646				
004.057	120	1647	D.WID	DB	DFLT.WD	CHARACTERS/LINE
		1648				
004.060	074	1649	D.LNPG	DB	DFLT.LP	LINES/PAGE
		1650				
004.061	000	1651	D.LINX	DB	0	LINE INDEX
		1652				
004.062	000	1653	D.COLX	DB	0	COLUMN INDEX
		1654				
004.063	000	1655	D.LWE	DB	0	LAST CHARACTER WAS AN ESCAPE IF != 0
		1656				
004.064	000	1657	D.NOC	DB	0	NEED ONE MORE ESC. CHAR. IF != 0
		1658				
004.065	000	1659	D.BURC	DB	0	BURST COUNT

```
                              1661          LON     G
     004.066  055 000 062     1662          END
              000 065 000
              130 000 170
              001 205 001
              224 001 236
              001 252 001
              264 001 300
              001 313 001
              325 001 340
              001 367 001
              373 001 003
              002 033 002
              040 002 047
              002 054 002
              060 002 063
              002 070 002
              073 002 076
              002 101 002
              104 002 114
              002 121 002
              126 002 132
              002 141 002
              146 002 151
              002 161 002
              166 002 200
              002 203 002
              206 002 211
              002 214 002
              220 002 225
              002 231 002
              235 002 240
              002 244 002
              253 002 260
              002 267 002
              273 002 277
              002 303 002
              310 002 315
              002 324 002
              327 002 333
              002 336 002
              345 002 352
              002 360 002
              365 002 372
              002 377 002
              004 003 007
              003 020 003
              023 003 030
              003 035 003
              040 003 044
              003 051 003
              056 003 063
              003 066 003
              073 003 100
              003 105 003
              112 003 116
```

```
003 121 003
127 003 132
003 136 003
145 003 150
003 154 003
161 003 165
003 170 003
176 003 212
003 220 003
225 003 232
003 235 003
245 003 253
003 262 003
265 003 272
003 300 003
303 003 317
003 326 003
335 003 343
003 353 003
370 003 375
003 007 004
014 004 023
004 034 004
043 004 000
000
ASSEMBLY COMPLETE
 1662 STATEMENTS
    0 ERRORS DETECTED
11748 BYTES FREE
```

```
$CNA    042207  590L  790
$DCS    042204  588L
$EST    042212  592L
$LBD    042223  598L  795
$PBF    042231  602L  763
$PBV    042234  604L  773
$SNA    042201  586L  742
$SOP    042226  600L  740
$TBLS   042215  594L
$TBRA   031076  927   1611E
$TYPTX  031136  817   1626E
$TYPTX. 031144 1628E
$WTBLS  042220  596L
.       001377  904S  905   906
.ABUSS  040024  569E
.ALARM  002136  542E
.ALEDS  040013  567E
.CHFLG  000060  475L
.CLEAR  000055  472L
.CLEARA 000056  473L
.CLOSE  000046  465L
.CLRCO  000007  449L
.CONSL  000006  448L
.CRC    002347  550E
.CRCSUM 040027  570E
.CTC    002172  544E
.CTLC   000041  460L
.CTLFLG 040011  566E
.DECODE 000053  470L
.DELET  000050  467L
.DISMT  000061  476L
.DLEDS  040021  568E
.DLY    000053  539E  1483
.DMNMS  000203  487L
.DMOUN  000201  485L
.DOD    003122  553E
.DODA   003356  555E
.DSPMOD 040007  564E
.DSPROT 040006  563E
.DUMP   001374  541E
.ERROR  000057  474L
.EXIT   000000  442L
.HORN   002140  543E
.IDENT  000000  538E
.IOWRK  040002  561E
.LINK   000040  459L
.LOAD   001267  540E
.LOADD  000062  477L
.LOADO  000010  450L
.MFLAG  040010  565E
.MONMS  000202  486L
.MOUNT  000200  484L
.NAME   000054  471L
.OPENC  000045  464L
.OPENR  000042  461L
.OPENU  000044  463L
.OPENW  000043  462L
.PCHL   002264  546E
```

```
.POSIT  000047  466L
.PRINT  000003  445L
.RCK    003260  554E
.READ   000004  446L
.REGI   040005  562E
.REGPTR 040035  573E
.RENAM  000051  468L
.RESET  000204  488L
.RNB    002331  549E
.RNP    002325  548E
.SCIN   000001  443L
.SCOUT  000002  444L
.SETTP  000052  469L
.SRS    002265  547E
.START  040000  560E
.SYSRES 000012  452L
.TICCNT 040033  572E
.TPERR  002205  545E
.TPERRX 040031  571E
.UIVEC  040037  574E
.VERS   000011  451L
.WNB    003024  552E
.WNP    003017  551E
.WRITE  000005  447L
ABORT   002032' 935   972E  1102
AC.DLY  000156  612E  1482
ACK     000006  713E  1197
AIO.CGN 041047  196L
AIO.CHA 041116  211L
AIO.CNT 041111  207L
AIO.CSI 041050  197L
AIO.DDA 041041  192E
AIO.DES 041055  201L
AIO.DEV 041057  202L
AIO.DIR 041062  205L
AIO.DTA 041053  200L
AIO.EOF 041113  209L
AIO.EOM 041112  208L
AIO.FLG 041043  193L
AIO.GRT 041044  194L
AIO.LGN 041051  198L
AIO.LSI 041052  199L
AIO.SPG 041046  195L
AIO.TFP 041114  210L
AIO.UNI 041061  203L
AIO.VEC 041040  191L
BAUD    000107' 789L  893
BAUDI   000000  879   892E
BELL    000007  281E
BKSP    000010  283E
BOOT.P  000001  171E
BURST   000040  714E  1017  1177  1200
C.STX   000002  285E
C.SYN   000026  284E
CB.CLI  000100  508E  523
CB.HTL  000040  507E
CB.SPK  000200  509E
CB.SSI  000020  506E
```

```
CDB.H84 000001  114E
CDB.H85 000000  113E
CES     002230' 1112    1131L
CES1    002256' 1137    1146L
CES2    002263' 1133    1150L
CES3    002272' 1152    1154L
CFA     003202' 1191    1190    1320L
CHP     002302' 1117    1172L
CHP1    002326' 1190L   1194    1198
CLOSE   002131' 934     973     1055E
CO.FLG  000001  263E
CR      000015  277E    1036    1218    1222    1243
CS.FLG  000200  264E
CSL.CHR 000001  241E
CSL.ECM 000200  239E
CSL.WRP 000002  240E
CTLA    000001  292E
CTLB    000002  293E
CTLC    000003  294E
CTLD    000004  295E
CTLO    000017  296E
CTLP    000020  297E
CTLQ    000021  298E
CTLS    000023  299E
CTLZ    000032  300E
CTP.2SB 000010  249E
CTP.BKM 000002  250E
CTP.BKS 000200  246E
CTP.MLI 000040  247E
CTP.MLO 000020  248E
CTP.TAB 000001  251E
D.ASGN  004050' 1009    1011    1061    1063    1587    1635E
D.BAUD  004052' 800     1023    1639L
D.BURC  004065' 1018    1172    1201    1289    1291    1659L
D.COLX  004062' 1221    1230    1254    1273    1278    1653L
D.CON   040110   87L
D.FLAG  004051' 855     859     1065    1637L
D.LINX  004061' 1035    1245    1247    1255    1299    1651L
D.LNPG  004060' 871     1296    1649L
D.LPI   004056' 1645L
D.LWE   004063' 1015    1131    1143    1156    1183    1655L
D.NOC   004064' 1014    1135    1147    1154    1179    1657L
D.PORT  004055' 874     1022    1026    1348    1396    1643L
D.RAM   040240   90L
D.UNIT  004050' 1633L   1635
D.VEC   040130   89L
D.WAIT  004054' 1641L
D.WID   004057' 877     1269    1647L
DBD1    002022' 925     939L
DBDVD   002000' 922E
DBO.    003075' 1223    1249    1257    1261L
DBO1    002374' 1219    1225L
DBO10   003157' 1281    1295L
DBO11   003200' 1298    1303L
DBO2    003006' 1230L   1237
DBO3    003025' 1226    1240L
DBO4    003053' 1241    1251L
DBO5    003075' 1252    1259E
```

```
DBOB    003131'   1271    1278L
DBO9    003142'   1262    1264    1286L
DBOA    003027'    846     851    1242E
DBOB    002376'    863     867    1227E
DBOUT   002355'   1037    1070    1114   1198   1216E  1229   1236   1244   1276   1302
DC.ABT  000007     315L
DC.CLO  000006     314L
DC.LOD  000011     317L
DC.MAX  000012     318L
DC.MOU  000010     316L
DC.OPR  000003     311L
DC.OPU  000005     313L
DC.OPW  000004     312L
DC.REA  000000     308L
DC.RER  000002     310L
DC.WRI  000001     309L
DEV.DDA 000004     334L
DEV.DVG 000016     346L
DEV.DVL 000014     345L
DEV.FLG 000006     335L
DEV.JMP 000003     333L
DEV.MNU 000011     342L
DEV.MUM 000010     341L
DEV.NAM 000000     325L
DEV.RES 000002     329L
DEV.SPG 000007     340L
DEV.UNT 000012     343L
DEVELEN 000017     348E
DF.CLR  000376      55E
DF.EMP  000377      54E
DFLT.BD 000140     702E    1639
DFLT.FB 000001     704E    1637
DFLT.LI 000006     705E    1645
DFLT.LP 000074     707E    1649
DFLT.PN 000340     701E    1643
DFLT.WD 000120     706E    1647
DIR.ALD 000025      70L
DIR.CLU 000015      63L
DIR.CRD 000023      69L
DIR.EXT 000010      58L
DIR.FGN 000020      66L
DIR.FLG 000016      64L
DIR.LGN 000021      67L
DIR.LSI 000022      68L
DIR.NAM 000000      57L
DIR.PRO 000013      59L
DIR.VER 000014      60L
DIRELEN 000027      72E     205
DIRIDL  000015      61E
DM.MR   000000     513E
DM.MW   000001     514E
DM.RR   000002     515E
DM.RW   000003     516E
DR.IM   000001     330E
DR.PR   000002     331E
DT.CR   000002     337E
DT.CW   000004     338E     674    677
DT.DD   000001     336E
```

DV.EL	000000	326E						
DV.NU	000001	327E						
DVD.CAF	000007	369L						
DVD.DVD	000006	368L						
DVD.ENT	002000	377E	906	923				
DVD.MNU	000011	371L						
DVD.MUM	000010	370L						
DVD.SET	000022	373L						
DVD.STE	000053	375E	681	732				
DVD.UFL	000012	372L						
DVDFLV	000307	364E	673	679				
EC.CNA	000004	387L						
EC.DDA	000027	406L						
EC.DIF	000017	398L						
EC.DIW	000035	412L						
EC.DNI	000045	420L						
EC.DNR	000046	421L						
EC.DNS	000005	388L	957					
EC.DSC	000047	422L						
EC.EOF	000001	384L						
EC.EOM	000002	385L						
EC.FAO	000031	408L						
EC.FAP	000026	405L						
EC.FL	000030	407L						
EC.FNF	000014	395L						
EC.FNO	000011	392L						
EC.FNR	000034	411L						
EC.FOD	000043	418L						
EC.FUC	000013	394L						
EC.ICN	000016	397L						
EC.IDN	000006	389L						
EC.IFC	000020	399L						
EC.IFN	000007	390L						
EC.ILC	000003	386L						
EC.ILO	000040	415L	745					
EC.ILR	000012	393L	939					
EC.ILV	000037	414L	791	796				
EC.IOI	000052	425L						
EC.IS	000032	409L						
EC.NCV	000050	423L						
EC.NEM	000021	400L						
EC.NOS	000051	424L						
EC.NPM	000044	419L						
EC.NRD	000010	391L						
EC.NVM	000042	417L						
EC.OTL	000053	426L						
EC.RF	000022	401L						
EC.UNA	000036	413L	1003	1057	1093			
EC.UND	000015	396L						
EC.UUN	000033	410L	749					
EC.VPM	000041	416L						
EC.WF	000023	402L						
EC.WP	000025	404L						
EC.WPV	000024	403L						
ENL	000212	290E	829					
ESC	000033	288E	1140					
ETX	000003	712E	1187					
F.FORM	000001	696E	704	854	854	858	1066	

```
FF        000014  291E  1069  1251  1256  1301
FLAG      042231  763E  896
FLAGI     000001  844   849   854   858   862   866   895E
FT.ABS    000000   31E
FT.BAC    000003   34E
FT.PIC    000001   32E
FT.REL    000002   33E
H8410     000000    1E  1353  1399  1435
HELP      000134' 816E  899
HELPI     000002  882   898E
I.CONFL   000004  266E  267
I.CONTY   000001  253E  254
I.CONNI   000003  259E  260
I.CSLMD   000000  243E
I.CUSOR   000002  256E  257
I8250     003310' 1025  1450E
IN        004020' 1356  1360  1406  1481  1485  1544E
IN.ADD    004026' 1547  1549E
INC1      003237' 1358  1376L
INC2      003240' 1361  1378L
INCHAR    003210' 1193  1346E
IP.PAD    000360  499E
LF        000012  278E
LOADD     002035' 937   986L
M.FOX     000303  533E
M.PAM8    000021  532E
MI.CALL   000315  690E
MI.CZ     000314  691E
MI.JMP    000303  688E  850   866
MI.JNZ    000302  689E  845   862
NL        000012  289E  290   818   818   818   818   819   820   821   822   822   823
                  823   824   825   826   827   828   829   1240  1248  1275
NSUIT     002026' 928   930   931   933   936   956E
NUL2      000000  280E
NULL      000200  279E
OP.CTL    000360  500E
OP.DIG    000360  501E
OP.SEG    000361  502E
OPENW     002037' 932   1001E
OPTTAB    001170' 739   841L
OPTTABE   001366' 841   885L
OUT       004030' 1030  1411  1457  1460  1463  1466  1470  1479  1487  1565E
OUT.ADD   004040' 1569  1572E
OUTCO     003255' 1403L 1408
OUTC1     003305' 1405  1431L
OUTC2     003306' 1412  1433L
OUTCHAR   003242' 1287  1392E
OVL.IN    000001  138E
OVL.NUM   000014  140E
OVL.RES   000002  139E
OVL.UCS   000200  141E
PIC.COD   000006   46L  366
PIC.ID    000000   41L
PIC.LEN   000002   43L
PIC.PTR   000004   44L
PRCTAB    001367' 738   890L  892   895   898   901
QUOTE     000047  286E
ROMBOOT   030000   82E
```

```
RUBOUT  000177      282E    1263
S.BAUD  040344      115L
S.BOOTF 041034      170L
S.CAADR 040333      270L    1320    1403
S.CACC  041006      154L
S.CCTAB 040335      271L
S.CDB   040343      112L
S.CFWA  040352      122L
S.CODE  041007      155L
S.CONFL 040332      268L
S.CONTY 040327      255L
S.CONWI 040331      261L
S.CSLMD 040326      244L    254     257     260     267
S.CUSOR 040330      258L
S.DATC  040310      226L
S.DATE  040277      225L
S.DCS   041033      168L
S.DDDTA 040366      133L
S.DDGRP 040364      130L
S.DDLDA 040360      128L
S.DDLEN 040362      129L
S.DDOPC 040370      134L
S.DFWA  040354      123L
S.DIREA 041016      162L
S.DLINK 040346      120L
S.FASER 041013      161L
S.FCI   041021      163L
S.GRT0  024000       78E
S.GRT1  025000       79E
S.GRT2  026000       80E
S.GUP   041027      165L
S.HIMEM 040316      228L
S.INT   040343       92L    108
S.JUMPS 041010      159L
S.MOUNT 041032      167L
S.OFWA  040350      121L
S.OMAX  040324      234L
S.OSN   041004      150L
S.OVLE  041000      147L
S.OVLFL 040371      143L
S.OVLS  040376      146L
S.OVSTK 041035      175L
S.RFWA  040356      124L
S.SCI   041024      164L
S.SCR   041120      213L
S.SDD   041010      160L
S.SOVR  041146       94L     96
S.SSN   041002      149L
S.SYSM  040320      230L
S.TIME  040312      227L
S.UCSF  040372      144L
S.UCSL  040374      145L
S.USRM  040322      232L
S.VAL   040277       91L    223
SC.ACE  000350      611E
SET1    000103'     734     749L
SETNTR  000053'     731E
STACK   042200       98E
```

```
STACKL  001032    96E
SYDD    040130    88E
SYSCALL 000377   435E
TAB     000011   287E    1225
UAS     004042' 1002    1056    1092    1587L
UC.2SB  000004   637E    1476    1477
UC.5BW  000000   633E
UC.6BW  000001   634E
UC.7BW  000002   635E
UC.8BW  000003   636E    1478
UC.BI   000020   656E
UC.CTS  000020   665E
UC.DCS  000001   661E
UC.DDR  000002   662E
UC.DLA  000200   642E    1462
UC.DR   000001   652E    1357
UC.DRL  000010   664E
UC.DSR  000040   666E
UC.DTR  000001   645E    1029
UC.EDA  000001   623E
UC.EPS  000020   639E
UC.FE   000010   655E
UC.IID  000006   630E
UC.IIP  000001   629E
UC.LOO  000020   649E    1459    1486
UC.MSI  000010   626E
UC.OR   000002   653E
UC.OU1  000004   647E
UC.OU2  000010   648E    1029
UC.PE   000004   654E
UC.PEN  000010   638E
UC.RI   000100   667E
UC.RLS  000200   668E
UC.RSI  000004   625E
UC.RTS  000002   646E    1029
UC.SB   000100   641E
UC.SKP  000040   640E
UC.TER  000004   663E
UC.THE  000040   657E    1407
UC.TRE  000002   624E
UC.TSE  000100   658E
UNT.DIS 000005   357L
UNT.FLG 000000   354L
UNT.GRT 000001   355L
UNT.GTS 000003   356L
UNT.SIZ 000007   359E
UO.CLK  000001   525E
UO.DDU  000002   524E
UO.HLT  000200   522E
UO.NFR  000100   523E
UR.DLL  000000   618E    1464
UR.DLM  000001   620E    1467
UR.IER  000001   622E    1455
UR.IIR  000002   628E
UR.LCR  000003   632E    1461    1471
UR.LSR  000005   651E    1355    1401
UR.MCR  000004   644E    1028    1458    1484
UR.MSR  000006   660E
```

```
UR.RBR  000000  614E  1359  1480
UR.THR  000000  616E  1410
USEREWA 042200  89E   584
VAL     042234  773E  902
VALI    000003  870   873   876   901E
VERS    000026  433E
WAIT    003207' 1329E 1402
WRI1    002174' 1097L 1105
WRI2    002213' 1104  1112L
WRITE   002165' 929   1091E
```

25704 BYTES FREE