KD8-E
data break interface
engineering drawings

digital equipment corporation · maynard. massachusetts

MASTER DRAWING LIST

DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE
A-PL-KD8-E-0		1	DATA BREAK INTERFACE (PARTS LIST)
E-CS-M8360-0-1	B	3	DATA BREAK INTERFACE
A-SP-KD8-E-1		3	ENGINEERING SPECIFICATIONS
A-SP-KD8-E-2	A	2	TEST PROCEDURE
A-SP-KD8-E-3	A	2	ACCEPTANCE PROCEDURE
A-AL-KD8-E-4		1	ACCESSORY LIST
D-UA-BC08-T-0-0	#	1	I/O CABLE (BC08J)

REVISIONS

REV.	DATE	CHG. NO.	APP'D.
A	3/23/71	00001	L.K.
B	4/71	M8360-1	L.K.
C	4/71	KD8E-2	L.K.
D	10/71	00003	L.K.
E	3/72	00004	ZK
F	4/72	00005	ZK

DRN. K. GULICK	DATE 1-15-71	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHK'D K. GULICK	DATE 1-18-71	
ENG. [signature]	DATE 3/5/71	TITLE DATA BREAK
PROJ. ENG. [signature]	DATE 3/5/71	
PROD. [signature]	DATE 3/5/71	
FIRST USED ON PDP8-E		SIZE A · CODE ML · NUMBER KD8-E · REV. F
SCALE NONE		
SHEET 1 OF 1		DIST.

DEC FORM NO. 16-1033
DRA 103

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

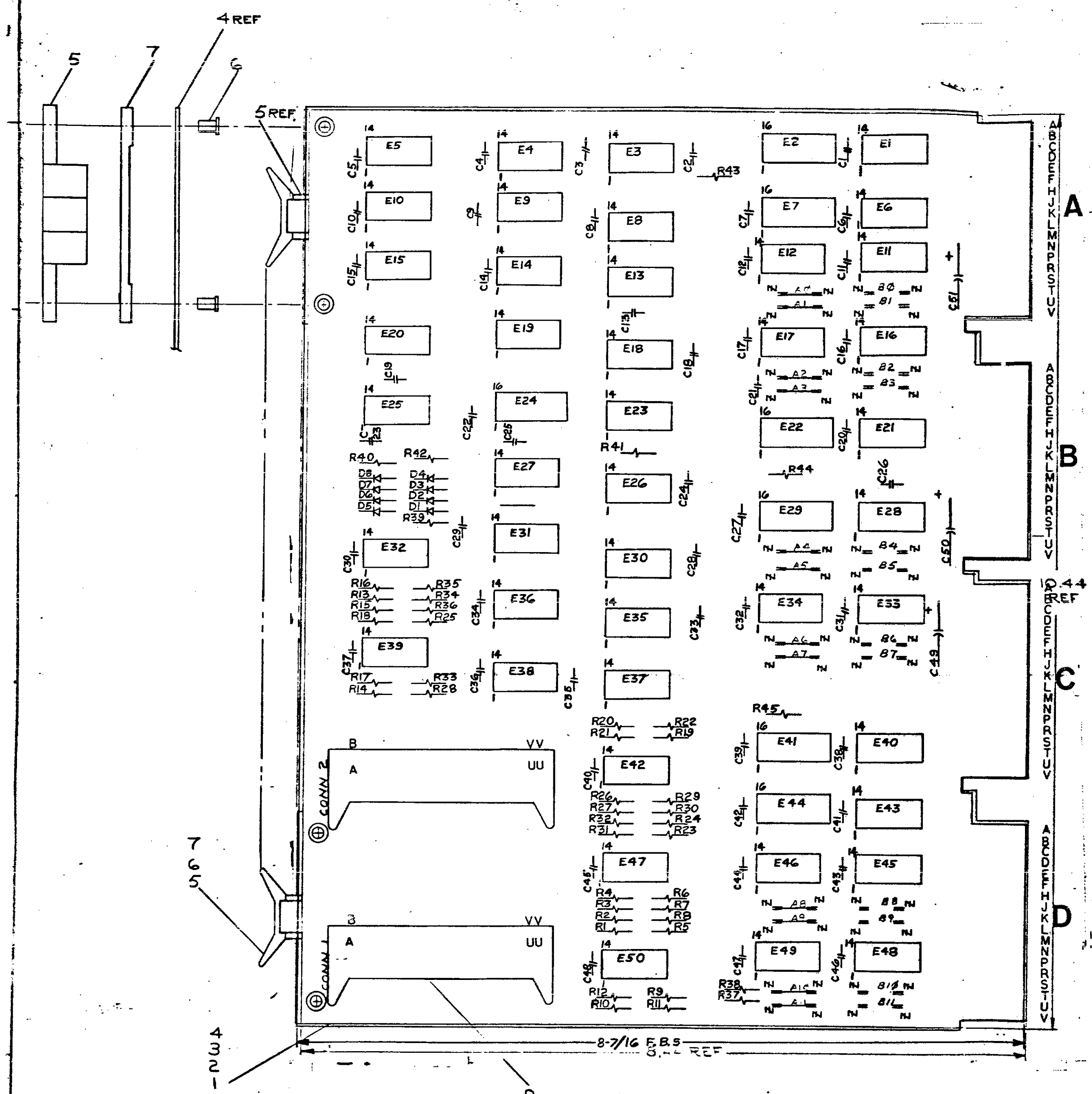
PARTS LIST

MADE BY K. GULICK	CHECKED K. RUSS	SECTION
DATE 3/23/71	DATE 3/23/71	1
ENG [signature]	PROD [signature]	ISSUED SECT.
DATE 4-8-71	DATE 4-7-71	1

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION
1	E-CS-M836-0-1	DATA BREAK INTERFACE	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV	ECO NO.
DATA BREAK INTERFACE KD8-E		A	PL	KD8-E-0		
	SHEET 1 OF 1	DIST.				

DEC FORM NO.16-1031
DRA 110

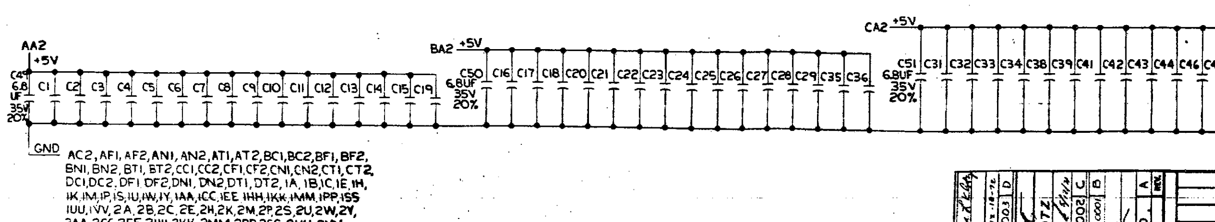


NOTES:

1. UNLESS OTHERWISE NOTED:
   CAPACITORS ARE .01UF, 100V, 20%
   DIODES ARE D662
   RESISTORS ARE 220, 1/4W, 5%
   I.C.'S ARE DEC 97401
2. ALL "A" JUMPERS ARE INSTALLED AT MANUFACTURING. TO ESTABLISH HIGHER PRIORITIES REMOVE AN "A" JUMPER AND INSTALL A "B" JUMPER. BØ IS HIGHEST PRIORITY WHILE B11 IS LOWEST PRIORITY.
3. MD DIR IS LOW FOR EVERY MEMORY READ. THIS LEVEL IS TRUE DURING WRITE.

SEE NOTE #3

	WC	CA		BREAK			
		INC	NO INC	OUT	IN	MB INC	ADM
MD DIR	H	H	L	L	H	H	H
BREAK DATA C	L	L	L	H	H	L	L
DATA EN H	L	L	L	L	H	L	H



QTY.	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
4	E1, E21, E37, E40	I.C. DEC 8881	1909705	31
A/R		WIRE #22 AWG SOLID BUS	9107560-01	30
5	E32, E39, E42, E47, E50	DIODE PACK 2501	1910010	29
2	E3, E8	DIODE PACK 7412	1909955	28
3	E7, E29, E44	I.C. 8266	1909934	27
2	E25, E27	I.C. 7416	1909928	26
4	E16, E48, E23, E33,	I.C. DEC 97401	1909973	25
2	E12, E46	I.C. DEC 6314	1909972	24
3	E11, E19, E45	I.C. 7404	1909686	23
5	E4, E9, E31, E36, E38	I.C. 74H74	1909667	22
4	E2, E22, E24, E41	I.C. 8271	1909615	21
1	E30	I.C. 384	1909486	20
7	E6, E17, E28, E34, E35, E43, E49	I.C. DEC 6380	1909971	19
1	E13	I.C. 74H11	1909267	18
1	E14	I.C. 74H10	1909057	17
3	E10, E20, E26	I.C. 7402	1909004	16
1	E5	I.C. 7440	1905579	15
2	E15, E18	I.C. 7400	1905575	14
45	R1-R45	RES. 220, 1/4W, 5%	1300271	13
8	D1-D8	DIODE D662	1100115	12
48	C1-C48	CAP. .01UF, 100V, 20% DISC	1001610	11
3	C49-C51	CAP. 6.8UF, 35V, 20% S. TANT	1000067	10
2		RIGHT ANGLE HEADER 40 PIN	1209941	9
48		SPLIT LUG	9006735	8
4		SPACER (CABLE CLAMP)	1202704	7
8		EYELET GS4-11 STIMPSON	9006750	6
4		HANDLE FLIP CHIP-MAGENTA	9008337-06	5
1		ETCHED CIRCUIT BOARD	5009447	4
REF		MODULE HISTORY LIST	B-MH-M8360-0-6	3
REF		ASSY/DRILLING HOLE LAYOUT	D-AH-M8360-0-5	2
REF		X-Y COORDINATE HOLE LOC.	K-CO-M8360-0-4	1

PARTS LIST

ETCH BOARD REV B

IC TYPE		GND	+5V
DEC 2501	+3V PIN 1	14	NONE
DEC 6314		1	8
IC 384		1	8
DEC 6380		1	8

GND AND 5V ARE USUALLY PIN 7 AND 14 RESPECTFULLY. EXCEPTIONS ARE STATED ABOVE

IC PIN LOCATIONS

SEE NOTE #2

ITEM NO	AWG	FROM PT	TO PT

JUMPER LIST

REV.	CHANGE NO.		
A	ORIGINATED	L KLOTZ	
B	ECO# M8360-0001	L KLOTZ	
C	M8340-00002	LOUIS KLOTZ	
D	M8360-00003	L KLOTZ	

REVISIONS

DEC NO.	EIA NO.	DEC NO.	EIA NO.
		D662	1N645

SEMICONDUCTOR CONVERSION CHART

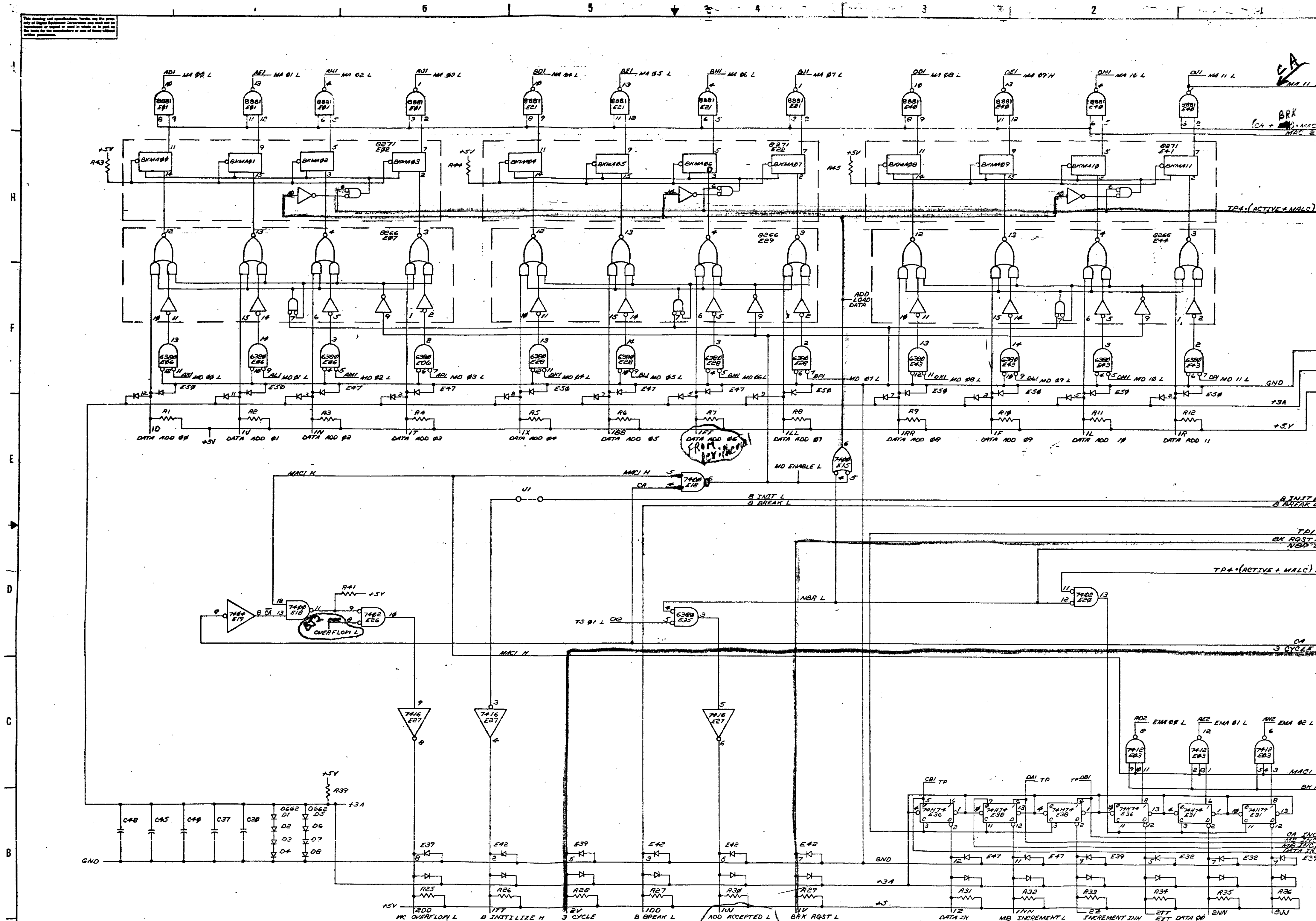
EQUIPMENT CORPORATION

TITLE: DATA BREAK INTERFACE

FIRST USED ON: A-M-KO8-E

SIZE: E · CODE: CS · NUMBER: M8360-0-1 · REV: D

SCALE · SHEET OF 3



QTY.	DESCRIPTION	PART NO.	ITEM NO.
	PARTS LIST		

FIRST USED ON OPTION/MOD

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES
TOLERANCES
DECIMALS ± .005 FRACTIONS ± 1/64 ANGLES ± 0°30'
FINAL SURFACE QUALITY ✓
REMOVE BURRS AND BREAK SHARP CORNERS

MATERIAL

FINISH

DRN. DATE 3/5/71
CHK'D. DATE
ENG. DATE
PROJ. ENG. DATE
PROD. DATE
NEXT HIGHER ASSY

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE
DATA BREAK INTERFACE

SIZE E CODE CS NUMBER M8350-0-1 REV. C

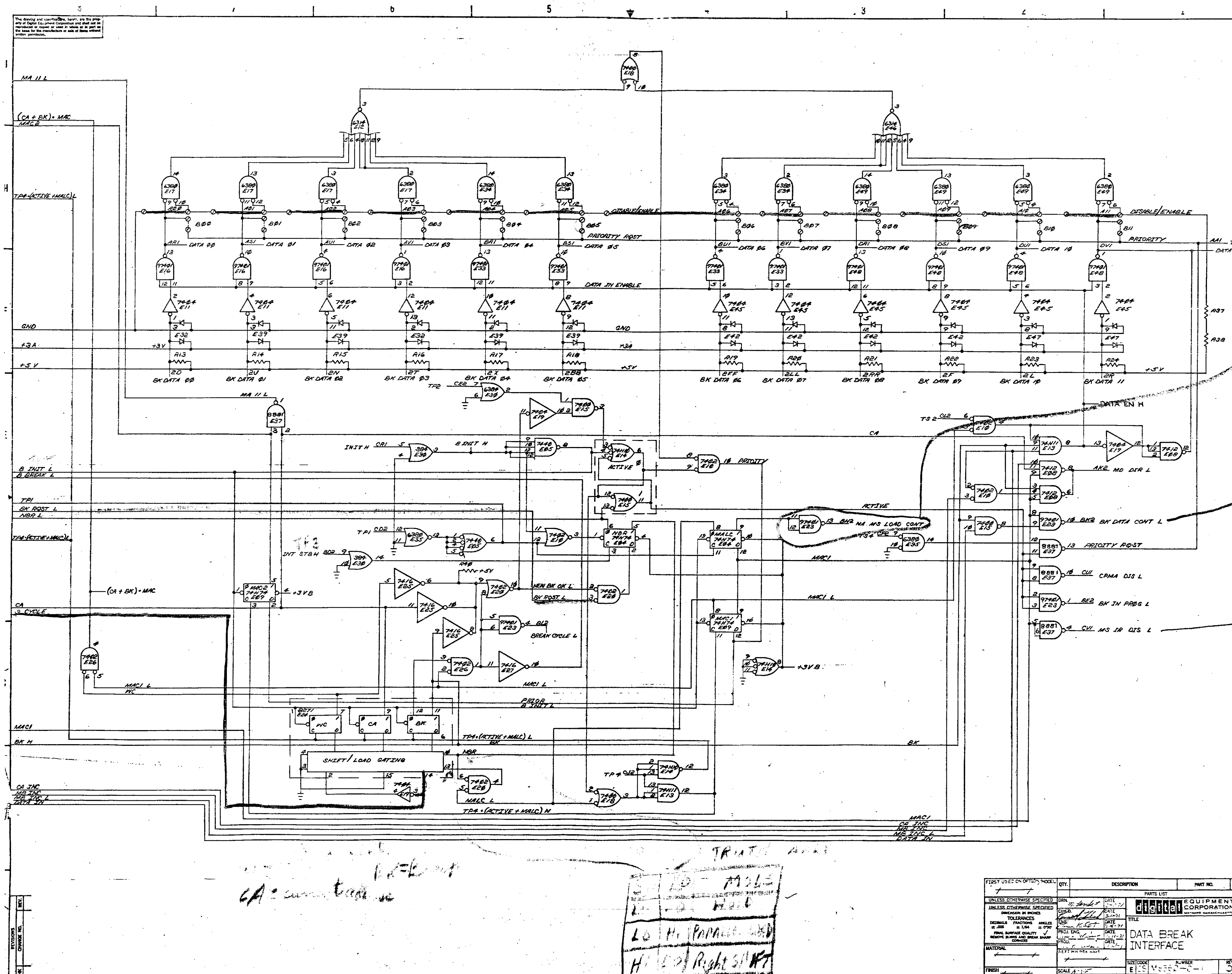
SCALE NONE
SHEET 2 OF 3

Word Count page 52 Handout

3 cycle Device Hor grid

To Perip

Vol II maint manual



Data Bus MA Memory address major state

H = Data Bus to M.B.
L = Take the Data Bus plus MD to M.B.

Disqualify M.S. É 10 ST, Ref Page 14

CA : ... ...

	LD	MALE
	...	MALC
LO	H	PARALLEL LOAD
H	LO	Right SHIFT

2

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 4/21/71

TITLE KD8-E DATA BREAK MULTIPLEXER

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE

ENG	APPD	SIZE	CODE	NUMBER	REV
Louis Klotz	Louis Vogelsang	A	SP	KD8-E-1	

DEC FORM NO. DRA 107

1.Ø Overall Description

The KD8-E option is used with the KA8-E and converts the "Omnibus" to a PDP8/I or 8/L Positive Data Break Bus either three cycle or single cycle break. It also provides for multiplexing of up to twelve (12) KD8-E options in a single PDP8/E; therefore, removing the need for External Multiplexers such as the DMØ1 or DMØ4.

Due to timing considerations in the PDP8/E, the DMØ1 or DMØ4 Break Multiplexers may not be used with the KD8/E.

The 1971 edition of the Small Computer Handbook represents part of this specification and should be referred to.

2.Ø General Description

2.1 Definition of Basic System

A. One M836Ø Data Break Board
B. Two BCØ8J Cables

2.2 List of Included Options

2.3 Mechanical Packaging

A. 8½" by 10½" quad board
B. Two cable connectors

2.4 Environmental Specification

A. Temperature: 32° to 13Ø°F (Ø° to 55°C)
B. Humidity: Maximum 90% Rel. No condensation
C. Power: +5 @ 1.43 amp.

2.5 General Preformance Specification

Refer to 1971 Small Computer Handbook.

3.Ø Specification of Vendor Supplied Equipment

Refer to Purchase Specification for component in question.

4.Ø Programming

A. Non-programmable.

5.Ø Interface Specifications

Refer to 1971 Small Computer Handbook.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 10/13/71

TITLE KD8-E TEST PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	ECO CHANGE	00005	KLOTZ	4-72	JK	4-25-72

ENG	APPD	SIZE	CODE	NUMBER	REV
	RK Allen	A	SP	KD8-E-2	A

DEC FORM NO. DRA 107

ENGINEERING SPECIFICATION — digital — CONTINUATION SHEET

TITLE KD8-E TEST PROCEDURE

1.0 EQUIPMENT

1.1 PDP8E

1.2 Daughter station on PDP8E test line

1.3 453 Scope/voltage probes

2.0 TEST STATION SET UP

2.1 Check paperwork in envelop making sure it is complete as required by DEC Standard # 101.

2.1.1 Test and inspection record

2.1.2 Key sheet and ECO status sheet will contain both CS and etch revision.

2.1.3 Quality control inspection report.

2.1.4 PDP8E progress report

2.2 Insert the M8360 to be tested in the Omnibus per "Recommended Module Assignment List" (A-SP-PDP8E-0-4)

2.3 Cable connections

M8360	Daughter Station
Conn 1	C8 - D8
Conn 2	C7 - D7

3.0 TESTING

3.1 Run a quick verify off daughter station

4.0 FINAL OPERATION AND INSPECTION

4.1 Remove M8360

4.2 Disconnect cables

4.3 Check that the following paperwork has been completed

ECO status sheet

QC sheet

8/E progress report

5.0 EXCEPTIONS

5.1 If daughter station is not available, but KD8E tester is, the above steps 1.0 to 3.0 will not be performed. Instead the KD8E will be hooked up and 3 passes of the latest KD8E diagnostic will be run (Refer to D-CS-KD8E-T-1).

SIZE	CODE	NUMBER	REV
A	SP	KD8-E-2	A

DEC FORM NO 16-1022 DRA 108

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 10/8/71

TITLE KD8E ACCEPTANCE PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	ECO CHANGE	KD8E-00004	KLOTZ	3/72	[illegible]	3/72

ENG	APPD	SIZE	CODE	NUMBER	REV
[signature]	[signature]	A	SP	KD8-E-3	A

DEC FORM NO. DRA 107

1.0 EQUIPMENT REQUIRED FOR ACCEPTANCE

1.1 PDP8E

1.2 Daughter statior on PDP8E test line

2.0 PROCEDURE

2.1 Make sure all ECO's have been installed

2.2 Perform Q.C. inspection

2.3 Insert the M8360 to be accepted in the 8E Omnibus per "Recommended Module Assignment List" (A-SP-PDP8/E-0-4)

2.4 Cable connections

M8360	Daughter Station
Conn 1	C8 - D8
Conn 2	C7 - D7

3.0 ACCEPTANCE TESTING

3.1 Run quick verify off daughter station

4.0 SHIPPING SOFTWARE

4.1 KD8-E print set

4.2 Maintenance manual or Engineering specification

5.0 SHIPPING HARDWARE

5.1 M8360 module (1 each)

5.2 BC08J-10 cable (2 each) 10 feet length will be shipped unless otherwise specified on construction requisition

6.0 EXCEPTIONS

6.1 If 8-E is installed in a system (i.e. with an RFØ8 etc.) the system acceptance will be used as the KD8-E acceptance and the above steps 1.0 - 5.0 will not be performed.

6.2 If KD8-E is not in a system, but the KD8E tester is available the above steps 1.0-3.0 will not be performed. The KD tester will be hooked up and 3 passes of the latest KD8E tester diagnostic will be run.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY J. Mc Cluskey DATE 4/18/72	CHECKED DATE 4/18/72	SECTION
ENG L. Klotz DATE 4/18/72	PROD DATE 4/18/72	ISSUED SECT.

LEGEND

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

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	QUANTITY/VARIATION KD8-E
1	M8360	Data Break Interface Module	1
2	BC08-J	Control Cable	3
3	A-ML-KD8-E	KD8-E Print Set	1
4	DEC-8E-HR2B-D-KD8	KD8-E Maintenance Manual	1
		Note: If item 4 is Temporarilly waivered ship the following	
	A-SP-KD8-E-1	KD8-E Engineering Specifications	1
	A-SP-KD8-E-3	KD8-E Acceptance Procedure	1

KIT CHECK BY _____ DATE _____
INSTALLATION CHECK BY _____ DATE _____

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
ACCESSORY LIST FOR KD8-E	SHEET 1 OF 1	A	AL	KD8-E-4		
		DIST.				

DEC 16-(325)-1075-N172 DRA 121

WIRE TABLE

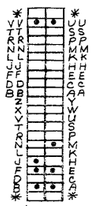
ITEM NO.	DESCRIPTION AWG	COLOR	FROM		TO		REMARKS
				WITH	CONNECTION	WITH	
2		BLU	P1 - A	3	P2 - VV	3	CRIMP
		ORN	P1 - B		P2 - UU		
		BRN	P1 - E		P2 - RR		
		RED	P1 - F		P2 - PP		
		VIO	P1 - J		P2 - MM		
		BLK	P1 - M		P2 - JJ		
		GRY	P1 - UU		P2 - B		
2		GRN	P1 - VV	3	P2 - A	3	CRIMP

LEGEND

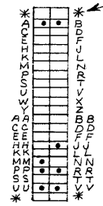
NUMBER	VARIATION
	DIM "X"
BCØ8T-1A	1 FT. 1 IN. ± 1 IN.

NOTES:
1. MANUFACTURING SHALL USE THE MACHINE CRIMPING TOOL FOR THE ASSY OF PINS. (ITEM #3).
2. PINS (ITEM #3) SHOULD BE CRIMPED USING ELCO HAND TOOL (J67515-C) OR THE EQUIVALENT.
3. * ASTERISKS INDICATES CAVITIES NOT USED OR DESIGNATED BY LETTERS.
4. BERG CONNECTORS WILL BE LABELLED BCØ8T P1 AND BCØ8T P2 ON THE BACK SIDE OF THE RESPECTIVE CONNECTOR.

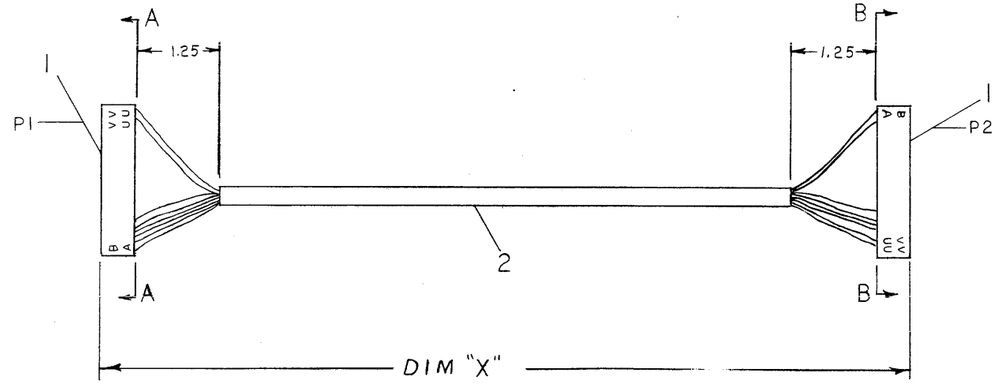
SEE NOTE #3

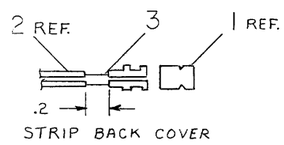


VIEW A-A
(P1)



VIEW B-B
(P2)





REVISIONS			
CHK	CHANGE NO.		REV
[illegible]	BCØ8T-ØØØ1	4/18/72	A
	B. SMITH		

ITEM	QTY.	DESCRIPTION	PART NO.
16		SOCKET PIN 48015 BERG	1210089-6
A/R		10 COND. CABLE	917623
2		HOUSING BERG #20383	1210090-0

PARTS LIST

FIRST USED ON OPTION/MODEL	PDP-8E
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES	
DECIMALS	.XXX = .005 .XX = .02 .X = .1
ANGLES	±0° 30'
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓	
MATERIAL	
FINISH	

DRN.	E. Wilson	DATE 3/27/72
CHK'D.	[illegible]	DATE 3/30/72
ENG.	[illegible]	DATE 3/30/72
PROJ. ENG.	[illegible]	DATE 3/30/72
PROD.	[illegible]	DATE 3/30/72
NEXT HIGHER ASSY.	KL8M	
SCALE	NONE	
SHEET	OF	

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: CABLE MODEM INTERCONNECTING

SIZE	CODE	NUMBER	REV.
D	UA	BCØ8T-Ø-Ø	A

DIST.

DEC FORM NO
ORD 100-A

SIZE D | CODE UA | NUMBER BCØ8T-Ø-Ø | REV A