|   | •••••••                                |   | • | HEATH HEASH V1.4 01/20/78 PAGE 1<br>15:59:38 29-001-80 |
|---|--|---|---|--|
| 000.001                                 | 2 DEBUG                                | EQU                                     | <b>1</b>                                | DEBUG MODE   |
|   | 3                                      |   |   |  |
|   | 4 ***<br>5 *                           | FLAGS -                                 | - SET AND CLEA                          | R PROGRAM FLAGS.                                       |
|   | ······································ | j                                       | . L. 2/2/78                             |  |
|   | 7 *<br>8 *                             |   |   | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,                |
|   | 8 *<br>9                               | COPYRIO                                 | SHT 1978, BY T                          | HE HEATH COMPANY.                                      |
| 000.000                                 | 9<br>10<br>11                          | VTCVT                                   | ACCTT                                   |  |
|   |  | XTEXT                                   | MSGII                                   |  |
|   | 13X **                                 | ASCII C                                 | HARACTER EQUI                           | VALENCES.  |
| 000.015                                 | 14X<br>15X CR                          | EQU                                     | 13                                      | CARRIAGE RETURN  |
| 000.012                                 | 16XLF                                  | EQU                                     | 10                                      | LINE FEED  |
| 000.200                                 | 17X NULL                               | ĒQŪ                                     | 200Q                                    | PAD CHARACTER  |
| 000,000                                 | 18X NUL2                               | . EQU                                   |   |  |
| 000.007                                 | 19X BELL                               | EQU                                     |   | BELL CHARACTER   |
| 000,177                                 | 20X RUBOUT                             | . Edn                                   | 1770                                    |  |
| 000.010                                 | 21X BKSP                               | EQU                                     | 100                                     | CTL-H  |
|   | 22X C.SYN<br>23X C.STX                 | EQV<br>EQU                              | 26Q<br>2                                | SYNC.  |
| 000,047                                 | 24X QUOTE                              | . EQU                                   | 47Q                                     | 317  |
| 000.011                                 | 25X TAB                                | EQU                                     | 11Q                                     |  |
| 000.033                                 | 26X ESC                                | EQU                                     | 33Q                                     |  |
| 000.012                                 | 27X NL                                 | EQU                                     | 120                                     | NEW LINE (HDOS SYSTEMS)                                |
|   | 28X ENL                                | EQU                                     | NL+200Q                                 | NL + END-OF-LINE-FLAG<br>FORM FEED                     |
| 000.014                                 | 29X FF                                 | EQU                                     | 14Q                                     |  |
| 000,001                                 | 30X CTLA                               | . EQU                                   | 010                                     | CTL-A  |
| 000.002<br>000.003                      | 31X CTLB<br>32X CTLC                   | EQU<br>EQU                              | 02Q<br>03Q                              | CTL-B<br>CTL-C   |
| 000.004                                 | 33X CTLD                               | EQU                                     | 04Q                                     | CTL-D  |
| 000,017                                 | 34X CTLO                               | EQU                                     | 170                                     | CTL-0  |
| 000.020                                 | 35X CTLP                               | ÉQU                                     | 20Q                                     | CTL-P  |
| . 000.021                               | 36X CTLQ                               | EQU                                     | 210                                     | CTL-Q  |
| 000.023                                 | 37X CTLS                               | EQU                                     | 23Q                                     | CTL-S  |
| 000.032                                 | 38X_CTLZ                               | EQU                                     | 320                                     | CTL-Z  |
| 000.000                                 | 39                                     | XTEXT                                   | DEVDEF                                  |  |
| *************************************** |  |   | • |  |
| •••••                                   | 41X **<br>42X                          | DEVICE                                  | TABLE ENTRYS.                           |  |
| 000 000                                 | 42X<br>43X                             | ODC                                     | ^                                       |  |
| 000.000                                 | 43X                                    | ORG                                     |   |  |
| 000.000                                 | 45X DEV.NAM                            | ng ·                                    | 2                                       | DEVICE NAME  |
| 000.000                                 | 46X DV.EL                              | EQU                                     |   | END OF DEVICE LIST FLAG                                |
| 000.001                                 | 47X DV.NU                              | EQU                                     | 00000001B                               | DEVICE ENTRY NOT IN USE                                |
| *************************************** | 48X                                    | • |   |  |
| 000.002                                 | 49X DEV.RES                            |   | 1                                       | DRIVER RESIDENSE CODE                                  |
| 000.001                                 | 50X DR.IM                              | EQU                                     | 0000001B                                | DRIVER IN MEMORY                                       |
| 000.002                                 | 51X DR+PR                              | . EQU                                   | 00000010B                               | DRIVER PERMINANTLY RESIDENT                            |
| 000.003                                 | 52X                                    | ne                                      | •                                       | NO TO PROCEECOS  |
| VVV+VV3                                 | 53X DEV.JMP                            | nΩ                                      | 1                                       | JMP TO PROCESSOR                                       |

|   |  |                                       | DEV 15:59:41 29-0CT-80   |
|---|--|---------------------------------------|--|
|   |  |                                       |  |
| 000.004                                 | 54X DEV.DDA DS                         | 2                                     | DRIVER ADDRESS   |
| 0.00. 0.06.                             | 55X DEV.FLG DS                         | 1                                     | FLAG BYTE  |
| 000.001                                 | 56X DT.DD EQU                          | 0000001B                              | DIRECTORY DEVICE   |
| 0.00002                                 | 57X DT,CR EQU                          | 00000010B                             | CAPABLE OF READ OPERATION  |
| 000.004                                 | 58X DT.CW EQU                          | 00000100B                             | CAPABLE OF WRITE OPERATION   |
|   | 59X.DT.RNEQU                           | 00001000B                             | Capable of random access /80.02.sc/  |
| 000.020                                 | 60X DT.CH EQU                          | 00010000B                             | Capable of Character mode /80.02.sc/   |
| 000.007                                 | 61X<br>62X DEV.MUM DS                  | <b>1</b>                              | MOUNTED UNIT MASK  |
| 000.007                                 | 63X DEV.MNU DS                         | 1                                     | MAXIMUM NUMBER OF UNITS  |
| 000,011                                 | 64X DEV. UNT DS                        |                                       | ADDRESS OF UNIT SPECIFIC DATA TABLE  |
| 0001011                                 | 65X                                    | _                                     | Constraint of the Contract of  |
| 000.013                                 | 66X DEV.DVL DS                         | 2                                     | DRIVER BYTE LENGTH   |
| 000.015                                 | 67X DEV.DVG DS                         | <u>i</u>                              | BRIVER ROUTINE GROUP ADDRESS   |
| *************************************** | 68X                                    |                                       |  |
| 000.016                                 | 69X DEVELEN EQU                        | *                                     | DEVICE TABLE ENTRY LENGTH  |
| i i i i i i i i i i i i i i i i i i i   |  |                                       |  |
|   |  |                                       |  |
|   |  | SPECIFIC DEVICE                       | DATA TABLE ENTRIES   |
|   | 72X<br>73X ORG                         |                                       |  |
| 000.000                                 |  | 0 1 7                                 |  |
|   | 74X<br>75X UNT.FLG DS                  |                                       | INST APPAIRIO PARIS ELAP   |
| 000.000<br>000.001                      | 76X UNT.SPG DS                         | 1                                     | UNIT SPECIFIC *DEV.FLG* Sectors Per Group /80.04.GC/   |
| 000.001                                 | 77X UNT.GRT DS                         |                                       | ADDRESS OF GROUP RESERVATION TABLE (IF DT.DD)  |
| 000.002                                 | 78X UNT.GTS DS                         | 2                                     | GRT SECTOR NUMBER  |
| 000.006                                 | 79X UNT.DIS DS                         | ·····‡                                | DIRECTORY FIRST SECTOR NUMBER  |
|   | BOX                                    |                                       |  |
| 000.010                                 | 81X UNT.SIZ EQU                        | *                                     | SIZE OF UNIT SPECIFIC DATA TABLE PER UNIT  |
| 000.010                                 | 82 XTEX                                | DIFDEF                                | ,  |
| •••••                                   |  |                                       |  |
|   |  | TORY FILE FLAGS                       | •  |
|   | 85X                                    |                                       | CVCTCY CTI C   |
| 000.200                                 | 86X DIF.SYS EQU                        | 1000000B                              | SYSTEM FILE  |
| 000.100                                 | 87X DIF.LOC EQU<br>88X DIF.WP EQU      | 01000000B                             | LOCKED FOR CHANGE WRITE PROTECTED  |
| 000.020                                 | 89X DIF.CNT EQU                        | 0010000B                              | CONTIGUOUS FILE  |
| YXY.1YAY                                | 90X                                    |                                       | CONTIDUOUS FILE  |
| 000.010                                 | 91 XTEX                                | DIRDEF                                | and the second of the second o |
|   | ······································ |                                       |  |
|   |  |                                       |  |
|   | 67V 44 ***                             | TODY ENTRY FORM                       | AT.  |
|   | 93X ** DIRE                            | TORY ENTRY FORM                       | n1.  |
| 000.000                                 | 95X ORG                                | 0                                     |  |
|   | 96X                                    | · · · · · · · · · · · · · · · · · · · |  |
|   | 97X                                    | ·                                     |  |
| 000.377                                 | ÝÁŶ DF∵EMP EQU                         | 3770                                  | FLAGS ENTRY EMPTY  |
| 000.376                                 | 99X DF.CLR EQU                         | 3760                                  | FLAGS ENTRY EMPTY, REST OF DIR ALSO CLEAR  |
|   | 100X                                   |                                       |  |
| 000.000                                 | 101X DIR.NAM DS                        | 8                                     | NAME   |

|             | **************************************               | HEATH HEASH V1.4 01/20/78 PAGE 3 DIR 15:59:44 29-00T-80 |
|-------------|--|---|
|             |  |   |
| 000.010     | 102X DIR.EXT DS 3                                    | EXTENSION   |
| 000.013     | 103X DIR.PRO DS 1                                    | PROJECT   |
| 000.014     | 104X DIR.VER DS 1                                    | VERSION   |
| 000.015     | 105X DIRIDL EQU *                                    | FILE IDENTIFICATION LENGTH                              |
|             | 106X   |   |
| 000.015     | 107X DIR.CLU DS 1                                    | CLUSTER FACTOR  |
| 000.016     | 108X DIR.FLG DS 1                                    | FLAGS   |
| 000.017     | 109X DS 1  | RESERVED  |
| 000.020     | 110X DIR.FGN DS 1                                    | FIRST GROUP NUMBER                                      |
| 000.021     | 111X DIR.LGN DS 1                                    |   |
| 000.022     | 112X DIR.LSI DS 1                                    | LAST GROUP NUMBER                                       |
|             |  | LAST SECTOR INDEX (IN LAST GROUP)                       |
| 000,023     | 113X DIR.CRD DS 2                                    | CREATION DATE   |
| 000.025     | 114X DIR.ALD DS 2                                    | LAST ALTERATION DATE                                    |
|             | 115X   |   |
| 000.027     | 116X DIRELEN EQU *                                   | DIRECTORY ENTRY LENGTH                                  |
|             | 117 XTEXT IOCDEF                                     |   |
|             |  | •••••••••••••••••••••••••••••••••••••••                 |
| ••••••      |  |   |
| •••••       | 119X ** I/O CHANNEL DEFINIT                          | IONS.   |
|             | 120X   |   |
| 000.000     | 121X ORG 0   |   |
|             | 122X   |   |
| 000.000     | 123X IOC.LNK DS 2                                    | ADDRESS OF NEXT CHANNEL, =0 IF LAST                     |
| 000.002     | 124X IOC.DDA DS 2                                    | THREAD JUMP TO DEVICE DRIVER (VIA DEV TABLE)            |
| 00000       | 125X   | THREAD SOME TO DEVICE DRIVER (VIA DEV TABLE)            |
| 000.004     | 126X 10C.FLG DS 1                                    | FILE TYPE FLAGS   |
| 000.001     |  |   |
| 000.002     | 127X FT.DD EQU 00000001B<br>128X FT.DR EQU 00000010B | =1 IF DIRECTORY DEVICE                                  |
|             |  | =1 IF OPEN FOR READ                                     |
| 000,004     | 129X FT.OW EQU 00000100B                             | =1 IF OPEN FOR WRITE                                    |
| 000.010     | 130X FT.OU EQU 00001000B                             | =1 IF OPEN FOR UPDATE                                   |
| 000.020     | 131X FT.OC EQU 00010000B                             | =1 IF OPEN FOR CHARACTER MODE /80.02.GC/                |
| 000.003     | 132X IOC, SQL EQU *-IOC, DDA                         | LENGTH OF INFO FOR SEQUENTIAL FILE (FROM 10C)           |
|             | 133X   |   |
| 000.005     | 134X 10C.GRT DS 2                                    | ADDRESS OF GROUP RESERVATION TABLE                      |
| 000.007     | 135X IOC.SPG DS 1                                    | SECTORS PER GROUP, THIS DEVICE                          |
| 000.010     | 136X IOC.CGN DS 1                                    | CURRENT GROUP NUMBER                                    |
| 000.011     | 137X IOC.CSI DS 1                                    | CURRENT SECTOR INDEX (IN CURRENT GROUP)                 |
| 000.012     | 138X IOC.LGN DS 1                                    | LAST GROUP NUMBER                                       |
| 000.013     |  |   |
| 000.013     | 139X IOC.LSI DS 1                                    | LAST SECTOR INDEX (IN LAST GROUP)                       |
| VVV+V10     | 140X IDC.DRL EQU *-IOC.FLG                           | LENGTH OF INFO NORMALLY COPIED BACK TO                  |
|             | 141X *   | THE CHANNEL TABLE                                       |
| 000.014     | 142X IOC.DTA DS 2                                    | DEVICE TABLE ADDRESS FOR THIS DEVICE                    |
| 000.016     | 143X IOC.DES DS 2                                    | SECTOR NUMBER OF DIRECTORY ENTRY                        |
| 000.020     | 144X IOC.DEV DS 2                                    | DEVICE CODE   |
| 000.022     | 145X IOC.UNI DS 1                                    | UNIT NUMBER (0-9)                                       |
| 000.021     | 146X TOC.DIL EQU *-TOC.DDA                           | LENGTH OF INFO FOR DIRECTORY FILE (FROM TOC)            |
|             | 147X   |   |
| 000.023     | 148X TOC.DIR DS DIRELEN                              | DIRECTORY ENTRY   |
| · ·         | 149X   | PERSONAL ENTITY   |
| 000.052     | ************************************                 | **************************************                  |
| VVV+VJZ     | 150X IOCELEN EQU *                                   | TOC ENTRY LENGTH  |
|             | 151X   | **************************************                  |
| 000.001     | 152X TOCCTD EQU 1                                    | INDEX OF USER CHANNEL #0 IN CHANTAB (FIRST # 0)         |
| 000.052     | 153 XTEXT HOSDEF                                     |   |
|             |  |   |
| *********** |  |   |
|             |  |   |
|             |  |   |

| FLAGS - SET/CLEAR FI                    |                           |  | HEATH H8ASM V1.4 01/20/78 PAGE<br>HOSDEF 15:59:46 29-0CT-80 |   |
|---|---------------------------|--|---|---|
|   |                           |  |   |   |
|   | 155X **                   | HOSDEF - DEFINE HOS  | PARAMETER.  |   |
| • | 156X *                    |  |   |   |
|   | 157X                      |  |   |   |
|   | 158X<br>159X VERS         |  | HEDETON 2 A   |   |
| 000.040                                 |                           | EQU 2*16+0   | VERSION 2.0   |   |
|   | 160X                      | . EQU 377Q   | evecal ( The Tolletton                                      |   |
| 000.377                                 | 161X SYSCALI<br>162X      | _ EUU 3//U   | SYSCALL INSTRUCTION   |   |
|   | 162X<br>163X              |  |   |   |
| 000 000                                 | 164X                      | ORG O  |   |   |
| 000,000                                 | 187A                      | ORG O  |   |   |
|   |                           | DESTREME CHARTONS  |   |   |
|   | 166X *                    | RESIDENT FUNCTIONS   |   |   |
| 000.000                                 | 167X<br>168X •EXIT        | DS 1   | EXIT (MUST BE FIRST)  |   |
| 000.001                                 | 169X .SCIN                | DS i   | SCIN  | • • • • • • • • • • • •                 |
| 000.001                                 | 170X .SCOUT               | DS 1   | SCOUT   |   |
| 000.003                                 | 171X .PRINT               | DS 1   | PRINT   |   |
| 000.003                                 |                           | DS 1   | READ  |   |
| 000.005                                 | 172X .READ<br>173X .WRITE | DS 1   | WRITE   |   |
| 000.003                                 | 174X • CONSL              | DS 1   |   |   |
| 000,007                                 | 175X •CLRCO               | DS 1   | SET/CLEAR CONSOLE OPTIONS                                   | • • • • • • • • • • • •                 |
|   | 176X .LOADO               | DS 1   | CLEAR CONSOLE BUFFER  |   |
| 000.010<br>000.011                      | 177X • VERS               | DS 1   | LOAD AN OVERLAY   |   |
|   |                           |  | RETURN HDOS VERSION NUMBER                                  |   |
| 000.012                                 | 178X •SYSRES              | . ha   | PRECEDING FUNCTIONS ARE RESIDENT                            |   |
|   | 177X<br>180X              |  |   |   |
|   | 181X *                    | *HDOSOVLO.SYS* FUN   | CTTONE  |   |
|   | 182X                      | *#####################################   | CITONS  |   |
| 000.040                                 | 183x                      | ORG 40A  | ••••••  | ,                                       |
| 0001010                                 | 184X                      | 7011   |   |   |
| 000.040                                 | 185X +LINK                | DS 1   | LINK (MUST BE FIRST)  |   |
| 000.041                                 | 186X .CTLC                | DS 1   | CTL-C   |   |
| 000.042                                 | 187X OPENR                | ĎŠ i   | OPENR   |   |
| 000.043                                 | 188X .OPENW               | DS 1   | OPENW   |   |
| 000.044                                 | 189X .OPENU               | DS i   | OPENU   |   |
| 000.045                                 | 190X .OPENC               | DS 1   | OPENC   |   |
| 000.046                                 | 191X CLOSE                | DS 1   | CLOSE   |   |
| 000.047                                 | 192X .POSIT               | DS 1   | POSITION  |   |
| 000.050                                 | 193X DELET                | ĎŠ i   | DELETE  | • |
| 000.051                                 | 194X .RENAM               | DS 1   | RENAME  |   |
| 000.052                                 | 195X SETTP                | DS i   | SETTOP  |   |
| 000.053                                 | 196X .DECODI              |  | NAME DECODE   |   |
| 000.054                                 | 197X .NAME                | ĎŠ i   | GET FILE NAME FROM CHANNEL                                  |   |
| 000.055                                 | 198X .CLEAR               | DS 1   | CLEAR CHAN  |   |
| 000.054                                 | 199X CLEAR                |  | CLEAR ALL CHANS   | • |
| 000.057                                 | 200X •ERROR               | DS 1   | LOOKUP ERROR  |   |
| 000.060                                 | 201X CHFLG                | DS 1   | CHANGE FLAGS  |   |
| 000.061                                 | 202X DISMT                | DS 1   | FLAG SYSTEM DISK DISMOUNTED                                 |   |
| 000.062                                 | 203X .LOADD               | - วิธี - วิธี  | LOAD DEVICE DRIVER  | •••••                                   |
| 000.082                                 | 204X .OPEN                | DS 1   | Parametrized Open   |   |
| **************************************  | 205X                      |  | 0 0mCV 14EU UFE   |   |
|   | 205X<br>206X              |  |   |   |
|   | 205X<br>207X ¥            | **************************************   | rtynne  |   |
|   | 208X                      | THE STATE OF THE PRODUCT OF THE PROD | C 1 1 017 0   |   |
| 000.200                                 | 208X<br>209X              | ORG 2000   |   |   |
| VVV+2VV                                 | 207X<br>210X              | UND ZVVA   |   |   |
|   |                           |  |   |   |

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| FLAGS - SET/CLEAR F                     | TLE PLHOS                               |  |  | HEATH HEASH V1.4 01/20/76 PAGE 5        |
|---|---|--|--|---|
|   | ar Co                                   |  |  |   |
| 000.200                                 | 211X . MOUNT                            | ns   |  | MOUNT (MUST BE FIRST)                   |
| 000.201                                 | 212X .DMOUN                             | DS   | · 🛊  | DISMOUNT                                |
| 000.202                                 | 213X MONMS                              | s  | • • <del>;</del> • • • • • • • • • • • • • • • • • • • | MOUNT/NO MESSAGE                        |
| 000.203                                 | 214X .DMNMS                             | DS   | •  | DISMOUNT/NO MESSAGE                     |
| 000.204                                 | 215X .RESET                             | ชีรี                                       | • 🖟 • • • • • • • • • • • • • • • • • •                | RESET = DISMOUNT/MOUNT OF UNIT          |
| 000.205                                 | 216X .CLEAN                             | DS   | î  | Clean device                            |
| 000.206                                 | 217X .DAD                               | Ďš   | · 🞝 · · · · · · · · · · · · · · · · · ·                | Dismount All Disks /80.08.sc/           |
| 000.207                                 | 218                                     | XTEXT                                      | ĤOSEQU   | premodut HII pieks \80.08.8C\           |
| •••••                                   |   |  | ••••••   |   |
| · · · · · · · · · · · · · · · · · · ·   | 2200 44                                 | ····                                       |  |   |
|   | 220X **                                 | UD02 21                                    | STEM EQUIVALENC  | ES.                                     |
| • | 221X *                                  |  |  |   |
| 024 000                                 | 222X                                    | EOU  |  |   |
| 024,000                                 | 223X S.GRTO                             | <u>E</u> KŲ                                | . 24000A   | SYSTEM AREA FOR GRTO                    |
| 025+000                                 | 224X S.GRT1                             |  | 25000A   | SYSTEM AREA FOR GRT1                    |
| 026.000                                 | 225X S.GRT2                             | ÈĸŸ  | 26000A   | SYSTEM AREA FOR GRT2                    |
| 030.000                                 | 226X                                    | r cou                                      | 700004   | DON DOOT CHTCH                          |
| 030.000                                 | 227X ROMBOO1                            | FRO  | 30000A   | ROM BOOT ENTRY                          |
| 040 100                                 | 228X                                    | 000  | 484884   |   |
| 040+100                                 | 229X                                    | ORG  | 40100A   | FREE SPACE FROM PAM-8                   |
| 040 100                                 | 230X                                    | 20   | _  | W                                       |
| 040.100<br>040.110                      | 231X                                    | <u>DS</u>                                  |  | JUMP TO SYSTEM EXIT                     |
|   | 232X D.CON                              | DS   | 16   | DISK CONSTANTS                          |
| 040.130                                 | 233X SYDD                               | <u>E</u> QU                                | · *  | SYSTEM DISK ENTRY POINT                 |
| 040.130                                 | 234X D.VEC                              | DS   | 24*3   | SYSTEM ROM ENTRY VECTORS                |
| 040+240                                 | 235X D+RAM                              | <u>DS</u>                                  | . <u>31</u>  | SYSTEM ROM WORK AREA                    |
| 040.277                                 | 236X S.VAL                              | DS   |  | SYSTEM VALUES                           |
| 040+343                                 | 237X S.INT                              | <u>D\$</u>                                 | . 115  | SYSTEM INTERNAL WORK AREAS              |
| 041.126                                 | 238X                                    | DS   | 16   |   |
|   | 239X S+SOVR                             | . DS                                       |  | STACK DVERFLOW WARNING                  |
| 041.150                                 | 240X                                    | DS   | 42200A-*   | SYSTEM STACK                            |
| 001.032                                 | 241X STACKL                             | EĠŲ  | *-S.SOVR   | STACK SIZE                              |
| 0.40 000                                | 242X                                    |  |  |   |
| 042,200                                 | 243X STACK                              | EQU  | *  | LWA+1 SYSTEM STACK                      |
| 042.200                                 | 244X USERFWA                            |  | *  | USER FWA                                |
| 042,200                                 | 245                                     | XTEXT                                      | ESVAL  |   |
| · · · · · · · · · · · · · · · · · · ·   |   | ·<br>· · · · · · · · · · · · · · · · · · · | •                |   |
|   | 247X **                                 | S.VAL -                                    | SYSTEM VALUE I   | EFINTIONS.                              |
|   | 248X *                                  |  |  |   |
|   | 249X *                                  | THESE V                                    | ALUES ARE SET A  | ND MAINTAINED BY THE SYSTEM.            |
|   | 250X *                                  |  |  |   |
|   | 251X *                                  | THE DEC                                    | K HOSEQU MÚSŤ É  | E MODIFIED WHEN THIS IS MODIFIED.       |
|   | 252X                                    |  | · • • • • • • • • • • • • • • • • • • •                |   |
|   | 253X                                    |  |  |   |
| 040.277                                 | 254X                                    | ORG  | S.VAL  |   |
|   | 255X                                    |  |  |   |
| 040,277                                 | 256X S.DATE                             | DS   | 9  | SYSTEM DATE (IN ASCII)                  |
| 040.310                                 | 257X S.DATC                             | ĎS   | 2  | CODED DATE                              |
| 040.312                                 | 258X S.TIME                             | DS   | 4  | TIME FROM MIDNIGHT (IN TICS)            |
| 040.316                                 | 259X S.HIMEM                            |  | 42   | HARDWARE HIGH MEMORY ADRESS+1           |
|   | 260X                                    |  |  |   |
|   | • | • • • • • • • • • • • • •                  |  | *************************************** |

|   |                | •••••                                   |            |                        | ESVAL                                   | 15:59:49 29-0CT-80   | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
|---|----------------|---|------------|------------------------|---|--|---|
| 040.320                                 | 261X S         | S.SYSM                                  | DS         | 2                      | FWA RESIDENT S                          | SYSTEM   |   |
|   | 0/07           | .USRM                                   |            |                        | LWA USER MEMOR                          | ••••••••••••••••••••••••••••••••••••••   |   |
| 040.322                                 |                |   |            | 2                      | LWA USEK MENUR                          | ¢Υ.  |   |
| 040.324                                 | 265X S         | • OMAX                                  | DS         | 2                      | MAX OVERLAY SI                          | IZE FOR SYSTEM   |   |
|   | 266X           |   |            |                        |   |  |   |
|   | 267X<br>268X * | / <b>*</b>                              | THE EN     | LIONING FIUE CE        | IIS SHOULD BE MOI                       | DIFIED/READ ONLY VIA THE .CONSL SYS  | CALL                                    |
|   | 269X           | <b>T</b>                                | .1115.7.75 |                        | interest and the second second          | Call Aller the transfer with the same and th |   |
| 000.200                                 | 270X C         | SL.ECH                                  |            | 10000000B              | SUPPRESS ECHO                           |  |   |
| 000.004                                 |                | SL.RAW                                  |            | 00000100B              | Raw Mode I/O                            | /80.09.sc/   |   |
| .000,002                                |                | SL.WRP                                  |            | 00000010B<br>00000001B | OPERATE IN CHA                          |  |   |
| 000.001                                 | 273X C         | SL.CHR                                  | EUU        | 00000015               | OLEVRIE TH OIL                          | INHCIEN HODE   |   |
| 000.000                                 |                | CSLMD                                   | EQU        | Ŏ                      | S.CSLMD IS FIF                          | RST BYTE   |   |
| 040.326                                 | 276X S         | CSLMD                                   |            | 1                      | CONSOLE MODE                            |  |   |
|   | 277X           |   |            | 2000000                | TERVIUM PRODU                           |  |   |
| .000,200                                |                | TP.BKS                                  |            | 10000000B              |   | ESSES BACKSPACES esses Form-Feed /80.09.sc/  |   |
| 000.100<br>000.040                      |                | CTP.FF<br>CTP.MLI                       |            | 00100000B              |   | E TO UPPER ON INPUT  |   |
| 000.020                                 |                | TP.MLO                                  |            | 00010000B              |   | E TO UPPER ON OUTPUT   |   |
| 000.010                                 |                | TP.2SB                                  |            | 00001000B              | TERMINAL NEEDS                          | S TWO STOP BITS  | ••••                                    |
| 000.002                                 |                | TP.BKM                                  |            | 00000010B              |   | N INPUT) TO RUBOUT   |   |
| 000,001                                 |                | TP.TAB.                                 | EQU        | 00000001B              | TERMINAL SUPPO                          | ORTS TAB CHARACTERS  |   |
| 000.001                                 | 285X<br>284Y T | . CONTY                                 | COLL       | 1                      | S.CONTY IS 2NI                          | n RYTE   |   |
| 000.000                                 |                |   | ERRNZ      | *-S.CSLMD-1.C          |   | D DITE   | ~~···                                   |
| 040.327                                 |                | S.CONTY                                 |            | 1                      | CONSOLE TYPE F                          |  |   |
| 000.002                                 |                | CUSOR                                   |            | 2                      | S.CUSOR IS 3RI                          | D BYTE   | ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |
| .000.000                                | 290X           |   | ERRNZ      | *-S.CSLMD-I.C          | USOR<br>CURRENT CURSOI                  | 698644400  |   |
| 040.330<br>000.003                      |                | .CUSOR                                  |            | 1 7                    | S.CONWI IS 4TH                          |  |   |
| 000.000                                 | ·····293X · 1  |   | ERRNZ      | ¥-s.csLMD-1.c          | ONWI                                    |  |   |
| 040.331                                 |                | .CONWI                                  |            | 1                      | CONSOLE WIDTH                           |  |   |
|   | 295X           |   |            |                        |   |  |   |
| 000,001                                 |                | CO.FLG                                  |            | 00000001B              | CTL-O FLAG                              |  |   |
| 000.200                                 | 297X C<br>298X | CS.FLG                                  | EWU        |                        |   | •  |   |
|   |                | CONFL                                   | EQU        | ····4                  | S.CONFL YS ST                           | H BYTE   |   |
| 000.000                                 | 300X           |   | ERRNZ      | *-S.CSLMD-I.C          | ONFL                                    |  |   |
| 040.332                                 |                | SCONFL                                  | DS         | 1                      | CONSOLE FLAGS                           |  |   |
| 040.333                                 | 302X           | S.CAADR                                 | nė         |                        | ZANREFSSTFORTA                          | BORT PROCESSING (>256 IF VALID)  |   |
| 040.335                                 |                | S.CCTAB                                 |            | 6                      |   | A, CTL-B, CTL-C PROCESSING   |   |
| 040.343                                 | 305            |   | XTEXT      | ESINT                  |   | WZ. 1 Z Z Z Z  |   |
|   |                |   |            |                        |   |  |   |
|   | 307X *         | **                                      |            |                        | IAL WORKAREA DEFI                       |  |   |
|   | 308X *         |   |            |                        | ·····                                   |  | *************************************** |
|   | 309X *         |   |            |                        |   | S AND MAIN CODE, AND   |   |
|   | 310X *         | *                                       | MUSI II    | HEKELUKE KESIDE        | 'IN FIXED LOW ME                        | MUNT •   |   |
| • | 311X<br>312X   | · • • • • • • • • • • • • • • • • • • • |            |                        | • |  |   |
| 040.343                                 | 313X           |   | ORG        | S. INT                 |   |  |   |
| *******************                     |                | •••••                                   |            |                        |   | · · · · · · · · · · · · · · · · · · ·  |   |
|   |                |   |            |                        | · · · · · · · · · · · · · · · · · · ·   |  |   |

| flags - set/clear f                     |  |   | HEATH HEASH V1.4 01/20/78 PAGE 7                                       |
|---|--|---|--|
|   | *****                                    | · • • • • • • • • • • • • • • • • • • • | ,  |
| · · · · · · · · · · · · · · · · · · ·   | . در د د د د د د د د د د د د د د د د د د | .,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,, |  |
|   | 314X                                     |   |  |
| • |  | NSOLE STATUS FLAGS                      |  |
| 040.343                                 | 316X<br>317X S.CDB DS                    | e e e e e e e e e e e e e e e e e e e   | CONCOLE DECENTATED TYPE  |
| 000.000                                 | 319X CDB.H85 EQ                          |   | CONSOLE DESCRIPTOR BYTE  |
| 000.000                                 | 319X CDB.H84 EQ                          |   | =0 IF H8-5, =1 IF H8-4   |
| 040.344                                 | 320X S.BAUD DS                           | 2                                       | [0-14] H8-4 BAUD RATE, =0 IF H8-5                                      |
| 0404544                                 | 321X *                                   | 2                                       | [15] =1 IF BAUD RATE => 2 STOP BITS                                    |
|   | 322X                                     |   |  |
|   |  | BLE ADDRESS WORDS                       |  |
| ••••••                                  | 324X                                     | rth.ntevryh.rynth.                      |  |
| 040.346                                 |  | . 2                                     | ADDRESS OF DATA IN HDOS CODE   |
| 040.350                                 | 326X S.OFWA DS                           | ·····                                   | FIM AUDI AV TABLE  |
|   | 327X S.CFWA., DS                         | 5                                       | FWA OVERLAY TABLE<br>FWA CHANNEL TABLE                                 |
| 040.354                                 | 328X S.DFWA DS                           | 2                                       | FWA DEVICE TABLE   |
| 040.354                                 | 720V C DEUA TC                           | 2                                       | FWARESIDENT.HDGS.CODE  |
|   | 330X                                     |   | , r.wnkestpeninudscope   |
|   |  | VICE DRIVER DELAYE                      | N LOAD FLAGS   |
| *************************************** | 332X                                     | eron institution remedica               | K. HANY, I. BONA   |
| 040.360                                 | 333X S.DDLDA DS                          | 2                                       | DRIVER LOAD ADDRESS (HIGH BYTE=O IF NO LOAD PENDING)                   |
| 040.362                                 | 334X S.DDLEN DS                          | 2                                       | CODE LENGTH IN BYTES   |
| 040.364                                 |  |   | GROUP NUMBER FOR DRIVER  |
| 040.365                                 | 336X DS                                  | 1                                       | HOLD PLACE   |
|   | 337X. #\$. DDSEC                         |   | SECTOR NUMBER FOR DRIVER ( * ORSOLETE : * )                            |
| 040.366                                 | 338X S.DDDTA DS                          | 2                                       | DEVICE'S ADDRESS IN DEVLST +DEV.RES                                    |
| 040.370                                 | 338X S.DDDTA DS<br>339X S.DDQPC DS       | ī                                       | OPEN OPCODE PENDEDING  |
|   | 340X                                     |   |  |
|   | 341X ** OV                               | ERLAY MANAGEMENT. F                     | LAGS   |
|   | 342X                                     |   | ***************************************                                |
| 0.00.40.01                              | 343X.DVL.INEQ                            | U Q0Q0Q0Q1B                             | IN MEMORY.   |
| 000.002                                 | 344X OVL.RES EQ                          | J 00000010B                             | PERMINANTLY RESIDENT   |
| 000.014                                 | 345X DVL NUM EQI                         | J0.00.0110.0B                           | OVERLAY NUMBER MASK  |
| 000.200                                 | 346X OVL.UCS EQ                          | J 10000000B                             | USER CODE SWAPPED FOR OVERLAY  |
|   | 347X                                     |   |  |
| 040.371                                 | 348X S.OVLFL DS                          | 1                                       | OVERLAY FLAG   |
| 040 • 372                               | 349X.S,UCSFDS.                           |   | FWA.SWAPPED USER CODE  |
| 040.374                                 | 350X S.UCSL DS                           |   | LEMPTH CHARRES HOLD CORE   |
|   | 351X S.QVLS. DS.                         |   | SIZE.QFQVERLAY.CQDE  |
| 041,000                                 | 352X S.OVLE DS                           | 2                                       | SIZE OF OVERLAY CODE ENTRY POINT OF OVERLAY CODE                       |
| , . , . , , . ,                         | 353X                                     |   |  |
| 041.002                                 | 354X S.SSN DS                            | 2                                       | SWAP AREA SECTOR NUMBER  |
| 0.41.0.04                               | 355X .S+Q\$ND\$.                         | 2                                       | QVERLAY SECTOR NUMBER  |
|   | 356X                                     |   |  |
| ,.,.,                                   | 357X * SY                                | SCALL PROCESSING W                      | ORK AREAS  |
|   | 358X                                     |   |  |
| 941.4006                                | 359X S.CACC DS<br>360X S.CODE DS         |   | (ACC) UPON SYSCALL   |
|   | 360X S.CODE DS                           | 1                                       | SYSCALL INDEX IN PROGRESS  |
| • | 361X                                     |   | RESIDENT HDOS CODE   |
|   | 362X * JUI                               | MPS TO ROUTINES IN                      | RESIDENT HOOS CODE   |
|   | 363X                                     |   |  |
| 041.010                                 | 364X S.JUMPS DS                          | 0                                       | START OF DUMP VECTORS  |
| 041.010                                 |  |   | JUMP TO STAND-IN DEVICE DRIVER<br>JUMP TO FATSERR (FATAL SYSTEM ERROR) |
| 041.013                                 | 366X S.FASER DS                          | 3                                       | JUMP TO FATSERR (FATAL SYSTEM ERROR)                                   |
| 041,016                                 | 367X S.DIREA DS                          |   | JUMP TO DIREAD (DISK FILE READ)  |
| 041.021                                 | 368X S.FCI DS<br>369X S.SCI DS           | 3                                       | JUMP TO FCI (FETCH CHANNEL INFO)<br>JUMP TO SCI (STORE CHANNEL INFO)   |
| 041.024                                 |  |   |  |

| LAGS - SET/CLEAR F)                     |                                    | ,                                       | HEATH HBASM V1.4 01/20/78<br>ESINT 15:59:52 29-0CT-80                                  | PAGE                                    |   |
|---|------------------------------------|---|--|---|---|
| 041.027                                 | 370X S.GUP DS                      | <b>3</b>                                | JUMP TO GUP (GET UNIT POINTER)   |   |   |
| · · · · · · · · · · · · · · · · · · ·   | 371X                               |   |  |   |   |
| 041.032                                 | 372X S.MOUNT DS<br>373X S.DCS DS   | 1                                       | <pre>&lt;&gt;O IF THE SYSTEM DISK IS MOUNTED DEEAULT CLUSTED SIZE_1</pre>              |   |   |
| 041.033                                 | 373X S.DCS DS<br>374X              |   | DEFAULT CLUSTER SIZE-1   | • |   |
| 041.034                                 | 375X S.BOOTF DS                    | 1                                       | BOOT FLAGS   |   |   |
| 000.001                                 | 376X BOOT.P EQU                    | 0000001B                                | EXECUTE PROLOGUE UPON BOOTUP   |   |   |
|   | 377X<br>378X * STA                 | CK OATHE SAUEN                          | FOR OVERLAY SYSCALLS   |   |   |
|   | 379X                               |   |  |   |   |
| 041.035                                 |                                    | ż.                                      | VALUE OF SP UPON SYSCALLS USING OVERLAY  |   |   |
|   | 381X<br>382X DS                    | <b>i</b>                                | RESERVED   |   |   |
| 041.037                                 |                                    |   | REGERVED   |   |   |
|   | ••••                               | ·                                       | · · · · · · · · · · · · · · · · · · ·  |   |   |
|   | 384X ** ACT                        | IVE I/O AREA.                           |  |   |   |
|   | 385X *                             |   | ANTATIO THEORY ATTON ADDIT THE TAR OPERATION   |   |   |
|   |                                    |   | ONTAINS INFORMATION ABOUT THE I/O OPERATION REFORMED. THE INFORMATION IS OBTAINED FROM | , . ,                                   |   |
|   |                                    |   | AND WILL BE RESTORED THERE WHEN DONE.  |   |   |
|   | 389X *                             | CHRICLE INDELY                          | THE WILL BE REGIONED THERE WILK DONE   | • | • • • • • • • • • •                     |
|   |                                    | MALLY, THE AID.                         | XXX INFORMATION WOULD BE OBTAINED DIRECTLY   |   |   |
| • |                                    |   | M TABLES VIA POINTER REGISTERS. SINCE THE  |   | • |
|   | 392X * 808                         | O HAS NO GOOD I                         | NDEXED ADDRESSING, THE DATA IS MANUALLY  |   |   |
|   |                                    |   | O.XXX CELLS BEFORE PROCESSING, AND   |   |   |
|   | 394X * BAC                         | KDATED AFTER PR                         | OCESSING.  |   |   |
| 041.040                                 | 396X AIO.VEC DS                    | 7                                       | JUMP INSTRUCTION   |   |   |
| 041.041                                 | 397X A10.DDA EQU                   |   | DEVICE DRIVER ADDRESS  | • | • • • • • • • • •                       |
| 041.043                                 | 398X AIO.FLG DS                    | i                                       | FLAG BYTE  |   |   |
| 041.044                                 | 399X AIO.GRT DS                    | 2                                       | ADDRESS OF GROUP RESERV TABLE  | *************************************** |   |
| 041.046                                 | 400X AID.SPG DS                    | 1                                       | SECTORS PER GROUP  |   |   |
| 041.047                                 | 401X AIO.CGN DS                    | i                                       | CURRENT GROUP NUMBER   |   |   |
| 041.050                                 | 402X AIO.CSI DS                    | <u>1</u>                                | CURRENT SECTOR INDEX   |   |   |
| 041.051<br>041.052                      | 403X AIO.LGN DS<br>404X AIO.LSI DS | 1                                       | LÄST GRÖUF NUMBER<br>LAST SECTOR INDEX   |   |   |
| 041.053                                 | 405X A10.DTA DS                    |   | DEVICE TABLE ADDRESS   | •••••                                   |   |
| 041.055                                 | 406X AID.DES DS                    | 2                                       | DIRECTORY SECTOR   |   |   |
| 041.057                                 | 407X ATO DEV DS                    | 2                                       | DEVICE CODE  |   |   |
| 041.061                                 | 408X AID.UNI DS                    |   | UNIT NUMBER (0-9)  |   |   |
| 041.042                                 | 409X                               | חדפרי באו                               | NIDECTORY ENTRY  |   |   |
| 041.062                                 | 410X AIG.DIR DS<br>411X            | DIRELEN                                 | DIRECTORY ENTRY  |   |   |
| 041.111                                 | 412X AIO.CNT DS                    | 1                                       | SECTOR COUNT   |   |   |
| 041.112                                 | 413X AID EOM DS                    | .,                                      | END OF MEDIA FLAG  | • |   |
| 041.113                                 | 414X AIO.EOF DS                    | 1                                       | END OF FILE FLAG   |   |   |
| 041.114                                 | 415X AIO, TFP DS                   | 2                                       | TEMP FILE PUINTERS   |   |   |
| 041.116                                 | 416X AIO.CHA DS                    | 2                                       | ADDRESS OF CHANNEL BLOCK (IOC.DDA)   | • |   |
| ,                                       |                                    |   |  | • |   |
| ,                                       |                                    | • |  |   |   |
|   | _                                  |   |  |   |   |
|   |                                    |   |  |   |   |

|          |                               | *********       | 153.59:153,,,29+.0CT-80   |
|----------|-------------------------------|-----------------|---|
| 041.120  | 418X S.BDA DS                 | <b>1</b>        | Boot Device Address (Setup by ROM) /80.09.sc/                     |
| 041.121  | A10Y C. CCD TIC               |                 | SOOT DEVICE ADDRESS (SETUP DY KUM) /80.09.SC/                     |
| 041.123  | 420 XTE                       | XT ÉCDEF        | SYSTEM SCRATCH AREA ADDRESS                                       |
|          | ATE.                          | AT ECDET        |   |
|          |                               |                 |   |
|          |                               | OR CODE DEFINIT | TOMO  |
|          | 423X                          | NK CORE DELIKI! | IONS:   |
| 000.000  | 424X ORG                      | 0               | ·   |
| 000000   | 425X DS                       | <b>1</b>        | NO ERROR #0   |
| 000.001  | 426X EC.EOF DS                | 1               | END OF FILE   |
| 000.002  | 427X.EC.EQMDS                 |                 | END. OF. MEDIA.   |
| 000.003  | 428X EC.ILC DS                | 1               | ILLEGAL SYSCALL CODE  |
|          | 429X.EC.CNADS                 |                 | CHANNEL NOT AVAILABLE   |
| 000.005  | 430X EC.DNS DS                | 1               | DEVICE NOT SUITABLE   |
|          | 431X.EC.IDNDS.                |                 |   |
| 000.007  | 432X EC.IFN DS                | 1               | ILLEGAL FILE NAME   |
| 000.010  | 433X EC.NRD DS.               |                 | NO ROOM FOR DEVICE DRIVER   |
| 000.011  | 434X EC.FNO DS                | 1               | CHANNEL NOT OPEN  |
| 000.013  |                               |                 | ILLEGAL REQUEST   |
| 000.013  | 436X EC.FUC DS437X.EC.FNFDS   | 1               | FILE USAGE CONFLICT   |
| 000.015  | 438X EC.UND DS                | <del>.  </del>  | FILE.NAME.NOT.FOUND.  |
|          | 439X EC.ICN . AS.             |                 |   |
| 000.017  | 440X EC.DIF DS                |                 | ILLEGAL CHANNEL NUMBER. DIRECTORY FULL                            |
|          | 441X EC. IFC DS               | 1               | ILLEGAL FILE CONTENTS   |
| 000.021  | 442X EC.NEM DS                | <del></del>     | NOT ENOUGH MEMORY   |
| 000.022  | 443X EC.RF DS                 |                 | READ FAILURE  |
| 000.023  | 444X EC.WF DS                 |                 | WRITE FAILURE   |
| 000.024  |                               | -<br>1          | WRITE PROTECTION VIOLATION  |
| 000.025  | 446X EC.WP DS                 | 1               | DISK WRITE PROTECTED  |
| 0.00026  | 447X EC.FAP DS                |                 | FILE ALREADY PRESENT  |
| 000.027  | 448X EC.DDA DS                | 1               | DEVICE DRIVER ABORT   |
|          |                               |                 | FILE LOCKED   |
| 000.031  | 450X EC.FAO DS                | 1               | FILE ALREADY OPEN   |
|          | 451X.EC.ISDS                  |                 | ILLEGAL SWITCH  |
| 000.033  | 452X EC.UUN DS                | 1               | UNKNOWN UNIT NUMBER   |
| 000.034  | 453X.EC.FNRDS                 | 1               | FILE NAME REQUIRED  |
| 000.035  | 454X EC.DIW DS                | 1               | DEVICE IS NOT WRITABLE (OR WRITE LOCKED)                          |
| 000,034  | 455X.EC.UNAS                  |                 | UNIT NOT AVAILABLE  |
| 000.037  | 456X EC.ILV DS                | 1               | ILLEGAL VALUE   |
| 000.040  | 457X EC.ILO DS 458X EC.VPM DS |                 | ILLEGAL OPTION  |
| 000.041  |                               | 1               | VOLUME PRESENTLY MOUNTED ON DEVICE<br>NO VOLUME PRESENTLY MOUNTED |
| 000.043  | 460X EC.FOD DS                | ······          | FILE OPEN ON DEVICE   |
| 0.00.044 |                               | 1               | NO PROVISIONS MADE FOR REMOUNTING MORE DISKS                      |
| 000.045  | 462X EC.DNI DS                | ········•       | DISK NOT INITIALIZED  |
| 000,046  |                               | ī               | DISK IS NOT READABLE  |
| 000.047  | 464X EC.DSC DS                | 1               | DISK STRUCTURE IS CORRUPT   |
|          | 465X EC.NCV DS                | . 1             | NOT CORRECT VERSION OF HDOS                                       |
| 000.051  | 466X EC.NOS DS                | 1               | NO OPERATING SYSTEM MOUNTED                                       |
| 000.052  |                               | ī               | ILLEGAL OVERLAY INDEX   |
| 000.053  | 468X EC.OTL DS                | 1               | OVERLAY TO LARGE  |
| 000.054  |                               | KTFILDEF        |   |
|          |                               |                 | ***************************************                           |

|   | 471X **  | CTINE                                   |   |  |   |   |
|---|--|---|---|--|---|---|
|   | 7/1/ **  |   | - <i>CTLC</i> TVDC DCC                  | THITTONE   | *************************************** |   |
|   | 472X *   | FILDER                                  | - FILE TYPE DEF                         | TKT110K2+  |   |   |
|   | 473X *   | DB                                      | 3770,FT.XXX                             | •  |   |   |
|   | 474X   |   |   |  |   |   |
|   | 475X   |   |   |  |   |   |
| 000.000                                 | 476X FT.AE   |   | Q                                       | ABSOLUTE BIN   |   |   |
| 000.001<br>000.002                      | 477X FT.FI<br>478X FT.RE   |   | 1 2                                     | POSITION INDI  | EPENDANT CODE                           |   |
| 000.003                                 | 479X FT.BA   | C EQU                                   | ···· §                                  | COMPILED BAS   |   |   |
| 000.054                                 | 480  | XTEXT                                   | ABSDEF                                  | COM ILLE PRO   | I G GGE                                 |   |
|   |  |   | •••••                                   |  |   | ••••••••••••••••••••••••••••••••••••••• |
|   |  |   | · · · · · · · · · · · · · · · · · · ·   |  | *************************************** | •••••                                   |
| The second second second                | 482X **  | ARS FO                                  | DRMAT EQUIVALENCE                       | s.   |   |   |
|   | 483X   |   |   |  | ••••••                                  |   |
| 000.000                                 | 484X   | ORG                                     | 0                                       |  |   |   |
|   | 485X   |   | • |  |   | *************************************** |
| 000,000                                 | 486X ABS.I   | D DS                                    | 1                                       | 377Q = BINAR   | / FILE FLAG                             |   |
| 000.001<br>000.002                      | 487X   | DS<br>DA DC                             | 1                                       | FILE TYPE (F)  | (+ABS)                                  |   |
| 000.004                                 | 488X ABS.L   |   | <u>2</u>                                | LOAD ADDRESS<br>LENGTH OF EN   | rtor occasa                             |   |
| 000.006                                 | 490X ABS.E   |   | 2                                       | ENTRY POINT  | THE RECORD                              |   |
|   | 491X   | ,                                       | *************************************** |  | *************************************** | ••••••••••••••••••••••••••••••••••••••• |
| 000.010                                 | 492X ABS.C   | od ds                                   | 0                                       | CODE STARTS I  | HERE                                    |   |
|   |  |   |   |  |   |   |
|   | · · · · · · · · · · · · · · · · · · ·  |   |   |  |   |   |
|   |  |   |   |  |   |   |
| *************************************** | <b></b>  |   |   | •  | •••••                                   |   |
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|   |  |   |   | z  | *************************************** |   |
|   |  |   |   | · · · · · · · · · · · · · · · · · · ·  | *************************************** | • |
|   | ÷ .  |   |   |  |   |   |
|   | •••••  | ***********                             | *************************************** | •  | •••••                                   |   |
|   |  |   |   |  |   |   |
| 5.4                                     |  |   |   |  | *************************************** |   |
|   | •••••  |   | *************                           |  | •••••                                   |   |
|   | The state of the s |   |   |  |   |   |
| • |  | •••••                                   |   |  | •••••                                   |   |
|   | 7. ±   |   |   |  |   |   |
|   | <del>.</del>   | · · · · · · · · · · · · · · · · · · ·   | •••••                                   | •••••  | •••••                                   | *************************************** |
|   |  |   |   | 198 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 199 - 19 | ·····                                   |   |
|   | 1 3 A  |   |   |  |   |   |
|   |  |   |   |  |   |   |
|   |  |   |   |  |   |   |
|   | :  |   |   | # 4.0  |   |   |
|   | :  |   |   | # 4.0  |   |   |
|   | :  | • | **************************************  | 7<br>  |   |   |

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| •     |   | GS - SEY/<br>N.ROUTINE                  |               |   |               |             |   |                  |                           | HEATH HEASH V1.4 01/20/78 PAGE 11 15:59:57 29-001-80   |
|-------|---|---|---------------|---|---------------|-------------|---|------------------|---------------------------|--|
|       |   |   |               |   |               |             | 4 •                                     |                  |                           |  |
|       |   | 042.170                                 |               |   |               | 495         |   | ORG              | USERFWA-ABS.COD           |  |
| :     |   | 042.170                                 |               |   |               | 496         |   | DB<br>D <b>W</b> | 377Q,FT.ABS               | LOAD ADDRESS   |
|       |   | 042.174                                 |               |   |               | 498         |   | DW.              | USERFWA<br>MEML-USERFWA   |  |
| . •   |   | 042.176                                 | 200           | 042   | • • • • • • • | 499         |   | DW               | ENTRY                     | ENTRY POINT  |
|       |   | 0-12-12-1                               |               |   |               | 500         |   |                  | ER IN                     | ERIKI TOTRI  |
| • •   |   | ***********                             | • • • • • • • | •••••   | • • • • • • • | 501         | • |                  | *******************       | ***************************************  |
|       |   |   |               |   |               | 502         | **                                      | FLAGS -          | MAIN ENTRY POIN           | T.   |
|       |   |   |               |   |               | 503         |   |                  | ••••••                    | ***************************************  |
| ٠     | . <b></b>                               | .042,200                                |               |   |               | 504         | ENTRY                                   | EQU              | *<br>PRS                  | * <u>************************************</u>  |
|       |   | 042.200                                 |               |   |               | 505         |   | CALL             |                           | PRESET PROGRAM /79.12.GC/  |
| • • • | • | .042+203.                               | <b>ې</b> .۱.۳ | 3.7.2   |               | 506         | • • • • • • • • • • • • • • • •         | CALL             | OUI                       | OFFER USER INSTRUCTIONS  |
|       |   |   |               |   |               | 507<br>508  | *                                       | DESTABL          | ADDRESS                   |  |
| *     | • | • | •••••         | • • • • • •                                   |               | 509         |   |                  |                           |  |
|       |   | .042.206.                               | . 257         | ,   |               |             | RESTART                                 | XRA              | A                         |  |
| •     |   | 042.207                                 | 377           | 055   |               |             |   | DB               | SYSCALL, CLEAR            | CLEAR CHANNEL 0  |
|       |   |   |               | ,   |               | 512         |   |                  |                           |  |
|       |   |   |               |   |               | 513         |   |                  |                           |  |
| ٠.    |   | 042.211                                 |               |   |               |             | FLAGS1                                  | CALL             | \$TYPTX                   |  |
|       |   | 042.214                                 |               |   |               | 515         |   | DB               | NL,'File Name?'           |  |
|       |   | .042+230.                               |               |   |               | 516.        |   | .LXI             | H,LINE                    | The state of the s |
|       |   | 042,233                                 |               | 264   |               | 517<br>518  |   | CALL             | \$RTL.                    | READ LINE IN UPPER CASE  |
| •     | • | 042.241                                 |               | 047   |               | 519         | • | .JC<br>.XI       | EXIT                      | NONE   |
|       |   | 042.244                                 |               | 065   |               | 520         |   | LXI              | B,FLAGA                   |  |
| ٠     |   | 042.247                                 |               | 053   |               | 521         | • | DB               |                           | DECODE DEV INFO  |
|       |   | 042,251                                 | 332           | 220   | 043           | 522         |   | JC               | ERROR                     | NO GOOD  |
|       |   | 042.254                                 | 072           | 065   | 047           | 523         |   | LDA              | FLAGA+0                   | (A) = DEVICE TYPE  |
|       |   | .042+257                                |               |   |               | 524         |   | ANI              |                           |  |
|       |   | 042.261                                 |               |   |               | 525         |   | MVI              | A,EC.DNS                  |  |
| •     |   | .042.263                                |               |   |               | 526         |   | . JZ             | ERROR                     | NOT DIRECTORY DEVICE   |
|       | ,                                       | 042.266                                 |               |   |               | 527<br>528  |   | LXI<br>LXI       | D, DEFALT                 |  |
| •     | /-                                      | .042+271.<br>042+274                    | 257           | , <u>, , , , , , , , , , , , , , , , , , </u> | Y.19          | 529         | • | XRA              | .H,LINE                   |  |
|       |   | .042,275.                               |               |   |               | 530         |   | DB               | , · · ·                   | OPEN FOR READ  |
| • •   |   | 042.277                                 | 332           | 220   | 043           | 531         | • • • • • • • • • • • • • • •           | ĴĊ               | ERROR                     | . M. EV. J. DV. NEAD   |
|       |   | .042.302                                | 052           | 352   | 040           | 532         |   | LHLD             | S.CFWA                    |  |
| •     |   | 000.000                                 |               |   |               | 533         |   | ERRNZ            | IOCCTD-1                  | ASSUME LINK 1 TO USER CHAN #0  |
| ٠.    |   | .042,305.<br>042,310                    | 3.1.5         | 211   | .030          | 534         | ,                                       | CALL             | \$HLIHL                   |  |
|       |   |   |               |   |               | 535         |   | CALL             | <b>∌IND</b> L             |  |
|       |   | .042.313.                               |               |   |               | 536.        |   | . DW             | . <u>iog.pi</u> rtpir.flg |  |
|       |   | 042.315                                 | 315<br>107    | 136   | 142           | 537<br>538  |   | CALL<br>DB       | \$TYPTX                   | -/./ /12000  |
| :     |   | 042.340                                 | 173           |   | +94           | 539         |   | . WOV            | 'Current Flass            | =',' '+200Q<br>(A) = FLAGS   |
|       |   |   | 365           |   |               | 540         |   | PUSH             | PSW                       |  |
| •     | ,                                       |   |               | 251   | 045           | 541         |   | CALL             | TFF                       | TYPE FILE FLAGS  |
|       |   | .042,345                                |               |   |               | 542         |   | XRA              | Α                         | ······································   |
| • •   |   | 042.346                                 | 377           | 046   |               | 543         |   | DB               | SYSCALL, CLOSE            | CLOSE FILE   |
|       |   | 042.350                                 |               |   |               | 544         |   | POP              | PSW                       | (A) = FLAGS  |
|       |   | 042.351                                 |               |   |               | 545         |   | ANI              | DIF.LOC                   | ······································   |
| ٠.    |   | .Q42,353.                               | 312           | . 959   | .043.         | 546.        |   | <u>JZ</u>        | FLAGS2                    |  |
|       |   | 000.001                                 |               |   |               | 547         |   | IF               | DEBUG                     |  |
| ٠     |   | • |               | • • • • • •                                   | • • • • • • • | 548.<br>549 |   | .JMP             | .t.#6\$2                  | * * DEBUG * *  |
|       |   |   |               |   |               | 550         |   | EWTIL            |                           |  |

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| MAIN ROUTINE                            |   | • • • • • • •        |   |             |   | 15:59:58 29-0CT-80                            |
|---|---|----------------------|---|-------------|---|---|
| ••••••••••••••••••••••••••••••••••••••• |   | <br>551              | *                                       | LOCKED      | CANNOT CHANGE                           |   |
|   | <u></u>                                 | 552.                 | ***********                             |             |   |   |
| 042.356 315                             |   | 553                  |   | CALL        | \$TYPTX                                 | ·   |
| 042+361007                              |   | 554                  |   | . <u>DB</u> | BELL:NL: This file.                     | is locked; its flass cannot be chansed.', ENL |
| 043.045 303                             | 211 042                                 | 555<br>554           |   | JMP         | FLAGS1                                  |   |
| 043.050 315                             | 136 031                                 | 55 <u>6</u> .<br>557 | FLAGS2                                  | CALL        | \$TYPTX                                 |   |
| 043,053 012                             |   | 558                  | 1 =11002                                | DB          | NL, New flass: ','                      | ′+200B  |
| 043.070 041                             |   | 559                  | •••••                                   | LXI         | H,LINE2                                 |   |
| 043,073 315                             | 351 045                                 | 560                  |   | CALL        |   | I UPPER CASE                                  |
| 043.076 332                             | 264 043                                 | 561                  |   | JC          | EXIT EOF                                |   |
| · · · · · · · · · · · · · · · · · · ·   |   | 562.                 |   |             | ····                                    |   |
|   |   | 563                  | *                                       | CODE NE     | FLAGS                                   |   |
| 043.101 006                             |   | . 564<br>565         | •••••                                   | MVI         | B,0 (B)                                 | - FLAC ACCIM                                  |
| 043,101 000                             |   |                      | FLAGS3                                  | MOV         | A+W (E)                                 | = FLAG ACCUM                                  |
| 043.104 247                             | • | 567                  |   | ANA         | AA                                      |   |
| 043.105 345                             |   | 568                  |   | PUSH        |   | E LINE ADDRESS                                |
| 043.106 312                             |   | 569                  |   | JZ          | FLAGS5 END                              | OF LINE                                       |
| 043.111 041                             |   | 570                  |   | LXI         | H.FLAGB                                 |   |
| 043,114 315                             |   | 571                  |   | CALL        |   | D FLAG  |
| 043,117 312                             | . Yex . N49                             | . 572.<br>573.       | • | .JE         | FLAGS4 GOT                              | FLAG  |
|   |   | 574                  | *                                       | ILLEGAL     | FLAG                                    |   |
| ••••••••••••••••••••••••••••••••••••••• |   |                      |   | .+          |   |   |
| 043.122 315                             | 136 031                                 | 576                  |   | CALL        | \$TYPTX                                 |   |
| 043.125 007                             | 012 111                                 | 577                  |   | DB          | BELL, NL, 'Illesal fl                   | as -',' '+200Q                                |
| 043.146 341                             |   | . 578                |   | POP         | Н                                       |   |
| 043.147 176<br>043.150 315              | 340 045                                 | 579                  |   | MOV         |   | = BAD FLAG                                    |
|   | 343 045                                 | 580<br>581           |   | CALL        | \$WCHAR                                 |   |
| 043.156 303                             |   | 582                  |   | CALL<br>JMP | \$CRLF<br>FLAGS2 GET                    | NEW FLAGS                                     |
|   | <del></del>                             | 583                  | • |             | LHOUZ GET                               | ILEM LEHOO                                    |
| 043.161 176                             |   | 584                  | FLAGS4                                  | MOV         | A,M                                     |   |
| 043.162 260                             |   | 585                  |   | ORA         | B ACC                                   | UMULATE FLAGS                                 |
| 043,163 107                             |   | . 586.               | •                                       | MOV         | B,A                                     |   |
| 043.164 341<br>043.165 043              |   | . 585<br>588         |   | POP         | H<br>u wou                              | * TA LIPPLY #1 4 A                            |
| 043.166 303                             | 103 043                                 | ··589··              | • | INX<br>JMP  | FLAGS3                                  | TO NEEXT FLAG                                 |
|   | • • •                                   | 590                  |   |             |   |   |
| ••••••                                  | • | 591                  | .*                                      | GOT ALL     | THE FLAGS . SETEM                       |   |
|   |   | 592                  |   |             |   |   |
| 043.171 016                             |   |                      | FLAGS5                                  | MVI         |   | = MASK  |
| 043.173 021<br>043.176 041              |   | . 594<br>. 595       |   | LXI         | D.DEFALT                                |   |
| 043.201 377                             |   | 596                  |   | DB<br>CXI   | HALINE                                  |   |
| 043.203 332                             |   | 597                  | • |             | SYSCALL,.CHFLG<br>ERROR                 |   |
| 043.206 303                             |   | 598                  |   | JMP         | FLAGS1                                  |   |
| • | • | . 265.               |   |             | •••••                                   |   |
| 043.211 127                             |   |                      | FLAGB                                   | DB          | 'W',DIF.WP                              |   |
| 043.213 123                             |   | 991                  |   |             | 'S', DIF. SYS                           |   |
| 043,215 114<br>043,217 000              | 100                                     | .603<br>.603         |   | DB          | 'L',DIF,LOC                             | ***************************************       |
|   |   |                      |   |             | •                                       |   |
| • | •••••                                   | * • • • • •          |   |             | • |   |
|   |   |                      |   |             |   |   |
|   |   | • • • • • • • •      |   |             |   |   |

|   |   | F                                       | • | ••••••                   |   | •••••                     |   | RQR                                     | 1515915929                              | V1.4 01/20/78<br>P-DCT-80 | PASÉ                                    | •••••             |
|---|---|---|---|--------------------------|---|---------------------------|---|---|---|---------------------------|---|-------------------|
| • | ••••••••••••••••••••••••••••••••••••••• | •••••                                   |   | 605                      | **                                      | ERROR                     | - ERROR ENCOUNTERED.                    | •••••                                   | • | ••••••                    |   |                   |
| • | ••••••                                  | · • • • • • • • • • • • • • • • • • • • | · • • • • • • • • • • • • • • • • • • • | 606<br>607               | <b>*</b>                                | • • • • • • • • • • • • • | *************************************** | ••••••                                  | • |                           | ••••••                                  |                   |
| <i></i>                                 | 043.220                                 | · · · · · · .                           | • | 809                      | ···ERROR··                              | EQU                       | *************************************** | • | • |                           |   |                   |
|   |   | 315                                     | 226 043                                 | 610                      | ERROR                                   | CALL                      | ERROR.                                  |   |   |                           |   |                   |
| ••••••••                                |   |   | 206 042                                 | 611                      |   | ···JMP                    | RESTART                                 | • |   |                           |   | • • • • • • • •   |
|   | 043.226                                 |   |   | 612                      |   |                           |   |   |   |                           |   |                   |
|   |   |   | 136 031                                 | 613                      | ERRUR.                                  |                           | PSW                                     |   |   |                           |   | • • • • • • • •   |
|   | 043.232                                 | 012                                     | . 1007 105                              | 614<br>615               |   | CALL                      | *TYPTX<br>NL,BELL,'ERROR'-',            | 7718888                                 |   |                           |   |                   |
|   | 043,244                                 |   |   | 616                      |   | POP                       |   | 12000                                   |   |                           |   |                   |
|   | 043.245                                 | 046                                     | 012                                     | 617                      | • • • • • • • • • • • •                 | MVI                       | HaNL                                    | • | • |                           |   |                   |
| • • • • • • • • • • • • •               | 043-247                                 | 377                                     | .057                                    | 618                      |   | DB                        | SYSCALL, ERROR                          | LOOKUP                                  | ERROR                                   |                           |   |                   |
|   | 043,251                                 | 311                                     |   | 619                      | · · · · · · · · · · · · · · · · · · ·   | RET                       |   |   |   |                           | *************************************** |                   |
| •••••                                   | •••••                                   |   |   |                          | •••••                                   |                           |   |   |   |                           |   |                   |
|   |   |   |   | 621<br>622               | **                                      | CCHIT -                   | - HERE IF CTL-C HIT.                    |   |   |                           |   |                   |
|   |   |   |   |                          | *                                       |                           |   |   |   |                           | • | • • • • • • • •   |
| • | • | • • • • • •                             | • | 623<br>624               | • | • • • • • • • • • • • • • |   | • | •••••                                   |                           |   |                   |
|   | 043.252                                 | 315                                     | 136 031                                 |                          | CCHIT                                   | CALL                      | \$TYPTX                                 |   |   |                           |   |                   |
|   | 043.255                                 | 136                                     | 303                                     | 626                      |   | DB                        | '^','C'+200Q                            | *****************                       | ••••••                                  |                           | ••••••                                  | • • • • • • • • • |
|   | 043.257                                 | 377                                     | .007<br>.206 042                        | 627                      |   | DB                        | SYSCALL, CLRCO                          | CLEAR                                   | CONSOLE                                 |                           |   |                   |
|   |   | 303                                     | 206 042                                 | 628                      |   | JMP                       | RESTART                                 |   |   |                           |   |                   |
|   |   |   |   |                          |   |                           |   |   | •••••••                                 |                           |   |                   |
|   |   |   |   | 630<br>631<br>632        | **                                      | EXIT -                    | EXIT TO OS.                             | *****                                   |   |                           |   | ••••••            |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633        | ••••••                                  | EXIT -                    | EXIT TO OS.                             |   |   |                           |   |                   |
|   |   | 257                                     |   | 631<br>632               | **                                      | EXIT -                    | EXIT TO OS.                             |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633        | **                                      | EXIT -                    | EXIT TO OS.                             |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264<br>043.265                      | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264<br>043.265                      | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264<br>043.265                      | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
| ,                                       | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |
|   | 043.264                                 | 257                                     |   | 631<br>632<br>633<br>634 | **                                      | EXIT -<br>XRA<br>DB       | EXIT TO OS.  A SYSCALL, EXIT            |   |   |                           |   |                   |

|  |   | · · · · · · · · · · ·   |   |  |  | PRS 15:59:59 29   | V1.4 01/20/78<br>OCT-80  | PAGE 14                                 |
|--|---|---|---|--|--|---|--|---|
|  |   |   |   |  |  |   |  |   |
|  |   | 638   |   | PRS -  | PRESET CONSOLE.  | ••••••  | ***************************************                                  | *************                           |
| ••••••   | •   | 639.<br>640   | *                                       |  |  | ·····   |  |   |
|  |   | 641   |   |  |  |   |  |   |
| 043.267  | •   |   | PRS                                     | EQU  | **   |   | •                                  |   |
|  |   | 6.43  |   |  |  |   |  |   |
| 043.267  |   | 644   | ,                                       | DB   | SYSCALL, . VERS  | ************************************  | /79.12.GC/   |   |
|  | 332 362 043   | 645   |   | nc   | PRSERR1  | PROBABLY NO .VERS SYSCALL   | /79.12.GC/   |   |
| 043.274  | 3/6 040<br>302 362 043  | 646   |   | CPI  | VERS   |   |  |   |
|  | .304.302.043.   | 647.<br>648   | • • • • • • • • • • • • • • •           | . JŅZ  | PRSERR1  | NOT CORRECT VERSION OF HDOS   | /79.12.GC/   |   |
| 043.301  | 257   | 649   |   | XRA  | Δ  |   |  |   |
|  | 062 326 040   | 650   |   | STA  | S.CSLMD  | •   | ••••••   |   |
|  | 041 252 043   | 651   |   | LXI  | H,CCHIT  |   |  |   |
| 043.310  | 076 003   | 652   |   | MVI  | A,CTLC   |   | ***************************************                                  |   |
| 043.312  |   | 653   |   | DB   | SYSCALL, CTLC  |   |  |   |
| 043.314  |   | 654   |   | MVI  | A,377Q   |   | ***************************************                                  | ******************                      |
| 043.316  |   | 655   |   | . DB   | SYSCALL, CLOSE   | CLOSE OVERLAY CHANNEL   |  |   |
| 043.323  | 041 231 047   | 656<br>657  |   | DB<br>FXI  | H+RMEML  | OFT DAN VEVOEW LIVE   |  |   |
|  | 315 136 031   | 658   | •••••••                                 | CALL   | \$TYPTX  | SET RUN MEMORY LIMIT  | ••••••   |   |
|  | 012 106 114   | 659   |   | DB   |  | #50.06.00.'.NL.ENL  |  |   |
| 043.361  |   | 660   |   | RET  | nezr.enon.Asage  |   |  | • |
|  |   | 661   |   |  |  |   |  |   |
| 043.362  | 076 050   | 662   | PRSERR1                                 | MVI  | A,EC.NCV   | NOT CORRECT VERSION OF HDOS   | /79.12.GC/   |   |
|  |   | 663   |   |  |  |   |  |   |
|  | 315 226 043   | 664   | PRSERR                                  |  | ERROR.   |   | /79.12.GC/   |   |
| 043.36/  | 303 264 043   | 665   |   | JMP  | EXIT   |   | /79.12.GC/   |   |
|  |   |   |   |  |  |   |  |   |
|  |   | 667   |   |  | OFFER USER INSTRU  | CTIONS.   |  |   |
|  |   |   |   |  |  | CTIONS.   |  |   |
|  |   | 668<br>669  | ··*······                               | ENTRY  | NONE   | CTIONS.   |  |   |
|  |   | 668<br>669<br>670   | *<br>*<br>*                             | ENTRY<br>EXIT  | NONE<br>NONE   | CTIONS.   |  |   |
|  |   | 668<br>669  | ··*······                               | ENTRY  | NONE   | CTIONS.   |  |   |
|  |   | 668<br>669<br>670<br>671  | *<br>*<br>*                             | ENTRY<br>EXIT  | NONE<br>NONE   | CTIONS.   |  |   |
|  | 315 136 031   | 668<br>669<br>670<br>671<br>672<br>673<br>674   | *<br>*<br>*                             | ENTRY<br>EXIT<br>USES<br>CALL  | NONE<br>NONE<br>ALL<br>\$TYPTX   |   |  |   |
| 043.375  | 111 156 163   | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675  | * | ENTRY<br>EXIT<br>USES<br>CALL<br>DB  | NONE<br>NONE<br>ALL<br>\$TYPTX<br>'Instructions (  | CTIONS.<br>Yes/No) <no>?',' /+2000</no>   |  |   |
| 043.375<br>044.031   | 111 156 163<br>041 155 046  | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675  | * | ENTRY<br>EXIT<br>USES<br>CALL<br>DB<br>LXI   | NONE<br>NONE<br>ALL<br>\$TYPTX<br>'Instructions (  |   |  |   |
| 043.375<br>044.031<br>044.034  | 111 156 163<br>041 155 046<br>315 351 045   | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675<br>676   | * | ENTRY<br>EXIT<br>USES<br>CALL<br>DB<br>LXI   | NONE<br>NONE<br>ALL<br>\$TYPTX<br>'Instructions (<br>H,LINE<br>\$RTL.  | Yes/No) <no>?,, '+2000</no>   |  |   |
| 043.375<br>044.031<br>044.034<br>044.037   | 111 156 163<br>041 155 046<br>315 351 045<br>332 264 043  | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675<br>676<br>677  | * | ENTRY<br>EXIT<br>USES<br>CALL<br>DB<br>LXI<br>CALL<br>JC   | NONE<br>NONE<br>ALL<br>STYPTX<br>'Instructions (<br>H,LINE<br>SRTL.<br>EXIT  |   |  |   |
| 043.375<br>044.031<br>044.034<br>044.037<br>044.042  | 111 156 163<br>041 155 046<br>315 351 045<br>332 264 043<br>176   | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675<br>676   | * | ENTRY<br>EXIT<br>USES<br>CALL<br>DB<br>LXI<br>CALL<br>JC   | NONE<br>NONE<br>ALL<br>STYPTX<br>'Instructions (<br>H,LINE<br>SRTL<br>EXIT<br>A,M  | Yes/No) <no>?,, '+2000</no>   |  |   |
| 043.375<br>044.031<br>044.034<br>044.037<br>044.042<br>044.043   | 111 156 163<br>041 155 046<br>315 351 045<br>332 264 043<br>176   | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675<br>676<br>677<br>678   | * | ENTRY<br>EXIT<br>USES<br>CALL<br>DB<br>LXI<br>CALL<br>JC<br>HOV<br>ANA   | NONE<br>NONE<br>ALL<br>STYPTX<br>'Instructions (<br>H,LINE<br>SRTL.<br>EXIT  | Yes/No) <no>?',' /+200@<br/>EOF</no>  |  |   |
| 043.375<br>044.031<br>044.034<br>044.037<br>044.042<br>044.043   | 111 156 163<br>041 155 046<br>315 351 045<br>332 264 043<br>176<br>247<br>310   | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675<br>676<br>677<br>678<br>679<br>680   | * | ENTRY<br>EXIT<br>USES<br>CALL<br>DB<br>LXI<br>CALL<br>JC   | NONE<br>NONE<br>ALL<br>\$TYPTX<br>'Instructions (<br>H*LINE<br>\$RTL*<br>EXIT<br>A;M<br>A  | Yes/No) <no>?,, '+2000</no>   |  |   |
| 043.375<br>044.031<br>044.034<br>044.037<br>044.042<br>044.043<br>044.044<br>044.045   | 111 156 163<br>041 155 046<br>315 351 045<br>332 264 043<br>176<br>247<br>310<br>376 116<br>310   | 668<br>670<br>671<br>672<br>673<br>674<br>675<br>676<br>677<br>678<br>679<br>680  | * | ENTRY<br>EXIT<br>USES<br>CALL<br>DB<br>LXI<br>CALL<br>JC<br>HOU<br>ANA<br>RZ   | NONE<br>NONE<br>ALL<br>STYPTX<br>'Instructions (<br>H,LINE<br>SRTL<br>EXIT<br>A,M  | Yes/No) <no>?',' /+200@<br/>EOF</no>  |  |   |
| 043.375<br>044.031<br>044.034<br>044.037<br>044.042<br>044.043<br>044.044<br>044.045<br>044.047<br>044.050   | 111 156 163<br>041 155 046<br>315 351 045<br>332 264 043<br>176<br>247<br>310<br>376 116<br>310<br>376 131  | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675<br>676<br>677<br>678<br>679<br>680<br>681<br>682                             | * | ENTRY<br>EXIT<br>USES<br>CALL<br>DB<br>LXI<br>CALL<br>JC<br>MOV<br>ANA<br>RZ<br>CPI<br>RE<br>CPI                             | NONE NONE ALL  \$TYPTX 'Instructions ( H,LINE \$RTL EXIT A,M A 'N' 'Y'   | Yes/No) <no>?',' '+200Q<br/>EOF<br/>DEFAULT, NO</no>  |  |   |
| 043.375<br>044.031<br>044.037<br>044.042<br>044.043<br>044.043<br>044.044<br>044.047<br>044.047<br>044.050   | 111 156 163<br>041 155 046<br>315 351 045<br>332 264 043<br>176<br>247<br>310<br>376 116<br>376 131<br>362 372 043                                      | 668<br>669<br>670<br>671<br>673<br>674<br>675<br>676<br>677<br>680<br>681<br>682<br>683<br>684                                    | * | ENTRY<br>EXIT<br>USES<br>CALL<br>UB<br>LXI<br>CALL<br>JC<br>MOV<br>ANA<br>RZ<br>CPI<br>RE<br>CPI<br>JNE                      | NONE NONE ALL  \$TYPTX 'Instructions ( H,LINE \$RTL EXIT A,M A 'N' 'Y'   | Yes/No) <no>?',' / †2000<br/>EOF<br/>DEFAULT, NO</no>   |  |   |
| 043.375<br>044.031<br>044.037<br>044.042<br>044.043<br>044.043<br>044.045<br>044.047<br>044.050<br>044.050   | 111 156 163<br>041 155 046<br>315 351 045<br>332 264 043<br>176<br>247<br>310<br>376 116<br>310<br>376 131<br>362 372 043<br>315 136 031                | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675<br>677<br>678<br>679<br>681<br>682<br>683<br>684<br>685<br>686               | * | ENTRY<br>EXIT<br>USES<br>CALL<br>DB<br>LXI<br>CALL<br>JC<br>MOV<br>ANA<br>RZ<br>CPI<br>RE<br>CPI<br>RE<br>CPI<br>JNE<br>CALL | NONE NONE NONE ALL  \$TYPTX 'Instructions ( H,LINE \$RTL. EXIT A,M A 'N' 'Y' OUI \$TYPTX   | Yes/No) <no>?, '+2000<br/>EOF<br/>DEFAULT, NO<br/>NO<br/>KEÉP TRYING TILL THE BOZO GE</no>  | TS IT RIGHT  |   |
| 043.375<br>044.031<br>044.034<br>044.037<br>044.042<br>044.043<br>044.044<br>044.045<br>044.050<br>044.050<br>044.055<br>044.055   | 111 156 163<br>041 155 046<br>315 351 045<br>332 264 043<br>176<br>247<br>310<br>376 116<br>310<br>376 131<br>302 372 043<br>315 136 031<br>012 106 114 | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675<br>677<br>678<br>679<br>680<br>681<br>682<br>683<br>684<br>686               | * | ENTRY EXIT USES  CALL DS LXI CALL JC MOV ANA RZ CPI RE CPI RE CPI CALL DB  | NONE NONE NONE ALL  \$TYPTX 'Instructions ( H,LINE \$RTL. EXIT A,M A 'N' 'Y' OUI \$TYPTX NL,'FLAGS is us                           | Yes/No) <no>?',' /1200Q  EOF  DEFAULT, NO  NO  KEEP TRYING TILL THE BOZO GE ed to set and/or clear the fi</no>                              | TS IT RIGHT  |   |
| 043.375<br>044.031<br>044.037<br>044.042<br>044.043<br>044.043<br>044.045<br>044.047<br>044.050<br>044.050<br>044.055<br>044.055<br>044.055                                  | 111 156 163 041 155 046 315 351 045 332 264 043 176 247 310 376 116 310 376 131 302 372 043 315 136 031 012 106 114 012 160 162                         | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675<br>677<br>678<br>679<br>681<br>682<br>684<br>685<br>686<br>686<br>687<br>688 | * | ENTRY EXIT USES  CALL DB LXI CALL JC HOV ANA RZ CPI RE CPI JNE CALL DB   | NONE NONE NONE ALL  \$TYPTX 'Instructions ( H,LINE \$RTL. EXIT A,M A 'N' 'Y' OUI \$TYPTX NL,'FLAGS is us NL,'Prompted fo           | Yes/No) <no>?',' /1200Q  EOF  DEFAULT, NO  NO  KEEP TRYING TILL THE BOZO GE ed to set and/or clear the file the new flass, specify ALL</no> | TS IT RIGHT<br>le flass. When'<br>the flass that are'                    |   |
| 043.375<br>044.031<br>044.034<br>044.037<br>044.042<br>044.043<br>044.044<br>044.045<br>044.047<br>044.050<br>044.050<br>044.050<br>044.050<br>044.060<br>044.147<br>044.242 | 111 156 163<br>041 155 046<br>315 351 045<br>332 264 043<br>176<br>247<br>310<br>376 116<br>310<br>376 131<br>302 372 043<br>315 136 031<br>012 106 114 | 668<br>669<br>670<br>671<br>672<br>673<br>674<br>675<br>677<br>678<br>679<br>680<br>681<br>682<br>683<br>684<br>686               | * | ENTRY EXIT USES  CALL DS LXI CALL JC MOV ANA RZ CPI RE CPI RE CPI CALL DB  | NONE NONE ALL  \$TYPTX 'Instructions ( H,LINE \$RTL. EXIT A,M A 'N' 'Y' OUI \$TYPTX NL,'FLAGS is us NL,'Frompted fo NL,'to be set. | Yes/No) <no>?',' /1200Q  EOF  DEFAULT, NO  NO  KEEP TRYING TILL THE BOZO GE ed to set and/or clear the fi</no>                              | TS IT RIGHT<br>le flass. When'<br>the flass that are'<br>flas, you will' |   |

| FLAGS - SET/CLEAR FILE FL<br>PRS PRESET CONSOLE  |   |   |   | HEATH HBASH V1.4 01/20/78 PAGE 15                        |
|--|---|---|---|--|
|  |   |   |   | 10100:00 27-00:1-80                                      |
| 045.015 012  |   |   | *******                                 |  |
| 045.016 012 127 011  | 691<br>692                              | DB<br>DB                                | NL<br>NL,'W Write:                      |  |
| 045.116 012 123 011  | 673<br>693                              | DB                                      | NL,'S Suppre                            | protect file. May not be renamed, replaced, or deleted.' |
| 045.174 012 114 011  | 694                                     | DB                                      | NL,'L Lock t                            | he file from further flas chanses.                       |
| 045.247 212  | 695                                     | DB                                      | ENL                                     |  |
| 045.250 311  | 696                                     | RET                                     | ,                                       |  |
|  |   |   |   | Tr.  |
| ***************************************  |   |   | ••••••                                  |  |
| ***************************************  |   | \$                                      |   |  |
| and the second of the second o | 698                                     |   | TYPE FILE FLAGS.                        |  |
|  | 699                                     | *                                       |   | ······································                   |
|  | 700<br>701                              | * IYPE                                  | THE CURRENT FLAGS                       |  |
|  | 702                                     |   | (A) = FLAGS                             |  |
| ***************************************  | 703                                     |   |   | TER LAST FLAG  |
|  | 704                                     | * USES                                  | A,F,H,L                                 |  |
| ***************************************  | 705                                     | · · · · · · · · · · · · · · · · · · ·   |   |  |
| 045.251 041 271 045  | 706<br>707                              | TFF LXI                                 | II TEEA                                 |  |
| 045.254 207  | 708                                     | TFF4 ADD                                | H,TFFA                                  | (HL) = FLAG TABLE FWA                                    |
|  | 707                                     | PUSH                                    | PSW                                     | SALE EL AGO  |
| 045.256 176  | 710                                     | MOV                                     | A,M                                     | SAVE FLAGS   |
| 045+257 334 340 045  | 711                                     | CC                                      | \$WCHAR                                 | TYPE CHARACTER IF FLAG SET                               |
| 045.262 043  | 712                                     | INX                                     | H                                       | POINT TO NEXT FLAG CHARACTER                             |
| 045.263 361<br>045.264 247   | 713                                     | POP                                     | PSW                                     | RESTORE FLAGS  |
| 045.265 302 254 045  | 714<br>715                              | ANA                                     | A                                       | ·  |
| 045.270 311  | 716                                     | JNZ<br>RET                              | TFF4                                    | MORE FLAGS SET   |
|  | 717                                     |   |   |  |
| 045.271 123 114 127  |   | TFFA DB                                 | 'SLW'                                   |  |
| 045.274 000  | 719                                     | DB                                      | 0                                       | IGNORE THE CONTIGUOUS FLAG /79.12.GC/                    |
| 045.275 061 062 063<br>000.000   | 720                                     | DB                                      | '1234' CODES                            |  |
| 000,000  | 721<br>722                              | ERRNZ<br>ERRNZ                          | DIF.SYS-2000<br>DIF.LOC-1000            |  |
| 000.000  |   | ERRNZ                                   | DIF.WF-40Q                              |  |
| 000.000  | 723<br>724                              | ERRNZ                                   |   |  |
|  |   |   | ******                                  |  |
|  |   |   |   |  |
| •••••••••••••••••••••••••••••••••••••••  | • | ••••••                                  | • |  |
|  |   |   |   |  |
| · · · · · · · · · · · · · · · · · · ·  | • |   | • |  |
| ***************************************  |   | •••••                                   |   |  |
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| ,  |   |   |   |  |
|  |   |   |   |  |
| ***************************************  | • • • • • • • • •                       |   |   |  |
| *  |   |   |   |  |
|  |   | ••••••                                  |   |  |
|  |   |   |   |  |
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| •••••  |   |   |   |  |
|  |   |   |   |  |
| ***************************************  | • • • • • • • •                         | ••••••                                  | ••••••                                  |  |
|  |   |   |   |  |
|  |   | • | •••••••••                               |  |
|  |   |   |   |  |

| COMMON DECKS                            | CLEAR FILE FLA                          | • |  | HEATH HBASM V1.4 01/20/78 PAGE 16<br>16:00:01 29-001-80   |         |
|---|---|---|--|---|---------|
|   |   |   |  |   |         |
| 045.301                                 |   | 727                                     | XTEXT  | TBLS  |         |
|   |   | • |  |   |         |
|   |   |   | \$TBL\$  | - TABLE SEARCH  |         |
|   |   | 730X *<br>731X *                        | TABLE  | FORMAT  |         |
|   | ••••••                                  | 732X *                                  |  |   | ••••    |
|   |   | 733X *<br>734X *                        | DB   | KEY1, VAL1,   |         |
|   |   | 735X *                                  | •  |   |         |
|   |   | 736X *                                  | DB   | KEYN, VALN  |         |
|   |   | 737X ¥<br>738X *                        | DB   |   |         |
|   |   | 739X *                                  | ENTRY  | (A) = PATTERN   |         |
|   | *************************************** | 740X *                                  |  | (H,L) = TABLE FWA   |         |
|   |   | 741X *                                  | EXIT   | (A) = PATTERN IF FOUND  |         |
|   |   | 742X *<br>743X *                        |  | 'Z' SET IF FOUND<br>'Z' CLEAR IF NOT FOUND OR PATTERN=0 /78.10.GC/  |         |
| • | •••••••                                 | 744X *                                  | USES   | AFF9H9L   | ••••    |
|   | • | 745X<br>746X                            |  | ······································  |         |
| 045.301                                 | 305                                     | 740X<br>747X \$TB                       | LS PUSH  | R   |         |
| 045.302                                 | 376 000                                 | 748X                                    | CPI  | B /78.10.6C/  | • • • • |
| 045.304                                 | 312 326 045                             | 749X                                    | JZ   | TBL2 /78,10,6C/   |         |
| 045.307<br>045.310                      |   | 750X<br>751X TBL                        | MOV<br>1 MOV                                   | B+A<br>A+M (A) = CHARACTER  |         |
| 045.311                                 | 043                                     |   | XNI  | H   | • • • • |
| 045.312                                 | 270<br>312 330 045                      | . 753X                                  | CMP  | B   |         |
| 045.313<br>045.316                      | 247                                     | 754X<br>755X                            | JZ<br>ANA                                      | TBL3 IF MATCH   |         |
| 045.317                                 | 043                                     | 756X                                    | ĬŃX  | H SKIP PAST   | ••••    |
| 045.320<br>045.323                      | 302 310 045<br>053                      | . 757X<br>. 758X                        | JNZ<br>DCX                                     | TBL1 IF NOT END OF TABLE  |         |
| 045.324                                 | 053                                     | 759X                                    | DCX  | H ·   |         |
| 045.325                                 | 257                                     | 760X                                    | XKA  | A SET TO ZERO FOR OLD USERS /78.10.GC/  | • • • • |
| 045.326                                 | 376 001                                 | 761X TBL:                               | 2 CPI  | 1 CLEAR ZERO /78.10.GC/   |         |
|   |   | 763X *                                  | DONE   |   |         |
| A                                       |   | 764X                                    | • • • • • • • • • • • • • • •                  |   |         |
| 045.330<br>045.331                      | 301                                     | 765X TBL                                | 3 POP<br>RET                                   | В   |         |
| 045.332                                 | 511                                     | 767                                     | XTEXT  | HLIHL   |         |
| .,                                      |   | • | ••••••   |   | • • • • |
|   |   |   |  |   |         |
|   |   |   |  |   |         |
|   | **** ********************************** | 769X **                                 | \$HLIHL  | - LOAD HL INDIRECT THROUGH HL.  | • • • • |
|   |   | . 770X *<br>                            | ······›\\\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ | · ((AL))  |         |
|   |   | .772X *                                 | (DL) =   | WILLIAM TO THE TOTAL THE TOTAL TO THE TOTAL THE TOTAL TO |         |
|   | *****************                       | ``773X`` <b>*</b> ```                   | ENTRY.   |   |         |
|   | • | 774X *                                  | EXIT<br>USES                                   | NONE<br>A)H)L   |         |
|   |   | 775X * 776X                             | USES   | Hanar   |         |
| ,                                       | • |   |  |   |         |

| FLAGS - SET/CLEAR FILE FL<br>COMMON DECKS         |  |   |   | HEATH HEASH V1.4 01/20/78 PAGE 17\$HLIHL 16:00:02 27-0CT-80 |
|---|--|---|---|---|
|   |  |   | • |   |
| 030.211<br>045.332                                | 777X \$HLIHL<br>778  | EQU                                     | 30211A<br>INBL                          | IN H17 ROM  |
|   |  |   |   |   |
| ••••••  | •                                  | • | ••••••••••••••••••••••••••••••••••••••• |   |
|   | 780X **  |   | · · · · · · · · · · · · · · · · · · ·   |   |
|   | 781X *   | #INDL -                                 | - INDEXED LOAD                          | •   |
|   | 782X *   | \$INDL L                                | DADS DE WITH                            | THE TWO BYTES AT (HL)+DISPLACMENT                           |
|   | 783X *<br>784X *   | THIS AC                                 | TS AS AN THIE                           | KED FULL WORD LOAD.   |
|   | 785X *   |   |   |   |
|   | 786X *<br>787X *   | (DE) =                                  | ( (HL) + DSPLA                          | ACEMENT )   |
|   | 788X *   | ENTRY                                   | ((RET)) = DIS                           | SPLACMENT (FULL WORD)                                       |
|   | 789X*  |   | (HL)E.TABLE.                            | ADDRESS   |
|   | 790X *<br>791X *   | EXIT<br>USES                            | TO (RET+2)                              |   |
|   | 792X   |   |   |   |
| 030.234   | 793X<br>794X \$INDL  | EQU                                     | 30234A                                  | 741 14 7 BAN  |
| 045,332   | 795  |   | RCHAR                                   | IN H17 ROM  |
|   |  |   |   |   |
|   | •                                  |   |   |   |
| •••••   | 797X **  | \$RCHAR                                 | - READ SINGLE                           | CHARACTER FROM CONSOLE.                                     |
| ••••••••••••••••                                  | 798X *<br>799X *   |   |   |   |
|   | 800X *   | ENTRY<br>EXIT                           | NONE<br>(A) = CHARACT                   | FR .  |
|   | 801X *   | USES                                    | A,F                                     |   |
| •••••••••••••••••••••••••••••••••••••••           | 802X<br>803X   |   | • |   |
| 045.332 377 001                                   | 804X \$RCHAR   | DB                                      | SYSCALL, SCIN                           | L   |
| 045.334 332 332 045<br>045.337 311                | 805X<br>806X   | JC<br>BET                               | \$RCHAR                                 | NOT READY   |
|   | 807X   | RET                                     |   |   |
| 045.340 377 002<br>045.342 311                    | 808X \$WCHAR   | DB                                      | SYSCALL, SCOL                           | IT.   |
| 045.343   | 809X<br>810  | RET<br>XTEXT                            | CRLE                                    |   |
|   |  |   |   |   |
| ••••••••••••••••                                  |  |   | • |   |
|   | 812X **  | ···zwara···                             | n nazyska an navyska kolony ska         | · · · · · · · · · · · · · · · · · · ·                       |
|   | BIZX XX  | ¥CRLF                                   | TYPE CARRIAGE                           | RETURN/ LINE FEED   |
|   |  |   | an established e de de elemente e de    | RATE PADDED CRLF'S.   |
|   | 813X *<br>814X *   | \$CRLF I                                | S USED TO GENE                          | WHIE LADDER CKEL.2.   |
|   | 813X *<br>814X *<br>815X *   |   |   |   |
|   | 813X *<br>814X *   | \$CRLF I<br>ENTRY<br>EXIT               | S USED TO GENE  NONE  (A) = 0           | CHIE FHUDED CREF'S.   |
|   | 813X *<br>814X *<br>815X *<br>815X *<br>816X *<br>817X *                 | ENTRY                                   | NONE                                    | RHIE FHUDED CREF'S.   |
|   | 813X *<br>814X *<br>815X *<br>816X *<br>816X *<br>818X *<br>819X         | ENTRY<br>EXIT                           | NONE<br>(A) = 0                         | RHIE PHDDED CRLF'S.   |
| 045.343 076 012                                   | 813X * 814X * 815X * 816X * 817X * 818X * 819X * 820X \$20X              | ENTRY<br>EXIT<br>USES<br>MVI            | NONE<br>(A) = 0                         | RHIE PHDDED UKLF'S.   |
| 045.343 076 012<br>045.345 377 002<br>045.347 257 | 813X *<br>814X *<br>815X *<br>816X *<br>817X *<br>818X *<br>819X<br>820X | ENTRY<br>EXIT<br>USES                   | NONE<br>(A) = 0<br>A,F                  |   |

|   |   | •••••                                    |           |   | \$CRLF 16:00:04 29-0CT-80   |
|---|---|--|-----------|---|---|
|   |   | 1.5                                      | 18/14/1   | Programme Section                                 |   |
| 045.350                                 | 311                                     | 824X                                     | RET       |   |   |
|   |   | 825                                      | XTEXT     | RTL   |   |
|   |   |  |           |   |   |
|   |   |  |           |   |   |
|   |   |  |           | •   |   |
|   | • | Admine with                              |           |   |   |
|   |   | 827X **                                  | SKIL -    | READ TEXT LI                                      | NE.   |
| • | • | 828X.*<br>829X *                         | #DTI D    | CATIC A LINE C                                    | DOM THE TERMINAL  |
|   |   | 830X *                                   | PRIL R    | CHDO H LINE F                                     | ROM THE TERMINAL,   |
|   | • | 831X *                                   | CHARAC    | TER ARE ACCEP                                     | TED FROM THE TERMINAL, RUBOUT AND BACKSPACE                               |
|   |   | 832X.*                                   |           |   | ESSED. WHEN A CARRIAGE RETURN IS ENTERED.                                 |
|   |   | 833X *                                   |           | ETURNS.   | na market 1917 (a. 17. 17. 17. 17. 19. 19. 19. 19. 19. 19. 19. 19. 19. 19 |
|   | • | 834X.*                                   |           |   |   |
|   |   | 835X *                                   | ENTRY     | (HL) = BUFF                                       |   |
|   |   | 836X.*                                   | EXIT      | 'C' CLEAR I                                       |   |
|   |   | 837X *                                   |           | DATA IN BUI                                       |   |
|   |   | 838X *<br>839X *                         |           | (A) = TEXT  | LENGTH<br>CTL-D STRUCK  |
|   | 7                                       | 840X *                                   | USES      | A,F   | SIE D SINGER  |
| • | • | 841X                                     |           |   |   |
|   |   | 842X                                     |           |   |   |
|   | 315 360 045                             | 843X \$RTL.                              | CALL      | \$RTL   | \$RTL IN UPPER CASE   |
| 045.354                                 | 330                                     | 844X                                     | RC        |   | CTL-D   |
| 045.355                                 | 303 027 046                             | 845X                                     | JMP       | \$MLU   | MAP LINE TO UPPER CASE  |
|   |   | 846X                                     |           | ,   | A   |
| 045.360                                 | 745                                     | 847X \$RTL                               | EQU       | - <b>*</b> **<br>> <b>H</b> * <sup>25</sup> * > > |   |
| 045.360                                 | .345<br>315 332 045                     | 848X *********************************** | PUSH      |   | SAVE FWA  |
| 045,364                                 |   | 849X \$RTL1<br>850X                      | CALL      | \$RCHAR   |   |
|   | 312 013 046                             | 850X                                     | CPI<br>JE | CTLD<br>\$RTL2                                    | CTL-D STRUCK  |
| 045.371                                 |   | 852X                                     | MOV       | Mark .  |   |
| 045.372                                 |   | 853x                                     | INX       | Н   |   |
| 045.373                                 |   | 854X                                     | CPI       | NL.   | ······································                                    |
|   | 302 361 045                             | 855X                                     | JNE       | \$RTL1  |   |
| 046.000                                 |   | 856X                                     | DCX       | Н   | ······································                                    |
| 046.001                                 |   | 857X                                     | MVI       | M • O   |   |
| 048.003                                 | V45                                     | 858X                                     | INX       | . н   |   |
| S. Sarahara                             |   | 859X<br>860X *                           | ALL TIO   | NE. COMPUTE !                                     | INCTU   |
|   |   | 861X                                     |           | NE. COMPUTE LE                                    | ing in  |
| 046:004                                 | 353                                     | 862X                                     | XCHG      | 4 - 4   | (DE) = LWA+1  |
| 046.005                                 |   | 863X                                     | ···XTHL   | ••••••  | (HL) = FWA  |
| 046.006                                 |   | 864X                                     | MOV       | A,E   |   |
| 046.007                                 |   | 865X                                     | ŚÜB       | <u>r</u>  | (A) = LENGTH  |
| 046.010                                 |   | 866X                                     | ANA       | A   | CLEAR CARRY   |
| 046.011                                 |   | 867X                                     | POP       | D.  | RESTORE (DE)  |
| 046.012                                 | 311                                     | 868X                                     | RET       | ٠٠  |   |
|   |   | 869X                                     | CTI P     | CIDION  |   |
|   |   | 870X *                                   | CTL-D 9   | 5 1 KULK  |   |
| 046.013                                 | 341                                     | 872X \$RTL2                              | POP       | ٠ ٠ ٠ ٠ ٠ ٠                                       | (HL) = FWA  |
| 046.014                                 |   | 873X                                     | STC       |   |   |
| 046.015                                 |   | 874X                                     | RET       |   |   |
| 046.016                                 |   | 875                                      | XTEXT     | MCU   |   |
| 1, 2                                    |   |  |           |   |   |

| FLAGS - SET/CLEAR FILE FLA              |   | HEATH HBASH V1.4 01/20/78 PAGE 19                                |
|---|---|--|
| COMMON DECKS                            | 103                                     |  |
|   | *************                           | #HCU 143.901.04 29-0CT-80  |
| **********************************      | ** <u>****</u>                          |  |
|   | 877X **<br>878X *                       | MCU - MAP LOWER CASE TO UPPER CASE.                              |
| *************************************** | · 879X *                                | MCU MAPS A LOWER CASE ALPHABETIC TO UPPER                        |
|   | 880X *                                  | CASE.  |
| ••••••••••••••••••••••••••••••••••••••• | 881X *                                  |  |
|   | 882X *                                  | ENTRY (A) = CHARACTER EXIT (A) = CHARACTER RESULY                |
|   | 884X *                                  | USES AF  |
| *************************************** | 885X                                    |  |
| *************************************** | . 886X                                  | 200  |
| 046.016 376 141                         | 887X \$MCU                              | CPI 'a'  |
| 046.020 330<br>046.021 376 173          | 888X<br>889X                            | RC NOT LOWER CASE CPI 'z'+1                                      |
| 046.023 320                             | 870X                                    | RNC NOT LOWER CASE   |
| 046.024 326 040                         | 891X                                    | SUI 'a'-'A'  |
| 046.026311                              | <u>892</u> X                            | RET  |
| 046.027                                 | 893                                     | XTEXT MLU  |
|   | •••••                                   |  |
| *************************************** | ••••                                    |  |
|   |   | W  |
|   | .895X **<br>896X *                      | MLU - MAP LOWER CASE LINE TO UPPER CASE.                         |
|   | 897X *                                  | MLU MAPS THE LOWER CASE ALPHARETICS IN A LINE TO UPPER CASE.     |
| *************************************** | 898X *                                  |  |
|   | .899X *                                 | ENTRY (HL) = LINE FWA  |
|   | 900X *<br>901X *                        | EXIT NONE  |
|   | · 402x                                  | USES NONE  |
|   | 903X                                    |  |
| 046.027 365                             | 904X \$MLU                              | PUSH PSW SAVE (PSW)  |
| 046.030 345<br>046.031 053              | 905X<br>906X                            | PUSH H SAVE FWA DCX H ANTICIPATE INX H                           |
| 046.032 043                             | .907X \$MLU1                            | DCX H ANTICIPATE INX H INX H                                     |
| 046.033 176                             | 908X                                    | MOV A,M (A)= CHARACTER   |
| 046.034 315 016 046                     | 909X                                    | CALL \$MCU MAP CHAR TO UPPER                                     |
| 046.037 167<br>046.040 247              | 910X<br>911X                            | MOV MyA  |
| 046.041 302 032 046                     | 912X                                    | ANA A  JNZ \$MLU1 MORE TO GO                                     |
| 046.044 341                             | 913X                                    | POP H RESTORE (HL)   |
| 046.045 361                             | 914X                                    | POP PSW RESTORE (PSW)  |
| 046.046.311                             | 915X<br>916                             | RET<br>XTEXT TYPTX   |
| V-10101/                                | ,10                                     | AILAI (IFIA  |
| *************************************** | • |  |
| *****                                   |   |  |
|   | 010V **                                 | ATVDTV TVDF TFVT   |
| *****                                   | .918X **<br>919X *                      | \$TYPTX - TYPE TEXT.   |
|   | 920X ¥                                  | \$TYPTX IS CALLED TO TYPE A BLOCK OF TEXT ON THE SYSTEM CONSOLE. |
|   | 921X *                                  |  |
|   | .922X *                                 | IMBEDDED ZERO BYTES INDICATE A CARRIAGE RETURN LINE FEED,        |
|   | 923X *<br>924X *                        | A BYTE WITH THE 2000 BIT SET IS THE LAST BYTE IN THE MESSAGE.    |
| *************************************** | 747∧<br>925X ¥                          | ENTRY (RET) = TEXT   |
|   | 926X *                                  | EXIT TO (RET+LENGTH)   |
|   |   |  |
|   |   |  |

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| FLAGS - SET/CLEAR FILE<br>COMMON DECKS  | ••••••••••••••••••••••••••••••••••••••• |   | \$T.YP.T.X                              | HEATH HBASM V1.4 01/20/78<br>16:00:07 29-0CT-80 | PAGE                                    | 20                                      |
|---|---|---|---|---|---|---|
|   |   | <u>.</u>                                |   |   |   |   |
|   | 927X * USES<br>928X<br>929X             | A*F                                     |   |   |   |   |
| A74 474                                 | 929X                                    |   | •••••••••••                             | ***************************************         | • | • |
| 031.136                                 | 930X \$TYPTX EQU<br>931X                | 31136A                                  | IN H17 ROM                              | ***************************************         |   |   |
| 031.144                                 | 932X \$TYPTX. EQU                       | 31144A                                  | IN H17 ROM                              |   |   |   |
| ••••••                                  | *************************************** | • |   |   |   | • |
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| *************************************** | ·····                                   | •••••                                   | · • • • • • • • • • • • • • • • • • • • |   |   |   |
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| ······································  | · · · · · · · · · · · · · · · · · · ·   | *************************************** | •••••                                   |   |   | •••••                                   |
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| *****                                   |   | ••••••                                  |   | ······  | • |   |
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| FLAGS - SEY/CLI<br>DAIA. AND, BUFFE            |   | • • • • • • • • •                       |   |   |   |   | H H8ASM V1.4 01/20/78 PAGE 21 0:08 29-001-80 |           |
|--|---|---|---|---|---|---|--|-----------|
|  |   | •••••                                   | •••••                                   |   | •••••                                   | **************************************  | *!XY 6 ( 481 48                              | 20.00     |
| 046.047 1                                      | 23 131 060                              | 935 I                                   | DEFALT                                  | DB                                      | 'SYO',0,0,                              | 0 DEFAULTS                              |  | ***       |
| 046.055  | • | 936<br>937<br>938                       | MEML                                    | EQU                                     | *                                       | LOAD MENL                               |  |           |
| 046.055  | • * * * * * * * * * * * * * * * * * * * | ''939'''1<br>940                        | PATCH                                   | ďŚ                                      | 64                                      | PATCH AREA                              |  | · • • • • |
| 046.155<br>046.321                             |   |   | LINE<br>LINE2                           | DS<br>DS                                | 100<br>100                              | LINE BUFFER<br>FLAGS BUFFER             | •••••  | ••••      |
| 047.065<br>047.231                             |   |   | LAGA                                    | DS<br>EQU                               | 100                                     | DÉCÒDE BUFFER<br>RUN MEML               |  | ••••      |
| 047.231  | • | 945<br>946                              |   | END                                     |   |   |  | ••••      |
| ASSEMBLY COMPLE<br>946 STATEMEN<br>0 ERRORS DE | ETE<br>TS                               |   |   |   |   |   |  | ••••      |
| O ERRORS DE<br>12876 BYTES FRE                 |   |   |   |   |   | *************************************** |  | ••••      |
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|                    |   | ILE FLAGS    |   |   |   |   |   | XREF VI                   | • 1                                     |   |   |   |   |
|--------------------|---|--------------|---|---|---|---|---|---------------------------|---|---|---|---|---|
| CRQ\$\$RE          | FERENCE, T  | ABLE         |   |   |   |   |   | PAGE                      | <del>?</del> ?                          |   |   |   |   |
| #CD1 E             | 045747  | 501          | 0211                                    |   |   |   |   |                           |   |   |   |   |   |
| .\$CRLF<br>\$HLIHL |   | 581<br>534   | 821L                                    |   | • • • • • • • • • • •                   |   | • | • • • • • • • • • • • •   | • • • • • • • • • • •                   |   |   | • • • • • • • • • • • • • • •           |   |
| ¥INDL              |   | 535          | 794E                                    |   |   |   |   |                           |   |   |   |   |   |
|                    | 946016  | 887L         | 909                                     | • • • • • • • • • • • • •               |   |   |   |                           | • | • | • • • • • • • • • • • • •               | • |   |
|                    | 046027  | 845          | 904L                                    |   |   |   |   |                           |   |   |   |   |   |
|                    | 9.79.9A?<br>046032                                | 907L         | 912                                     |   |   | • • • • • • • • • • • •                 | • | • • • • • • • • • • • • • | • | • • • • • • • • • • • •                 | • | • • • • • • • • • • • •                 |   |
| \$RCHAR            |   | 804L         | 805                                     | 849                                     |   |   |   |                           |   |   |   |   |   |
|                    | 045360  | 843          | 847E                                    |   | • • • • • • • • • • • • •               |   |   |                           |   | .,                                      | • • • • • • • • • • • • •               | • |   |
|                    | 045351  | 517          | 560                                     | 677                                     | 843L                                    |   |   |                           |   |   |   |   |   |
|                    | 045361  | 849L         | 855                                     |   |   |   |   |                           |   |   |   |   |   |
|                    | 046013  | 851          | 872L                                    |   |   |   |   |                           |   |   |   |   |   |
|                    | 045301  | 57i          | 747L                                    |   |   |   |   |                           |   |   |   | • |   |
| .\$TYPTX           | 031136  | 514          | 537                                     | 553                                     | 557                                     | 576                                     | 614                                     | 625                       | 658                                     | 674                                     | 686                                     | 930E                                    |   |
| \$TYPTX.           | 031144  | 932E         |   |   | ,                                       |   |   |                           |   |   |   |   |   |
| \$WCHAR            | 045340  | 580          | 711                                     | 808L                                    |   |   |   |                           |   |   |   |   |   |
| • CHFLG            | 000060  | 201L         | 596                                     |   |   |   |   |                           |   |   |   |   |   |
|                    | 000205  | 216L         | ,                                       |   |   |   |   |                           |   |   |   |   |   |
|                    | 000055  | 198L         | 511                                     |   |   |   |   |                           |   |   |   |   |   |
| CLEARA.            |   | 199L         |   | ,                                       |   |   |   |                           |   |   |   |   |   |
|                    | 000046  | 191L         | 543                                     | 655                                     |   |   |   |                           |   |   |   |   |   |
|                    | 000007  | 175L         | 627                                     |   |   |   |   |                           |   |   |   |   | • |
|                    | 000006<br>000041                                  | 174L<br>186L | 457                                     |   |   |   |   |                           |   |   |   |   |   |
|                    | 000206  | 217L         | 653                                     |   |   |   | • |                           | • • • • • • • • • • •                   |   | • • • • • • • • • • • • •               |   |   |
| •DECODE            |   | 196L         | 521                                     |   |   |   |   |                           |   |   |   |   |   |
|                    | 000050  | 173L         | ······································  | • |   |   | • | • • • • • • • • • • • • • | • | • • • • • • • • • • • •                 | • • • • • • • • • • • •                 |   | • |
|                    | 000061  | 202L         |   |   |   |   |   |                           |   |   |   |   |   |
|                    | 000203  | 214L         | • | • | • • • • • • • • • • •                   |   |   |                           | • |   | • • • • • • • • • • • •                 |   |   |
|                    | 000201  | 212L         |   |   |   |   |   |                           |   |   |   |   |   |
|                    | 000057  | 200L         |   |   | • |   | • |                           | • • • • • • • • • • • •                 | • | • | • | • |
| .EXIT              | 000000  | 168L         | 634                                     |   |   |   |   |                           |   |   |   |   |   |
| <i></i>            | 000040  | 185L         |   |   |   |   |   |                           | •••••                                   |   |   |   |   |
| .LOADD             | 000062  | 203L         |   |   |   |   |   |                           |   |   |   |   |   |
| LOADO              | 000010  | 176L         |   |   |   |   |   |                           |   |   |   |   |   |
| MONMS              | 000202  | 213L         |   |   |   |   |   |                           |   |   |   |   |   |
| TAUON              | 000200  | 211L         |   |   |   |   |   |                           |   |   |   |   |   |
| NAME               | 000054  | 197L         |   |   |   |   |   |                           |   | <b></b>                                 |   |   |   |
| OPEN               | 000063  | 204L         |   |   |   |   |   |                           |   |   |   |   |   |
|                    | 000045  | 190L         |   |   |   |   |   |                           |   |   |   |   |   |
|                    | 000042  | 187L         | 530                                     | *                                       |   |   |   |                           |   |   |   |   |   |
|                    | 000044<br>%A&A%********************************** | 189L         |   |   |   |   |   |                           |   |   |   |   |   |
|                    | 000043  | 188F         |   |   |   |   |   |                           |   |   |   |   |   |
|                    | 000047  | 192L<br>171L |   |   | • • • • • • • • • • •                   |   |   |                           | · · · · · · · · · · · · · · · ·         |   |   |   |   |
|                    | 000004  | 171L<br>172L |   |   |   |   |   |                           |   |   |   |   |   |
|                    | 000051  | ΟĀĹ          | • • • • • • • • • • • • • • • • •       |   |   |   |   |                           |   |   |   | • | • |
|                    | 000204  | 215L         |   |   |   |   |   |                           |   |   |   |   |   |
|                    | 000001  | 169Ľ         | 864···                                  |   | • • • • • • • • • • • •                 |   | • • • • • • • • • • • • •               |                           | • • • • • • • • • • •                   |   |   | • | •••••                                   |
| SCOUT              |   | 170L         | 808                                     | 822                                     |   |   |   |                           |   |   |   |   |   |
| SETTP              |   | 195L         |   |   | • • • • • • • • • • •                   |   | • | • • • • • • • • • • • • • | • • • • • • • • • • • •                 | • • • • • • • • • • • •                 | • • • • • • • • • • • •                 | • |   |
| SYSRES             |   | 178L         |   |   |   |   |   |                           |   |   |   |   |   |
| VERS               |   | 177L         | 644                                     | •••••                                   |   | • | • • • • • • • • • • • • •               |                           |   |   |   |   |   |
| WRITE              |   | 173L         |   |   |   |   |   |                           |   |   |   |   |   |
| ABS.COD            |   | 492L         | 495                                     | • • • • • • • • • • • •                 | • | • • • • • • • • • • • •                 | • | • • • • • • • • • • • • • | •••••                                   | • • • • • • • • • • • • •               | • | • |   |
| ABS.ENT            |   | 490L         |   |   |   |   |   |                           |   |   |   |   |   |
| ABS.1D             |   | 486L         |   |   | • |   | • |                           | • |   |   | • |   |
| ABS.LDA            |   | 488L         |   |   |   |   |   |                           |   |   |   |   |   |
| ABS LEN            | ስስስስስለል*****                                      | 489L         |   | • • • • • • • • • • • •                 |   |   | • • • • • • • • • • • • •               |                           |   |   |   |   |   |

| CROSS.REF  | CLEAR<br>FRENCE           | TARIF *      | XREF 01.1   |
|------------|---------------------------|--------------|-------------|
|            | / <b>-</b> / <b>/</b> / / | . I MOLE     |             |
| AIO.CGN C  |                           | 401L         |             |
| AIO CHA C  |                           | 416L         |             |
| AIO.CNT C  |                           | 412L         |             |
| AID.CSI O  |                           | 402L         |             |
| AIO.DDA C  |                           | 397E         |             |
| AIO.DES O  |                           | 406L         |             |
| AIO.DEV O  |                           | 407L         |             |
| AIO.DIR O  | 41062                     | 410L         |             |
| AIO.DTA 0  |                           | 405L         |             |
| AID EOF O  |                           | 414L         |             |
| AID-EOM O  |                           | 413L         |             |
| AID FLG O  |                           | 398L         |             |
| AID.GRT O  |                           | 399L         |             |
| AIO.LSI O  |                           | 403L         |             |
| AIO.SPG 0  |                           | 404L         |             |
|            |                           | 400L         |             |
| AIQ.TFP Q  |                           | 415L         |             |
| AID, VEC 0 |                           | 408L<br>396L |             |
|            | 7.497.9<br>00007          |              | 554 527 415 |
|            | 00010                     | 19E<br>21E   | 00. 07. 013 |
| BOOT.P O   |                           | 376E         |             |
| C,STXQ     |                           | 23E          |             |
|            | 00026                     | 22E          |             |
| CCHIT O    |                           | 625L         |             |
| CDB.H84 O  |                           | 319E         | 651         |
| CDB.H85 O  |                           | 318E         |             |
| CO.FLG O   |                           | 296E         |             |
| CR O       | 00015                     | 15E          |             |
| CS.FLG O   | 00200                     | 297E         |             |
|            | 00001                     | 273E         |             |
| CSL.ECH O  |                           | 270E         |             |
| CSL.RAW.O  |                           | 271E         |             |
| CSL, WRP O |                           | 272E         |             |
| GTLAQ      |                           | 30E          |             |
|            | 00002                     | 31E          |             |
|            | 00003                     | 32Ę          | 850         |
|            | 00004                     | 33E          | 850         |
|            | 00017                     | 34E          |             |
|            | 00020                     | 35E          |             |
|            | 00021                     | <u>36</u> E  |             |
|            | 00023                     | 37E          |             |
| CTP.2SB 00 | 0032                      | 38E          |             |
| CTP.BKM O  |                           | 282E         |             |
| CTP.BKS 00 |                           | 283E         |             |
| CTP.FF 00  |                           | 278E<br>279E |             |
| CTP.MLI OC |                           |              |             |
| CTP.MLO.QC |                           | 281E         |             |
| CTP.TAB 00 |                           | 284E         |             |
| DACON 04   | 0110                      | 232L         |             |
|            | 0240                      |              |             |
|            | 0130                      | 235L         |             |
|            | 00001                     | 234L<br>2E   | 547         |
| DEFALT 04  |                           | 512          |             |
| DEV.DDA OC |                           |              | 527594935L  |
| DEV.DVG OC | 0015                      | 67L          |             |
| DEV.DVL OC |                           | 66L          |             |
|            | JJ10                      | 00L          |             |

| FLAGS - SET/CLEAR FILE FLAGS               | XREF VI.1          |
|--|--------------------|
| GROSS, REFERENCE, TABLE                    | PAGE 24            |
| TELL EL D. AAAAA/ EE!                      |                    |
| DEV.FLG 000006 55L<br>DEV.JMP 000003 53L   |                    |
| DEV.MNU 000010 63L                         |                    |
| DEV.MUM 000007 62L                         |                    |
| DEV.RES 000002 49L 49L                     |                    |
| DEV.RES 000002 49L DEV.UNT 000011 64L      |                    |
| DEVELEN 000016 69E                         |                    |
| DF.CLR 000376 99E                          |                    |
| DF.EMP 000377 98E<br>DIF.CNT 000020 89E    | 724                |
| DIF.LOC 000100 87E                         | 545 602 722        |
| DIF.SYS 000200 86E                         | 601 721<br>600 723 |
| DIF.WP 000040 88E                          | 600 723            |
| DIR.ALD 000025 114L<br>DIR.CLU 000015 107L |                    |
| DIR.CRD 000023 113L                        |                    |
| DIR.EXT 000010 102L                        |                    |
| DIR.FGN 000020 110L                        | 536                |
| DIR.FLG 000016 108L<br>DIR.LGN 000021 111L | 336                |
| DIR.LSI 000022 112L                        |                    |
| DIR.NAM 000000 101L                        |                    |
| DIR.PRO 000013 103L                        |                    |
| DIR.VER 000014 104L<br>DIRELEN 000027 116E | 148 410            |
| DIRIDL 000015 105E                         | 1.0                |
| DR.IM 000001 50E                           |                    |
| DR.PR 000002 51E<br>DT.CH 000020 60E       |                    |
| DT.CH 000020 60E<br>DT.CR 000002 57E       |                    |
| DT.CW 000004 58E                           |                    |
| рт.вр 000001 56Е                           | 524                |
| DT.RN 000010 59E<br>DV.EL 000000 46E       |                    |
| DV.EL 000000 46E                           |                    |
| EC.CNA 000004 429L                         |                    |
| EC. DDA 000027 448L                        |                    |
| EC.DIF 000017 440L<br>EC.DIW 000035 454L   |                    |
| EC.DNI 000045 462L                         |                    |
| EC. DNR 000046 463L                        |                    |
| EC.DNS 000005 430L                         | 525                |
| EC.DSC 000047 464L<br>EC.EOF 000001 426L   |                    |
| EC.EOM 000002 427L                         |                    |
| EC.FAD 000031 450L                         |                    |
| EC.FL 000026 447L 447L 449L                |                    |
| EC.FL 000030 449L<br>EC.FNF 000014 437L    |                    |
| EC.FNO 000011 434L                         |                    |
| EC.FNR 000034 453L                         |                    |
| EC.FOD 000043 460L                         |                    |
| EC.ICN 000016 439L                         |                    |
| EC.1DN 000008 431L                         |                    |
| EC.IFC 000020 441L                         |                    |
| EC.1FN 000007 432L                         |                    |
|  |                    |

|                                       |                  | YLE FLAGS    |   |   |   |   | Xr                                      |   |   |   |   |   |                 |
|---------------------------------------|------------------|--------------|---|---|---|---|---|---|---|---|---|---|-----------------|
| CROSS. REJ                            | ERENCE. I        | ABLE,        |   |   | • | • |   | \ĢE 25                                  |   |   |   |   |                 |
| EC.ILC (                              | 20000            | 428L         |   |   |   |   |   |   |   |   |   |   |                 |
| EC.ILO (                              |                  | 457L         | • |   | • • • • • • • • • • • •                 | • | • | • • • • • • • • • • • • • •             |   |   |   |   |                 |
| EC.ILR (                              | 00012            | 435L         |   |   |   |   |   |   |   |   |   |   |                 |
| EC.ILV (                              | 00037            | 456L         |   |   |   |   |   | • |   | • • • • • • • • • • • • •               | • • • • • • • • • • • • • • •           |   |                 |
| · · · · · · · · · · · · · · · · · · · | 00052            | 467L         |   |   |   |   |   |   |   |   |   |   |                 |
|                                       | 00032            | 451L         |   |   | •••••                                   | •••••                                   |   |   | • |   | • • • • • • • • • • • • •               | • | • • • • • •     |
|                                       | 00050            | 465L         | 662                                     |   |   |   |   |   |   |   |   |   |                 |
|                                       | 000021           | 442L         | ,                                       |   |   |   | ,                                       |   |   | • |   | •••••                                   |                 |
|                                       | 00051            | 466L         |   |   |   |   |   |   |   |   |   |   |                 |
|                                       | 00044            | 461L         |   |   |   |   |   |   | • • • • • • • • • • • • • • • • •       |   | • |   | • • • • • • • • |
|                                       | 000010           | 433L         |   |   |   |   |   |   |   |   |   |   |                 |
|                                       | 00042            | 459L         |   |   |   |   |   |   |   |   |   | ***************                         |                 |
|                                       | 000053           | 468L         | • |   |   |   |   |   |   |   |   |   |                 |
|                                       | 000022<br>000036 | 443L         |   |   |   |   |   |   |   |   |   |   |                 |
|                                       |                  | 455L         | • • • • • • • • • • • • • •             |   |   |   |   |   |   |   |   |   |                 |
|                                       | 000015           | 438L         |   |   |   |   |   |   |   |   |   |   | .,              |
|                                       | 100033<br>100041 | 452L<br>458L | • • • • • • • • • • • • • •             | • • • • • • • • • • • • •               |   |   |   |   |   |   | · · · · · · · · · · · · · · · · · · ·   |   |                 |
|                                       | 00023            | 444L         |   |   |   |   |   |   |   |   |   |   |                 |
|                                       | 00025            | 446L         |   | • | • | • • • • • • • • • • • • • •             | • | • • • • • • • • • • • • • •             |   |   |   |   |                 |
|                                       | 00024            | 445L         |   |   |   |   |   |   |   |   |   |   |                 |
| ENL C                                 | 00212            | 28E          | 554                                     | 659                                     | 695                                     |   | • • • • • • • • • • • • • • • • •       | • • • • • • • • • • • • • •             | • | • • • • • • • • • • • • • • •           |   |   |                 |
|                                       | 42200            | 499          | 504E                                    | 007                                     | 0/3                                     |   |   |   |   |   |   |   |                 |
|                                       | 43220            | 522          | 526                                     | 531                                     | 597                                     | 609E                                    | • | • • • • • • • • • • • • • •             | • | • • • • • • • • • • • • • •             |   |   |                 |
| ERROR. C                              | 43226            | 610          | 613L                                    | 664                                     |   | 5072                                    |   |   |   |   |   |   |                 |
|                                       | 00033            | 26E          |   |   | • • • • • • • • • • • • •               |   | • | • • • • • • • • • • • • • • • •         | • • • • • • • • • • • • • • • • • •     | • | • • • • • • • • • • • • • • • •         |   |                 |
|                                       | 43264            | 518          | 561                                     | 633L                                    | 665                                     | 678                                     |   |   |   |   |   |   |                 |
| FF C                                  | 00014            | 29E          |   |   |   | • • • • • • • • • • • • •               |   |   |   | • |   |   |                 |
|                                       | 47065            | 520          | 523                                     | 943L                                    |   |   |   |   |   |   |   |   |                 |
|                                       | 43211            | 570          | 600L                                    |   |   |   |   |   | •••••••                                 | • | • • • • • • • • • • • • • • •           | • | • • • • • • •   |
|                                       | 42211            | 514L         | 555                                     | 59.8                                    |   |   |   |   |   |   |   |   |                 |
|                                       | 43050            | 546          | 557L                                    | 582                                     |   |   |   |   |   | • |   | ••••••                                  |                 |
|                                       | 43103            | <u>566L</u>  | 589                                     |   |   | • • • • • • • • • • • • •               |   |   |   |   |   |   |                 |
|                                       | 43161            | 572          | 584L                                    |   |   |   |   |   |   |   |   |   |                 |
|                                       | 43171            | 569          | 593L                                    |   |   |   | .,                                      |   |   |   |   |   |                 |
|                                       | 00000            | 476E         | 496                                     |   |   |   |   |   |   |   |   |   |                 |
|                                       | 00003<br>00001   | 479E<br>127E | • • • • • • • • • • • • • • •           |   |   |   |   |   |   |   |   |   |                 |
| ***                                   | 00020            | 131E         |   |   |   |   |   |   |   |   |   |   |                 |
|                                       | 00002            | 128E         | • | • | • • • • • • • • • • • •                 | · • • • • • • • • • • • • • • • • • • • |   |   |   |   |   |   |                 |
|                                       | 00010            | 130E         |   |   |   |   |   |   |   |   |   |   |                 |
| <u></u>                               | 00004            | 129E         | • | • • • • • • • • • • • •                 |   | · · · · · · · · · · · · · · · · · · ·   | • |   |   |   |   |   |                 |
|                                       | 00001            | 477E         |   |   |   |   |   |   |   |   |   |   |                 |
|                                       | 00002            | 478E         |   | • | • | • • • • • • • • • • • • • • •           | • |   |   | • • • • • • • • • • • • • • •           |   |   |                 |
| I.CONFL O                             |                  | 299E         | 300                                     |   |   |   |   |   |   |   |   |   |                 |
| I.CONTY 0                             |                  | 286E         | 287                                     |   |   |   | • |   | • |   |   |   | . <b></b> .     |
| I.CONWI O                             |                  | 292E         | 293                                     |   |   |   |   |   |   |   |   |   |                 |
| I.CSLMD 0                             |                  | 275E         |   | • | • | • • • • • • • • • • • • •               | • | • • • • • • • • • • • • • • • •         |   |   |   |   | • • • • • • •   |
| I.CUSOR O                             | 00002            | 289E         | 290                                     |   |   |   |   |   |   |   |   |   |                 |
| IOC.CGN O                             | 00010            | 136L         |   | • • • • • • • • • • • •                 |   |   | • | • | • |   |   |   | • • • • • • •   |
| 10C.CSI 0                             | 00011            | 137L         |   |   |   |   |   |   |   |   |   |   |                 |
| IOC.DDA O                             | 00002            | 124L         | 132                                     | 146                                     |   | • | • |   |   | • | • | • |                 |
| IOC.DES.O                             | 00016            | 143L         |   |   |   |   |   |   |   |   |   |   |                 |
| IOC.DEV 0                             | 00020            | 144L         | • |   |   |   |   | •••••                                   | • | • | • |   | • • • • • • •   |
| IOC.DIL O                             |                  | 146E         |   |   |   |   |   |   |   |   |   |   |                 |
| IOC.DIR O                             |                  | 148L         | 536                                     |   | · · · · · · · · · · · · · · · · · ·     |   |   | • | • | • | • |   | • • • • • •     |
| IOC.DRL 0                             |                  | 140E         |   |   |   |   |   |   |   |   |   |   |                 |
| IOC.DTA O                             | 00014            | 142L         |   |   |   | • • • • • • • • • • • •                 |   |   |   |   |   |   |                 |

| 100.081   000005   134.  | τr  | on FLR    | 000004   | 126L | 140                                     |   |   |       |   |   |   |   |   |   |   |        |   |
|--|-----|-----------|--|------|---|---|---|-------|---|---|---|---|---|---|---|--------|---|
| 100   1.00   1.00   1.20   1.30   1   |     | JUATES    | 2000005  |      | ÷.!¥                                    |   |   | ••••• |   |   |   |   |   |   |   |        |   |
| TOC.LINE   000000  |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        | , .                                     |
| 101.151   090013   1374   1515   1516   1526   1516   1526   1516   1526   1516   1526   1516   1526   1516   1526   1516   1526   1516   1526   1516   1526   1516   1526   1516   1526   15   |     |           |  |      |   |   |   |       |   |   | *******                                 | *********                               | ••••                                    | • • • • • •                             |   |        |   |
| Tot. SPG 000007   135L   10C-SPG 000007   135L   10C-SPG 000007   135L   10C-SPG 0000007   135L   10C-SPG 0000007   135L   135L   10C-SPG 0000007   135L     |     |           |  |      |   |   |   |       |   |   |   | · · · · • • • • • • • • • • • • • • • • |   |   |   |        |   |
| 10C, SIN, 0000003  |     |           |  |      |   |   |   | ,     |   |   | •••••                                   |   | **                                      |   |   |        |   |
| 10C, UNI 000022  |     |           |  |      |   |   |   |       |   |   |   |   |   | ,                                       |   |        |   |
| IDCCTT   000001   152E   533   |     |           |  |      |   |   |   |       | ******                                  | •••••                                   | * *                                     |   |   |   |   |        |   |
| TOCKLEN 000052   150E  |     |           |  |      | 533                                     |   |   |       |   |   | <b></b>                                 |   |   |   |   |        |   |
| LE 000012 146  |     |           |  |      | ,                                       |   |   |       |   | ••••                                    | •••••                                   | •••                                     |   |   |   |        |   |
| LINE 044315 116 528 595 676 941L LINE 044525 1259 972L MEML 046055 478 937E MILL 000000 18E 080 670 691 692 893 894 821 854 MILL 000000 18E 080 670 691 692 893 894 821 854 MILL 000000 17E 080 17E 080 17E 080 17E 080 18E 08 | LF  | F         |  | 16E  |   |   |   |       |   |   |   | ,                                       |   |   |   |        |   |
| LINE2 044521 559 942L  HEML 046055 476 937E 28 515 554 558 577 415 417 659 659 687 688  NIL 000010 27E 28 515 554 558 577 415 417 659 659 687 688  NIL 000000 17E  NIL 000000 17E  OUL 1N 040001 343E  OUL 1N 000014 345E  OUL 1N 0000000 344E  PATCH 040055 959L  FAICH 040055 959L  FREEN 043362 645 647 662L  PRESERT 043362 645 647 662L  RESIART 04206 510L 611 628  REMIN 047231 556  ROBBOOT 030000 27E  REMIN 04001 00017 3000  REMIN 040033 303L  S. DATCH 04033 303L  S. CAACR 041006 359L  S. CAACR 04006 359L  S. CAACR 04006 359L  S. CAACR 04006 359L  S. CAACR 04003 317.  S. CAACR 04003 32 303L  S. CAACR 04003 32 303L  S. CAACR 04003 32 304L  S. CAACR 04003 32 305L  S. CAACR 04003 32 305L  S. CAACR 04003 33 303L  S. CAACR 04003 33 303L  S. CAACR 04003 33 304L  S. CAACR 04003 33 305L  S. CAACR 04004 359L  S. CONTY 04033 301L  S. CONTY 04034 335L  S. DOTT  |     |           | 046155   | 516  | 528                                     | 595                                     | 676                                     | 941L  | ••••                                    | ••••                                    |   |   |   |   |   |        |   |
| MEM.   044055   496   937E   28   515   554   558   577   615   617   659   687   688     MUL2   000000   18E   699   690   692   693   694   621   684     MUL1   000000   195   692   693   694   621   684     MUL1   000001   343E   695   695   695   695   695     MUL1   000001   343E   695   695   695   695     MUL1   000001   343E   695   695   695     MUL1   000001   343E   695   695   695   695     MUL1   000001   343E   695   695   695     MUL1   000001   343E   695   695   695     MUL1   000001   343E   695   695   695     MUL1   000001   344E   695   695   695     MUL1   000001   344E   695   695   695     PRIS RR   | L.J | INE2      | 046321   | 559  |   |   |   |       |   |   |   | ,                                       |   |   |   |        | • • • • • •                             |
| ML 000012 27E 28 515 554 559 577 615 617 659 697 698 698 698 698 699 699 699 699 699 699   |     |           |  |      |   |   |   |       |   |   |   | - 455                                   | / EO                                    | / 07                                    | 400                                     |        |   |
| NULL 000000 689 690 691 692 693 694 821 854  NULL 000206 171   |     |           | 000012   | 27E  | 28                                      |   |   |       |   |   | 61/                                     | ,Y                                      | 657                                     | 68/                                     | 666                                     |        |   |
| NULL 000260 17E  |     |           |  | 689  | 690                                     | 691                                     | 692                                     | 693   | 694                                     | 821                                     | 854                                     |   |   |   |   |        |   |
| NULL 000200 17E OUT 043372 506 674L 685 OUL.NIN 00001 343E DUL.NIN 00001 343E DUL.NIN 00001 345E DUL.RES 000002 346E PATCH 040037 505 442E PRICH 040336 265 45 647 662L OUT 000000   | NI  | UL2       | 000000   |      |   |   |   |       |   |   |   |   |   |   |   |        | • • • • • • • •                         |
| 0V., 1N 00001 345E 0V., 1RES 000002 344E 0V., 1RES 000002 344E 0V., 1RES 000002 344E PATCH 046055 929U PRESERV 043364 6644 PRESERV 043265 930U PRESERV 043364 944E PRESERV 043264 944E PRESERV 043264 944E PRESERV 043264 944E PRESERV 043274 655 PRESERV 043364 320U PRESERV 043364 330U PRESERV 043364 330U PRESERV 043664 944E PRESERV 043664 94646 946 | וא  |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| 0V., IN 000014 345E 0V., INES 000002 344E 0V., INES 000000 344E 0V., INES 000000 344E 0V., INES 000000 344E 0V., INES 0000000 344E 0V., INES 000000000000000000000000000000000000  |     |           |  |      | 67 <b>4</b> L                           | 685                                     |   |       |   |   |   |   |   |   |   |        | • • • • • •                             |
| DULLICS 000000   |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| OVI. RES 000002  |     |           |  |      |   |   |   |       |   | • |   |   |   | • | • |        | • • • • • • •                           |
| PATCH 046055 9391 642E PRS 043267 505 642E PRSERN 043362 645 647 662L GUOTE 000047 24E RESTART 042206 510L 611 62B RREMIN 047231 556 944E RESTART 042206 510L 611 62B RREMIN 047231 556 944E RREMIN 047231 556 | O/  |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| PRS 043267 505 642E PRSERRI 043364 664L PRSERRI 043362 645 647 662L  000°00°00000000000000000000000000000  |     | . <i></i> | <b></b>  |      |   |   |   |       | • | • • • • • • • • • •                     |   |   |   |   | • | •••••  | • • • • • •                             |
| PRSERR 043342 645 647 662L  @UOTE 000047 24E 611 628  RESTART 04220 510L 611 628  RMEML 047231 556 944E  RMBOOT 030000 227E  RUBOUT 000177 20E  S. BAUD 04034 320L  S. BAUD 040343 303L  S. CACC 041006 359L  S. COTAB 040335 304L  S. COTAB 040335 304L  S. COMPL 04033 317L  S. COMPL 04033 317L  S. COMPL 04033 301L  S. DOTTO 04031 257L  S. DATC 04031 257L  S. DATC 04031 331L  S. DOTTO 04034 335L  S. DOTTO 04034 304 304 A  S. COMPLETE 04034 A  S. COMPL | P/  |           |  |      | . ADE                                   | ***                                     |   |       |   |   |   |   |   |   |   |        |   |
| PRSERRI 043362   |     |           |  |      | 642E                                    |   |   |       |   | • |   |   |   |   | • | •••••  | • |
| QUOTE   000047   24E   |     |           |  |      | 447                                     | 4421                                    |   |       |   |   |   |   |   |   |   |        |   |
| RESTART 04220 510 611 628 RMEML 047231 656 RMEML 047231 656 RMEMDOT 030000 227E RUBGUT 000177 20F S. BAUD 040344 320. S. BAUD 040344 320. S. BAUD 040343 375L S. CABER 040333 3031 S. CACC 041006 3591 S. CETAB 040335 3041 S. CDE 041007 360. S. CETAB 040332 327L S. COMPT 040332 3011 S. COMPT 040331 2941 S. COMPT 040331 2941 S. COMPT 040332 3011 S. COMPT 040331 3941 S. CSIND 040346 3351 S. DATE 040306 3373L S. DATE 040306 3373L S. DATE 040307 353L S. DATE 040308 373L S. DATE 040308 373L S. DATE 040308 373L S. DATE 040364 335L S. DEGRO 040364 325L   |     |           |  |      |   |   |   |       |   | •••••                                   | • |   | • |   |   | •••••  | • • • • • • •                           |
| RMEML 047231   |     |           |  |      | 411                                     | 428                                     |   |       |   |   |   |   |   |   |   |        |   |
| RUMBOUT 030000 227E RUBOUT 000177 206 S.BAUD 040344 320L S.BOUT 041120 41BL S.BOUTF 041120 375L S.CAADR 040333 303L S.CACC 041006 359L S.CCTAB 040333 317L S.CHWA 040352 327L S.CDE 041007 360L S.CONTY 040352 327L S.CODE 041007 360L S.CONTY 040332 301L S.CONTY 040331 294L S.SONNU 040331 294L S.SONNU 040331 397L S.DATE 040310 257L S.DATE 040310 257L S.DATE 040310 3373L S.DATE 040340 338L S.DDERP 040344 338L S.DDERP 040346 325L S.DERP 040356 338L S.DDERP 040364 328L |     |           |  |      |   | 020                                     |   |       | • | • |   |   | • |   | • |        | • • • • • • • •                         |
| RUBOUT 000177 20E S. BRUD 040344 320L S. BDAT 041120 418C S. BOOTF 041034 375L S. CACC 041006 359L S. CCTAB 040335 304L S. CDB 040343 317L S. CDB 040343 317L S. CDB 040343 317L S. CDB 040343 317L S. CDB 040352 327L 532 S. CODE 041007 360L S. CONFL 040327 288L S. CONFL 040327 288L S. CONFL 040320 276L 287 290 293 300 650 S. CUSOR 040330 291L S. CSL MD 040326 276L 287 290 293 300 650 S. CUSOR 040330 373L S. DATE 040310 357L S. DATE 040326 333L S. DDLFA 040346 335L S. DDLFA 040346 325L   |     |           |  |      | 7 T T I                                 |   |   |       |   |   |   |   |   |   |   |        |   |
| S.BAUD 040344 320L S.BDA 041120 41BE S.BOTF 041034 375L S.CARDR 040333 303L S.CARC 041006 359L S.COTAB 040333 301L S.COTAB 040333 301L S.COTAB 040333 301L S.COTB 040343 317L S.COMB 040352 327L S.CODB 041007 360L S.CONFL 040332 301L S.CONFL 040332 301L S.CONFL 040332 301L S.CONFL 040332 301L S.CONFL 040331 294L S.CONFL 040331 294L S.CONMI 040341 294L S.CONMI 040340 257L S.DATC 040310 257L S.DATC 040310 257L S.DATC 040310 373L S.DATC 040313 373L S.DOTAB 040364 335L S.DOTAB 040364 335 |     |           |  |      |   | • | .,                                      |       | • | • | • | ••••••                                  |   |   |   | •••••  |   |
| S. BDA   041120   418L   S. BOOTF   041034   375L   S. CACID   040333   303L   S. CACID   040335   304L   S. CCTAB   040345   304L   S. CCTAB   040345   317L   S. CCTAB   040345   317L   S. CCTAB   040345   317L   S. CCDB   041007   360L   S. CCODE   041007   360L   S. CCODE   041007   360L   S. CCONTY   040332   301L   S. CCONTY   040327   288L   S. CONTY   040321   294L   S. CCONTY   040321   294L   S. CCONTY   040326   276L   287   290   293   300   650   S. CCUSOR   040330   291L   S. DATC   040310   257L   S. DATC   040310   257L   S. DATC   040313   373L   S. DESTE   040346   335L   S. DESTE   040364   |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| S.ROOTF 041034 375L S.CAÁDR 040333 303L S.CACC 041006 359L S.CCTAB 040335 304L S.CDB 040343 317L S.CFB 040352 327L S.CFB 040352 327L S.CFB 040352 327L S.COMFL 040332 301L S.COMFL 040332 301L S.COMFL 040332 301L S.COMFL 040327 288L S.COMNI 040326 276L 287 290 293 300 650 S.CUSOR 040326 276L S.DATE 040310 257L S.DATE 040310 257L S.DATE 040310 373L S.DBCR 040336 339L  |     |           |  |      | • |   |   |       |   |   |   |   |   |   |   |        | •••••                                   |
| S.CAADR 040333 303L S.CACC 041006 359L S.COTAB 040335 304L S.CDB 040343 317L S.CPWA 040355 329L S.CODE 041007 360L S.COWT 040332 301L S.CONTY 040332 301L S.CONTY 040331 294L S.CONTY 040331 294L S.CSLMD 040342 276L 287 290 293 300 650 S.CUSDR 040330 291L S.DATC 040310 257L S.DATC 040310 257L S.DATC 040310 257L S.DATC 040310 3373 S.DBTATC 040377 358L S.DBTATC 040370 338L S.DBTATC 040368 335L S.DBTATC 040368 335L S.DBTATC 040368 335L S.DBLEN 040368 335L   |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| S.CACC 041006 359L S.CCTAB 040335 304L S.CDB 040343 317L S.CFWA 040352 327L S.CODE 041007 360L S.CONT 040337 28BL S.CONTY 040327 28BL S.CONTY 040326 276L 287 290 293 300 650 S.CUSOR 040330 291L S.CUSOR 040330 291L S.DATC 040310 257L S.DATC 040310 33 373L S.DATC 040310 33 373L S.DATC 040364 335L S.DDGRP 040364 325L S.DDGRP 040364 325L  |     |           |  |      |   | • |   |       | ••••                                    |   |   |   | ,                                       |   |   | •••••• | ,,,,,,                                  |
| S.CCTAB 040335 304L S.CDB 040343 317L S.CFWA 040352 327L S.CDDE 041007 360L S.CDNFL 040332 301L S.CDNFL 040332 301L S.CDNY 040331 294L S.CDNY 040331 294L S.CSLMD 040326 276L 287 290 293 300 650 S.CUSDR 040330 291L S.DATE 040310 257L S.DATE 040310 257L S.DATE 040333 373L S.DDCS 041033 373L S.DDCS 041033 373L S.DDCS 041034 335L S.DDCS 040346 335L S.DDCS 040346 335L S.DDCS 040346 334L S.DDCS 040346 334L S.DDCS 040346 335L   |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| S.CDB 040343 317L S.CFWA 040352 327L 532 S.CODE 041007 360L S.COMFL 040332 30TL S.CONY 040327 288L S.CONWI 040331 294L S.CSLMD 040326 276L 287 290 293 300 650 S.CSLMD 040326 276L 287 290 293 300 650 S.CSLMD 040310 257L S.DATC 040310 257L S.DATE 040277 256L S.DATE 040277 256L S.DOS 041033 373L S.DOS 041033 373L S.DOS 041033 373L S.DOS 041036 338L S.DOSPP 040364 335L S.DOSPP 040364 335L S.DOSPP 040362 334L S.DOSPP 040362 334L S.DOSPP 040363 338L S.DOSPP 040363 338L S.DOSPP 040364 325L S.DOSPP 040364 325L S.DIREA 040364 325L S.DIREA 040364 325L S.DIREA 040364 325L S.DIREA 040364 325L  |     |           |  |      | • |   |   |       |   |   |   |   |   |   |   | •••••  |   |
| S.CFWA 040352 327L 532 S.CODE 041007 360L S.COMFL 040332 301L S.CONTY 040327 288L S.CONNI 040331 294L S.CSLMD 040326 276L 287 290 293 300 650 S.CUSDR 040330 291L S.DATE 040310 257L S.DATE 040310 373L S.DOS 041033 373L S.DOS 041033 373L S.DOSP 040366 338L S.DOSP 040366 335L S.DOSP 040360 333L S.DOSP 040362 334L S.DOSP 040363 328L S.DOSP 040363 339L S.DOSP 040364 335L S.DOSP 040365 333L S.DOSP 040366 338L S.DOSP 040366 335L  |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| S.CODE 041007 360L S.CONFL 040332 301L S.CONTY 040327 288L S.CONTY 040327 288L S.CONTY 040323 294L S.CSLMD 040326 276L 287 290 293 300 650 S.CUSOR 040330 297L S.DATC 040310 257L S.DATC 040310 257L S.DCS 041033 373L S.DDTA 040366 339L S.DDTA 040366 339L S.DDTA 040360 333C S.DDCA 040360 333C S.DDCA 040360 333C S.DDCA 040360 339L S.DDCA 040364 325L S.DFWA 040364 328L S.DFWA 040364 325L  |     |           |  |      | 532                                     |   |   |       |   |   |   | •••••                                   |   | *********                               |   | ****** |   |
| S.CONFL 040332 301L<br>S.CONFU 040327 288L<br>S.COLFID 040326 276L 287 290 293 300 650<br>S.CULFOR 040330 291L<br>S.DATC 040310 257L<br>S.DATC 040310 257L<br>S.DATC 04033 373L<br>S.DOS 041033 373L<br>S.DOS 041033 373L<br>S.DOS 040364 338L<br>S.DOS 040364 335L<br>S.DOS 040360 333L<br>S.DOS 040360 333L<br>S.DOS 040360 334L<br>S.DOS 040360 335L<br>S.DOS 040360 335L   |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| \$.CONWI 040331  |     |           |  | 301L |   |   |   |       | ************                            |   |   | ••••                                    |   |   |   |        |   |
| \$.CONUT 040331  |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| S.CUSUR 040330 291L S.DATC 040310 257L S.DATE 040277 256L S.DCS 041033 373L S.DDTA 040366 338L S.DDTA 040366 335L S.DDCBA 040360 333L S.DDLBA 040360 334L S.DDLBA 040362 334L S.DDCBC 040370 339L S.DDCBC 040370 339L S.DEWA 040354 328L S.DEWA 040354 328L S.DEWA 040354 328L S.DEWA 040363 335L S.DEWA 040363 335L S.DEWA 040364 325L S.DEWA 040364 325L S.DEWA 040364 325L  |     |           |  | 294L |   |   |   |       |   | •                                       |   |   |   |   |   |        |   |
| S.DATE 040310 257L S.DATE 040277 256L S.DCS 041033 373L S.DDTA 040366 339L S.DDTA 040366 335L S.DDLIA 040360 333L S.DDLIA 040362 334L S.DDLIA 040370 339L S.DDLIA 040354 328L S.DTATE 040364 328L S.DTATE 040364 328L S.DTATE 041016 367L S.DLINK 040346 325L S.DLINK 040346 325L  |     |           |  |      | 287                                     | 290                                     | 293                                     | 300   | 650                                     |   |   |   |   |   |   |        |   |
| S.DATE 040277 256L S.DCS 041033 373L S.DDDTA 040366 338L S.DDGRP 040364 335L S.DDLDA 040360 333L S.DDLDA 040360 334L S.DDLDA 040362 334L S.DDDCC 040370 339L S.DDCC 040370 339L S.DDCC 040370 339L S.DDCC 040370 328L S.DDCC 040370 328L S.DDCC 040370 328L S.DLDCC 040370 328L  |     |           |  |      |   | ••••                                    | ••••                                    |       |   |   |   |   |   |   |   |        |   |
| S.DCS 041033 373L S.DDTA 040366 338L S.DDGRP 040364 335L S.DDCDA 040360 333L S.DDCDA 040362 334L S.DDCDA 040370 339L S.DDCDA 040354 328L S.DDCDA 040354 328L S.DDCDA 040354 328L S.DDCDA 040354 328L S.DDCDA 040354 325L S.DLDA 040354 367L S.DLDA 040354 367L S.DLDA 040354 367L  |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        | • • • • • • • •                         |
| \$.DDTA 040366 339L \$.DDERP 040364 335L \$.DDEN 040360 333L \$.DDEN 040362 334L \$.DDEN 040362 334L \$.DDEN 040363 339L \$.DDEN 040354 329L \$.DEN 040354 328L \$.DEN 040363 325L \$.DEN 040346 325L \$.DEN 040346 325L   |     |           |  |      | ,                                       | ••••                                    | • |       |   |   |   |   |   |   |   |        |   |
| S.DDGRP 040364 335L S.DDCDA 040360 333L S.DDCDA 040362 334L S.DDCPC 040370 339C S.DFWA 040354 328L S.DTREA 041016 367L S.DLINK 040346 325L S.DLINK 040346 325L   |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| S.DDLDA 040360 333L S.DDLEN 040362 334L S.DDOPC 040370 339L S.DFWA 040354 328L S.DTREA 041016 367L S.DLINK 040346 325L S.DLINK 040346 325L   |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| S.DDLBN 040360 334L S.DDDCC 040370 339L S.DFWA 040354 328L S.DTREA 041016 367L S.DLINK 040346 325L S.DLINK 040346 325L   |     |           |  |      |   |   |   |       |   |   |   | ,                                       |   |   |   |        | • • • • • • • •                         |
| \$.DDOPC 040370 339L<br>\$.DFWA 040354 328L<br>\$.DIREA 041016 367L<br>\$.DLINK 040346 325L<br>\$.FASER 041013 368L  | -5  |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| S.DEWA 040354 328L<br>S.DIECA 041016 367L<br>S.DIINK 040346 32SL<br>S.EASER 041013 368L  |     |           |  |      |   |   |   |       |   |   | ,                                       |   |   |   |   |        |   |
| S.DIREA 041016 367L<br>S.DLINK 040346 325L<br>S.FASER 041013 366L  |     |           | and the second s |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| S.DLINK 040346 325L  |     |           |  |      |   |   |   |       | ,                                       |   |   |   |   | • |   | ,      |   |
| S. FASER 041013 366L   |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        |   |
| S.FASER 041013 366L  |     |           |  |      |   |   |   |       |   |   |   |   |   |   |   |        | • |
|  | 5   | FASER     | 041013   | 366L |   |   |   |       |   |   |   |   |   |   |   |        |   |
|  |     |           |  |      |   |   |   |       |   |   |   |   |   | • |   |        |   |

| FLAGS - SET/CLEAR')             |   | • | • | • * • • • • • • • • • • • • • • • • • • | XI                                      | REF VY:Y ·····                          |   | ••••••                                  | ************                            |   |   |
|---------------------------------|---|---|---|---|---|---|---|---|---|---|---|
| CROSS REFERENCE.                | TABLE                                   |   |   | • | P                                       | AGE 27                                  |   |   |   |   |   |
| S.FCI 041021                    | 368L                                    |   |   |   |   |   |   |   | • |   | *******                                 |
| S.GRTO 024000                   | 223E                                    | • |   | • |   |   |   |   |   | ***********                             |   |
| S.GRT1 025000                   | 224E                                    |   |   |   |   |   |   |   |   |   |   |
| 5.GRT2 026000                   | 225E                                    | • | •••••                                   | • | • | • |   |   |   | • |   |
| S.GUP 041027                    | 370L                                    |   |   |   |   |   |   |   |   |   |   |
| S.HIMEM 040316                  | 259L                                    | • | • | • | • | • |   | •••••                                   | • |   |   |
| S.INT 040343                    | 237L                                    | 313                                     |   |   |   |   |   |   |   |   |   |
| S.JUMPS 041010                  | 364L                                    | .,                                      |   |   | ***********                             | • |   | •••••                                   | • • • • • • • • • • • • • • • •         | • |   |
| 5.MOUNT 041032                  | 372L                                    |   |   |   |   |   |   |   |   |   |   |
| S.OFWA 040350                   | 359F                                    |   |   | •••••                                   |   | • |   |   | • |   |   |
| S.OMAX 040324<br>S.OSN 041004   | 265L                                    |   |   |   |   |   |   |   |   |   |   |
|                                 | 355L                                    |   |   |   |   |   | •••••                                   |   | • |   |   |
| S.OVLE 041000                   | 352L                                    | • |   |   |   |   |   |   |   |   |   |
| 5.0VLFL 040371<br>S.0VLS 040376 | 348L                                    |   |   |   |   |   |   |   | • |   |   |
| S.OVSTK 041035                  | 351L                                    |   |   |   |   |   |   |   |   |   |   |
|                                 | 380L                                    |   |   |   |   |   | .,                                      | ,                                       | • |   |   |
| S.SCI 041024                    | 329L<br>369L                            |   |   |   |   |   |   |   |   |   |   |
| S.SCR 041121                    | 419L                                    |   |   |   |   |   |   |   |   |   | • |
| S.SDD 041010                    | 365L                                    | • | • | • • • • • • • • • • • • • • • • • • •   |   |   | • • • • • • • • • • • • • •             |   |   | ••••••                                  |   |
| S.SOVR 041146                   | 239L                                    | 241                                     |   |   |   |   |   |   |   |   |   |
| S.SSN 041002                    | 354L                                    |   | • |   | • |   |   | . <b></b>                               |   |   | ••••••                                  |
| S.SYSM 040320                   | 261L                                    |   |   |   |   |   |   |   |   |   |   |
| S.TIME 040312                   | 258L                                    |   | • | • |   | • | <i></i> .                               | • |   |   | ,                                       |
| S.UCSF 040372                   | 349L                                    |   |   |   |   |   |   |   |   |   |   |
| S.UCSL 040374                   | 350L                                    |   | ***************                         |   |   | ••••••                                  | • • • • • • • • • • • • •               | • | • • • • • • • • • • • • • • • •         |   |   |
| S.USRM 040322                   | 263L                                    |   |   |   |   |   |   |   |   |   |   |
| S.VAL 040277                    | 236L                                    | 254                                     |   | • |   |   | • • • • • • • • • • • • • •             | • • • • • • • • • • • • • •             |   | • | • • • • • • • • • • • • •               |
| STACK 042200                    | 243E                                    |   |   |   |   |   |   |   |   |   |   |
| STACKL 001032                   | 241E                                    |   |   | • |   |   |   | • • • • • • • • • • • • •               | • |   | • |
| SYDD 040130                     | 233 <u>E</u>                            |   | <u></u> ., ,                            |   |   |   |   |   |   |   |   |
| SYSCALL 000377                  | 161E                                    | 511                                     | 521 530                                 | 543                                     | 596                                     | 618 627                                 | 634                                     | 644                                     | 653                                     | 655                                     | • • • • • • • • • • • • •               |
| TAB 000011                      | 657                                     | B04                                     | 808 822                                 |   |   |   |   |   |   |   |   |
| TPL1 045310                     | 25E<br>751L                             | 757                                     |   |   |   |   |   |   |   |   | • |
| TBL2 045326                     | 749                                     | 757<br>761L                             |   |   |   |   |   |   |   |   |   |
| TBL3 045330                     | 754                                     | 765L                                    |   |   |   |   |   |   |   |   |   |
| TFF 045251                      | 541                                     | ····/207L                               | • | • • • • • • • • • • • • • • • • • •     |   |   |   |   |   |   |   |
| TFF4 045254                     | 708L                                    | 715                                     |   |   |   |   |   |   |   |   |   |
| TFFA 045271                     | 707                                     | 718L                                    | • | • | • • • • • • • • • • • • • • • •         | • | · · · · · · · · · · · · · · · · · · ·   | • • • • • • • • • • • • •               |   |   |   |
| UNT.DIS 000006                  | . 79L                                   |   |   |   |   |   |   |   |   |   |   |
| UNT.FLG 000000                  | 75L                                     | •••••                                   |   |   | • |   |   | • • • • • • • • • • • • • •             | • |   |   |
| UNT - GRT 000002                | 77L                                     |   |   |   |   |   |   |   |   |   |   |
| UNT.GTS 000004                  | 78L                                     |   |   |   |   |   | • |   |   | • |   |
| UNT.SIZ 000010                  | 81E                                     |   |   |   |   |   |   |   |   |   |   |
| UNT.SPG 000001                  | 76L                                     |   |   |   |   |   |   | • • • • • • • • • • • • •               | • |   |   |
| USERFWA 042200                  | 244E                                    | 495                                     | 497 498                                 |   |   |   |   |   |   |   |   |
| VERS 000040                     | 159E                                    | 646                                     |   |   |   |   |   | • • • • • • • • • • • • •               |   | • | • |
| 28114 BYTES FREE                | • |   |   |   |   |   |   |   |   |   |   |
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