

MAYNARD, MASSACHUSETTS

SOFTWARE LIST

MADE BY		CHECKED	SECTION	PA	PAPER TAPE ASCII
DATE	8/29/72	DATE 8-30-72		PB	PAPER TAPE BINARY
ENG	P. Janson	PROD 8-31-72	ISSUED SECT.	PM	PAPER TAPE READ-IN-MODE
DATE	8/29/72	DATE 8-31-72			

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LEGEND
D      DOCUMENT
DN     DOCUMENT CHANGE
        NOTICE
PA     PAPER TAPE ASCII
PB     PAPER TAPE BINARY
PM     PAPER TAPE
        READ-IN-MODE

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ITEM NO.	DWG NO. / PART NO.	DESCRIPTION
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DL11-A	QUANTITY / VARIATION
DL11-B	
DL11-C	
DL11-D	
DL11-E	
IT CHECK Y _____ DATE _____	
INSTALLATION CHECK Y _____ DATE _____	

[illegible]

DEC FORM NO. DEC 16 (327) - 1049 N4711
DRA 120

DL11 SOFTWARE LIST

ASSY. NO.

SHEET 1 OF 1

SIZE	CODE
A	SL

NUMBER
DL17-0-4

REV. ECONOMIC

ECONO

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY: Pellegrini	CHECKED: P. Janson	SECTION	D DOCUMENT
DATE June 26, 1972	DATE 8-8-72		DN DOCUMENT CHANGE
ENG PAUL Janson	PROD: P. Janson	ISSUED SECT.	PA PAPER TAPE ASCII
DATE June 26, 1972	DATE 8-2-72		PB PAPER TAPE BINARY
			PM PAPER TAPE
			READ-IN-MODE

LEGEND	
D	DOCUMENT
DN	DOCUMENT CHANGE
PA	PAPER TAPE ASCII
PB	PAPER TAPE BINARY
PM	PAPER TAPE
	READ-IN-MODE

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION					KIT CHECK		INSTALLATION CHECK	
1	M7800	ASYNCHRONOUS LINE INTERFACE (EIA)	DL11-A	1	1	1	1			BY	DATE
2	38000	FILTER NETWORK	DL11-B	1	1	1	1				
3	M7800-YA	ASYNCHRONOUS LINE INTERFACE (CURRENT LOOP)	DL11-C	1	1	1	1				
4	5408776	PRIORITY JUMPER LEVEL #4	DL11-D	1	1	1	1				
5	BC05-C-25	MODEM CABLE	DL11-E	1	1	1	1				
6	7008360	TTY CABLE		1	1	1	1				
7	-	CRYSTAL		1	1	1	1				
8	-	DL11 ENGINEERING DRAWINGS		1	1	1	1				
9	DEC-11-HDLAA-A-D	DL11 ASYNCHRONOUS LINE INTERFACE MANUAL		1	1	1	1				
10	LIBKIT-11-KL11-04	KL11 MAINDEC		1	1	1	1				
11	LIBKIT-11-DL11C-A-K	DL11 MAINDEC		1	1	1	1				
12	LIBKIT-11-DL11E-A-K	DL11 MAINDEC		1	1	1	1				
13	H315	MODEM TEST CONNECTOR		1	1	1	1				
NOTES: 1. 38000 IS REQUIRED ONLY IN PDP-11 SYSTEMS											
WHERE +15V IS NOT AVAILABLE. ONE PER DD11-A.											
2. CRYSTAL FREQUENCY DEFINED BY CUSTOMER SPECIFIED BAUD RATE.											
3. ONE H315 PER PDP11 SYSTEM											
4. INSURE THAT TRANSPARENT VINYL TAPE HAS BEEN APPLIED TO THE											
TOP SURFACE OF THE CRYSTAL AND MOUNTING BRACKET.											

TITLE	DL11 CHECK LIST	ASSY. NO.	SIZE CODE	NUMBER	REV.	ECO NO
			A AL	DL11-0-5	C	DL11-00005
		SHEET 1 OF 1	DIST.			

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS						
DATE 6-1-73						
TITLE DL11 INSTALLATION PROCEDURE						
REVISIONS						
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
C	CHANGE PER ECO	DL11-4	JANSON	3/73	P. Janson	4-6-73
D	CHANGE PER ECO	DL11-5	CONDON	7/73	P. Janson	
E	CHANGE PER ECO	DL11-7	CONDON	8, 74	P. Janson	
F	CHANGE PER ECO	DL11-8	CONDON	4-75	P. Janson	4/1/75

ENG	APPD	SIZE	CODE	NUMBER	REV
Paul F. Janson	Paul F. Janson	A	SP	DL11 0-2	F

DEC FORM NO. DRA 107A

SHEET 1 OF 9

ENGINEERING SPECIFICATION		CONTINUATION SHEET		
TITLE DL11 INSTALLATION PROCEDURE				
DL11 INSTALLATION PROCEDURE: Installation of the M7800 module or its variation as a DL11-A through DL11-E option consists of the following preparations: 1. Jumper insertion/deletion for selection of operation mode (A, B, C, D, or E). 2. Register address assignment. 3. Vector address assignment. 4. Priority assignment. 5. Special NPR jumper insertion/deletion. 6. Selection of data format (data bits, stop bits, parity). 7. Selection of crystal for baud rate. 8. Installation of G8000 in systems where +15v is not available. 9. Filter capacitor selection for high baud rate current-loop. A. OPERATION MODE: The following describes the jumpers associated with controlling the mode of operation (A,B,C,D, or E): - J1. Ties EIA driver to REQUEST-TO-SEND lead (pin 4) of dataset cable. IN for DL11-B,D, and E; does not affect DL11-A and C. Drawing DL-7. - J2. Ties EIA driver, normally used for the REQUEST-TO-SEND lead, to FORCE BUSY lead (pin 25) for use with Bell 103E. This is a customer option. If not specified, jumper is OUT for all DL11's. Drawing DL-7. - J3. When inserted, allows REQUEST-TO-SEND lead (pin 4) to be controlled by bit 2 of the receiver status register. OUT for DL11-B and D; IN for DL11-E; does not affect DL11-A and C. Drawing DL-4. - J4. When inserted, forces "DATA LEADS ONLY" mode of EIA operation. Turns DATA TERMINAL READY (pin 20) and REQUEST-TO-SEND (pin 4) on. IN for DL11-B and D; OUT for DL11-E; does not affect DL11-A and C. Drawing DL-4. - J5. When inserted, allows the BREAK bit to function. OUT for DL11-A and B; IN for DL11-C,D, and E. Drawing DL-4. - J6. When inserted, allows DSET INT to cause interrupts. OUT for DL11-A,B,C and D; IN for DL11-E. Drawing DL-4. - J7. When inserted, allows dataset control bits to be read as part of the receiver status register.				
DEC FORM NO DEC 16-(381)-1022-N370 DRA 108	SIZE A	CODE SP	NUMBER DL11-0-2	REV F
SHEET <u>2</u> OF <u>9</u>				

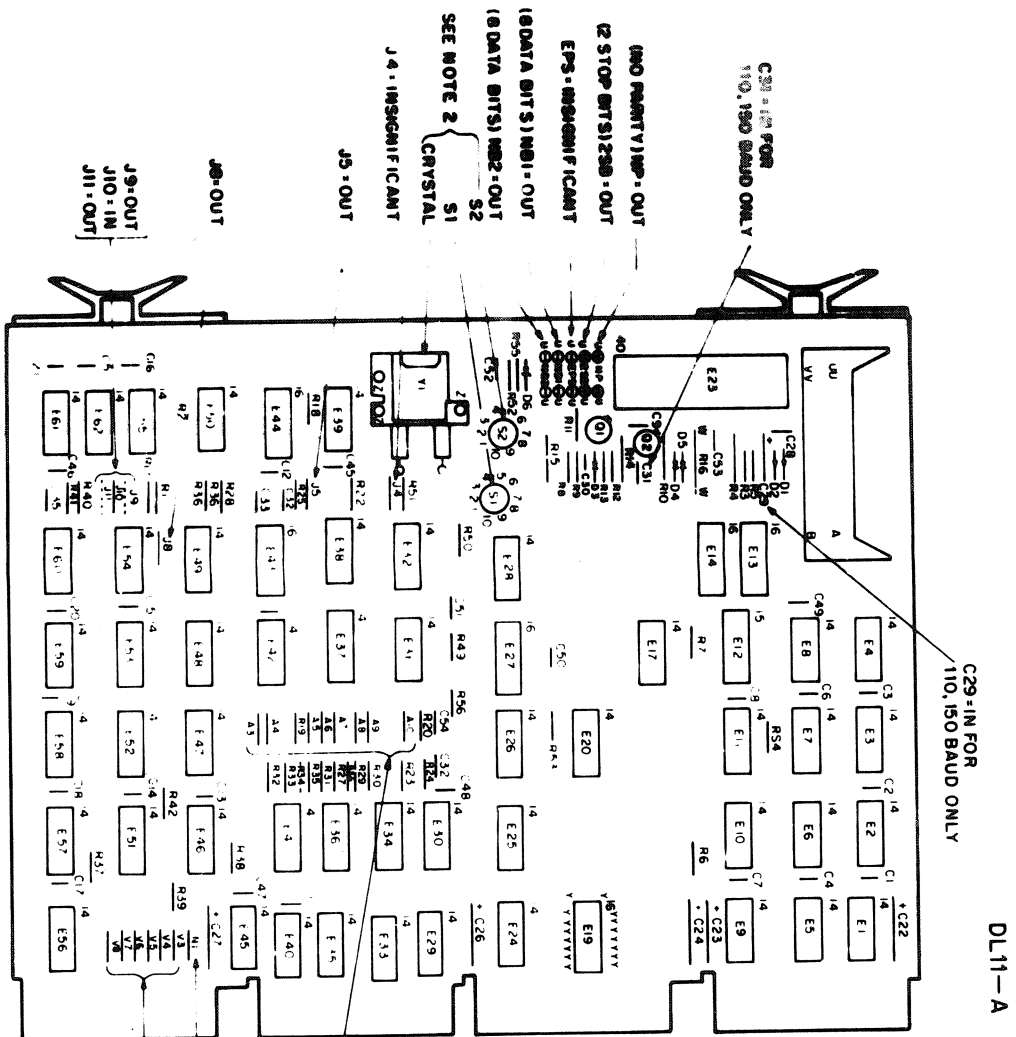
ENGINEERING SPECIFICATION					000000	CONTINUATION SHEET																																																																																																								
TITLE DL11 INSTALLATION PROCEDURE																																																																																																														
J7. (con't) OUT for DL11-A,B,C and D; IN for DL11-E. Drawing DL-2. J8. When inserted, allows error bits to be read as part of the receiver data register. OUT for DL11-A and B; IN for DL11-C,D and E. Drawing DL-2. Summary of mode control jumpers: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <thead> <tr> <th>JUMPER</th> <th>A</th> <th>B</th> <th>C</th> <th>D</th> <th>E</th> <th>DRAWING</th> </tr> </thead> <tbody> <tr><td>J1</td><td>*</td><td>IN</td><td>*</td><td>IN</td><td>IN</td><td>DL-7</td></tr> <tr><td>J2</td><td>OUT</td><td>OUT</td><td>OUT</td><td>OUT</td><td>OUT</td><td>DL-7</td></tr> <tr><td>J3</td><td>*</td><td>OUT</td><td>*</td><td>OUT</td><td>IN</td><td>DL-4</td></tr> <tr><td>J4</td><td>*</td><td>IN</td><td>*</td><td>IN</td><td>OUT</td><td>DL-4</td></tr> <tr><td>J5</td><td>OUT</td><td>OUT</td><td>IN</td><td>IN</td><td>IN</td><td>DL-4</td></tr> <tr><td>J6</td><td>OUT</td><td>OUT</td><td>OUT</td><td>OUT</td><td>IN</td><td>DL-4</td></tr> <tr><td>J7</td><td>OUT</td><td>OUT</td><td>OUT</td><td>OUT</td><td>IN</td><td>DL-2</td></tr> <tr><td>J8</td><td>OUT</td><td>OUT</td><td>IN</td><td>IN</td><td>IN</td><td>DL-2</td></tr> </tbody> </table> *= don't care B. <u>REGISTER ADDRESS ASSIGNMENTS:</u> The DL11 can respond to addresses with the following format: <table border="1" style="width: 100%; border-collapse: collapse; text-align: center;"> <tr> <td>17</td><td>16</td><td>15</td><td>14</td><td>13</td><td>12</td><td>11</td><td>10</td><td>9</td><td>8</td><td>7</td><td>6</td><td>5</td><td>4</td><td>3</td><td>2</td><td>1</td><td>0</td> </tr> <tr> <td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td>1</td><td colspan="10">JUMPERS</td><td></td><td></td> </tr> </table> Selects 1 of 4 Registers Byte Control Bits 10 through 3 are controlled by jumpers A10 to A3. A jumper inserted indicates a zero. For the DL11-A and B used as the console device, address 777560 is assigned. For additional units, assign 776XX0, where XX=50 for the first additional unit and XX=67 for the 16th unit. For the DL11-C,D and E assign address 77XXX0, where XXX=561 for the first line, and XXX=617 for the 31st line. Assign all C's first, then D's, and then E's.											JUMPER	A	B	C	D	E	DRAWING	J1	*	IN	*	IN	IN	DL-7	J2	OUT	OUT	OUT	OUT	OUT	DL-7	J3	*	OUT	*	OUT	IN	DL-4	J4	*	IN	*	IN	OUT	DL-4	J5	OUT	OUT	IN	IN	IN	DL-4	J6	OUT	OUT	OUT	OUT	IN	DL-4	J7	OUT	OUT	OUT	OUT	IN	DL-2	J8	OUT	OUT	IN	IN	IN	DL-2	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	1	1	1	1	1	1	1	JUMPERS											
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J3	*	OUT	*	OUT	IN	DL-4																																																																																																								
J4	*	IN	*	IN	OUT	DL-4																																																																																																								
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ENGINEERING SPECIFICATION		CONTINUATION SHEET																					
TITLE DL11 INSTALLATION PROCEDURE																							
C. VECTOR ADDRESS ASSIGNMENT: Jumpers V8 through V3 control the interrupt vector. A jumper inserted provides a vector bit of one. Vectors can be produced in the form XX0 and XX4 where XX ranges from 00 to 77. For the DL11-A and B used as a console device the vector address is 060/064. For additional units vectors are floating. For the DL11-C,D, and E vector addresses are floating. Assign all C's first, then D's then E's. D. PRIORITY ASSIGNMENT: Interrupt priority is established by inserting a "priority plug" in the socket at IC location E19. For DL11-A B,C,D and E use level 4, for the standard assignment or level 5-7 as specified by the customer or the documentation of an option which uses the DL11. <u>SUMMARY OF REGISTER, VECTOR AND PRIORITY ASSIGNMENTS:</u> <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 35%;"></th> <th style="width: 20%; text-align: center;"><u>ADDRESS</u></th> <th style="width: 20%; text-align: center;"><u>VECTOR</u></th> <th style="width: 25%; text-align: center;"><u>PRIORITY</u></th> </tr> </thead> <tbody> <tr> <td>DL11-A,B CONSOLE</td> <td>777560 777562 777564 777566</td> <td>60/64</td> <td>BR4</td> </tr> <tr> <td>DL11-A,B ADDITIONAL UNITS</td> <td>776XX0 776XX2 776XX4 776XX6</td> <td>FLOATING</td> <td>BR4</td> </tr> </tbody> </table> Where XX= 50 for line #1 and XX= 67 for line #16 <table border="1" style="width: 100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th style="width: 35%;"></th> <th style="width: 20%; text-align: center;"><u>ADDRESS</u></th> <th style="width: 20%; text-align: center;"><u>VECTOR</u></th> <th style="width: 25%; text-align: center;"><u>PRIORITY</u></th> </tr> </thead> <tbody> <tr> <td>DL11-C,D,E</td> <td>77XXX0 77XXX2 77XXX4 77XXX6</td> <td>Floating</td> <td>4</td> </tr> </tbody> </table> Where XXX= 561 for line #1 and XXX= 617 for line #31					<u>ADDRESS</u>	<u>VECTOR</u>	<u>PRIORITY</u>	DL11-A,B CONSOLE	777560 777562 777564 777566	60/64	BR4	DL11-A,B ADDITIONAL UNITS	776XX0 776XX2 776XX4 776XX6	FLOATING	BR4		<u>ADDRESS</u>	<u>VECTOR</u>	<u>PRIORITY</u>	DL11-C,D,E	77XXX0 77XXX2 77XXX4 77XXX6	Floating	4
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		SIZE A	CODE SP	NUMBER DL11-0-2	REV F																		
DEC FORM NO DEC 16--(381)--1022--N370 DRA 108																							
SHEET <u>4</u> OF <u>9</u>																							

ENGINEERING SPECIFICATION

CONTINUATION SHEET

TITLE DL11 INSTALLATION PROCEDURE



Position 1 is most counter-clockwise position

SPEED GROUP	1	2	3	4
CRISTAL FREQ (HZ)	44.8K	103.296K	1.152M	4.608M
ST. S2 POS				
BAUD RATE				
1	36.7	44.8	50	200
2	55	67.3	75	300
3	110	134.5	150	600
4	220	269	300	1200
5	440	538	600	2400
6	880	1076	1200	4800
7	1320	1614	1800	7200
8	1760	2152	2400	9600

NOTES

- 1 For further information on the DL11-A configuration or the installation of DL11-B, DL11-C, DL11-D or DL11-E refer to:
 - a DL11 Asynchronous Line Interface Manual
 - b ASP-DL11-0-2 (DL11 installation procedure) in the DL11 Engineering Drawings.

NOT EXCEPT FOR 11/20 & 11/15 SYSTEMS
WITHOUT KHI OPTION

VECTOR ADDRESS

ADDRESS

11-2454

SIZE
A

CODE
SP

NUMBER
DL11-0-2

REV
F