

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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[Faded microfiche content, likely containing data tables or program listings]

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000000 005362
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.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.

LOCZ: .WORD DVREND-
FLAGWD: .WORD 0

DWAIT= 100000
WRBSY= 40000
RDBSY= 20000
BRFLG= 10
CLWVCT= 4
CLRVCT= ?

.WORD 0
.WORD 0
.WORD 0
.WORD 0
.WORD 0
.WORD 0
SIZE: .WORD 0
ERR: .WORD 0
DREGAD: .WORD 160010
IVCTAD: .WORD 300
RBUSRQ: .WORD 240
MBUSRQ: .WORD 240

.WORD HSKEEP-
.WORD REPORT-
.WORD KILL-
.WORD DATAER-
.WORD TOUTER-

CIOBSY: .WORD 0
CUPGER: .WORD 0
ULIST: .WORD 0
CLIST: .WORD 0
BINASC: .WORD 0
BTASLZ: .WORD 0
DECASC: .WORD 0
CSYSFW: .WORD 0

: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

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DTJJA8.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		CLBVEC:	.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		

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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 TRES 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, ; 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

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DTDJAB.P11

DJ11 DEVICE ROUTINE FOR MPG
DJ11 FUNCTION ROUTINES

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SEG 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, RPRINTV   ; 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       ; BRANCH IF SET
306 000756' 032714 000100          BIT     #100, (R4)   ; TEST RECV INT EBL
307 000762' 001403          BEQ     SRDBSY       ; CONTINUE IF NOT SET
308 000764' 004.      177056          JSR     R5, DCIOBSY  ; OTHERWISE RELEASE CONTROL
309 000770' 000757          BR     READ

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307	000772'	052767	020000	177012	SRDBSY:	BIS	#RDBS7, FLAGWD	;SET READ BUSY
308	001000'	016767	177022	00001e		MOV	IVCTAD, 10\$;INT VECTOR ADDR TO CALL
309	001006'	016767	177016	000006		MOV	RBUSRQ, 20\$;ALSO BUS 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	;BYTE COUNT AND
327	001106'	012500				MOV	(R5)+, R0	;LINE NBR FROM CALL
328	001110'	001011				BNE	TESTRC	;BR IF LINE SPECIFIED
329	001112'	116301	000035			MOVB	PCURDV(R3), R1	;GET CURRENT DEV NBR
330	001116'	012700	000001			MOV	#1, R0	
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		BIS	#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     RS,STMT      ;SAVE RS
369 001304' 162767 000004 002550 SUB      #4,STMT      ;FOR STMT # REFERENCE
370 001312' 016704 176506 MOV     DREGAO,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     RS,@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     IVCTAO,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     RS,@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,SUPTAO      ;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
398 001464' 012500 MOV     (R5)+,R0
399 001466' 001011 BNE     TESTTC
400 001470' 116301 000035 MOVB   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     RS,@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 MOVB   @#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		MTPS	#340	
420	001571'	010702			FSNDB: MOV	PC,R2	
421	001576'	062702	000434		ADD	#SNDTBL-.,R2	
422	001602'	012701	000020		MOV	#16.,R1	
423	001606'	006000			FSNDTL: ROR	R0	;FILL SEND TABLE
424	001610'	103007			BCC	DSNDTL	
425	001612'	016722	000516		MOV	ADDR,(R2)+	;WITH ADDRESS
426	001616'	016722	000514		MOV	BYTES,(R2)+	;AND BYTE COUNT
427	001622'	005301			DEC	R1	
428	001624'	001370			BNE	FSNDTL	
429	001626'	000404			BR	SETTSE	
430	001630'	062702	000004		DSNDTL: ADD	#4,R2	
431	001634'	005301			DEC	R1	
432	001636'	001363			BNE	FSNDTL	
433	001640'	052763	000010	000000	SETTSE: BIS	#WT4IOT,PFLGWD(R3)	;SET WAIT FOR I/O TERM
434	001646'	056764	000466	000004	BIS	STCR,4(R4)	;SET LINE NBR IN HARD TCR
435	001654'	032767	000010	176120	BIT	#BRFLG,FLAGWD	;IF BREAK FLAG SET
436	001662'	001410			BEQ	INCWRC	
437	001664'	052714	002000		BIS	#2000,(R4)	;SELECT BREAK REG
438	001670'	056764	000444	000004	BIS	STCR,4(R4)	;SET LINE NBR IN BCR
439	001676'	005267	176572		INC	BKCN↑	;INCR BREAK CMD COUNT
440	001702'	000402			BR	SETSCN	
441	001704'	005267	176562		INCWRC: INC	WRCNT	;INCR WRITE CMD COUNT
442	001710'	052714	000400		SETSCN: BIS	#400,(R4)	;SET MASTER SCAN EBL
443	001714'	032777	000002	176142	BIT	#USMTPS,DCSYSFW	;RESTORE PS AND EBL INT
444	001722'	001004			ENE	10\$	
445	001724'	116737	000402	177776	MOVB	PSSAVE,2#F5	
446	001732'	000402			BR	20\$	
447	001734'	106467	000372		10\$: MTPS	PSSAVE	
448	001740'	032767	100000	176034	20\$: BIT	#DRWAIT,FLAGWD	;TEST DEV ROUT NOWAIT
449	001746'	001411			BEQ	TSTIEB	;IF RESET TEST INT EBL
450	001750'	042763	000010	000000	BIC	#WT4IOT,PFLGWD(R3)	;CLEAR WAIT FOR I/O TERM
451	001756'	000205			RETURN: RTS	R5	;OTHERWISE RETURN
452							
453							
454							
455	001760'	042767	100000	176014	WAIT: BIC	#DRWAIT,FLAGWD	;CLEAR DEV ROUT NOWAIT
456	001766'	016704	176032		MOV	DREGWD,R4	;POINT R4 AT REG ADDR
457	001772'	032714	040100		TSTIEB: BIT	#40100,(R4)	;TEST INT EBL
458	001776'	001053			BNE	RELEAS	;IF SET, RELEASE CONTROL
459	002006'	032767	000002	175774	TRMTST: BIT	#CLRVRT,FLAGWD	;TEST IF VECTOR CLR REQD
460	002006'	001410			BEQ	10\$;BRANCH IF NOT
461	002010'	004567	002616		JSR	R5,TRVECT	;TEST READ VECTOR
462	002014'	000405			BR	10\$;BRANCH IF NOT ME
463	002016'	004767	001222		JSR	PC,RRINTV	;GO RESET THE VECTOR
464	002022'	042767	000002	175752	BIC	#CLRVRT,FLAGWD	;CLEAR THE REQ FLAG
465	002030'	032767	000004	175744	10\$: BIT	#CLWVRT,FLAGWD	;TEST IF VECTOR CLR REQD
466	002036'	001410			BEQ	ERRTST	;BRANCH IF NOT
467	002040'	004567	002616		JSR	R5,TWVECT	;TEST WRITE VECTOR
468	002044'	000405			BR	ERRTST	;BRANCH IF NOT ME
469	002046'	004767	001210		JSR	PC,RWINTV	;GO RESET THE VECTOR
470	002052'	042767	000004	175722	BIC	#CLWVRT,FLAGWD	;CLEAR THE REQ FLAG
471	002060'	005767	000260		ERRTST: TST	ERRFLG	;TEST FOR ANY ERROR
472	002064'	001734			BEQ	RETURN	;RETURN IF NONE
473	002066'	012767	000001	175726	MOV	#1,ERR	;SET ERROR INDICATOR
474	002074'	004767	002120		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 RE,JCIOBSY ;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 STS #2,(R4) ;SET HALF DUPLEX BIT
493 002154' 005267 176316 INC MISCNT ;INCR MISC CMD COUNT
494 002160' 000205 RTS ;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 ;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 ;RETURN
  
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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          ;: 1
518 002242' 000000 000000          .WORD 0,0          ;: 2
519 002246' 000000 000000          .WORD 0,0          ;: 3
520 002252' 000000 000000          .WORD 0,0          ;: 4
521 002256' 000000 000000          .WORD 0,0          ;: 5
522 002262' 000000 000000          .WORD 0,0          ;: 6
523 002266' 000000 000000          .WORD 0,0          ;: 7
524 002272' 000000 000000          .WORD 0,0          ;: 8
525 002276' 000000 000000          .WORD 0,0          ;: 9
526 002302' 000000 000000          .WORD 0,0          ;: 10
527 002306' 000000 000000          .WORD 0,0          ;: 11
528 002312' 000000 000000          .WORD 0,0          ;: 12
529 002316' 000000 000000          .WORD 0,0          ;: 13
530 002322' 000000 000000          .WORD 0,0          ;: 14
531 002326' 000000 000000          .WORD 0,0          ;: 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          ;: 1
543 002356' 000000 000000          .WORD 0,0          ;: 2
544 002362' 000000 000000          .WORD 0,0          ;: 3
545 002366' 000000 000000          .WORD 0,0          ;: 4
546 002372' 000000 000000          .WORD 0,0          ;: 5
547 002376' 000000 000000          .WORD 0,0          ;: 6
548 002402' 000000 000000          .WORD 0,0          ;: 7
549 002406' 000000 000000          .WORD 0,0          ;: 8
550 002412' 000000 000000          .WORD 0,0          ;: 9
551 002416' 000000 000000          .WORD 0,0          ;: 10
552 002422' 000000 000000          .WORD 0,0          ;: 11
553 002426' 000000 000000          .WORD 0,0          ;: 12
554 002432' 000000 000000          .WORD 0,0          ;: 13
555 002436' 000000 000000          .WORD 0,0          ;: 14
556 002442' 000000 000000          .WORD 0,0          ;: 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   RO, 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), RO
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 TCR
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, PFLAGWD(R3) ;NO - RESET WAIT FOR IOT
607 002670' 052767 000004 175104 INTEXT: BIS   #CLWVCT, FLAGWD ;SET CLR VECT REQUEST
608 002676' 004067 001300      INTEXT: JSR   RO, 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)          ;INCR BYTES READ BY :
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 BISB    #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     FRAMER        ;OTHERWISE INCR COUNT
643 003046' 152767 000002 177270 BISB    #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     OVRUN         ;OTHERWISE INCR COUNT
647 003066' 152767 000004 177250 BISB    #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   ;LDATE 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

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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, @CLAVEC		
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, @CLAVEC		
692	003302'	000000			10\$:	.WORD	XXXX		
693	003304'	000207				RTS	PC		
694	003306'	000000			JM17M:	.WORD	0		:JMT NBR AT LAST REC INT

E02

MAINDEC-11-DTDJA-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	

```

804                                     ;DJ11: ERROR REPORT ROUTINE
805
806 003644' 004767 000004      ERRPPT: JSR   PC,ERRDIS
807 003650' 000177 174174      JMP   2CUPGER
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   #ERCOTB-. ,R0
813 003676' 105710      15:   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      10$:  MOVB  (R0),R1           ;SAVE STMT LENGTH
832 003762' 026057 000004 000072  CMP   4(R0),STMT        ;ERROR OCCUR ON THIS STMT?
833 003770' 001402      BEQ   20$                ;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,DECA5C          ;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  ERCOTB: .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 004100' 000050      EMSGBF: .BLKB 40.
855 004150' 052123 047115 020124  STNMNG: .ASCII /STMT # /
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 #DVREG-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 000004  SUB      #4,RO
917 004314' 016701 173504  MOV      DREGADR,R1
918 004320' 052711 002000  BIS      #2000,(R1) ;SELECT BCR
919 004324' 016110 000004  MOV      4(R1),(R0) ;STORE BCR CONTENTS
920 004330' 042711 002000  BIC      #2000,(R1) ;SELECT TCR
921 004334' 000205      RTS      R5      ;EXIT IN-LINE
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      MOVB     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,JBASLZ ;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      DISUPR
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,JBINASC ;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 VALUE
964 004464' 004577 173366      JSR      R5,JBINASC ;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

```

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'   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 000040  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        .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        .WORD XXXX
1012 004626' 000000        .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 000004        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        .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

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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	: MPG WILL TELL ME SINCE I CAN'T
1034	004710'	175536		.WORD	WRINT-	: GET AT LOWER MEM IF MEM MGMT
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	R5	: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 CMDCLR: .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=

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M02

MAINDEC-11-DTJJA-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      SOPER= 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

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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

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: DEVICE ROUTINE TABLE

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	DEVVPS= +24.	:DEVICE READ PROCESSOR STATUS WORD (BUS REQ) - 1 WORD
000032	DEVWPS= +26.	:DEVICE WRITE PROC STATUS WORD (BUS REQ) - 1 WORD
000034	DHKPAD= +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	DTOEAD= +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	DVJPRT= +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	CJ2	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	PUTBYT	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		RD8SY =	020000	
CI0BSY	000046R	002	DISUMI	004422R	ERRMSG	005243R	002	PDPNTR=	000034		RDCNT	000470R	002
CLIST	000054R	002	DISUNM	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		ROMNCL	001070R	002
CLRSCN	002606R	002	DOERCK=	0000'Q	ERSTOP=	000004		PFWADR=	000004		ROMNST	001074R	002
CLRVCT=	000002		DOJIT =	0000'J	ERTBEN	003736R	002	PLNGTH=	000026		ROMNT	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	PNNMSG	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	DT0EAD=	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	HSKPOST=	000434R	002	PSTKCT=	000124		RTRMLP	003142R	002
CURMSG	004741R	002	DVMVTE	000316R	INCHRC	001704R	002	PSTKSV=	000126		RWINTV	003262R	002
CWRINT	000674R	002	DVNMLP	001504R	INTEXT	002676R	002	PSVREG=	000222		R0	=%000000	
CYCDVL=	002000		DVPDTA=	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		DVREG5	000116R	LCRST	000432R	002	PTM13=	000110		S4VREG	004166R	002
DEVBTA=	000056		DVREND=	005362R	LFDPLX	000432R	002	PTM14=	000112		SETBSY	001342R	002
DEVDER=	000050		DVREX	003576R	LHPLX	000432R	002	PTM15=	000114		SETDEC=	000040	

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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	USEUHM=	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

