

# DJ11

DEVICE ROUTINE (MPG)  
MD-11-DTDJA-B

EP-DTDJA-B-DL-A  
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FICHE 1 OF 1

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**digital**  
MADE IN U.S.A.

*[Faint, illegible text from a microfiche strip, appearing as a vertical column of small characters and symbols.]*





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000000' 005362  
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000022' 000000  
000024' 160010  
000026' 000300  
000030' 000240  
000032' 000240  
000034' 003254  
000036' 003306  
000040' 000572  
000042' 000450  
000044' 000454  
000046' 000000  
000050' 000000  
000052' 000000  
000054' 000000  
000056' 000000  
000060' 000000  
000062' 000000  
000064' 000000

LOCZ: .WORD DVREND-  
FLAGWD: .WORD 0  
  
DRAWAIT= 100000  
WRBSY= 40000  
RDBSY= 20000  
BRFLG= 10  
CLWVCT= 4  
CLRVCT= ?  
  
.WORD 0  
.WORD 0  
.WORD 0  
.WORD 0  
.WORD 0  
SIZE: .WORD 0  
ERR: .WORD 0  
DREGAD: .WORD 160010  
IVCTAD: .WORD 300  
RBSRQ: .WORD 240  
WBSRQ: .WORD 240  
  
CIOBSY: .WORD 0  
CUPGER: .WORD 0  
ULIST: .WORD 0  
CLIST: .WORD 0  
BINASC: .WORD 0  
BTASLZ: .WORD 0  
DECASC: .WORD 0  
CSYSFW: .WORD 0

.SBTTL STANDARD DEVICE ROUTINE TABLE  
.TITLE MAINDEC-11-DTDJA-B DJ11 DEVICE ROUTINE FOR MPG  
:REVISION B  
:FILENAME OF "TDJABD.MPG" ON MPG/XXDP MEDIA  
:MACY11: DTDJA',DTDJA' /CRF:SYM/DOC=DTDJA'.P11  
:LNKX11: DTDJA'.MPG/B:0-DTDJA'/E  
:PAPER TAPE: PUNCH DTDJA'.MPG/FILE:ELEV

.CSECT DJ11  
.DSABL GBL  
PS= 177776

:THE FOLLOWING TABLE IS IN THE STANDARDIZED FORMAT REQUIRED  
:TO INTERFACE WITH MPG.

:DEVICE ROUT SIZE IN BYTES  
:DEVICE ROUT FLAGWORD  
  
: DEVICE ROUTINE WAIT FLAG  
: WRITE BUSY FLAG  
: READ BUSY FLAG  
: BREAK INST FLAG  
: CLEAR WRITE VECTOR FLAG  
: CLEAR READ VECTOR FLAG  
  
: INTERFACE WORD # 1 (NOT USED)  
: INTERFACE WORD # 2 (NOT USED)  
: INTERFACE WORD # 3 (NOT USED)  
: INTERFACE WORD # 4 (NOT USED)  
: INTERFACE WORD # 5 (NOT USED)  
: INTERFACE WORD # 6 (NOT USED)  
: # OF BYTES TRANSFERRED / UNIMAP FLG  
: ERROR ON LAST I/O INDICATOR  
: FIRST DEVICE REGISTER ADR  
: INTERRUPT VECTOR ADR  
: INT PROC STATUS WORD (BR 5)  
: INT PROC STATUS WORD (BR 5)  
: HOUSEKEEPING ROUT REL ADR  
: REPORT ROUT REL ADR  
: KILL ROUT REL ADR  
: DATA ERROR COUNTER REL ADR  
: TIME OUT ERROR ROUT REL ADR  
: I/O BUSY BRANCH ADR  
: DEVICE ERROR BRANCH ADR  
: USER MODE PRINT ROUTINE BRANCH ADR  
: CMDN MODE PRINT ROUTINE BRANCH ADR  
: CONVERT BINARY TO ASCII ROUT BR ADR  
: CONVERT BINARY TO DECIMAL ASCII BR ADR  
: CONVERT PACKED DECIMAL TO ASCII BR ADR  
: MPG SYSTEM FLAGWORD ADR

# E01

MAINDEC-11-DTJAB-B  
DTJAB.P11

DJ11 DEVICE ROUTINE FOR MPG  
STANDARD DEVICE ROUTINE TABLE

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SEQ 0004

|     |         |         |        |        |         |        |          |  |                                     |
|-----|---------|---------|--------|--------|---------|--------|----------|--|-------------------------------------|
| 110 | 000066' | 000000  |        |        | SETVEC: | .WORD  | 0        |  | :SET INT VECT ROUT SR ADR           |
| 111 | 000070' | 000000  |        |        | CLRVEC: | .WORD  | 0        |  | :CLEAR INT VECTOR ROUT BR ADR       |
| 112 | 000072' | 000000  |        |        | TSTVEC: | .WORD  | 0        |  | :TEST INT VECTOR ROUT BR ADR        |
| 113 | 000074' | 000000  |        |        | RTNINT: | .WORD  | 0        |  | :RETURN FROM INT ROUT BR ADR        |
| 114 | 000076' | 000000  |        |        | GETBYT: | .WORD  | 0        |  | :GET DATA BYTE ROUT BR ADR          |
| 115 | 000100' | 000000  |        |        | PUTBYT: | .WORD  | 0        |  | :PUT DATA BYTE ROUT BR ADR          |
| 116 | 000102' | 000014  |        |        |         | .WORD  | DVREGS-  |  | :ADR OF DEVICE REGISTER NAMES       |
| 117 | 000104' | 000050  |        |        |         | .WORD  | DVCMDS-  |  | :ADR OF DEVICE FUNCTIONS            |
| 118 | 000106' | 000120  |        |        |         | .WORD  | DVPKTE-  |  | :ADR OF PACK TBL EXTENSION          |
| 119 | 000110' | 000206  |        |        |         | .WORD  | DVMVTE-  |  | :ADR OF MODEL VECTOR TBL EXTEN.     |
| 120 | 000112' | 000240  |        |        |         | .WORD  | DVCPTE-  |  | :ADR OF COMPILER TBL EXTEN.         |
| 121 | 000114' | 000314  |        |        |         | .WORD  | DVIWST-  |  | :ADR OF DEV INTERFACE WD SYM TBL    |
| 122 |         |         |        |        |         |        |          |  |                                     |
| 123 |         |         |        |        |         |        |          |  |                                     |
| 124 | 000116' | 051503  | 020122 |        | DVREGS: | .ASCII | /CSR /   |  | :VALID DEVICE REGISTER NAMES &      |
| 125 | 000122' | 000000  |        |        |         | .WORD  | 0        |  | :THEIR POSITIONS RELATIVE TO        |
| 126 | 000124' | 041122  | 043125 |        |         | .ASCII | /RBUF/   |  | :THE DEVICE REGISTERS BASE ADDRESS. |
| 127 | 000130' | 000002  |        |        |         | .WORD  | 2        |  |                                     |
| 128 | 000132' | 041524  | 020122 |        |         | .ASCII | /TCR /   |  |                                     |
| 129 | 000136' | 000004  |        |        |         | .WORD  | 4        |  |                                     |
| 130 | 000140' | 041502  | 020122 |        |         | .ASCII | /BCR /   |  |                                     |
| 131 | 000144' | 000004  |        |        |         | .WORD  | 4        |  |                                     |
| 132 | 000146' | 041124  | 043125 |        |         | .ASCII | /TBUF/   |  |                                     |
| 133 | 000152' | 000006  |        |        |         | .WORD  | 6        |  |                                     |
| 134 |         | 000154' |        |        | DVREGE= | .      |          |  |                                     |
| 135 |         |         |        |        |         |        |          |  |                                     |
| 136 | 000154' | 120     | 001    |        | DVCMDS: | .BYTE  | 120,1    |  | :VALID DEVICE FUNCTIONS             |
| 137 | 000156' | 000552  |        |        |         | .WORD  | READ-    |  | : FLAG BYTE:                        |
| 138 | 000160' | 130     | 001    |        |         | .BYTE  | 130,1    |  | : BIT 7 = NPR DEV                   |
| 139 | 000162' | 001100  |        |        |         | .WORD  | WRITE-   |  | : BIT 3 = MASSBUS DEV               |
| 140 | 000164' | 160     | 001    |        |         | .BYTE  | 160,1    |  | : BIT 0 = 2 WORDS FOR ADR           |
| 141 | 000166' | 001104  |        |        |         | .WORD  | BREAK-   |  | : (18 BIT ADRS)                     |
| 142 | 000170' | 376     | 000    |        |         | .BYTE  | 376,0    |  |                                     |
| 143 | 000172' | 002006  |        |        |         | .WORD  | CRESET-  |  |                                     |
| 144 | 000174' | 375     | 000    |        |         | .BYTE  | 375,0    |  |                                     |
| 145 | 000176' | 001736  |        |        |         | .WORD  | NOWAIT-  |  |                                     |
| 146 | 000200' | 374     | 000    |        |         | .BYTE  | 374,0    |  |                                     |
| 147 | 000202' | 001556  |        |        |         | .WORD  | WAIT-    |  |                                     |
| 148 | 000204' | 373     | 000    |        |         | .BYTE  | 373,0    |  |                                     |
| 149 | 000206' | 003136  |        |        |         | .WORD  | REPORT-  |  |                                     |
| 150 | 000210' | 372     | 000    |        |         | .BYTE  | 372,0    |  |                                     |
| 151 | 000212' | 003132  |        |        |         | .WORD  | REPORT-  |  |                                     |
| 152 | 000214' | 371     | 000    |        |         | .BYTE  | 371,0    |  |                                     |
| 153 | 000216' | 001744  |        |        |         | .WORD  | FDUPLX-  |  |                                     |
| 154 | 000220' | 370     | 000    |        |         | .BYTE  | 370,0    |  |                                     |
| 155 | 000222' | 001722  |        |        |         | .WORD  | HOUPLX-  |  |                                     |
| 156 | 000224' | 177777  |        |        |         | .WORD  | 177777   |  | :TABLE TERMINATOR                   |
| 157 |         |         |        |        |         |        |          |  |                                     |
| 158 | 000226' | 051103  | 051505 | 052105 | DVPKTE: | .ASCII | /CRESET/ |  | :PACK TABLE EXTENSION               |
| 159 | 000234' | 376     | 000    |        |         | .BYTE  | 376,0    |  |                                     |
| 160 | 000236' | 047516  | 040527 | 052111 |         | .ASCII | /NOWAIT/ |  |                                     |
| 161 | 000244' | 375     | 000    |        |         | .BYTE  | 375,0    |  |                                     |
| 162 | 000246' | 020040  | 040527 | 052111 |         | .ASCII | / WAIT/  |  |                                     |
| 163 | 000254' | 374     | 000    |        |         | .BYTE  | 374,0    |  |                                     |
| 164 | 000256' | 052123  | 052101 | 051525 |         | .ASCII | /STATUS/ |  |                                     |
| 165 | 000264' | 373     | 000    |        |         | .BYTE  | 373,0    |  |                                     |

# F01

MAINDEC-11-DTDJA-B  
DTDJAB.P11

DJ11 DEVICE ROUTINE FOR MPG  
STANDARD DEVICE ROUTINE TABLE

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SEQ 0005

|     |         |         |        |        |               |                 |                               |
|-----|---------|---------|--------|--------|---------------|-----------------|-------------------------------|
| 166 | 000266' | 047503  | 047125 | 051524 | .ASCII        | /COUNTS/        |                               |
| 167 | 000274' | 372     | 000    |        | .BYTE         | 372,0           |                               |
| 168 | 000276' | 042106  | 050125 | 054114 | .PSCII        | /FDUPLX/        |                               |
| 169 | 000304' | 371     | 000    |        | .BYTE         | 371,0           |                               |
| 170 | 000306' | 042110  | 050125 | 054114 | .ASCII        | /HDUPLX/        |                               |
| 171 | 000314' | 370     | 000    |        | .BYTE         | 370,0           |                               |
| 172 |         |         |        |        |               |                 |                               |
| 173 | 000316' | 000376  | 000432 |        | DVMVTE: .WORD | 376,LCRST-LOCZ  | ;MODEL VECTOR TABLE EXTEN.    |
| 174 | 000322' | 000375  | 000432 |        | .WORD         | 375,LNWAIT-LOCZ |                               |
| 175 | 000326' | 000374  | 000432 |        | .WORD         | 374,LWAIT-LOCZ  |                               |
| 176 | 000332' | 000373  | 000432 |        | .WORD         | 373,LCOUNT-LOCZ |                               |
| 177 | 000336' | 000372  | 000432 |        | .WORD         | 372,LCOUNT-LOCZ |                               |
| 178 | 000342' | 000371  | 000432 |        | .WORD         | 371,LFDPLX-LOCZ |                               |
| 179 | 000345' | 000370  | 000432 |        | .WORD         | 370,LHDPLX-LOCZ |                               |
| 180 |         |         |        |        |               |                 |                               |
| 181 |         |         |        |        |               |                 |                               |
| 182 |         |         |        |        |               |                 |                               |
| 183 |         |         |        |        |               |                 |                               |
| 184 | 000352' | 003     | 376    |        | DVCPT: .BYTE  | 3,376           | ;CONTROL RESET                |
| 185 | 000354' | 004537  | 000012 |        | .WORD         | 4537,10.        |                               |
| 186 | 000360' | 003     | 375    |        | .BYTE         | 3,375           | ;NO WAIT                      |
| 187 | 000362' | 004537  | 000012 |        | .WORD         | 4537,10.        |                               |
| 188 | 000366' | 003     | 374    |        | .BYTE         | 3,374           | ;WAIT                         |
| 189 | 000370' | 004537  | 000012 |        | .WORD         | 4537,10.        |                               |
| 190 | 000374' | 004     | 373    |        | .BYTE         | 4,373           | ;STATUS                       |
| 191 | 000376' | 004537  | 000012 | 001002 | .WORD         | 4537,10.,1002   |                               |
| 192 | 000404' | 004     | 372    |        | .BYTE         | 4,372           | ;COUNTS                       |
| 193 | 000406' | 004537  | 000012 | 001001 | .WORD         | 4537,10.,1001   |                               |
| 194 | 000414' | 003     | 371    |        | .BYTE         | 3,371           | ;FULL DUPLEX                  |
| 195 | 000416' | 004537  | 000012 |        | .WORD         | 4537,10.        |                               |
| 196 | 000422' | 003     | 370    |        | .BYTE         | 3,370           | ;HALF DUPLEX                  |
| 197 | 000424' | 004537  | 000012 |        | .WORD         | 4537,10.        |                               |
| 198 |         |         |        |        |               |                 |                               |
| 199 |         |         |        |        |               |                 |                               |
| 200 |         |         |        |        |               |                 |                               |
| 201 |         |         |        |        |               |                 |                               |
| 202 | 000430' | 177777  |        |        | DVIWST: .WORD | 177777          |                               |
| 203 |         |         |        |        |               |                 |                               |
| 204 |         |         |        |        |               |                 |                               |
| 205 |         |         |        |        |               |                 |                               |
| 206 |         |         |        |        |               |                 |                               |
| 207 | 000432' |         |        |        | LCRST:        |                 |                               |
| 208 | 000432' |         |        |        | LNWAIT:       |                 |                               |
| 209 | 000432' |         |        |        | LWAIT:        |                 |                               |
| 210 | 000432' |         |        |        | LSTATS:       |                 |                               |
| 211 | 000432' |         |        |        | LCOUNT:       |                 |                               |
| 212 | 000432' |         |        |        | LFDPLX:       |                 |                               |
| 213 | 000432' | 000     |        |        | LHDPLX: .BYTE | 0               |                               |
| 214 |         | 000434' |        |        | .EVEN         |                 |                               |
| 215 |         |         |        |        |               |                 |                               |
| 216 |         | 000434' |        |        | HSKPST=       |                 |                               |
| 217 |         | 000434' |        |        | ISTAT=        |                 | ;STORAGE FOR DEV REG'S AT INT |
| 218 | 000434' | 000000  |        |        | CSR: .WORD    | 0               |                               |
| 219 | 000436' | 000000  |        |        | REUF: .WORD   | 0               |                               |
| 220 | 000440' | 000000  |        |        | TCR: .WORD    | 0               |                               |
| 221 | 000442' | 000000  |        |        | BCR: .WORD    | 0               |                               |

|     |         |         |         |        |   |   |
|-----|---------|---------|---------|--------|---|---|
| 222 | 000444' | 000000  | TBUF:   | .WORD  | 0 |   |
| 223 |         |         |         |        |   |   |
| 224 | 000446' | 000005  | CSTAT:  | .BLKW  | 5 | ; DEV REG CURRENT VALUE STORAGE                 |
| 225 |         |         |         |        |   |   |
| 226 | 000460' | 000000  | BYRD:   | .WORD  | 0 | ; B TES READ COUNT                              |
| 227 | 000462' | 000000  |         | .WORD  | 0 |   |
| 228 | 000464' | 000000  | BYWR:   | .WORD  | 0 | ; BYTES WRITTEN COUNT                           |
| 229 | 000466' | 000000  |         | .WORD  | 0 |   |
| 230 | 000470' | 000000  | RDCNT:  | .WORD  | 0 | ; READ CMD COUNT                                |
| 231 | 000472' | 000000  | WRCNT:  | .WORD  | 0 | ; WRITE CMD COUNT                               |
| 232 | 000474' | 000000  | BKCNT:  | .WORD  | 0 | ; BREAK CMD COUNT                               |
| 233 | 000476' | 000000  | MISCNT: | .WORD  | 0 | ; MISC. CMD COUNT (CRESET,<br>; FDUPLX, HDUPLX) |
| 234 |         |         |         |        |   |   |
| 235 | 000500' | 000000  | RICNT:  | .WORD  | 0 | ; READ INTERRUPT COUNT                          |
| 236 | 000502' | 000000  | WICNT:  | .WORD  | 0 | ; WRITE INTERRUPT COUNT                         |
| 237 | 000504' | 000000  | OVRRUN: | .WORD  | 0 | ; OVERRUN ERRORS COUNT                          |
| 238 | 000506' | 000000  | FRAMER: | .WORD  | 0 | ; FRAMING ERRORS COUNT                          |
| 239 | 000510' | 000000  | PARERR: | .WORD  | 0 | ; PARITY ERRORS COUNT                           |
| 240 | 000512' | 000000  | DATAER: | .WORD  | 0 | ; DATA ERROR COUNT                              |
| 241 | 000514' | 000000  | TOECNT: | .WORD  | 0 | ; # OF ENTRIES INTO T/O ERROR ROUT              |
| 242 |         |         |         |        |   |   |
| 243 | 000516' | 000000  | FLAG:   | .WORD  | 0 | ; FLAGWORD STORAGE                              |
| 244 |         |         |         |        |   |   |
| 245 |         |         |         |        |   |   |
| 246 |         | 000520' | MSKPE=  | .      |   |   |
| 247 |         |         |         |        |   |   |
| 248 |         | 000000  | XXXX=   | 0      |   | ; VALUE TO BE TAILORED BY DEV ROUT              |
| 249 |         |         |         |        |   |   |
| 250 |         | 000001  | MMVER=  | 1      |   | ; SYSTEM FLGWD BIT DEF.                         |
| 251 |         | 120000  | PSCONS= | 120000 |   | ; INT SRVC VIRT PAGE BASE                       |
| 252 |         | 000002  | USMPS=  | 2      |   | ; MTPS INST LEGAL FLAG                          |

# H01

MAINDEC-11-DTJJA-B  
DTDJAB.P11

DJ11 DEVICE ROUTINE FOR MPG  
DJ11 FUNCTION ROUTINES

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SEQ 0007

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254                                     .SBTTL  DJ11 FUNCTION ROUTINES
255
256                                     ;TIMEOUT ERROR HANDLER
257
258 000520' 005267 177770          TOUTER: INC      TOECNT          ; INCR TIME OUT ERROR COUNT
259 000524' 026727 177764 000010  CMP      TOECNT, #8.    ; EXCEEDED 8 TIMEOUTS?
260 000532' 001401          BEQ      Z$           ; YES - CONTINUE
261 000534' 000205          RTS      R5           ; NO - RETURN
262 000536' 004067 003424          Z$:   JSR      R0, SAVREG    ; SAVE REGISTERS
263 000542' 004767 003452          JSR      PC, SUPTAD    ; P TBL ADR TO R3
264 000546' 042713 000010          BIC      #4IOT, (R3)  ; RESET WAIT FOR I/O TERM
265 000552' 000004          CLR      R4
266 000554' 004567 003736          TSR      R5, PRINT    ; PRINT TIMEOUT ERR MSG
267 000560' 000026          .WORD   TOEMSG-     ;
268 000562' 000023          .WORD   19.         ;
269 000564' 004567 000042          JSR      R5, KILL     ; KILL THE PROGRAM
270 000570' 004767 003152          JSR      PC, ERDIRG   ; DISPLAY STATUS & STMT #
271 000574' 004067 003402          JSR      R0, RESREG   ; RESTORE REGISTERS
272 000600' 012605          TOUTEX: MOV      (SP)+, R5 ; GO DISPLAY DEVICE REGS
273 000602' 000177 177242          JMP
274
275 000606' 045104 030461 052040  TOEMSG: .ASCII  'DJ11 TIMEOUT ON I/O'
276 000614' 046511 047505 052125
277 000622' 047440 020116 027511
278 000630' 117
279 000632' 000632'          .EVEN
280
281                                     ;KILL USER PROGRAM ROUTINE
282
283 000632' 016700 177166          KILL:  MOV      DREGAD, R2 ; GET DEV REG ADR
284 000636' 032762 040100 000004  BIT      #40100, 4(R2) ; ANY INT EBLs SET?
285 000644' 001426          BEQ      KILLEX       ; NO-EXIT
286 000646' 004567 003760          IS:   JSR      R5, TRVECT ; TEST READ INT VECTOR
287 000652' 000410          BR      CWRINT        ; BRANCH IF NOT ME
288 000654' 042762 000100 000004  BIC      #100, 4(R2)   ; RESET RD INT EBL
289 000662' 042767 020000 177112  BIC      #RDBSY, FLAGWD ; RESET READ BSY IN FLAG WD
290 000670' 004767 002350          JSR      PC, RINTV    ; RESET INT VECTOR INFO
291 000674' 004567 003762          CWRINT: JSR      R5, TRVECT ; TEST WRITE INT VECTOR
292 000700' 000410          BR      KILLEX        ; BRANCH IF NOT ME
293 000702' 042762 040000 000004  BIC      #40000, 4(R2) ; RESET WR INT EBL
294 000710' 042767 040000 177064  BIC      #WRBSY, FLAGWD ; RESET WRITE BSY IN FLAG WD
295 000716' 004767 002340          JSR      PC, RWINTV   ; RESET INT VECTOR INFO
296 000722' 005067 177074          KILLEX: CLR      ERR    ; CLEAR ERROR INDICATOR
297 000726' 000205          RTS      R5          ; RETURN
298
299                                     ;READ COMMAND HANDLER
300
301 000730' 010567 003126          READ:  MOV      R5, STMT   ; SAVE R5
302 000734' 162767 000004 003120  SUB      #4, STMT     ; FOR STMT # REFERENCE
303 000742' 016704 177056          MOV      DREGAD, R4  ; DEV REG ADDR TO R4
304 000746' 032767 020000 177026  BIT      #RDBSY, FLAGWD ; TEST READ BUSY
305 000754' 001030          BNE      GTPTBS      ; TEST READ BUSY
306 000756' 032714 000100          BIT      #100, (R4)  ; BRANCH IF SET
307 000762' 001403          BEQ      SRDBSY      ; TEST RCV INT EBL
308 000764' 004. . 177056          JSR      R5, DCIOBSY ; CONTINUE IF NOT SET
309 000770' 000757          BR      READ         ; OTHERWISE RELEASE CONTROL

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|     |         |        |        |        |         |       |                     |                            |
|-----|---------|--------|--------|--------|---------|-------|---------------------|----------------------------|
| 307 | 000772' | 052767 | 020000 | 177012 | SRDBSY: | BIS   | #RDBS7, FLAGWD      | ;SET READ BUSY             |
| 308 | 001000' | 016767 | 177022 | 00001c |         | MOV   | IVCTAD, 10\$        | ;INT VECTOR ADDR TO CALL   |
| 309 | 001006' | 016767 | 177016 | 000006 |         | MOV   | RBUSRQ, 20\$        | ;ALSO B-S PRIORITY         |
| 310 | 001014' | 004577 | 177046 |        |         | JSR   | R5, @SETVEC         | ;GO SET THE VECTOR         |
| 311 | 001020' | 000000 |        |        | 10\$:   | .WORD | XXXX                |                            |
| 312 | 001022' | 000000 |        |        | 20\$:   | .WORD | XXXX                |                            |
| 313 | 001024' | 001664 |        |        |         | .WORD | RDINT-              |                            |
| 314 | 001026' | 005067 | 177462 |        |         | CLR   | TCECNT              | ;CLEAR TIME OUT ERR CNT    |
| 315 | 001032' | 052714 | 000100 |        |         | BIS   | #100, (R4)          | ;SET RECV INT EBL          |
| 316 | 001036' | 004767 | 003156 |        | GTPTBS: | JSR   | PC, SUPTAD          | ;GET P TBL BASE IN R3      |
| 317 | 001042' | 005067 | 176754 |        |         | CLR   | ERR                 | ;CLEAR ERROR INDICATOR     |
| 318 | 001046' | 005267 | 177416 |        |         | INC   | RDCNT               | ;INCR READ CMD COUNT       |
| 319 | 001052' | 032763 | 000200 | 000002 |         | BIT   | #SOPER, PPSW(R3)    | ;TEST MAINT BIT IN OPSW    |
| 320 | 001060' | 001403 |        |        |         | BEQ   | RDMNCL              |                            |
| 321 | 001062' | 052714 | 000004 |        |         | BIS   | #4, (R4)            | ;SET CSR BIT TO SAME STATE |
| 322 | 001066' | 000402 |        |        |         | BR    | RDMNST              |                            |
| 323 | 001070' | 042714 | 000004 |        | RDMNCL: | BIC   | #4, (R4)            |                            |
| 324 | 001074' | 012500 |        |        | RDMNST: | MOV   | (R5)+, R0           | ;GET ADDRESS               |
| 325 | 001076' | 012567 | 001232 |        |         | MOV   | (R5)+, ADDR         |                            |
| 326 | 001102' | 012567 | 001230 |        |         | MOV   | (R5)+, BYTES        |                            |
| 327 | 001106' | 012500 |        |        |         | MOV   | (R5)+, R0           | ;BYTE COUNT AND            |
| 328 | 001110' | 001011 |        |        |         | BNE   | TESTRC              | ;LINE NBR FROM CALL        |
| 329 | 001112' | 116301 | 000035 |        |         | MOVB  | PCURDV(R3), R1      | ;BR IF LINE SPECIFIED      |
| 330 | 001116' | 012700 | 000001 |        |         | MOV   | #1, R0              | ;GET CURRENT DEV NBR       |
| 331 | 001122' | 105701 |        |        |         | TSTB  | R1                  |                            |
| 332 | 001124' | 001403 |        |        |         | BEQ   | TESTRC              |                            |
| 333 | 001126' | 006300 |        |        | CALDNL: | ASL   | R0                  |                            |
| 334 | 001130' | 005301 |        |        |         | DEC   | R1                  |                            |
| 335 | 001132' | 001375 |        |        |         | BNE   | CALDNL              |                            |
| 336 | 001134' | 030064 | 000004 |        | TESTRC: | BIT   | R0, 4(R4)           | ;ANY DESIRED LINE IN USE ? |
| 337 | 001140' | 001405 |        |        |         | BEQ   | LOADRC              | ;NO - KICK OFF THIS READ   |
| 338 | 001142' | 004577 | 176700 |        |         | JSR   | R5, @CIOBSY         | ;YES - WAIT                |
| 339 | 001146' | 162705 | 000006 |        |         | SUB   | #6, R5              |                            |
| 340 | 001152' | 000666 |        |        |         | BR    | READ                |                            |
| 341 | 001154' | 050067 | 001162 |        | LOADRC: | BIS   | R0, RCR             | ;SET LINE NBR IN RCR       |
| 342 | 001160' | 010702 |        |        |         | MOV   | PC, R2              |                            |
| 343 | 001162' | 062702 | 001164 |        |         | ADD   | #RCVTBL-. , R2      |                            |
| 344 | 001166' | 012701 | 000020 |        |         | MOV   | #16. , R1           |                            |
| 345 | 001172' | 006000 |        |        | FRCVTL: | ROR   | R0                  | ;FILL RECEIVE TABLE        |
| 346 | 001174' | 103007 |        |        |         | BCC   | DRCVTL              |                            |
| 347 | 001176' | 016722 | 001132 |        |         | MOV   | ADDR, (R2)+         | ;WITH ADDRESS              |
| 348 | 001202' | 016722 | 001130 |        |         | MOV   | BYTES, (R2)+        | ;AND BYTE COUNT            |
| 349 | 001206' | 005301 |        |        |         | DEC   | R1                  |                            |
| 350 | 001210' | 001370 |        |        |         | BNE   | FRCVTL              |                            |
| 351 | 001212' | 000407 |        |        |         | BR    | SETRSE              |                            |
| 352 | 001214' | 062702 | 000004 |        | DRCVTL: | ADD   | #4, R2              |                            |
| 353 | 001220' | 005301 |        |        |         | DEC   | R1                  |                            |
| 354 | 001222' | 001363 |        |        |         | BNE   | FRCVTL              |                            |
| 355 | 001224' | 052763 | 000010 | 000000 |         | B-S   | #WT4IOT, PFLGWD(R3) | ;SET WAIT FOR I/O TERM     |
| 356 | 001232' | 052714 | 000001 |        | SETRSE: | BIS   | #1, (R4)            | ;SET RECEIVE SCAN ENABLE   |
| 357 | 001236' | 032767 | 100000 | 176536 |         | BIT   | #DRWAIT, FLAGWD     | ;TEST DEV ROUT NOWAIT      |
| 358 | 001244' | 001002 |        |        |         | BNE   | RDNOWT              | ;BRANCH IF SET             |
| 359 | 001246' | 000167 | 000520 |        |         | JMP   | TSTIEB              | ;OTHERWISE WAIT            |
| 360 | 001252' | 042763 | 000010 | 000000 | RDNOWT: | BIC   | #WT4IOT, PFLGWD(R3) | ;CLEAR WAIT FOR I/O TERM   |
| 361 | 001260' | 000205 |        |        |         | RTS   | R5                  | ;RETURN IN LINE            |
| 362 |         |        |        |        |         |       |                     |                            |

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363                                     ;WRITE AND BREAK COMMAND HANDLER
364
365 001262' 042767 000010 176512 WRITE: BIC      #BRFLG,FLAGWD      ;CLEAR BREAK FLAG
366 001270' 000403                                     BR      XMIT
367 001272' 052767 000010 1765C2 BREAK: BIS      #BRFLG,FLAGWD      ;SET BREAK FLAG
368 001300' 010567 002556                                     XMIT.  MOV      R5,STMT      ;SAVE R5
369 001304' 162767 000004 002550 SUB      #4,STMT      ;FOR STMT # REFERENCE
370 001312' 016704 176506                                     MOV      DRGADR,R4      ;DEV REG ADDR TO R4
371 001316' 032767 040000 176456 BIT      #WRBSY,FLAGWD      ;TEST WRITE BUSY
372 001324' 001033                                     BNE     CLRBRK      ;BRANCH IF SET
373 001326' 032714 040000 BIT      #40000,(R4)      ;TEST XMIT INT EBL
374 001332' 001403 BEQ     SETBSY      ;CONTINUE IF NOT SET
375 001334' 004577 176506 JSR     R5,@CIOBSY      ;OTHERWISE RELEASE CONTROL
376 001340' 000757                                     BR      XMIT
377 001342' 052767 040000 176432 SETBSY: BIS      #WRBSY,FLAGWD      ;SET WRITE BUSY
378 001350' 016767 176452 000020 MOV      IVCTAD,10$      ;INT VECTOR ADDR TO CALL
379 001356' 062767 000004 000012 ADD      #4,10$      ;ADJUST FOR WRITE INT
380 001364' 016767 176442 000006 MOV      #BUSRQ,20$      ;ALSO PASS BUS PRIORITY
381 001372' 004577 176470 JSR     R5,@SETVEC      ;GO SET THE VECTOR
382 001376' 000000 10$: .WORD      XXXX
383 001400' 000000 20$: .WORD      XXXX
384 001402' 001044 .WORD      WINT-
385 001404' 005067 177104 CLR      TOECNT      ;CLEAR TIME OUT ERR CNT
386 001410' 052714 040000 BIS      #40000,(R4)      ;SET XMIT INT EBL
387 001414' 042714 002000 CLRBRK: BIC      #2000,(R4)      ;CLEAR BREAK REG SELECT
388 001420' 005067 176376 CLR      ERR      ;CLEAR ERROR INDICATOR
389 001424' 004767 002570 JSR     PC,SUPTAD      ;GET P TBL BASE IN R3
390 001430' 032763 000200 000002 BIT      #SPOPER,POPSW(R3)      ;TEST MAINT BIT IN OPSW
391 001436' 001403 BEQ     WRMNCL
392 001440' 052714 000004 BIS      #4,(R4)      ;SET CSR BIT TO SAME STATE
393 001444' 000402 BR      WRMNST
394 001446' 042714 000004 WRMNCL: BIC      #4,(R4)
395 001452' 012500 WRMNST: MOV      (R5)+,R0      ;GET ADDRESS
396 001454' 012567 000654 MOV      (R5)+,ADDR
397 001460' 012567 000652 MOV      (R5)+,BYTES      ;BYTE COUNT AND
398 001464' 012500 MOV      (R5)+,R0      ;LINE NBR FROM CALL
399 001466' 001011 BNE     TESTTC      ;BR IF LINE SPECIFIED
400 001470' 116301 000035 MOV      PCURDV(R3),R1      ;GET CURRENT DEV NBR
401 001474' 012700 000001 MOV      #1,R0
402 001500' 105701 TSTB   R1
403 001502' 001403 BEQ     TESTTC
404 001504' 006300 DVNMLP: ASL     R0
405 001506' 005301 DEC     R1
406 001510' 001375 BNE     DVNMLP
407 001512' 030064 000004 TESTTC: BIT      R0,4(R4)      ;ANY DESIRED LINE IN USE ?
408 001516' 001405 BEQ     LOADTC      ;NO - KICK OFF THIS WRITE
409 001520' 004577 176322 JSR     R5,@CIOBSY      ;YES - WAIT
410 001524' 162705 000006 SUB      #6,R5
411 001530' 000663 BR      XMIT
412 001532' 010067 000602 LOADTC: MOV      R0,STCR      ;SET LINE NBR IN SOFT TCR
413 001536' 032777 000002 176320 BIT      #USMTPS,@CSYSFW      ;SAVE PS AND INH INT
414 001544' 001007 BNE     10$
415 001546' 113767 177776 000556 MOV      @#PS,PSSAVE
416 001554' 152737 000340 177776 BISB   #340,@#PS
417 001562' 000404 BR      FSNDTB
418 001564' 106767 000542 10$: MFPS   PSSAVE

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419 001570' 106427 000340
420 001571' 010702
421 001576' 062702 000434
422 001602' 012701 000020
423 001606' 006000
424 001610' 103007
425 001612' 016722 000516
426 001616' 016722 000514
427 001622' 005301
428 001624' 001370
429 001626' 000404
430 001630' 062702 000004
431 001634' 005301
432 001636' 001363
433 001640' 052763 000010 000000
434 001646' 056764 000466 000004
435 001654' 032767 000010 176120
436 001662' 001410
437 001664' 052714 002079
438 001670' 056764 000444 000004
439 001676' 005267 176572
440 001702' 000402
441 001704' 005267 176562
442 001710' 052714 000400
443 001714' 032777 000002 176142
444 001722' 001004
445 001724' 116737 000402 177776
446 001732' 000402
447 001734' 106467 000372
448 001740' 032767 100000 176034
449 001746' 001411
450 001750' 042763 000010 000000
451 001756' 000205
452
453
454
455 001760' 042767 100000 176014
456 001766' 016704 176032
457 001772' 032714 040100
458 001776' 001053
459 002000' 032767 000002 175774
460 002006' 001410
461 002010' 004567 002616
462 002014' 000405
463 002016' 004767 001222
464 002022' 042767 000002 175752
465 002030' 032767 000004 175744
466 002036' 001410
467 002040' 004567 002616
468 002044' 000405
469 002046' 004767 001210
470 002052' 042767 000004 175722
471 002060' 005767 000260
472 002064' 001734
473 002066' 012767 000001 175726
474 002074' 004767 002120

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MTPS #340  
FSNDB: MOV PC,R2  
ADD #SNDBL-.,R2  
MOV #16.,R1  
FSNDTL: ROR R0 ;FILL SEND TABLE  
BCC DSNDTL  
MOV ADDR,(R2)+ ;WITH ADDRESS  
MOV BYTES,(R2)+ ;AND BYTE COUNT  
DEC R1  
BNE FSNDTL  
BR SETTSE  
DSNDTL: ADD #4,R2  
DEC R1  
BNE FSNDTL  
SETTSE: BIS #WT4IOT,PFLAGWDR3) ;SET WAIT FOR I/O TERM  
BIS STCR,4(R4) ;SET LINE NBR IN HARD TCR  
BIT #BRFLG,FLAGWD ;IF BREAK FLAG SET  
BEQ INCWRC  
BIS #2000,(R4) ;SELECT BREAK REG  
BIS STCR,4(R4) ;SET LINE NBR IN BCR  
INC BKCNT ;INCR BREAK CMD COUNT  
BR SETSCN  
INCWRC: INC WRCNT ;INCR WRITE CMD COUNT  
SETSCN: BIS #400,(R4) ;SET MASTER SCAN EBL  
BIT #USMTPS,DCSYSFW ;RESTORE PS AND EBL INT  
ENE 10\$  
MOVB PSSAVE,#F5  
BR 20\$  
10\$: MTPS PSSAVE  
20\$: BIT #DRWAIT,FLAGWD ;TEST DEV ROUT NOWAIT  
BEQ TSTIEB ;IF RESET TEST INT EBL  
BIC #WT4IOT,PFLAGWDR3) ;CLEAR WAIT FOR I/O TERM  
RETURN: RTS ;OTHERWISE RETURN  
;WAIT COMMAND HANDLER  
WAIT: BIC #DRWAIT,FLAGWD ;CLEAR DEV ROUT NOWAIT  
MOV DREGWD,R4 ;POINT R4 AT REG ADDR  
TSTIEB: BIT #40100,(R4) ;TEST INT EBL  
BNE RELEAS ;IF SET, RELEASE CONTROL  
TRMTST: BIT #CLRVRT,FLAGWD ;TEST IF VECTOR CLR REQD  
BEQ 10\$ ;BRANCH IF NOT  
JSR R5,TRVECT ;TEST READ VECTOR  
BR 10\$ ;BRANCH IF NOT ME  
JSR PC,RRINTV ;GO RESET THE VECTOR  
BIC #CLRVRT,FLAGWD ;CLEAR THE REQ FLAG  
10\$: BIT #CLWVRT,FLAGWD ;TEST IF VECTOR CLR REQD  
BEQ ERRST ;BRANCH IF NOT  
JSR R5,TWVECT ;TEST WRITE VECTOR  
BR ERRST ;BRANCH IF NOT ME  
JSR PC,RWINTV ;GO RESET THE VECTOR  
ERRST: BIC #CLWVRT,FLAGWD ;CLEAR THE REQ FLAG  
TST IRRFLG ;TEST FOR ANY ERROR  
BEQ RETURN ;RETURN IF NONE  
MOV #1,ERR ;SET ERROR INDICATOR  
JSR PC,SUPTAD

L01

MAINDEC-11-DTDJA-B  
 DTDJAB.P11

DJ11 DEVICE ROUTINE FOR MPG  
 DJ11 FUNCTION ROUTINES

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SEQ 0011

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475 002100' 032763 020000 000002 BIT #PRONER,POPSW(R3) ;TEST CONT PRINT ON ERR BIT
476 002106' 001005 BNE EPR;AT ;EXIT 1 SET
477 002110' 005267 001472 INC #ABREV ;SET ABBREVIATED RPT FLG
478 002114' 005004 CLR R;
479 002116' 000167 001522 JMP ERRRPT
480 002122' 000177 175722 ERREXT: JMP JCUPGER
481 002126' 004577 175714 RELEAS: JSR RS;OCIOBSY ;OTHERWISE RELEASE CONTROL
482 002132' 000717 BR 15TIEB
483
484 ;NOWAIT COMMAND HANDLER
485
486 002134' 052767 100000 175640 NOWAIT: BIS #NOWAIT,FLAGWD ;SET NOWAIT FLAG
487 002142' 000705 BR RETURN
488
489 ;HALF DUPLEX COMMAND HANDLER
490
491 002144' 016704 175654 HDUPLX: MOV DREGAD,R4
492 002150' 052714 000002 BIC #2,(R4) ;SET HALF DUPLEX BIT
493 002154' 005267 176316 INC MISCNT ;INCR MISC CMD COUNT
494 002160' 000205 RTS R5 ;RETURN
495
496 ;FULL DUPLEX COMMAND HANDLER
497
498 002162' 016704 175636 FDUPLX: MOV DREGAD,R4
499 002166' 042714 000002 BIC #2,(R4) ;CLEAR HALF DUPLEX BIT
500 002172' 005267 176300 INC MISCNT ;INCR MISC CMD COUNT
501 002176' 000205 RTS R5 ;RETURN
502
503 ;CRESET COMMAND HANDLER
504
505 002200' 016704 175620 CRESET: MOV DREGAD,R4
506 002204' 052714 000004 BIS #4,(R4) ;SET MOS CLEAR
507 002210' 005267 176262 INC MISCNT ;INCR MISC CMD COUNT
508 002214' 032714 000010 CLRBSY: BIT #10,(R4)
509 002220' 001375 BNE CLRBSY ;WAIT UNTIL DONE
510 002222' 005014 CLR (R4) ;CLEAR ALL CONTROL BITS
511 002224' 005067 175572 CLR ERR ;CLEAR ERROR INDICATOR
512 002230' 000205 RTS R5 ;RETURN
  
```

# M01

MAINDEC-11-DTJJA-B  
DTJJA3.P11

DJ11 DEVICE ROUTINE FOR MPG  
DJ11 FUNCTION ROUTINES

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SEQ 0012

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514                                     ;WRITE & READ CONTROL TABLES
515
516 002232' 000000 000000          SNOTBL: .WORD 0,0          ;LINE 0  ADDR/BYTE CNT
517 002236' 000000 000000          .WORD 0,0          ;LINE 1
518 002242' 000000 000000          .WORD 0,0          ;LINE 2
519 002246' 000000 000000          .WORD 0,0          ;LINE 3
520 002252' 000000 000000          .WORD 0,0          ;LINE 4
521 002256' 000000 000000          .WORD 0,0          ;LINE 5
522 002262' 000000 000000          .WORD 0,0          ;LINE 6
523 002266' 000000 000000          .WORD 0,0          ;LINE 7
524 002272' 000000 000000          .WORD 0,0          ;LINE 8
525 002276' 000000 000000          .WORD 0,0          ;LINE 9
526 002302' 000000 000000          .WORD 0,0          ;LINE 10
527 002306' 000000 000000          .WORD 0,0          ;LINE 11
528 002312' 000000 000000          .WORD 0,0          ;LINE 12
529 002316' 000000 000000          .WORD 0,0          ;LINE 13
530 002322' 000000 000000          .WORD 0,0          ;LINE 14
531 002326' 000000 000000          .WORD 0,0          ;LINE 15
532
533 002332' 000000          PSSAVE: .WORD 0          ;PROC STATUS SAVE
534 002334' 000000          ADDR: .WORD 0
535 002336' 000000          BYTES: .WORD 0
536 002340' 000000          STCR: .WORD 0          ;XMIT SOFT CONT REG
537 002342' 000000          RCR: .WORD 0          ;RECEIVE CONT REG
538 002344' 000000          ERRFLG: .WORD 0      ;ERROR FLAG
539
540
541 002346' 000000 000000          RCVTBL: .WORD 0,0          ;LINE 0  ADDR/BYTE CNT
542 002352' 000000 000000          .WORD 0,0          ;LINE 1
543 002356' 000000 000000          .WORD 0,0          ;LINE 2
544 002362' 000000 000000          .WORD 0,0          ;LINE 3
545 002366' 000000 000000          .WORD 0,0          ;LINE 4
546 002372' 000000 000000          .WORD 0,0          ;LINE 5
547 002376' 000000 000000          .WORD 0,0          ;LINE 6
548 002402' 000000 000000          .WORD 0,0          ;LINE 7
549 002406' 000000 000000          .WORD 0,0          ;LINE 8
550 002412' 000000 000000          .WORD 0,0          ;LINE 9
551 002416' 000000 000000          .WORD 0,0          ;LINE 10
552 002422' 000000 000000          .WORD 0,0          ;LINE 11
553 002426' 000000 000000          .WORD 0,0          ;LINE 12
554 002432' 000000 000000          .WORD 0,0          ;LINE 13
555 002436' 000000 000000          .WORD 0,0          ;LINE 14
556 002442' 000000 000000          .WORD 0,0          ;LINE 15

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# NO1

MAINDEC-11-DTDJA-8  
 DTDJAB.P11

DJ11 DEVICE ROUTINE FOR MPG  
 DJ11 FUNCTION ROUTINES

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SEQ 0013

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558                                     ;WRITE INTERRUPT HANDLER
559
560 002446' 004067 001514      WRINT: JSR   RD, SAVREG      ;SAVE REGISTERS
561 002452' 004567 001562      JSR   R5, STSTAT    ;STORE DEVICE REG CONTENTS
562 002456' 175756              .WORD  ISTAT-
563 002460' 005267 176016      INC   WICNT         ;INCR WRITE INTERRUPT COUNT
564 002464' 004767 001530      JSR   PC, SUPTAD    ;SET INTERNAL PTRS
565 002470' 116401 000007      MOVB  7(R4), R1     ;GET LINE NBR FROM TBUF
566 002474' 110102              MOVB  R1, R2        ;SAVE IN R2
567 002476' 006301              ASL   R1
568 002500' 006301              ASL   R1            ;USE AS TABLE INDEX
569 002502' 010703              MOV   PC, R3
570 002504' 062703 177526      ADD   #SNDTBL-., R3 ;POINT R3 AT TBL ENTRY
571 002510' 060103              ADD   R1, R3       ;ADD INDEX
572 002512' 005763 000002      TST   2(R3)        ;TEST BYTE COUNT
573 002516' 001417              BEQ   WTERM        ;BRANCH IF ZERO
574 002520' 010701              MOV   PC, R1
575 002522' 062701 175744      ADD   #BYWR+2-., R1
576 002526' 062711 000001      ADD   #1, (R1)     ;INCR BYTES WRITTEN BY 1
577 002532' 005541              ADC   -(R1)
578 002534' 011300              MOV   (R3), R0
579 002536' 105733              TSTB  2(R3)+
580 002540' 004777 175332      JCR   PC, 2GETBYT  ;GET BYTE FROM MEM
581 002544' 110164 000006      MOVB  R1, 6(R4)
582 002550' 005313              DEC   (R3)         ;DECREMENT BYTE COUNT
583 002552' 005243              INC   -(R3)       ;INCREMENT ADDRESS
584 002554' 000450              BR    INTXT        ;RETURN FROM INTERRUPT
585 002556' 010701              WTERM: MOV  PC, R1
586 002560' 062701 175706      ADD   #BYWR+2-., R1
587 002564' 011167 175230      MOV   (R1), SIZE  ;UPDATE ACTUAL BYTES XFERRED
588 002570' 012701 000001      MOV   #1, R1
589 002574' 105702              WTRMLP: TSTB  R2
590 002576' 001403              BEQ   CLRSCN
591 002600' 006301              ASL   R1            ;SET BIT AS PER LINE NBR
592 002602' 005302              DEC   R2
593 002604' 001373              BNE   WTRMLP
594 002606' 052714 002000      CLRSCN: BIS   #2000, (R4) ;SELECT BREAK REGISTER
595 002612' 040164 000004      BIC   R1, 4(R4)    ;RESET LINE NBR BIT
596 002616' 042714 002000      BIC   #2000, (R4) ;SELECT ICR
597 002622' 040164 000004      BIC   R1, 4(R4)    ;RESET LINE NBR BIT
598 002626' 005764 000004      TST   4(R4)       ;ALL LINES DISABLED ?
599 002632' 001401              BEQ   STOPWR      ;YES - STOP ALL WRITES
600 002634' 000420              BR    INTXT        ;RETURN FROM INTERRUPT
601 002636' 042767 040000 175136 STOPWR: BIC   #WRBSY, FLAGWD ;RESET WRITE BUSY
602 002644' 042714 040400      BIC   #40400, (R4) ;RESET XMIT SCN & INT EBL
603 002650' 004767 001344      JSR   PC, SUPTAD
604 002654' 032714 000100      BIT   #100, (R4)  ;RECEIVE INT STILL UP ?
605 002660' 001003              BNE   GVECAD      ;YES - CONTINUE
606 002662' 042763 000010 000000 GVECAD: BIC   #WTHIOT, PFLGWD(R3) ;NO - RESET WAIT FOR IOT
607 002670' 052767 000004 175104 GVECAD: BIS   #CLWVCT, FLAGWD ;SET CLR VECT REQUEST
608 002676' 004067 001300      INTXT: JSR   RD, RESREG ;RESTORE REGISTERS
609 002702' 000177 175166      JMP   2RTNINT     ;RETURN FROM INTERRUPT
610 002706' 000000              LNUM: .WORD  0
  
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612                                     ;READ INTERRUPT HANDLER
613
614 002710' 004067 001252      RDINT: JSR      RD, SAVREG      ;SAVE REGISTERS
615 002714' 004567 001320      JSR      RS, STATAT    ;STORE DEVICE REG CONTENTS
616 002720' 175514                .WORD    ISTAT-
617 002722' 005267 175552      INC      RICNT
618 002726' 004767 001266      JSR      PC, SUPTAD    ;SET INTERNAL PTRS
619 002732' 016401 000002      MOV      2(R4), R1     ;GET DATA FROM RBUF
620 002736' 010102                MOV      R1, R2        ;SAVE IN R2
621 002740' 000301                SWAB    R1
622 002742' 042701 177760      BIC      #177760, R1   ;FILTER OUT OTHER BITS
623 002746' 010167 000334      MOV      R1, UNITNM   ;SAVE UNIT NUMBER
624 002752' 006301                ASL     R1
625 002754' 006301                ASL     R1              ;USE AS TABLE INDEX
626 002756' 010703                MOV     PC, R3
627 002760' 062703 177366      ADD     #RCVTBL-..F3  ;POINT R3 AT TBL ENTRY
628 002764' 060103                ADD     R1, R3        ;ADD INDEX
629 002766' 005763 000002      TST     2(R3)         ;TEST BYTE COUNT
630 002772' 001451                BEQ     RTERM         ;BRANCH IF ZERO
631 002774' 010701                MOV     PC, R1
632 002776' 062701 175464      ADD     #BYRD+2-..R1
633 003002' 062711 000001      ADD     #1 (R1)
634 003006' 005541                ADC     -(R1)
635 003010' 005067 177330      CLR     ERRFLG
636 003014' 032702 010000      BIT     #10000, R2    ;TEST FOR PARITY ERROR
637 003020' 001405                BEQ     NOPERR        ;BRANCH IF NOT
638 003022' 005267 175462      INC     PARERR        ;OTHERWISE INCR COUNT
639 003026' 152767 000001 177310 BISH    #1, ERRFLG        ;REMEMBER PARITY ERROR
640 003034' 032702 020000      BIT     #20000, R2    ;TEST FOR FRAMING ERROR
641 003040' 001405                BEQ     NOFERR        ;BRANCH IF NOT
642 003042' 005267 175440      INC     FRAMERR       ;OTHERWISE INCR COUNT
643 003046' 152767 000002 177270 BISH    #2, ERRFLG        ;REMEMBER FRAMING ERROR
644 003054' 032702 040000      BIT     #40000, R2    ;TEST FOR OVERRUN ERROR
645 003060' 001405                BEQ     NOOERR        ;BRANCH IF NOT
646 003062' 005267 175416      INC     OVERRUN       ;OTHERWISE INCR COUNT
647 003066' 152767 000004 177250 BISH    #4, ERRFLG        ;REMEMBER OVERRUN ERROR
648 003074' 110201                MOV     R2, R1
649 003076' 012300                MOV     (R3)+, RD
650 003100' 004777 174774      JSR     PC, PUTBYT    ;PUT BYTE IN MEM
651 003104' 005263 177776      INC     -2(R3)        ;INCREMENT ADDRESS
652 003110' 005313                DEC     (R3)          ;DECREMENT BYTE COUNT
653 003112' 001401                BEQ     RTERM         ;TERMINATE IF BC ZERO
654 003114' 000670                BR     INTXT
655 003116' 010701                RTERM: MOV     PC, R1
656 003120' 062701 175342      ADD     #BYRD+2-..R1
657 003124' 011167 174670      MOV     (R1), SIZE    ;UPDATE ACTUAL BYTES XFERRED
658 003130' 012701 000001      MOV     #1, R1
659 003134' 000302                SWAB    R2
660 003136' 042702 177760      BIC     #177760, R2   ;FILTER ALL BUT LINE NBR
661 003142' 105702                RTRMLP: TST    R2
662 003144' 001403                BEQ     STRSCN
663 003146' 006301                ASL     R1            ;SET BIT AS PER LINE NBR
664 003150' 005302                DEC     R2
665 003152' 001373                BNE     RTRMLP
666 003154' 040167 177162      STRSCN: BIC    R1, RCR
667 003160' 005767 177156      TST     RCR

```

|     |         |        |        |        |         |       |                    |  |                            |
|-----|---------|--------|--------|--------|---------|-------|--------------------|--|----------------------------|
| 668 | 003164' | 001401 |        |        |         | BEG   | STOPRD             |  | :YES - STOP ALL READS      |
| 669 | 003166' | 000643 |        |        |         | BR    | INTEXT             |  | :RETURN FROM INTERRUPT     |
| 670 | 003170' | 042767 | 020000 | 174604 | STOPRD: | BIC   | #RD8SY,FLAGWD      |  | :RESET READ BUSY           |
| 671 | 003176' | 042714 | 000101 |        |         | BIC   | #101,(R4)          |  | :RESET READ & READ INT EBL |
| 672 | 003202' | 004767 | 001012 |        |         | JSR   | PC,SUPTAD          |  |                            |
| 673 | 003206' | 032714 | 040000 |        |         | BIT   | #40000,(R4)        |  | :TEST IF WRITE STILL UP    |
| 674 | 003212' | 001003 |        |        |         | BNE   | COMBER             |  | :IF YES-GO COMBINE ERRORS  |
| 675 | 003214' | 042763 | 000010 | 000000 |         | BIC   | #W14IOT,PFLGWD(R3) |  | :RESET WAIT FOR IOT        |
| 676 | 003222' | 032763 | 000400 | 000002 | COMBER: | BIT   | #DOERCK,POPSW(R3)  |  | :TEST DONT ERROR CK BIT    |
| 677 | 003230' | 001000 |        |        |         | BNE   | RERVEC             |  | :BRANCH IF SET             |
| 678 | 003232' | 052767 | 000002 | 174542 | RERVEC: | BIS   | #CLR VCT,FLAGWD    |  | :SET CLR RD VECT REQUEST   |
| 679 | 003240' | 000167 | 177432 |        |         | JMP   | INTEXT             |  | :EXIT                      |
| 680 |         |        |        |        |         |       |                    |  |                            |
| 681 |         |        |        |        |         |       |                    |  |                            |
| 682 |         |        |        |        |         |       |                    |  |                            |
| 683 | 003244' | 016767 | 174556 | 000004 | RRINTV: | MOV   | IVCTAD,10\$        |  | :RESET READ VECT SUBR      |
| 684 | 003252' | 004577 | 174612 |        |         | JSR   | RS,CLRVEC          |  |                            |
| 685 | 003256' | 000000 |        |        | 10\$:   | .WORD | XXXX               |  |                            |
| 686 | 003260' | 000207 |        |        |         | RTS   | PC                 |  |                            |
| 687 |         |        |        |        |         |       |                    |  |                            |
| 688 |         |        |        |        |         |       |                    |  |                            |
| 689 | 003262' | 016767 | 174540 | 000012 | RWINTV: | MOV   | IVCTAD,10\$        |  | :RESET WRITE VECT SUBR     |
| 690 | 003270' | 062767 | 000004 | 000004 |         | ADD   | #4,10\$            |  |                            |
| 691 | 003276' | 004577 | 174566 |        |         | JSR   | RS,CLRVEC          |  |                            |
| 692 | 003302' | 000000 |        |        | 10\$:   | .WORD | XXXX               |  |                            |
| 693 | 003304' | 000207 |        |        |         | RTS   | PC                 |  |                            |
| 694 | 003306' | 000000 |        |        | JNITNM: | .WORD | 0                  |  | :JNIT NBR AT LAST REC IN*  |



# E02

MAINDEC-11-DTJJA-B  
DTDJAB.P11

DJ11 DEVICE ROUTINE FOR MPG  
DJ11 SUPPORT ROUTINES

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SEQ 0017

|     |         |        |        |               |                |                                |
|-----|---------|--------|--------|---------------|----------------|--------------------------------|
| 752 | 003450' | 000014 |        | .WORD         | 12.            |                                |
| 753 | 003452' | 004567 | 000750 | JSR           | R5,DISPST      | ;GO DISPLAY STATUS AT LAST INT |
| 754 | 003456' | 174756 |        | .WORD         | ISTAT-         |                                |
| 755 | 003460' | 004567 | 001032 | JSR           | R5,PRINT       | ;ISSUE 'CURRENTLY' MSG         |
| 756 | 003464' | 001255 |        | .WORD         | CURMSG-        |                                |
| 757 | 003466' | 000012 |        | .WORD         | 10.            |                                |
| 758 | 003470' | 004567 | 000732 | JSR           | R5,DISPST      | ;GO DISPLAY CURRENT STATUS     |
| 759 | 003474' | 174752 |        | .WORD         | CSTAT-         |                                |
| 760 | 003476' | 032704 | 000001 | DISCNT: BIT   | #1,R4          | ;DISPLAY COUNTS?               |
| 761 | 003502' | 001431 |        | BEQ           | RPTEND         | ;Y,N-RPTEND                    |
| 762 | 003504' | 012700 | 000016 | MOV           | #14,R0         | ;SET UP # OF WORDS             |
| 763 | 003510' | 010701 |        | MOV           | PC,R1          | ;SET UP ADR OF CNTS            |
| 764 | 003512' | 062701 | 174746 | ADD           | #BYRD-. ,R1    |                                |
| 765 | 003516' | 010702 |        | MOV           | PC,R2          | ;SET UP TBL ADR                |
| 766 | 003520' | 062702 | 000070 | ADD           | #REPTBL-. ,R2  |                                |
| 767 | 003524' | 012267 | 000012 | RPTLP: MOV    | (R2)+,RPTBAS   | ;MOV MSG ADR TO S/R LINKAGE    |
| 768 | 003530' | 004067 | 000432 | JSR           | R0,SAVEG       | ;SAVE ALL REG'S                |
| 769 | 003534' | 011100 |        | MOV           | (R1),R0        | ;GET CURRENT COUNT             |
| 770 | 003536' | 004577 | 174314 | JSR           | R5,ABINASC     | ;CONVERT IT TO ASCII           |
| 771 | 003542' | 000000 |        | RPTBAS: .WORD | XXXX           |                                |
| 772 | 003544' | 004067 | 000432 | JSR           | R0,RESREG      | ;RESTORE REG'S                 |
| 773 | 003550' | 005721 |        | TST           | (R1)+          | ;POINT AT NXT CNT              |
| 774 | 003552' | 005300 |        | DEC           | R0             | ;DONE ALL WORDS?               |
| 775 | 003554' | 001363 |        | BNE           | RPTLP          | ;Y,N-RPTLP                     |
| 776 | 003556' | 004567 | 000734 | JSR           | R5,PRINT       | ;GO ISSUE COUNTS MSG           |
| 777 | 003562' | 001250 |        | .WORD         | CNTSMG-        |                                |
| 778 | 003564' | 000330 |        | .WORD         | CNTSEN-CNTSMG  |                                |
| 779 | 003566' | 004567 | 000724 | RPTEND: JSR   | R5,PRINT       | ;ISSUE "END OF REPORT" MSG     |
| 780 | 003572' | 001161 |        | .WORD         | RENDMG-        |                                |
| 781 | 003574' | 177763 |        | .WORD         | -13.           |                                |
| 782 | 003576' | 004067 | 000400 | DVREX: JSR    | R0,RESREG      | ;RESTORE REGISTERS             |
| 783 | 003602' | 005725 |        | TST           | (R5)+          | ;SET UP RETURN POINT           |
| 784 | 003604' | 000205 |        | RTS           | R5             | ;EXIT IN-LINE                  |
| 785 |         |        |        |               |                |                                |
| 786 | 003606' | 000000 |        | ABBREV: .WORD | 0              |                                |
| 787 |         |        |        |               |                |                                |
| 788 |         |        |        |               |                |                                |
| 789 | 003610' | 001304 |        | REPTBL: .WORD | BCMRD-RPTBAS   |                                |
| 790 | 003612' | 001312 |        | .WORD         | BCMRD+6-RPTBAS |                                |
| 791 | 003614' | 001326 |        | .WORD         | BCMRD-RPTBAS   |                                |
| 792 | 003616' | 001334 |        | .WORD         | BCMRD+6-RPTBAS |                                |
| 793 | 003620' | 001361 |        | .WORD         | CMDCRD-RPTBAS  |                                |
| 794 | 003622' | 001374 |        | .WORD         | CMDCRD-RPTBAS  |                                |
| 795 | 003624' | 001410 |        | .WORD         | CMDCBK-RPTBAS  |                                |
| 796 | 003626' | 001425 |        | .WORD         | CMDCMS-RPTBAS  |                                |
| 797 | 003630' | 001456 |        | .WORD         | RDINMS-RPTBAS  |                                |
| 798 | 003632' | 001471 |        | .WORD         | WRINMS-RPTBAS  |                                |
| 799 | 003634' | 001524 |        | .WORD         | ERCOVR-RPTBAS  |                                |
| 800 | 003636' | 001544 |        | .WORD         | EPCFRM-RPTBAS  |                                |
| 801 | 003640' | 001563 |        | .WORD         | PAR-RPTBAS     |                                |
| 802 | 003642' | 001612 |        | .WORD         | ERCDTA-RPTBAS  |                                |

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804                                     ;DJ11: ERROR REPORT ROUTINE
805
806 003644' 004767 000004      ERRPPT: JSR   PC,ERRDIS
807 003650' 000177 174174      JMP   JOCUPGER
808 003654' 010701      ERRDIS: MOV   PC,R1                ;POINT R1 AT ERR MSG
809 003656' 062701 000222      ADD   #EMSGBF-. ,R1
810 003662' 012767 000014 000054  MOV   #12, ERMBCT
811 003670' 010700      MOV   PC,R0                ;POINT R0 AT ERR MSG TBL
812 003672' 062700 000144      ADD   #ERCCTB-. ,R0
813 003676' 105710      1$:   TSTB  (R0)
814 003700' 001416      BEQ   ERTBEN              ;BRANCH IF R0 AT TBL END
815 003702' 132067 176436      BITB  (R0)+,ERRFLG      ;TEST FOR PARTICULAR ERR
816 003706' 001003      BNE   3$                 ;BRANCH IF FOUND
817 003710' 062700 000005      2$:   ADD   #5,R0
818 003714' 000770      BR    1$
819 003716' 012702 000005      3$:   MOV   #5,R2
820 003722' 112021 000014 4$:   MOVB  (R0)+(R1)+      ;MOVE MSG CODE TO ERR MSG
821 003724' 005267 000014      INC   ERMBCT             ;BUMP BYTE COUNT
822 003730' 005302      DEC   R2
823 003732' 001373      BNE   4$
824 003734' 000760      BR    1$                 ;CHECK IF MORE
825 003736' 004567 000554      ERTBEN: JSR  RS,PRINT      ;PRINT ERROR MSG
826 003742' 000122      .WORD EMSGHD-.
827 003744' 000014      ERMBCT: .WORD 12.
828 003746' 004567 000454      ERDIRG: JSR  RS,DISPST    ;DISPLAY DEVICE REGS
829 003752' 174462      .WORD ISTAT-.
830 003754' 016300 000022      ERRSNM: MOV  PSRCST(R3),R0 ;GET ADDR OF SRC STMTS
831 003760' 111001 000004 000072  10$:  MOVB  (R0),R1           ;SAVE STMT LENGTH
832 003762' 026057      CMP   4(R0),STMT        ;ERROR OCCUR ON THIS STMT?
833 003770' 001402      BEQ   20$               ;YES - BRANCH
834 003772' 060100      ADD   R1,R0             ;POINT AT NEXT STATEMENT
835 003774' 000771      BR    10$              ;GO CK NEXT STMT
836 003776' 005720      20$:  TST  (R0)+            ;SET UP ADR OF STMT # DATA
837 004000' 010701      MOV   PC,R1             ;SET UP DATA OUTPUT ADDR
838 004002' 062701 000156      ADD   #STNUM-. ,R1
839 004006' 004577 174050      JSR   RS,JOEASC        ;CONVERT IT TO ASCII
840 004012' 012767 020040 000144  MOV   #20040,STNUM+4    ;SET 2 LOW DIGITS TO SPACES
841 004020' 004567 000472      JSR   RS,PRINT        ;ISSUE STMT # MSG
842 004024' 000124      .WORD STNMNG-.
843 004026' 177762      .WORD -14.
844 004030' 005067 176310      CLR   ERRFLG           ;CLEAR ERROR FLAG
845 004034' 000207      RTS   PC
846
847 004036' 020001 050040 051101  ERCCTB: .ASCII <001>/ PAR/ ;ERROR MSG CODE TABLE
848 004044' 020002 043040 046522      .ASCII <002>/ FRM/
849 004052' 020004 047440 051126      .ASCII <004>/ OVR/
850 004060' 000      .BYTE 0
851 004062' 004062'      .EVEN
852 004064' 000000      STMT:  .WORD 0           ;SAVED RS FOR STMT #
853 004072' 045104 030461 042440  EMSGHD: .ASCII /DJ11 ERROR: /
854 004072' 051122 051117 020072
854 004100' 000050      EMSGBF: .BLKB 40.
855 004150' 052123 047115 020124  STNMNG: .ASCII /STMT # /
856 004156' 020043
856 004160' 054130 054130  STNUM:  .ASCII /XXXXXX/

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858 .SBTTL SUBROUTINES FOR DJ11 DEVICE ROUTINE
859
860 ;SAVE REGISTERS R0 THRU R5
861
862 ;JSR R0,SAVREG S/R CALL
863
864 SAVREG: MOV R1,-(SP) ;SAVE R0 THRU R5
865 MOV R2,-(SP)
866 MOV R3,-(SP)
867 MOV R4,-(SP)
868 MOV R5,-(SP)
869 MOV R0,PC ;EXIT IN-LINE
870
871
872 ;RESTORE REGISTERS R4 THRU R5
873
874 ;JSR R0,RESREG S/R CALL
875
876 RESREG: TST (SP)+ ;RESTORE R4 THRU R0
877 MOV (SP)+,R5
878 MOV (SP)+,R4
879 MOV (SP)+,R3
880 MOV (SP)+,R2
881 MOV (SP)+,R1
882 RTS R0 ;EXIT IN-LINE
883
884
885 ;SET PROGRAM* JG TABLE ADR IN R3
886
887 ;JSR PC,SUPTAD S/R CALL
888
889 SUPTAD: MOV PC,R3 ;SET UP LOCATION ZERO ADR
890 ADD #LOCZ--,R3
891 SUB -2(R3),R3 ;SUBTRACT PROG TBL LENGTH
892 MOV DREGAD,R4 ;PUT DEV REG ADR IN R4
893 RTS PC ;EXIT IN-LINE
894
895
896 ;STORE DEVICE'S STATUS REGISTERS
897
898 ;JSR R5,STSTAT S/R CALL
899 ;.WORD STADR- REL STORAGE ADR
900 ;DESTROYS R0,R1,R2
901
902 STSTAT: MOV DREGAD,R1
903 BIC #2000,(R1) ;SELECT TCR
904 MOV R5,R0 ;GET REL STORAGE ADR & MAKE
905 ADD (R5)+,R0 ;IT ABSOLUTE
906 MOV #DVREGS-DVREGS/6,-(SP) ;GET # OF REG'S TO STORE
907 MOV PC,R2 ;GET ADR OF 1ST REG DISPLACEMENT
908 ADD #DVREGS+4--,R2
909 10$: MOV (R2),R1 ;GET REG DISPLACEMENT
910 ADD DREGAD,R1 ;ADD IN REG'S BASE ADR
911 MOV (R1),(R0)+ ;STORE REGISTER VALUE
912 ADD #6,R2 ;POINT AT NXT DISPLACEMENT
913 DEC (SP) ;DECR REG CNT

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914 004304' 001370      BNE      10$      ;DONE ALL? (Y,N-10$)
915 004306' 005726      TST      (SP)+    ;CLEAN UP THE STACK
916 004310' 162700      SUB      #4,RO
917 004314' 016701      MOV      DREGADR,R1
918 004320' 052711      BIS      #2000,(R1) ;SELECT BCR
919 004324' 016110      MOV      4(R1),(R0) ;STORE BCR CONTENTS
920 004330' 042711      BIC      #2000,(R1) ;SELECT TCR
921 004334' 000205      RTS
922
923
924                      ;DISPLAY CURRENT UNIT #
925
926                      ;JSR      PC,DISUNM      S/R CALL
927                      ;R3 MUST CONTAIN PROG TBL ADR
928                      ;DESTROYS R0,R1,R2
929
930 004336' 012767      000022      000056      DISUNM: MOV      #18,DISUML ;INIT TO NORM MSG LNTH
931 004340' 116300      000035      MOV      PCURDV(R3),R0 ;GET CURRENT UNIT #
932 004350' 020027      000020      CMP      R0,#15. ;VALID UNIT #?
933 004354' 101007      BHI      DISUIV ;Y,N-DISUIV
934 004356' 004577      173476      JSR      R5,28TASLZ ;CONVERT # TODECIMAL ASCII
935 004362' 000426      .WORD   UNASCI-
936 004364' 016767      000424      000416      MOV      UNASCI+4,UNASCI ;MOVE ASCII # TO 1ST TWO DIGITS
937 004372' 000410      BP
938 004374' 012767      000026      000020      DISUIV: MOV      #22,DISUML ;SET UP ERR COND MSG LNTH
939 004402' 042700      177400      BIC      #177400,R0 ;RESET HIGH BYTE
940 004406' 004577      173444      JSR      R5,28BINASC ;CONVERT BINARY TO ASCII
941 004412' 000376      .WORD   UNASCI-
942 004414' 004567      000076      DISUPR: JSR      R5,PRINT ;GO ISSUE UNIT # MSG
943 004420' 000350      .WORD   UNITMG-
944 004422' 000020      DISUML: .WORD   16.
945 004424' 000207      RTS      PC ;EXIT INLINE
946
947
948                      ;TAILOR STATUS MSG & PRINT IT
949
950                      ;JSR      R5,DISPST      S/R CALL
951                      ;WORD   STATADR-      REL ADR OF STATUS DATA
952                      ;DESTROYS R0,R1,R2
953
954 004426' 010502      DISPST: MOV      R5,R2 ;GET REL DATA ADR
955 004430' 062502      ADD      (R5)+,R2 ;MAKE IT ABS
956 004432' 010701      MOV      PC,R1 ;SET UP ADR OF REG NAMES IN ASCII
957 004434' 062701      173462      ADD      #DVRREGS-,R1
958 004440' 012700      000005      MOV      #DVRREG-DVRREGS/6,R0 ;GET # OF REGISTERS TO DISPLAY
959 004444' 012167      00034E      10$: MOV      (R1)+,DVRGMG ;MOVE REG NAME TO MSG
960 004450' 012167      000344      MOV      (R1)+,DVRGMG+2
961 004454' 005721      TST      (R1)+ ;BYPASS DISP VALUE
962 004456' 004067      177504      JSR      R0,SAVREG ;SAVE REG'S R0 - R5
963 004462' 011200      MOV      (R2),R0 ;GET REG'S STORED VALJE
964 004464' 004577      173366      JSR      R5,28BINASC ;CONVERT IT TO ASCII
965 004470' 000334      .WORD   DVRGDT-
966 004472' 004567      000020      JSR      R5,PRINT ;PRINT THE STATUS MSG
967 004476' 000320      .WORD   DVRGMG-
968 004500' 000014      .WORD   12.
969 004502' 004067      177474      JSR      R0,RESREG ;RESTORE R0 - R4

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MAINDEC-11-DTDA-B DJ11 DEVICE ROUTINE FOR MPG  
DTDJAB.P11 SUBROUTINES FOR DJ11 DEVICE ROUTINE

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SEQ 0021

970 004506' 005722  
971 004510' 005300  
972 004512' 001354  
973 004514' 000205

TST  
DEC  
BNE  
RTS

(R2)+  
R0  
10\$  
R5

:POINT AT NXT REG VALUE  
:DECR REG CNT  
:DONE ALL? (Y,N-10\$)  
:EXIT IN-LINE

```

;ISSUE MSG TO LIST DEVICE
;JSR   RS,PRINT           S/R CALL
;.WORD MSGADR-.         REL ADR OF MSG
;.WORD BYTCNT           MSG BYTE CNT (IF NEGATIVE,
                        RESET PRT DEV DEDICATED.)
;R3 = PROG TBL ADR
;R4 = FLAGWORD -- IF NEGATIVE, USE CMND MODE PRINT
;DESTROYS R0,R1,R2

975                                     ;ISSUE MSG TO LIST DEVICE
976
977                                     ;JSR   RS,PRINT           S/R CALL
978                                     ;.WORD MSGADR-.         REL ADR OF MSG
979                                     ;.WORD BYTCNT           MSG BYTE CNT (IF NEGATIVE,
980                                     ;                        RESET PRT DEV DEDICATED.)
981                                     ;R3 = PROG TBL ADR
982                                     ;R4 = FLAGWORD -- IF NEGATIVE, USE CMND MODE PRINT
983                                     ;DESTROYS R0,R1,R2
984
985 004F      J10500      PRINT:  MOV   RS,R0           ;GET MSG ADR & MAKE IT ABS
986 004      CU'      062500      ADD   (RS)+,R0
987 004522'   012501      MOV   (RS)+,R1           ;GET BYTE COUNT
988 004524'   005704      TST   R4           ;USE CMND MODE PRINT?
989 004526'   100030      BPL   40$           ;Y,N-40$
990 004530'   010702      MOV   PC,R2           ;SET UP LINK INFO ADR
991 004532'   062702      ADD   #20$,R2
992 004536'   160200      SUB   R2,R0           ;MAKE MSG ADR REL
993 004540'   010022      MOV   R0,(R2)+      ;STORE MSG ADR
994 004542'   010112      MOV   R1,(R2)       ;STORE MSG'S BYTE COUNT
995 004544'   100001      BPL   10$           ;CNT NEG? (Y,N-10$)
996 004546'   005412      NEG   (R2)          ;MAKE IT POSITIVE
997 004550'   016367      000006 000144 10$:  MOV   PASCIN(R3),PROGNM ;STORE PROG'S # IN MSG
998 004556'   004577      173272      JSR   RS,@CLIST    ;ISSUE PROG #
999 004562'   000136      .WORD PNMMSG-.
1000 004564'   000005      .WORD 5
1001 004566'   004577      173262      JSR   RS,@CLIST    ;ISSUE MSG SPECIFIED
1002 004572'   000000      20$:  .WORD XXXX
1003 004574'   000000      .WORD XXXX
1004 004576'   004577      173252      JSR   RS,@CLIST    ;ISSUE A <CR> & <LF>
1005 004602'   000302      .WORD CRLF-.
1006 004604'   000002      .WORD 2
1007 004606'   000410      BR    PRTEX        ;GO TO EXIT
1008 004610'   010067      000010 40$:  MOV   R0,50$       ;STORE MSG'S ABS ADR
1009 004614'   010167      000006      MOV   R1,60$       ;STORE ITS BYTE CNT
1010 004620'   004577      173226      JSR   RS,@ULIST    ;GO TO MPG TO ISSUE THE MSG
1011 004624'   000000      50$:  .WORD XXXX
1012 004626'   000000      60$:  .WORD XXXX
1013 004630'   000205      PRTEX: RTS   R5           ;EXIT IN-LINE
1014
1015
1016                                     ;TEST READ INTERRUPT VECTOR S/R
1017
1018 004632'   016767      173170 000010 TRVECT: MOV   IVCTAD,20$ ;GET CURR INT VECT ADR
1019 004640'   016346      00C004      MOV   PFWADR(R3),-(SP) ;STORE FLGWD ADR TO IDENTIFY ME
1020 004644'   004577      173222      JSR   RS,@TSTVEC   ;DO I HAVE VECTOR CONTROL?
1021 004650'   000000      20$:  .WORD XXXX           ;MPG WILL TELL ME SINCE I CAN'T
1022 004652'   176036      .WORD RDINT-.       ;GET AT LOWER MEM IF MEM MGMT
1023 004654'   000401      BR    TRVEXT        ;BR IF I DONT HAVE CONTROL
1024 004656'   005725      TST   (R0)+         ;BYPASS BR INST IN S/R CALL
1025 004660'   000205      TRVEXT: RTS   R5           ;EXIT IN-LINE
1026
1027                                     ;TEST WRITE INTERRUPT VECTOR S/R
1028
1029 004662'   016767      173140 000016 TWVECT: MOV   IVCTAD,20$ ;GET CURR INT VECT ADR
1030 004670'   062767      000004 000010      ADD   #4,20$        ;ADJUST FOR WRITE INT

```

# K02

MAINDEC-11-DTJJA-B DJ11 DEVICE ROUTINE FOR MPG  
DTDJAB.P11 SUBROUTINES FOR DJ11 DEVICE ROUTINE

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SEQ 0023

|      |         |        |        |         |                  |                                 |
|------|---------|--------|--------|---------|------------------|---------------------------------|
| 1031 | 004676' | 016346 | 000004 | MOV     | PFWADR(R3),-(SP) | :STORE FLGWD ADR TI IDENTIFY ME |
| 1032 | 004702' | 004577 | 173164 | JSR     | R5,@TSTVEC       | :DO I HAVE VECTOR CONTROL?      |
| 1033 | 004706' | 000000 |        | 20\$:   | .WORD            | XXXX                            |
| 1034 | 004710' | 175536 |        |         | .WORD            | WRINT-                          |
| 1035 | 004712' | 000401 |        | BR      | TWVEXT           | :BR IF I DONT HAVE CONTROL      |
| 1036 | 004714' | 005725 |        | TST     | (R5)+            | :BYPASS BR INST IN S/R CALL     |
| 1037 | 004716' | 000205 |        | TWVEXT: | RTS              | :RETURN IN-LINE                 |
| 1038 |         |        |        |         |                  |                                 |
| 1039 |         |        |        |         |                  |                                 |

```

1041 .SBTTL MESSAGE STORAGE AREA
1042
1043
1044 .NLIST BEX
1045
1046 .EVEN
1047 004720' 021520 PNMMSG: .ASCII /P#/
1048 004722' 054130 011 PROGM: .ASCII /XX/<011>
1049 004725' 101 020124 040514 ATMSG: .ASCII /AT LAST INT:/
1050 004741' 103 051125 042522 CURMSG: .ASCII /CURRENTLY:/
1051 004753' 105 042116 047440 RENDMG: .ASCII /END OF REPORT/
1052
1053 004770' 025052 025052 042040 UNITMG: .ASCII /**** DJ11 UNIT: /
1054 .EVEN
1055 005010' 054130 054130 054130 UNASCI: .ASCII /XXXXXX/
1056 005016' 054130 054130 020075 DVRGMG: .ASCII /XXXX= /
1057 005024' 054130 054130 054130 DVRGDT: .ASCII /XXXXXX/
1058
1059 005032' 054502 042524 035123 CNTSMG: .ASCII /BYTES: RD= /
1060 005046' 054130 054130 054130 BCMRD: .ASCII /XXXXXXXXXXXXX WR= /
1061 005070' 054130 054130 054130 BCMWR: .ASCII /XXXXXXXXXXXXX/
1062 005104' 005015 CRLF: .ASCII <015><012>
1063
1064 005106' 041411 047115 051504 .ASCII <011>/CMNDS: RD= /
1065 005123' 130 054130 054130 CMDCRD: .ASCII /XXXXXX WR= /
1066 005136' 054130 054130 054130 CMDCWR: .ASCII /XXXXXX BRK= /
1067 005152' 054130 054130 054130 CMDCBK: .ASCII /XXXXXX MISC= /
1068 005167' 130 054130 054130 CMDCMS: .ASCII /XXXXXX/<015><012>
1069 005177' 011 047111 042524 .ASCII <011>/INTERRUPTS: PD= /
1070 005220' 054130 054130 054130 RDINMS: .ASCII /XXXXXX WR= /
1071 005233' 130 054130 054130 WRINMS: .ASCII /XXXXXX/<015><012>
1072 005243' 011 051105 047522 ERRMSG: .ASCII <011>/ERRORS: OVERRUN= /
1073 005266' 054130 054130 054130 ERCOVR: .ASCII /XXXXXX FRAMING= /
1074 005306' 054130 054130 054130 ERCFRM: .ASCII /XXXXXX PARITY= /
1075 005325' 130 054130 054130 ERCPAR: .ASCII /XXXXXX/<015><012>
1076 005335' 011 040504 040524 .ASCII <011>/DATA ERRORS = /
1077 005354' 054130 054130 054130 ERCDTA: .ASCII /XXXXXX/
1078 005362' CNTSEN=
1079 .EVEN
1080
1081 .LIST BEX
1082
1083 005362' DVREND= .

```

# M02

MAINDEC-11-DTDA-B  
DTDJAB.P11

DJ11 DEVICE ROUTINE FOR MPG  
FORMATS FOR PROGRAM & DEVICE ROUTINE TABLES

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SEQ 0025

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1085          .SBTTL FORMATS FOR PROGRAM & DEVICE ROUTINE TABLES
1086
1087          ; PROGRAM TABLE FORMAT
1088
1089          000242      PTLGTH= 162.      ;PROGRAM TABLE LENGTH - NON MEM MGMNT VERSION OF MPG
1090
1091          ;(PTLGTH= 212. ;PROGRAM TABLE LENGTH - MEM MGMNT VERSION OF MPG)
1092
1093          000000      PFLGWD= +0.      ;PROGRAM FLAG WORD - 1 WORD
1094
1095          000002      URSTOP= 2        ; 1 = USER HAS STOPPED THIS PROGRAM
1096          000004      ERSTOP= 4        ; 1 = AN ERROR HAS STOPPED THIS PROGRAM
1097          000010      WT4IOT= 10       ; 1 = WAITING FOR I/O TERMINATION
1098          000020      CTPRIO= 20       ; 1 = CONSOLE OR PRINTER I/O IN PROGRESS
1099          000040      SETDED= 40       ; 1 = THIS PROG SET THE PRT DEV DEDICATED FLAG
1100          000100      OCPRES= 100      ; 1 = OBJ CODE IS PRESENT
1101          000200      USEUBM= 200     ; 1 = THIS PROG USES THE UNIBUS MAP (MEM MGMNT ONLY)
1102          100000      ACTIVE= 100000   ; 1 = PROGRAM IS ACTIVE (SPECIFIED FOR EXECUTION)
1103
1104          000002      POPSW= +2.      ;PROGRAM'S OPERATION SWITCHES - 1 WORD
1105
1106          100000      STONER= 100000   ; 1 = STOP PROG EXECUTION UPON ERROR
1107          040000      CYCPRG= 40000    ; 1 = CYCLE PROGRAM (ON CURRENT DEVICE)
1108          020000      PRONER= 20000    ; 1 = DO NOT PRINT ON ERROR
1109          010000      BIT12= 10000     ; 0 = NOT USED
1110          004000      BIT11= 4000     ; 0 = NOT USED
1111          002000      CYCOVL= 2000    ; 1 = CYCLE THE DEVICE LIST
1112          001000      GTNXTD= 1000    ; 1 = CYCLE ON SAME DEVICE UPON ERROR
1113          000400      DOERCK= 400     ; 1 = DON'T DO ERROR CHECKING
1114          000200      SPOPER= 200     ; 1 = DEVICE SPECIAL OPERATION
1115          000100      BIT6= 100       ; 0 = NOT USED
1116          000040      DOIOT= 40       ; 1 = DO NOT PERFORM I/O TIMEOUT
1117          000020      AUTORP= 20      ; 1 = DO NOT AUTOMATICALLY DISPLAY COUNTS
1118          000010      AURPEP= 10      ; 1 = AUTO DISPLAY COUNTS AT END OF FINAL PASS ONLY
1119          000004      HSKPEP= 4       ; 1 = HOUSEKEEP COUNTS ONLY AT RUN COMMAND
1120          000002      PFBBOV= 2      ; 1 = PRINT FIRST BAD BYTE ONLY ON VERIFY
1121          000001      NOCOMP= 1       ; 1 = DO NOT PRINT PROG COMPLETED MSG
1122
1123          000004      PFWADR= +4.      ;*;PROGRAM FLAGWORD ADDRESS - 1 WORD
1124
1125          000006      PASCIN= +6.      ;PROGRAM'S NUMBER IN ASCII - 1 WORD
1126
1127          000010      PNAME= +8.      ;PROGRAM'S NAME IN ASCII - 6 BYTES
1128
1129          000016      PRDIOA= +14.     ;ADDRESS OF READ I/O AREA - 1 WORD
1130
1131          000020      PWRIOA= +16.     ;ADDRESS OF WRITE I/O AREA - 1 WORD
1132
1133          000022      PSRCST= +18.     ;SOURCE STATEMENTS START ADDRESS - 1 WORD
1134
1135          000024      POBJST= +20.     ;OBJECT CODE START ADDRESS - 1 WORD
1136
1137          000026      PLNGTH= +22.     ;PROG AREA LENGTH (OBJ END MINUS PROG TBL START) - 1 WORD
1138
1139          000030      PTOCNT= +24.     ;I/O TIMEOUT COUNT - 1 WORD
1140

```

|      |        |               |   |
|------|--------|---------------|---|
| 1141 | 000032 | PMDLCD= +26.  | ;DEV ROUT MODEL # CODE - 1 WORD                     |
| 1142 |        |               |   |
| 1143 | 000034 | PDPNTR= +28.  | ;CURRENT DEVICE NUMBER POINTER - 1 BYTE             |
| 1144 |        |               |   |
| 1145 | 000035 | PCURLV= +29.  | ;CURRENT DEVICE # - 1 BYTE                          |
| 1146 |        |               |   |
| 1147 | 000036 | PDNUMS= +30.  | ;DEVICE NUMBERS - 16 BYTES                          |
| 1148 |        |               |   |
| 1149 | 000056 | PTEMJ= +46.   | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1150 |        |               |   |
| 1151 | 000060 | PTEM1= +48.   | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1152 |        |               |   |
| 1153 | 000062 | PTEM2= +50.   | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1154 |        |               |   |
| 1155 | 000064 | PTEM3= +52.   | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1156 |        |               |   |
| 1157 | 000066 | PTEM4= +54.   | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1158 |        |               |   |
| 1159 | 000070 | PTEM5= +56.   | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1160 |        |               |   |
| 1161 | 000072 | PTEM6= +58.   | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1162 |        |               |   |
| 1163 | 000074 | PTEM7= +60.   | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1164 |        |               |   |
| 1165 | 000076 | PTEM8= +62.   | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1166 |        |               |   |
| 1167 | 000100 | PTEM9= +64.   | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1168 |        |               |   |
| 1169 | 000102 | PTEM10= +66.  | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1170 |        |               |   |
| 1171 | 000104 | PTEM11= +68.  | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1172 |        |               |   |
| 1173 | 000106 | PTEM12= +70.  | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1174 |        |               |   |
| 1175 | 000110 | PTEM13= +72.  | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1176 |        |               |   |
| 1177 | 000112 | PTEM14= +74.  | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1178 |        |               |   |
| 1179 | 000114 | PTEM15= +76.  | ;USER PROGRAM TEMPORARY STORAGE - 1 WORD            |
| 1180 |        |               |   |
| 1181 | 000116 | PNBR= +78.    | ;NUMBER OF BYTES TO TRANSFER ON MOVE (NBR) - 1 WORD |
| 1182 |        |               |   |
| 1183 | 000120 | PSRC= +80.    | ;DATA SOURCE ADDRESS ON MOVE (SRC) - 1 WORD         |
| 1184 |        |               |   |
| 1185 | 000122 | PDST= +82.    | ;DATA DESTINATION ADDRESS ON MOVE (DST) - 1 WORD    |
| 1186 |        |               |   |
| 1187 | 000124 | PSTKCT= +84.  | ;# OF WORDS (X 2) SAVED OFF STACK - 1 WORD          |
| 1188 |        |               |   |
| 1189 | 000126 | PSTKSV= +86.  | ;STACK WORDS STORAGE AREA - 30 WORDS                |
| 1190 |        |               |   |
| 1191 | 000222 | PSVREG= +146. | ;USER'S R0 THRU R5 REGISTERS STORAGE AREA - 6 WORDS |
| 1192 |        |               |   |
| 1193 | 000236 | PUSRPC= +158. | ;USER'S CURRENT PROGRAM COUNTER - 1 WORD            |
| 1194 |        |               |   |

# B03

MAINDEC-11-DTQJA-B  
DTQJAB.F11

DJ11 DEVICE ROUTINE FOR MPG  
FORMATS FOR PROGRAM & DEVICE ROUTINE TABLES

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SEQ 0027

1196  
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;FOLLOWING ENTRIES (PRDIOX THRU PUBMAP) ARE ONLY IN MEM MGMT VERSION

;(PRDIOX= +160. ;18/22 BIT ABSOLUTE ADDRESS OF READ I/O AREA - 2 WORDS)

;(PRDIOV= +164. ;18 BIT VIRTUAL ADDRESS OF READ I/O AREA - 2 WORDS)

;(PWRIOX= +168. ;18/22 BIT ABSOLUTE ADDRESS OF WRITE I/O AREA - 2 WORDS)

;(PWRIOV= +172. ;18 BIT VIRTUAL ADDRESS OF WRITE I/O AREA - 2 WORDS)

;(PUPARS= +176. ;STORAGE AREA FOR USER'S PAP'S 0 THRU 7 - 8 WORDS)

;(PJPDRS= +192. ;STORAGE AREA FOR USER'S PDR'S 0 THRU 7 - 8 WORDS)

;(PUBMAP= +208. ;15\* UNIBUS MAP REG # AND # OF REGS USED - 1 WORD)

;END OF MEM MGMT ONLY ENTRIES

000240

PTSIZE= +160. ;PROGRAM TABLE SIZE IN BYTES - 1 WORD - NON MEM MGMT

;(PTSIZE= +210. ;PROGRAM TABLE SIZE IN BYTES - 1 WORD - MEM MGMT VERSION

000242

PTEND= +162. ;END OF PROGRAM TABLE - NON MEM MGMT VERSION

;(PTEND= +212. ;END OF PROGRAM TABLE - MEM MGMT VERSION

: DEVICE ROUTINE TABLE

1233  
1234  
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|        |               |   |
|--------|---------------|---|
| 000116 | DRTLTH= 78.   | ;DEVICE ROUTINE TABLE LENGTH                              |
| 000000 | DEVRSZ= +0.   | ;DEVICE ROUTINE SIZE IN BYTES - 1 WORD                    |
| 000002 | DEVFWD= +2.   | ;DEVICE ROUTINE FLAGWORD - 1 WORD                         |
| 000004 | DEVIW1= +4.   | ;DEVICE INTERFACE WORD # 1 - 1 WORD                       |
| 000006 | DEVIW2= +6.   | ;DEVICE INTERFACE WORD # 2 - 1 WORD                       |
| 000010 | DEVIW3= +8.   | ;DEVICE INTERFACE WORD # 3 - 1 WORD                       |
| 000012 | DEVIW4= +10.  | ;DEVICE INTERFACE WORD # 4 - 1 WORD                       |
| 000014 | DEVIW5= +12.  | ;DEVICE INTERFACE WORD # 5 - 1 WORD                       |
| 000016 | DEVIW6= +14.  | ;DEVICE INTERFACE WORD # 6 - 1 WORD                       |
| 000020 | DEVIW7= +16.  | ;DEVICE INTERFACE WORD # 7 - 1 WORD (SIZE)                |
| 000022 | DEVIW8= +18.  | ;DEVICE INTERFACE WORD # 8 - 1 WORD (ERR)                 |
| 000024 | DEVDR= +20.   | ;DEVICE REGISTERS ADDRESS - 1 WORD                        |
| 000026 | DEVIVA= +22.  | ;DEVICE INTERRUPT VECTOR ADDRESS - 1 WORD                 |
| 000030 | DEVRRPS= +24. | ;DEVICE READ PROCESSOR STATUS WORD (BUS REQ) - 1 WORD     |
| 000032 | DEVWRPS= +26. | ;DEVICE WRITE PROC STATUS WORD (BUS REQ) - 1 WORD         |
| 000034 | DHMPAD= +28.  | ;DEVICE ROUT HOUSEKEEPING ROUT REL ENTRY ADR - 1 WORD     |
| 000036 | DERPAD= +30.  | ;DEVICE ROUT REPORT ROUT REL ENTRY ADR - 1 WORD           |
| 000040 | DKILAD= +32.  | ;DEVICE ROUT KILL ROUTINE REL ENTRY ADR - 1 WORD          |
| 000042 | DECTAD= +34.  | ;DEVICE ROUT ERROR COUNTER REL ADR - 1 WORD               |
| 000044 | DTOED= +36.   | ;DEVICE ROUT TIMEOUT ERR ROUT REL ENTRY ADR - 1 WORD      |
| 000046 | DEVI08= +38.  | ;DEVICE I/O BUSY BRANCH ADDRESS (CIOBSY) - 1 WORD         |
| 000050 | DEVDER= +40.  | ;DEVICE ERROR BRANCH ADDRESS (CUPGER) - 1 WORD            |
| 000052 | DVJPR= +42.   | ;USER MODE PRINT BRANCH ADDRESS (ULIST) - 1 WORD          |
| 000054 | DVCPRT= +44.  | ;CMND MODE PRINT BRANCH ADDRESS (CLIST) - 1 WORD          |
| 000056 | DEVBT= +46.   | ;CONVERT BINARY TO ASCII BR ADR (BINASC) - 1 WORD         |
| 000060 | DVBTDA= +48.  | ;CONVERT BINARY TO DECIMAL ASCII BR ADR (BTASLZ) - 1 WORD |

|      |        |              |  |
|------|--------|--------------|--|
| 1278 | 000062 | DVPDTA= +50. | ; CONVERT PACKED DECIMAL TO ASCII BR ADR (DECASC) - 1 WORD |
| 1279 |        |              |  |
| 1280 | 000064 | DVSFW= +52.  | ; MPG SYSTEM FLAGWORD ADDRESS (CSYSFW) - 1 WORD            |
| 1281 |        |              |  |
| 1282 | 000066 | DVSVEC= +54. | ; SET INTERRUPT VECTOR BR ADR (SETVEC) - 1 WORD            |
| 1283 |        |              |  |
| 1284 | 000070 | DVCVEC= +56. | ; CLEAR INTERRUPT VECTOR BR ADR (CLRVEC) - 1 WORD          |
| 1285 |        |              |  |
| 1286 | 000072 | DVTVEC= +58. | ; TEST INTERRUPT VECTOR BR ADR (TSTVEC) - 1 WORD           |
| 1287 |        |              |  |
| 1288 | 000074 | DVRINT= +60. | ; RETURN FROM INTERRUPT BR ADR (RTNINT) - 1 WORD           |
| 1289 |        |              |  |
| 1290 | 000076 | DVGETB= +62. | ; GET DATA BYTE BR ADR (GETBYT) - 1 WORD                   |
| 1291 |        |              |  |
| 1292 | 000100 | DVPUTB= +64. | ; PUT DATA BYTE BR ADR (PUTBYT) - 1 WORD                   |
| 1293 |        |              |  |
| 1294 | 000102 | DEVSTP= +66. | ; DEVICE ROUT REL SYMBOL TABLE POINTER - 1 WORD            |
| 1295 |        |              |  |
| 1296 | 000104 | DEVETP= +68. | ; DEVICE ROUT REL ENTRY TABLE POINTER - 1 WORD             |
| 1297 |        |              |  |
| 1298 | 000106 | DVPTEP= +70. | ; PACK TABLE EXTEN. REL POINTER - 1 WORD                   |
| 1299 |        |              |  |
| 1300 | 000110 | DVVTEP= +72. | ; VECTOR TABLE EXTEN. REL POINTER - 1 WORD                 |
| 1301 |        |              |  |
| 1302 | 000112 | DVCTEP= +74. | ; COMPILER TBL EXTEN. REL POINTER - 1 WORD                 |
| 1303 |        |              |  |
| 1304 | 000114 | DVIWSP= +76. | ; DEVICE INTERFACE WORD SYMBOL TBL REL POINTER - 1 WORD    |
| 1305 |        |              |  |
| 1306 | 000116 | DRTEND= +78. | ; END OF DEVICE ROUTINE TABLE                              |
| 1307 |        |              |  |
| 1308 |        |              |  |
| 1309 |        |              |  |
| 1310 | 000001 | .END         |  |

E03

MAINDEC-11-OTDJA-B  
OTDJA8.P11

DJ11 DEVICE ROUTINE FOR MPG  
SYMBOL TABLE

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SEQ 0030

|         |         |     |         |         |         |         |     |         |          |     |         |          |     |
|---------|---------|-----|---------|---------|---------|---------|-----|---------|----------|-----|---------|----------|-----|
| ABBREV  | 003606R | 002 | DEVORA= | 000024  | DVRGDT  | 005024R | 002 | LNUM    | 002706R  | 002 | PTM2 =  | 000062   |     |
| ACTIVE= | 100000  |     | DEVETP= | 000104  | DVRGMG  | 005016R | 002 | LNWAIT  | 000432R  | 002 | PTM3 =  | 000064   |     |
| ADDR    | 002334R | 002 | DEVFMD= | 000002  | DVRINT= | 000074  |     | LOADRC  | 001154R  | 002 | PTM4 =  | 000066   |     |
| ATMSG   | 004725R | 002 | DEVI08= | 000046  | DVSFMD= | 000064  |     | LOADTC  | 001522R  | 002 | PTM5 =  | 000070   |     |
| AURPEP= | 000010  |     | DEVIVA= | 000026  | DVSVEC= | 000066  |     | LOCZ    | 000300R  | 002 | PTM6 =  | 000072   |     |
| AUTORP= | 000020  |     | DEVIW1= | 000004  | DVTVEC= | 000072  |     | LSTATS  | 000432R  | 002 | PTM7 =  | 000074   |     |
| BCMRD   | 005046R | 002 | DEVIW2= | 000006  | DVUPRT= | 000052  |     | LWAIT   | 000432R  | 002 | PTM8 =  | 000076   |     |
| BCMR    | 005070R | 002 | DEVIW3= | 000010  | DVVTEP= | 000110  |     | MISCNT  | 000476R  | 002 | PTM9 =  | 000100   |     |
| BCR     | 000442R | 002 | DEVIW4= | 000012  | EMSGBF  | 004100R | 002 | MMVER = | 000001   |     | PTEN0 = | 000242   |     |
| BINASC  | 000056R | 002 | DEVIW5= | 000014  | EMSGHD  | 004064R | 002 | NOCOMP= | 000001   |     | PTLGTH= | 000242   |     |
| BIT11   | 004000  |     | DEVIW6= | 000016  | ERCDTA  | 005354R | 002 | NOFERR  | 003054R  | 002 | PTCNT=  | 000030   |     |
| BIT12 = | 010000  |     | DEVIW7= | 000020  | ERCDTP  | 004036R | 002 | NOOERR  | 003074R  | 002 | PTSIZE= | 000240   |     |
| BIT6 =  | 000100  |     | DEVIW8= | 000022  | ERCFRM  | 005306R | 002 | NOPEER  | 003034R  | 002 | PUSRPC= | 000236   |     |
| BKCNT   | 000474R | 002 | DEVVPS= | 000030  | ERCOVR  | 005266R | 002 | NOWAIT  | 002134R  | 002 | PURBYT  | 000100R  | 002 |
| BREAK   | 001272R | 002 | DEVRSZ= | 000000  | ERCPAR  | 005325R | 002 | OCPRES= | 000100   |     | PWRIA=  | 000020   |     |
| BRFLG = | 000010  |     | DEVSTP= | 000102  | ERDIRG  | 003746R | 002 | OVRUN   | 000504R  | 002 | PSCONS= | 120000   |     |
| BTASLZ  | 000060R | 002 | DEVVPS= | 000032  | ERMBCI  | 003744R | 002 | PARERR  | 000510R  | 002 | RBUF    | 000436R  | 002 |
| BYRD    | 000460R | 002 | DHKPAD= | 000034  | ERR     | 000022R | 002 | PASCIN= | 000006   |     | RBSRQ   | 000030R  | 002 |
| BYTES   | 002336R | 002 | DISCNT  | 003476R | ERRDIS  | 003654R | 002 | PC      | =%000007 |     | RCR     | 002342R  | 002 |
| BYWR    | 000464R | 002 | DISPST  | 004426R | ERREXT  | 002122R | 002 | PCURDV= | 000035   |     | RCVTBL  | 002346R  | 002 |
| CALDNL  | 001126R | 002 | DISUIV  | 004374R | ERRFLG  | 002344R | 002 | PDNUMS= | 000036   |     | RDBSY = | 020000   |     |
| CI0BSY  | 000046R | 002 | DISUMI  | 004422R | ERRMSG  | 005243R | 002 | PDPNTR= | 000034   |     | RDCNT   | 000470R  | 002 |
| CLIST   | 000054R | 002 | DISUMI  | 004336R | ERRRPT  | 003644R | 002 | PDST =  | 000122   |     | RDINMS  | 005220R  | 002 |
| CLBRK   | 001414R | 002 | DISUPR  | 0044'R  | ERRSNM  | 003754R | 002 | PFBBOV= | 000002   |     | RDINT   | 002710R  | 002 |
| CLBSY   | 002214R | 002 | DKILAD= | 0000'J  | ERTST   | 002060R | 002 | PFLGMD= | 000000   |     | ROMINCL | 001070R  | 002 |
| CLRSCN  | 002606R | 002 | DOERCK= | 0000'J  | ERSTOP= | 000004  |     | PFWADR= | 000004   |     | ROMNST  | 001074R  | 002 |
| CLRVCT= | 000002  |     | DOITJ = | 0000'J  | ERTBEN  | 003736R | 002 | PLNGTH= | 000026   |     | ROMONT  | 001252R  | 002 |
| CLRVEC  | 000070R | 002 | DRCVTL  | 001244R | FDUPLX  | 002162R | 002 | PMDLCD= | 000032   |     | READ    | 000730R  | 002 |
| CLWVCT= | 000004  |     | DREGAD  | 000024R | FLAG    | 000516R | 002 | PNAME = | 000010   |     | RELEAS  | 002126R  | 002 |
| CMDCBK  | 005152R | 002 | DRTEND= | 000116  | FLAGMD  | 000002R | 002 | PNR =   | 000116   |     | RENDMG  | 004753R  | 002 |
| CMDCMS  | 005167R | 002 | DRTLTH= | 000116  | FRAMER  | 000506R | 002 | PNUMSG  | 004720R  | 002 | REPORT  | 003344R  | 002 |
| CMDCRD  | 005123R | 002 | DRWAIT= | 100000  | FRCVTL  | 001172R | 002 | POBJST= | 000024   |     | REPTBL  | 003610R  | 002 |
| CMDCR   | 005136R | 002 | DSNDTL  | 001630R | FSNDTB  | 001574R | 002 | POPSW = | 000002   |     | REVEEC  | 003232R  | 002 |
| CNTSEN= | 005362R | 002 | DTOEAD= | 000044  | FSNDTL  | 001606R | 002 | PRDIA=  | 000016   |     | RESREG  | 004202R  | 002 |
| CNTSMG  | 005032R | 002 | DVBTD=  | 000060  | GETBYT  | 000076R | 002 | PRINT   | 004516R  | 002 | RETURN  | 001756R  | 002 |
| COMBER  | 003222R | 002 | DVCMD5  | 000154R | GTNXTD= | 001000  |     | PROGNM  | 004722R  | 002 | RICNT   | 000500R  | 002 |
| CRESET  | 002200R | 002 | DVCPRT= | 000054  | GTPTBS  | 001036R | 002 | PROMER= | 020000   |     | RPTBAS  | 003542R  | 002 |
| CRLF    | 005104R | 002 | DVCPTE  | 000352R | GVECAD  | 002670R | 002 | PRTEX   | 004630R  | 002 | RPTEND  | 003566R  | 002 |
| CSR     | 000434R | 002 | DVCTEP= | 000112  | HOUPLX  | 002144R | 002 | PS =    | 177776   |     | RPTLP   | 003524R  | 002 |
| CSTAT   | 000446R | 002 | DVCVEC= | 000070  | HSKEEP  | 003310R | 002 | PSRC =  | 000120   |     | RRINTV  | 003244R  | 002 |
| CSYSFW  | 000064R | 002 | DVGETB= | 000076  | HSKPEM= | 000520R | 002 | PSRCST= | 000022   |     | RTERM   | 003116R  | 002 |
| CTPRIO= | 000020  |     | DVIWSP= | 000114  | HSKPEP= | 000004  |     | PSSAVE  | 002332R  | 002 | RTNINT  | 000074R  | 002 |
| CUPGER  | 000050R | 002 | DVIWST  | 000430R | HSKPEP= | 000434R | 002 | PSTKCT= | 000124   |     | RTRMLP  | 003142R  | 002 |
| CURMSG  | 004741R | 002 | DVMVTE  | 000316R | INCHRC  | 001704R | 002 | PSTKSV= | 000126   |     | RWINTV  | 003262R  | 002 |
| CWRINT  | 000674R | 002 | DVMMLF  | 001504R | INTEXT  | 002676R | 002 | PSVREG= | 000222   |     | R0      | =%000000 |     |
| CYCDVL= | 002000  |     | DVPTA=  | 000062  | ISTAT = | 000434R | 002 | PTM0 =  | 000056   |     | R1      | =%000001 |     |
| CYCPRG= | 040000  |     | DVPKTE  | 000226R | IVCTAD  | 000026R | 002 | PTM1 =  | 000060   |     | R2      | =%000002 |     |
| DATAER  | 000512R | 002 | DVPTEP= | 000106  | KILL    | 000632R | 002 | PTM10=  | 000102   |     | R3      | =%000003 |     |
| DECASC  | 000062R | 002 | DVPUTB= | 000100  | KILLEX  | 000722R | 002 | PTM11=  | 000104   |     | R4      | =%000004 |     |
| DECTAD= | 000042  |     | DVREGE= | 000154R | LCOUNT  | 000432R | 002 | PTM12=  | 000106   |     | R5      | =%000005 |     |
| DERPAD= | 000036  |     | DVREGS  | 000116R | LCRST   | 000432R | 002 | PTM13=  | 000110   |     | SEVREG  | 004166R  | 002 |
| DEVBTA= | 000056  |     | DVREND= | 005362R | LFDPLX  | 000432R | 002 | PTM14=  | 000112   |     | SETBSY  | 001342R  | 002 |
| DEVDER= | 000050  |     | DVREX   | 003576R | LHOPLX  | 000432R | 002 | PTM15=  | 000114   |     | SETDEC= | 000040   |     |

# F03

MAINDEC-11-DTDJA-B  
 DTDJAB.P11

DJ11 DEVICE ROUTINE FOR MPG  
 SYMBOL TABLE

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SEQ 0031

|         |          |     |         |         |     |        |         |     |         |          |     |         |           |     |
|---------|----------|-----|---------|---------|-----|--------|---------|-----|---------|----------|-----|---------|-----------|-----|
| SETRSE  | 001232R  | 002 | STNUM   | 004160R | 002 | TOEMSG | 000606R | 002 | UNITMG  | 004770R  | 002 | WRITE   | 001262R   | 002 |
| SETSCN  | 001710R  | 002 | STONER= | 100000  |     | TOUTER | 000520R | 002 | UNITMH  | 003306R  | 002 | WRMNCI  | 001446R   | 002 |
| SETTSE  | 001640R  | 002 | STOPRO  | 003170R | 002 | TOUTEX | 000600R | 002 | WRSTOP= | 000002   |     | WRMNST  | 001452R   | 002 |
| SETVEC  | 000066R  | 002 | STOPWR  | 002636R | 002 | TRMTST | 002000R | 002 | USEUBM= | 000200   |     | WTERM   | 002556R   | 002 |
| SIZE    | 000020R  | 002 | STRSCN  | 003154R | 002 | TRVECT | 004632R | 002 | USMTPS= | 000002   |     | WTRMLP  | 002574R   | 002 |
| SNOTBL  | 002232R  | 002 | STSTAT  | 004240R | 002 | TRVEXT | 004660R | 002 | WAIT    | 001760R  | 002 | WT410T= | 000010    |     |
| SP      | =%000006 |     | SUPTAD  | 004220R | 002 | TSTIEB | 001772R | 002 | WBUSR0  | 000032R  | 002 | XMIT    | 001300R   | 002 |
| SPOPER= | 000200   |     | TBUF    | 000444R | 002 | TSTVEC | 000072R | 002 | WICNT   | 000502R  | 002 | XXXX    | = 000000  |     |
| SRDBSY  | 000772R  | 002 | TCR     | 000440R | 002 | TWVECT | 004662R | 002 | WRBSY   | = 040000 |     | .       | = 005362R | 002 |
| . ABS.  | 000000   | 000 |         |         |     |        |         |     |         |          |     |         |           |     |
|         | 000000   | 001 |         |         |     |        |         |     |         |          |     |         |           |     |
| 0011    | 005362   | 002 |         |         |     |        |         |     |         |          |     |         |           |     |

ERRORS DETECTED: 0  
 DEFAULT GLOBALS GENERATED: 0

\* DTDJAB/NL:TOC/DOC=DTDJAB.P:1  
 RUN-TIME: 3 8 1 SECONDS  
 RUN-TIME RATIO: 32/13=2.4  
 CORE USED: 5K (9 PAGES)

DOCUMENT PAGES: 31

