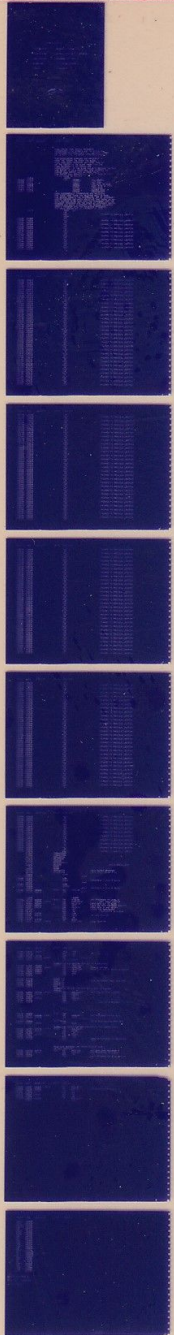


DR11A

MASTER
MD-11-DZDRD-A
(DUAL DR11A INTERFACE)

EP-DZDRD-A-DL
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FICHE 1 OF 1

MAY 1978
digital
MADE IN USA



IDENTIFICATION

PRODUCT CODE: MAINDEC-11-DZDRD-A-D
PRODUCT NAME: MASTER (DUAL DR11A INTERFACE)
DATE CREATED: DECEMBER 19, 1972
MAINTAINER: IPG CUSTOM SYSTEMS
AUTHOR: R. BALDWIN

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DIGITAL EQUIPMENT CORPORATION

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001562	001564	,+2	
001564	000000	HALT	ITRAPPED TO PREVIOUS LOCATION
001566	001570	,+2	
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001576	001600	,+2	
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002066	002070	,+2	
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002072	002074	,+2	
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002106	002110	,+2	
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002246	002250	,+2	
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002264	000000	HALT	ITRAPPED TO PREVIOUS LOCATION
002266	002270	,+2	
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002272	002274	,+2	
002274	000000	HALT	ITRAPPED TO PREVIOUS LOCATION
002276	002300	,+2	
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002302	002304	,+2	
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002372	002374	,+2	
002374	000000	HALT	ITRAPPED TO PREVIOUS LOCATION
002376	002400	,+2	
002400	000000	HALT	ITRAPPED TO PREVIOUS LOCATION
002402	002404	,+2	
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002412	002414	,+2	
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002416	002420	,+2	
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002430	000000	HALT	ITRAPPED TO PREVIOUS LOCATION
002432	002434	,+2	
002434	000000	HALT	ITRAPPED TO PREVIOUS LOCATION
002436	002440	,+2	
002440	000000	HALT	ITRAPPED TO PREVIOUS LOCATION
002442	002444	,+2	
002444	000000	HALT	ITRAPPED TO PREVIOUS LOCATION
002446	002450	,+2	

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002450 000000 HALT ;TRAPPED TO PREVIOUS LOCATION
002452 002454 ,+2
002454 000000 HALT ;TRAPPED TO PREVIOUS LOCATION
002456 002460 ,+2
002460 000000 HALT ;TRAPPED TO PREVIOUS LOCATION
002462 002464 ,+2
002464 000000 HALT ;TRAPPED TO PREVIOUS LOCATION
002466 002470 ,+2
002470 000000 HALT ;TRAPPED TO PREVIOUS LOCATION
002472 002474 ,+2
002474 000000 HALT ;TRAPPED TO PREVIOUS LOCATION
002476 002500 ,+2
002500 000000 HALT ;TRAPPED TO PREVIOUS LOCATION
002502 002504 ,+2
002504 000000 HALT ;TRAPPED TO PREVIOUS LOCATION
002506 002510 ,+2
002510 000000 HALT ;TRAPPED TO PREVIOUS LOCATION
002512 002514 ,+2
002514 000000 HALT ;TRAPPED TO PREVIOUS LOCATION

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177564 TYSR=177564
177566 TYDB=177566
167770 CSR=167770
177570 SR=177570
000240 NOP=240
177776 PSTAT=177776
000240 DRL=240
000004 R4=X4
000005 R5=X5
167772 DBR=167772
167774 DIT=167774

```

DR11-A BREAK LEVEL

```

000006 R6=X6
000300 ,=300
000300 001204 INTA ;PROCESSOR STATUS OF SEVEN
000302 000200 00200 ,=304
000304 001170 INTB ;PROCESSOR STATUS OF SEVEN
000306 000200 000200 ,=220
000200 012706 000000 STARTI MOV #000,X6 BEGIN
000204 000167 000570 JMP

```

```

001000 001000 ,=1000
001004 012704 001500 BEGINI MOV #TAB,X4 ;SET PROCESSOR TO LEVEL 4
001004 012767 000200 176764 MOV #200,PSTAT ;SET TABLE LOCATOR
001012 004567 000064 JSR %5,DATA0 ;SEND DATA OUT TO SLAVE
001016 000167 000122 JMP WAIT ;WAIT FOR DATA TRANSFER COMPLETE
001022 004567 000164 CYCLEI JSR %5,DATA1 ;READ DATA IN AND VERIFY
001026 005714 TST (X4) ;CHECK FOR TERMINATOR
001030 001402 BEQ ,+6 ;TERMINATOR IS A ZERO
001032 000167 177754 JMP ,+20
001036 005267 000070 INC COUNT ;UP DATE COUNTER
001042 001402 BEQ ,+6
001044 000167 177730 JMP BEGIN
001050 012767 000207 176510 MOV #207,TYDB ;LOAD TELETYPE

```



```

301056 105707 176502      TSTB   TYSR
301062 100422      BMI    ,+6           ;WAIT FOR A DONE
301064 000167 177766      JMP    ,+6
301070 012767 177776 000034  MOV    #-2,COUNT
301076 000167 177076      JMP    START

;
;SUBROUTINE FOR SENDING DATA OUT TO SLAVE PDP-11
DATA01  MOV    (%4),HOLD
301106 012767 000140 166654  MOV    #140,CSR      ;ENABLE INT A+B
301114 012467 166652      MOV    (%4)+,DBR     ;SEND DATA OUT TO DR11A ON MASTER
301120 005167 000010      COM    HOLD
301124 005267 000004      INC    HOLD
301130 000205      RTS    %5

;
COUNT1 -2
HOLD: 0           ;SAVE RECIPROCAL TEST DATA HERE
COUNT1: 2
COUNT2: 0
ROT: 2
;SUBROUTINE TO WAIT FOR DATA BEING READ INTO SLAVE
;PDP-11
301144 012767 177776 177764  WAIT:  MOV    #-2,COUNT1  ;SET TIME OUT FOR A LOOPS
301152 005267 177762      INC    COUNT2
301156 001375      BNE    ,+4
301160 005267 177752      INC    COUNT1
301164 001372      BNE    ,+12
301166 000000      HALT                    ;NO INT B RETURNED

;
;
;
;
INTB:  NOP
301170 000240
301172 012767 000200 176576  MOV    #200,PSTAT  ;SET PROCESSOR STATUS TO 5
301200 000167 177616      JMP    CYCLE

;
INTA:  NOP
301204 000240
301206 000167 000024      JMP    READ          ;GO TO READ ROUTINE FROM HERE

;
;SUBROUTINE TO WAIT FOR DATA RETURNED TO THE MASTER DR11-A
DATA11  MOV    #-3,COUNT1
301212 012767 177775 177716  INC    COUNT2
301220 005267 177714      BNE    ,+4
301224 001375      INC    COUNT1
301226 005267 177704      BNE    ,+12
301232 001372      HALT                    ;DATA NOT RETURNED IN SPECIFIED
301234 000000      ;TIME

;
;
;
;READ DATA RETURNED AND VERIFY AGAINST DATA
;IN HOLD POSITION
301236 013703 167774  READ:  MOV    @0D1T,%3  ;PUT DATA INTO REGISTER 3
301242 006703 177666      ADD    HOLD,%3      ;ADD RECIPROCAL OF NUMBER
301246 001401      BEQ    ,+4
301250 000000      HALT                    ;DATA RETURNED NOT SAME AS SENT

```

001252	012767	000200	176516	MOV	#200,PSTAT	
001260	012706	000600		MOV	#000,X6	1SET PROCESSOR STATUS TO 4
001264	005267	177652		INC	R0T	
001270	001375			BNE	,=4	
001272	005267	177644		INC	R0T	
001276	001375			BNE	,=4	
001300	000137	001020		JMP	@CYCLE+4	
	000001				.END	

BEGIN	001000
COUNT	001132
COUNT1	001136
COUNT2	001140
CSR	167770
CYCLE	001022
DATAI	001212
DATAD	001102
DSR	167772
DIT	167774
DRL	000240
HOLD	001134
INTA	001204
INTB	001170
NOP	000240
PSTAT	177776
R4	000004R
R5	000005R
R6	000006R
READ	001236
ROT	001142
SR	177570
START	000200
TAB	001500
TYDB	177566
TYSR	177564
WAIT	001144

ERRORS DETECTED: 0

RUN-TIME: 2 SECONDS

4K CORE USED