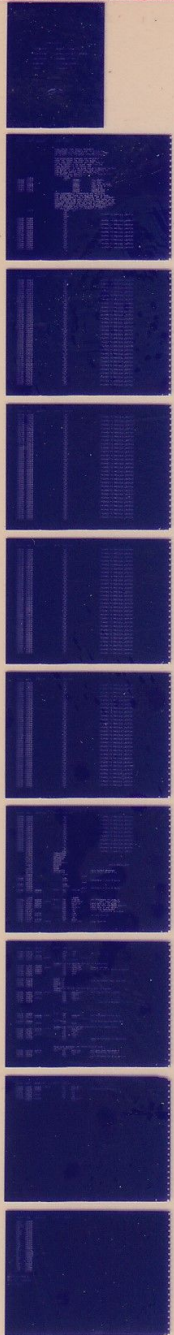


DR11A

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 (DUAI DR11A INTERFACE)
DATE CREATED: DECEMBER 19, 1972
MAINTAINER: IPG CUSTOM SYSTEMS
AUTHOR: R. BALDWIN

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321562	000000	HALT	ITRAPPED TO PREVIOUS LOCATION
321562	001564	,+2	
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222010	200020	HALT	ITRAPPED TO PREVIOUS LOCATION
222012	002014	,+2	
222014	000020	HALT	ITRAPPED TO PREVIOUS LOCATION
222016	202020	,+2	
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222066	202070	,+2	
222070	000020	HALT	ITRAPPED TO PREVIOUS LOCATION
222072	202074	,+2	
222074	000020	HALT	ITRAPPED TO PREVIOUS LOCATION
222076	002100	,+2	
222100	000020	HALT	ITRAPPED TO PREVIOUS LOCATION
222102	002104	,+2	
222104	000020	HALT	ITRAPPED TO PREVIOUS LOCATION
222106	002110	,+2	
222110	000020	HALT	ITRAPPED TO PREVIOUS LOCATION
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J22116	202120	,+2	
J22120	202000	HALT	TRAPPED TO PREVIOUS LOCATION
J22122	202124	,+2	
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J22136	202140	,+2	
J22140	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22142	202144	,+2	
J22144	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22146	222150	,+2	
J22150	200000	HALT	TRAPPED TO PREVIOUS LOCATION
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J22158	207000	HALT	TRAPPED TO PREVIOUS LOCATION
J22162	222164	,+2	
J22164	203000	HALT	TRAPPED TO PREVIOUS LOCATION
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J22172	202174	,+2	
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J22176	202200	,+2	
J22200	200000	HALT	TRAPPED TO PREVIOUS LOCATION
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J22206	202210	,+2	
J22210	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22212	202214	,+2	
J22214	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22216	202220	,+2	
J22220	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22222	202224	,+2	
J22224	203000	HALT	TRAPPED TO PREVIOUS LOCATION
J22226	202230	,+2	
J22230	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22232	202234	,+2	
J22234	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22236	202240	,+2	
J22240	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22242	202244	,+2	
J22244	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22246	202250	,+2	
J22250	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22252	202254	,+2	
J22254	003000	HALT	TRAPPED TO PREVIOUS LOCATION
J22256	202260	,+2	
J22260	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22262	002264	,+2	
J22264	200000	HALT	TRAPPED TO PREVIOUS LOCATION
J22266	202270	,+2	
J22270	200000	HALT	TRAPPED TO PREVIOUS LOCATION

322272	302274	,+2	
322274	302020	HALT	ITRAPPED TO PREVIOUS LOCATION
322276	302320	,+2	
322320	302020	HALT	ITRAPPED TO PREVIOUS LOCATION
302302	302324	,+2	
302324	302020	HALT	ITRAPPED TO PREVIOUS LOCATION
322306	302310	,+2	
322310	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
322312	302314	,+2	
322314	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
322316	302320	,+2	
322320	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302322	302324	,+2	
302324	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
322326	302330	,+2	
302330	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
322332	302334	,+2	
322334	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302336	302340	,+2	
322340	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
322342	302344	,+2	
302344	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
322346	302350	,+2	
302350	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
322352	302354	,+2	
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302356	302360	,+2	
322360	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302362	302364	,+2	
322364	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
322366	302370	,+2	
322370	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
322372	302374	,+2	
322374	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302376	302400	,+2	
302400	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302402	302404	,+2	
302404	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302406	302410	,+2	
302410	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302412	302414	,+2	
302414	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302416	302420	,+2	
302420	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
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302426	302430	,+2	
302430	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302432	302434	,+2	
322434	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302436	302440	,+2	
302440	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302442	302444	,+2	
302444	300020	HALT	ITRAPPED TO PREVIOUS LOCATION
302446	302450	,+2	

```

322450 002450 HALT ;TRAPPED TO PREVIOUS LOCATION
322452 002454 ,+2
322454 002458 HALT ;TRAPPED TO PREVIOUS LOCATION
322456 002458 ,+2
322460 002458 HALT ;TRAPPED TO PREVIOUS LOCATION
322462 002464 ,+2
322464 002470 HALT ;TRAPPED TO PREVIOUS LOCATION
322466 002470 ,+2
322472 002474 HALT ;TRAPPED TO PREVIOUS LOCATION
322472 002474 ,+2
322474 002478 HALT ;TRAPPED TO PREVIOUS LOCATION
322476 002478 ,+2
322520 002520 HALT ;TRAPPED TO PREVIOUS LOCATION
322572 002524 ,+2
322524 002528 HALT ;TRAPPED TO PREVIOUS LOCATION
322576 002510 ,+2
322510 002510 HALT ;TRAPPED TO PREVIOUS LOCATION
322512 002514 ,+2
322514 002514 HALT ;TRAPPED TO PREVIOUS LOCATION

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```

177564 TVSR=177564
177566 TYDB=177566
167770 CSR=167770
177570 SR=177570
00240 NOP=240
17776 PSTAT=177776
202240 DRL=240
300004 R4=X4
200025 R5=X5
167772 DBR=167772
167774 DIT=167774
000026 R6=X6
000300 ,=300
320300 001204 INTA ,=304
320302 000200 00200 ;PROCESSOR STATUS OF SEVEN
000304 001170 INTB ,=304
320306 200200 200200 ;PROCESSOR STATUS OF SEVEN
000200 ,=200
300200 012706 000000 START: MOV #000,X6
300204 000167 000070 JMP BEGIN

```

DR11-A BREAK LEVEL

;DATA BUFFER REGISTER
;DATA INPUT TRANSMITTER

```

321000 001000 001000 BEGIN: MOV ,=1000
321004 012704 000200 MOV #TAB,X4 ;SET PROCESSOR TO LEVEL 4
321008 004567 000064 JSR X5,DATA0 ;SET TABLE LOCATOR
321012 000167 000122 JMP WAIT ;SEND DATA OUT TO SLAVE
321016 004567 000164 CYCLE: JSR X5,DATA1 ;WAIT FOR DATA TRANSFER COMPLETE
321020 205714 TST (X4) ;READ DATA IN AND VERIFY
321024 001422 BEQ ,+6 ;CHECK FOR TERMINATOR
321028 002167 177754 JMP ,+20 ;TERMINATOR IS A ZERO
321032 005267 000070 INC COUNT ;UP DATE COUNTER
321036 001402 BEQ ,+6
321040 002167 177730 JMP BEGIN
321044 012704 200207 MOV #207,TYDB ;LOAD TELETYPE

```



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321256 105707 176522      TSTB   TVSR
321262 120422      BHI    ,=0           ;WAIT FOR A DONE
321264 202167 177760      JMP    ,=0
321270 212767 177770 200034  MOV    #=2,COUNT1
321276 202167 177270      JMP    STAH7

;
;SUBROUTINE FOR SENDING DATA OUT TO SLAVE POP=11
DATA01  MOV    (X4),HOLD
321122 211467 000020      MOV    #140,CSR      ;ENABLE INT A+B
321126 212767 202140 100654  MOV    (X4)+,CSR     ;SENT DATA OUT TO DR11A ON MASTER
321114 212467 100052      MOV    (X4)+,CSR
321120 205167 200010      COM    HOLD
321124 205267 000004      INC    HOLD
321130 200205      RTS    X5

;
COUNT1 =2
HOLD: 0
321132 177776      ;SAVE RECIPROCAL TEST DATA HERE
321134 200000
321136 200000
321140 200000
321142 200000
COUNT2: 0
ROT: 0
;SUBROUTINE TO WAIT FOR DATA BEING READ INTO SLAVE
;POP=11
321144 212767 177770 177764  WAIT:  MOV    #=2,COUNT1  ;SET TIME OUT FOR A LOOPS
321152 205267 177762      INC    COUNT2
321156 201375      BNE    ,=4
321160 205267 177752      INC    COUNT1
321164 201372      BNE    ,=12
321166 200000      HALT    ;NO INT B RETURNED

;
;
;
;
;INTB:  NOP
321170 200240
321172 212767 000200 176576  MOV    #200,PSTAT  ;SET PROCESSOR STATUS TO 0
321200 200167 177610      JMP    CYCLE

;INTA:  NOP
321204 200240
321206 200167 000224      JMP    READ

;
;SUBROUTINE TO WAIT FOR DATA RETURNED TO THE MASTER DR11-A
DATA11  MOV    #=3,COUNT1
321212 212767 177770 177716  INC    COUNT2
321220 205267 177714      BNE    ,=4
321224 201375      INC    COUNT1
321226 205267 177704      BNE    ,=12
321232 201372      HALT    ;DATA NOT RETURNED IN SPECIFIED
321234 200000      ;TIME

;
;
;READ DATA RETURNED AND VERIFY AGAINST DATA
;IN HOLD POSITION
321236 213723 167774      READ:  MOV    @ADR1,X3  ;PUT DATA INTO REGISTER 3
321242 206723 177660      ADD    HOLD,X3      ;ADD RECIPROCAL OF NUMBER
321246 201431      BEQ    ,=4
321250 200000      HALT    ;DATA RETURNED NOT SAME AS SENT

```

321252	212707	002200	176516	MOV	#220,MSTAT	
321260	212726	002000		MOV	#072,X0	ISPT PROCESSOR STATUS TO 4
321264	005267	177652		INC	#07	
321270	001375			BNE	,=4	
321272	005267	177644		INC	#07	
321276	001375			BNE	,=4	
321320	000137	001020		JMP	#CYCLE+4	
	000001				.END	

BEGIN	201020
COUNT	201132
COUNT1	201136
COUNT2	201140
CSR	107772
CYCLE	201022
DAT1	201212
DAT0	201122
DJR	107772
DIT	107774
DRL	200240
HOLD	201134
INTA	201204
INTB	201170
VDP	200240
PSTAT	177776
R4	200024R
R5	200025R
R6	200026R
READ	201236
ROT	201142
SR	177570
START	200220
TAB	201500
TYCH	177566
TYSH	177564
WAIT	001144

ERRORS DETECTED: 0

RUN-TIME: 2 SECONDS

4K CORE USED