

DDDDDDDD	UU	UU	PPPPPPPP	11	11	
DDDDDDDD	UU	UU	PPPPPPPP	11	11	
DD	DD	UU	UU	PP	PP	1111
DD	DD	UU	UU	PP	PP	1111
DD	DD	UU	UU	PP	PP	11
DD	DD	UU	UU	PP	PP	11
DD	DD	UU	UU	PPPPPPPP		11
DD	DD	UU	UU	PPPPPPPP		11
DD	DD	UU	UU	PP		11
DD	DD	UU	UU	PP		11
DD	DD	UU	UU	PP		11
DD	DD	UU	UU	PP		11
DD	DD	UU	UU	PP		11
DDDDDDDD	UUUUUUUUUU	UUUUUUUUUU	PP	111111	111111	111111
DDDDDDDD	UUUUUUUUUU	UUUUUUUUUU	PP	111111	111111	111111

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LL          IIIII
LL          IIIII
LL          II
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VAX-11 FORTRAN V3.4-56
DISK\$VMSMASTER:[ERF.SRC]DUP11.FOR;1

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```
0001      SUBROUTINE DUP11 (lun,parcsr,rxcsr,rxdbuf,txcsr,txdbuf)
0002      C
0003      C Version:      'V04-000'
0004      C
0005      C*****
0006      C*
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0023      C* SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
0024      C*
0025      C*
0026      C*****
0027      C
0028      C
0029      C
0030      C      Author: Sharon Reynolds      Creation date: 8-Sept-80
0031      C
0032      C
0033      C
0034      C      Functional description:
0035      C
0036      C      This module decodes the Dup11 register contents. It is called
0037      C      by the DUP3271 module.
0038      C
0039      C      Modified by:
0040      C
0041      C      V03-002 SAR0112      Sharon A. Reynolds,      23-Jun-1983
0042      C      Changed the carriage control in the 'format' statements
0043      C      for use with ERF.
0044      C
0045      C      v03-001 BP0001      Brian Porter,      20-AUG-1982
0046      C      Minor edit.
0047      C**
0048      C--
0049
0050
0051
0052
0053      Byte      lun
0054
0055      Integer*4  addr
0056      Integer*4  char
0057      Integer*4  field
```



```

0058      Integer*4      temp
0059      Integer*4      rxcsr
0060      Integer*4      rxdbuf
0061      Integer*4      txcsr
0062      Integer*4      txdbuf
0063      Integer*4      parcsr
0064      Integer*4      compressC
0065      Integer*4      compress4
0066
0067      logical*1      diagnostic_mode
0068
0069      Character*23     protocol(0:1)
0070      Character*12     oper_mode(0:1)
0071      Character*18     rxcsr_1(0:0)
0072      Character*26     rxcsr_2(3:8)
0073      Character*24     rxcsr_3(10:11)
0074      Character*18     rxcsr_4(14:15)
0075      Character*26     rxdbuf_1(8:10)
0076      Character*19     rxdbuf_2(12:12)
0077      Character*17     rxdbuf_3(14:15)
0078      Character*5      txcsr_1(4:4)
0079      Character*29     txcsr_2(6:9)
0080      Character*28     txcsr_3(15:15)
0081      Character*27     txdbuf_1(8:10)
0082      Character*12     parcsr_1(9:9)
0083      Character*26     dtr_status(0:1)
0084      Character*22     rts_status(0:1)
0085      Character*21     dsr_status(0:1)
0086      Character*21     car_status(0:1)
0087      Character*20     cts_status(0:1)
0088
0089
0090

```

```

0091      C
0092      C Define text for bits in the RXCSR register
0093      C

```

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0094
0095      Data      rxcsr_1(0)      /*DATA SET CHANGE B*/
0096      Data      rxcsr_2(3)      /*SECONDARY TRANSMIT DATA*/
0097      Data      rxcsr_2(4)      /*RECEIVER ENABLE*/
0098      Data      rxcsr_2(5)      /*DATA SET INTERRUPT ENABLE*/
0099      Data      rxcsr_2(6)      /*RECEIVER INTERRUPT ENABLE*/
0100      Data      rxcsr_2(7)      /*RECEIVER DONE*/
0101      Data      rxcsr_2(8)      /*STRIP SYNC CHARACTER*/
0102      Data      rxcsr_3(10)     /*SECONDARY RECEIVED DATA*/
0103      Data      rxcsr_3(11)     /*RECEIVER ACTIVE*/
0104      Data      rxcsr_4(14)     /*RING*/
0105      Data      rxcsr_4(15)     /*DATA SET CHANGE A*/
0106
0107

```

```

0108      C
0109      C Define bits for MODEM/LINE STATUS from rxcsr register
0110      C

```

```

0111
0112      Data      dtr_status(0)    /*DATA TERMINAL READY = OFF*/
0113      Data      dtr_status(1)    /*DATA TERMINAL READY = ON*/
0114

```



```
0115      Data   rts_status(0)  /*REQUEST TO SEND = OFF*/
0116      Data   rts_status(1)  /*REQUEST TO SEND = ON*/
0117
0118      Data   dsr_status(0)    /*DATA SET READY = OFF*/
0119      Data   dsr_status(1)    /*DATA SET READY = ON*/
0120
0121      Data   car_status(0)    /*CARRIER DETECT = OFF*/
0122      Data   car_status(1)    /*CARRIER DETECT = ON*/
0123
0124      Data   cts_status(0)    /*CLEAR TO SEND = OFF*/
0125      Data   cts_status(1)    /*CLEAR TO SEND = ON*/
0126
0127      C
0128      C
0129      C      Define text for bits in the RXDBUF register
0130
0131
0132      Data   rxdbuf_1(8)      /*START OF RECEIVED MESSAGE*/
0133      Data   rxdbuf_1(9)      /*END OF RECEIVED MESSAGE*/
0134      Data   rxdbuf_1(10)     /*RECEIVER ABORT*/
0135      Data   rxdbuf_2(12)     /*RECEIVER CRC ERROR*/
0136      Data   rxdbuf_3(14)     /*RECEIVER OVERRUN*/
0137      Data   rxdbuf_3(15)     /*RECEIVER ERROR*/
0138
0139      C
0140      C
0141      C      Define text for bits in the TXCSR register
0142
0143
0144      Data   oper_mode(0)      /*FULL DUPLEX*/
0145      Data   oper_mode(1)      /*HALF DUPLEX*/
0146      Data   txcsr_1(4)        /*SEND*/
0147      Data   txcsr_2(6)        /*TRANSMITTER INTERRUPT ENABLE*/
0148      Data   txcsr_2(7)        /*TRANSMITTER DONE*/
0149      Data   txcsr_2(8)        /*DEVICE RESET*/
0150      Data   txcsr_2(9)        /*TRANSMITTER ACTIVE*/
0151      Data   txcsr_3(15)       /*TRANSMITTER DATA LATE ERROR*/
0152
0153      C
0154      C
0155      C      Define text for bits in the TXDBUF register
0156
0157
0158      Data   txdbuf_1(8)       /*TRANSMIT START OF MESSAGE*/
0159      Data   txdbuf_1(9)       /*END OF TRANSMITTED MESSAGE*/
0160      Data   txdbuf_1(10)      /*TRANSMIT ABORT*/
0161
0162      C
0163      C
0164      C      Define text for bits in the PARCSR register
0165
0166
0167      Data   parcsr_1(9)        /*CRC INHIBIT*/
0168      Data   protocol(0)        /*BIT ORIENTED PROTOCOL*/
0169      Data   protocol(1)        /*BYTE ORIENTED PROTOCOL*/
0170
0171
```

```
0172
0173
0174
0175      diagnostic_mode = .false.
0176
0177      if (lib$extzv(11,2,txcsr) .ne. 0) diagnostic_mode = .true.
0178
0179      C
0180      C
0181      C
0182      Call LINCHK (lun,2)
0183      Write (lun,20) rxcsr
0184      Format (' ',T8,'RXCSR',T24,Z8.4)
0185
0186      if (.not. diagnostic_mode) then
0187
0188      Call LINCHK (lun,1)
0189      Write (lun,30) (' ',I=1,34)
0190      Format (' ',T40,Z4A1)
0191
0192      Call LINCHK (lun,1)
0193      Write (lun,40)
0194      Format (' ',T47,'MODEM/LINE STATUS')
0195
0196      Field=LIB$EXTZV (1,1,rxcsr)
0197
0198      Call LINCHK (lun,1)
0199      Write (lun,50) dtr_status(field)
0200      Format (' ',T40,A<compressC (dtr_status(field)))>>
0201
0202
0203      Field=LIB$EXTZV (2,1,rxcsr)
0204
0205      Call LINCHK (lun,1)
0206      Write (lun,60) rts_status(field)
0207      Format (' ',T40,A<compressC (rts_status(field)))>>
0208
0209
0210      Field=LIB$EXTZV (9,1,rxcsr)
0211
0212      Call LINCHK (lun,1)
0213      Write (lun,70) dsr_status(field)
0214      Format (' ',T40,A<compressC (dsr_status(field)))>>
0215
0216
0217      Field=LIB$EXTZV (12,1,rxcsr)
0218
0219      Call LINCHK (lun,1)
0220      Write (lun,80) car_status(field)
0221      Format (' ',T40,A<compressC (car_status(field)))>>
0222
0223
0224      Field=LIB$EXTZV (13,1,rxcsr)
0225
0226      Call LINCHK (lun,1)
0227      Write (lun,90) cts_status(field)
0228      Format (' ',T40,A<compressC (cts_status(field)))>>
```



```
0229
0230      Call LINCHK (lun,1)
0231      Write (lun,100) ('*',I=1,34)
0232 100      Format (' ',T40,34A1)
0233
0234      Call OUTPUT (lun,rxcsr,rxcsr_1,0,0,0,'0')
0235
0236      Call OUTPUT (lun,rxcsr,rxcsr_2,3,3,8,'0')
0237
0238      Call OUTPUT (lun,rxcsr,rxcsr_3,10,10,11,'0')
0239
0240      Call OUTPUT (lun,rxcsr,rxcsr_4,14,14,15,'0')
0241      endif
0242
0243      C
0244      C
0245      C
0246
0247      Call LINCHK (lun,1)
0248      Write (lun,110) rxdbuf
0249 110      Format (' ',T8,'RXDBUF',T24,Z8.4)
0250
0251      if (.not. diagnostic_mode) then
0252
0253      Field=LIB$EXTZV(0,8,rxdbuf)
0254
0255      Call LINCHK (lun,1)
0256      Write (lun,120) field
0257 120      Format (' ',T40,'RECEIVER DATA BUFFER = ',
0258      1 I<compress4 (field)>,>,'.')
0259
0260      Call OUTPUT (lun,rxdbuf,rxdbuf_1,8,8,10,'0')
0261
0262      Call OUTPUT (lun,rxdbuf,rxdbuf_2,12,12,12,'0')
0263
0264      Call OUTPUT (lun,rxdbuf,rxdbuf_3,14,14,15,'0')
0265      endif
0266
0267      C
0268      C
0269      C
0270
0271      Call LINCHK (lun,1)
0272      Write (lun,130) txcsr
0273 130      Format (' ',T8,'TXCSR',T24,Z8.4)
0274
0275      if (.not. diagnostic_mode) then
0276
0277      Field=LIB$EXTZV(3,1,txcsr)
0278
0279      Call LINCHK (lun,1)
0280      Write (lun,140) oper_mode(field)
0281 140      Format (' ',T40,'OPERATION MODE = ',
0282      1 A<compressC (oper_mode(field))>>)
0283
0284      Call OUTPUT (lun,txcsr,txcsr_1,4,4,4,'0')
0285
```

```
0286      Call OUTPUT (lun,txcsr,txcsr_2,6,6,9,'0')
0287
0288      Call OUTPUT (lun,txcsr,txcsr_3,15,15,15,'0')
0289      else
0290
0291      Call LINCHK (lun,1)
0292      Write (lun,150)
0293 150      Format (' ',T40,'DIAGNOSTIC MODE')
0294      endif
0295
0296      C
0297      C      Decode transmitter data buffer register
0298      C
0299
0300      Call LINCHK (lun,1)
0301      Write (lun,160) txdbuf
0302 160      Format (' ',T8,'TXDBUF',T24,Z8.4)
0303
0304      if (.not. diagnostic_mode) then
0305
0306      Field=LIBSEXTZV(0,8,txdbuf)
0307
0308      Call LINCHK (lun,1)
0309      Write (lun,170) field
0310 170      Format (' ',T40,'TRANSMITTER DATA BUFFER = ',
0311      1 I<compress4 (field)>,>'.')
0312
0313      Call OUTPUT (lun,txdbuf,txdbuf_1,8,8,10,'0')
0314      endif
0315
0316      C
0317      C      Decode and output PARCSR register contents
0318      C
0319
0320
0321
0322      Call LINCHK (lun,1)
0323      Write (lun,180) parcsr
0324 180      Format (' ',T8,'PARCSR',T24,Z8.4,/,
0325      1 T40,'** LOADED WITH **')
0326
0327      if (.not. diagnostic_mode) then
0328
0329      Call OUTPUT (lun,parcsr,parcsr_1,9,9,9,'0')
0330
0331      Temp=LIBSEXTZV (12,1,parcsr)
0332
0333      Field=LIBSEXTZV (15,1,parcsr)
0334
0335      Call LINCHK (lun,1)
0336      Write (lun,190) protocol(field)
0337 190      Format (' ',T40, A<compressC (protocol(field))>> )
0338
0339      Call LINCHK (lun,1)
0340      If (field .eq. 0 .and. temp .eq.0) then
0341
0342      Write (lun,200)
```


DUP11

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```
0343 200  Format (' ',T40,'OPERATING AS A PRIMARY STATION')
0344
0345      Else if (field .eq. 0 .and. temp .eq. 1) then
0346
0347      Write (lun,210)
0348 210  Format (' ',T40,'OPERATING AS A SECONDARY STATION')
0349
0350      Addr=LIB$EXTZV (0,8,parcsr)
0351
0352      Call LINCHK (lun,1)
0353      Write (lun,220) addr
0354 220  Format (' ',T40,'SECONDARY STATION ADDRESS = ',
0355          1 I<Compress4 (addr)>,>,'.')
0356
0357      Else
0358
0359      Char=LIB$EXTZV (0,8,parcsr)
0360
0361      Write (lun,230) char
0362 230  Format (' ',T40,'EXPECTED SYNC CHAR = ',
0363          1 I<Compress4 (char)>,>,'.')
0364
0365
0366      Endif
0367  endif
0368
0369      Return
0370
0371
0372      END
```

PROGRAM SECTIONS

Name	Bytes	Attributes
0 \$CODE	2023	PIC CON REL LCL SHR EXE RD NOWRT LONG
1 \$PDATA	592	PIC CON REL LCL SHR NOEXE RD NOWRT LONG
2 \$LOCAL	2024	PIC CON REL LCL NOSHR NOEXE RD WRT LONG
Total Space Allocated	4639	

ENTRY POINTS

Address	Type	Name
0-00000000		DUP11

VARIABLES

Address	Type	Name	Address	Type	Name
2-0000039C	I*4	ADDRS	2-000003A0	I*4	CHAR
2-00000399	L*1	DIAGNOSTIC_MODE	2-000003A4	I*4	FIELD
2-000003AC	I*4	I	AP-00000004a	L*1	LUN
AP-00000008a	I*4	PARCSR	AP-0000000Ca	I*4	RXCSR
AP-00000010a	I*4	RXDBUF	2-000003A8	I*4	TEMP
AP-00000014a	I*4	TXCSR	AP-00000018a	I*4	TXDBUF

ARRAYS

Address	Type	Name	Bytes	Dimensions
2-00000347	CHAR	CAR_STATUS	42	(0:1)
2-00000371	CHAR	CTS_STATUS	40	(0:1)
2-0000031D	CHAR	DSR_STATUS	42	(0:1)
2-000002BD	CHAR	DTR_STATUS	52	(0:1)
2-0000002E	CHAR	OPER_MODE	24	(0:1)
2-000002B1	CHAR	PARCSR_1	12	(9:9)
2-00000000	CHAR	PROTOCOL	46	(0:1)
2-000002F1	CHAR	RTS_STATUS	44	(0:1)
2-00000046	CHAR	RXCSR_1	18	(0:0)
2-00000058	CHAR	RXCSR_2	156	(3:8)
2-000000F4	CHAR	RXCSR_3	48	(10:11)
2-00000124	CHAR	RXCSR_4	36	(14:15)
2-00000148	CHAR	RXDBUF_1	78	(8:10)
2-00000196	CHAR	RXDBUF_2	19	(12:12)
2-000001A9	CHAR	RXDBUF_3	34	(14:15)
2-000001CB	CHAR	TXCSR_1	5	(4:4)
2-000001D0	CHAR	TXCSR_2	116	(6:9)
2-00000244	CHAR	TXCSR_3	28	(15:15)
2-00000260	CHAR	TXDBUF_1	81	(8:10)

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LABELS

Address	Label	Address	Label	Address	Label	Address	Label	Address	Label	Address	Label
1-0000003B	20'	1-0000004E	30'	1-00000058	40'	1-00000071	50'	1-0000007D	60'	1-00000089	70'
1-00000095	80'	1-000000A1	90'	1-000000AD	100'	1-000000B7	110'	1-000000CA	120'	1-000000F2	130'
1-00000104	140'	1-00000123	150'	1-0000013A	160'	1-0000014D	170'	1-00000178	180'	1-000001A3	190'
1-000001AF	200'	1-000001D5	210'	1-000001FD	220'	1-0000022A	230'				

FUNCTIONS AND SUBROUTINES REFERENCED

Type	Name	Type	Name	Type	Name	Type	Name	Type	Name
I*4	COMPRESS4	I*4	COMPRESSC	I*4	LIB\$EXTZV		LINCHK		OUTPUT

COMMAND QUALIFIERS

FORTRAN /LIS=LIS\$:DUP11/OBJ=OBJ\$:DUP11 MSRC\$:DUP11

/CHECK=(NOBOUNDS,OVERFLOW,NOUNDERFLOW)

/DEBUG=(NOSYMBOLS,TRACEBACK)

/STANDARD=(NOSYNTAX,NOSOURCE_FORM)

/SHOW=(NOPREPROCESSOR,NOINCLUDE,MAP)

/F77 /NOG_FLOATING /I4 /OPTIMIZE /WARNINGS /NOD_LINES /NOCROSS_REFERENCE /NOMACHINE_CODE /CONTINUATIONS=19

COMPILATION STATISTICS

Run Time:	5.30 seconds
Elapsed Time:	13.85 seconds
Page Faults:	201
Dynamic Memory:	200 pages

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AH-BT13A-SE
VAX/VMS V4.0

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