PC11
reader/punch control
engineering drawings

DIGITAL EQUIPMENT CORPORATION • MAYNARD, MASSACHUSETTS

PC11 ENGINEERING DRAWINGS

Drawing No.	Title
A-ML-PC11-0	High-Speed Paper Tape Reader & Punch, Master List
A-PL-PC11-0-0	High-Speed Paper Tape Reader & Punch, Parts List
C-DI-PC11-0-1	Drawing Index (PC11)
D-MU-PC11-0-MU	Module Utilization
A-PL-PC11-0-MU	Module Utilization, Parts List
D-CS-M7810-0-1	PC11 Interface
A-SP-PC11-0-5	PC11/PR11 Test Procedure

MASTER DRAWING LIST

DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE
A-PL-PC11-Ø-Ø	D	1	HS PAPER TAPE RDR & PUNCH
C-DI-PC11-Ø-1	D	1	DRAWING INDEX
D-CS-M781Ø-Ø-1	#	4	PC11 INTERFACE
D-MU-PC11-Ø-MU	B	1	MODULE UTILIZATION
A-PL-PC11-Ø-MU	B	1	MODULE UTILIZATION
A-SP-PC11-0-5	B	5	PC11/PR11 TEST PROCEDURE
A-AL-PC11-0-6	B	1	ACCESSORY LIST

REVISIONS			
REV.	DATE	CHG. NO.	APP'D.
A	11/70	00001	D.C.
B	9/71	00002	P.J.
C	11/71	00003	PJ.
D	2/72	00004	
E	7/72	00005	
F	5/74	00006	
H	5/77	00007	
J	4/78	00008	HD. (DAP)

DRN. MARCOTTE — DATE 4/2/70
CHK'D. PFYFFER — DATE 4/14/70
ENG. — DATE 5/4/70
PROJ. ENG. — DATE
PROD. — DATE 5/5/70
FIRST USED ON PDP11
SCALE NONE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
HS PAPER TAPE RDR & PUNCH
(60HZ)

SIZE	CODE	NUMBER	REV.
A	ML	PC11-Ø	J

DIST.

DEC FORM NO.16-1033
DRA 103

ML

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY P. MARCOTTE	CHECKED AL PFYFFER	SECTION
DATE 4/2/70	DATE 4/14/70	1
ENG P.E. Jonson	PROD [illegible signature]	ISSUED SECT.
DATE 5/4/70	DATE 5/5/70	1

QUANTITY/VARIATION

ITEM NO.	DWG NO./PART NO.	DESCRIPTION	PC11-Ø-Ø (60HZ)	PC11-A-Ø (50HZ)	
	A-PL-DD11-A-Ø	PERIPHERAL MOUNTING PANEL	1	1	(IF REQUIRED)
	A-PL-PC11-Ø-MU	MODULE UTILIZATION	1	1	
	C-SC-1209856-0-01	MODULE HOLDER	A/R	A/R	
	D-UA-BCØ8J-6-Ø	BCØ8J CABLE 6FT.	*	*	
	D-UA-PCØ5-C-Ø	PCØ5-C, PUNCH, READER, DRIVER	1		
	D-UA-PCØ5-CA-Ø	PCØ5-CA, PUNCH, READER, DRIVER		1	
	~~D-AR-PC11-Ø-4~~	~~OPTION ARRANGEMENT~~	~~1~~		
	D-UA-BCØ8J-1Ø-Ø	BCØ8J CABLE 1ØFT.	*	*	
	A-PI-3700024-0-0	PACKAGING INSTRUCTIONS CUST. PACK	1	1	
	A-PI-3700123-0-0	PACKAGING INSTRUCTIONS INTERPLANT	1	1	
	23-760A9	BOOTSTRAP ROM, PC11 **	1	1	
	9906228	BOX ROM SHIPPING **	1	1	

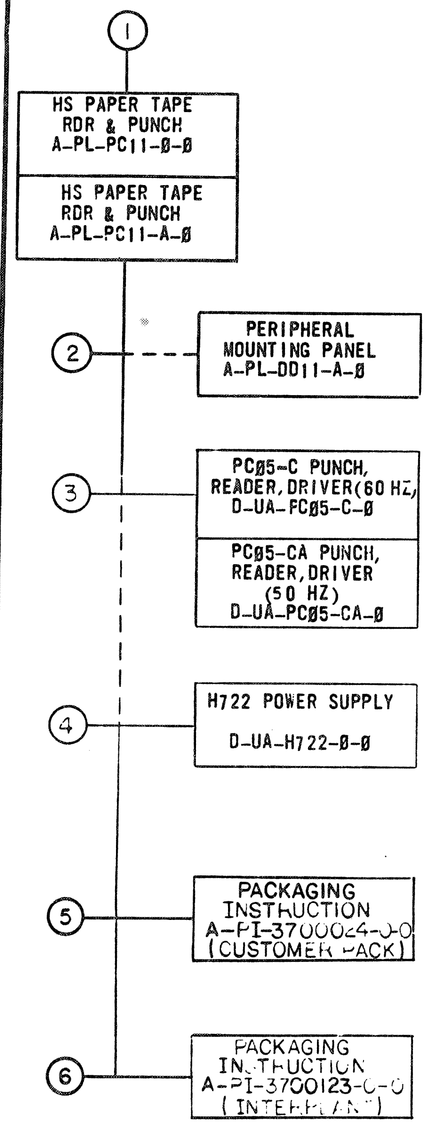
*NOTE: 2 EA. BCØ8F-X CABLES ARE REQUIRED.
THE LENGTH IS DETERMINED BY THE SYSTEM
CONFIGURATION.

** NOTE: TO BE SHIPPED WITH PC11 AND USED WHEN HOST
SYSTEM CONTAINS AN M9312 BOOT MODULE.

TITLE HS PAPER TAPE RDR & PUNCH	ASSY NO.	SIZE A	CODE PL	NUMBER PC11-Ø-Ø	REV. D	ECO NO. PC11-00008
	SHEET 1 OF 1	DIST. G				

DEC FORM NO.
DRA 110

Mc



MECHANICAL			USAGE		
FIND NO.	DESCRIPTION	PART NO.	PROD	CUST	FC
1.	HS PAPER TAPE RDR & PUNCH HS PAPER TAPE RDR & PUNCH (PL) BCØ8J CABLE MODULE HOLDER	A-PL-PC11-Ø-Ø A-PL-PC11-A-Ø D-UA-BCØ8J-6-Ø C-SC-1209856-0-01			
2.	PERIPHERAL MOUNTING PANEL DRAWING INDEX	A-PL-DD11-A-Ø C-DI-DD11-A-1			
3.	PCØ5-C, PUNCH, READER, DRIVER PCØ5-C, PUNCH, READER DRIVER (PL) DRAWING INDEX PCØ5-CA, PUNCH, READER DRIVER PCØ5-CA, PUNCH, READER DRIVER (PL)	D-UA-PCØ5-C-Ø A-PL-PCØ5-C-Ø D-DI-PCØ5-Ø-1 D-UA-PCØ5-CA-Ø A-PL-PCØ5-CA-Ø			
4.	H722 POWER SUPPLY H722 POWER SUPPLY PANEL, MOUNTING PROTECTION COVER	D-UA-H722-Ø-Ø A-PL-H722-Ø-Ø D-IA-5308863-Ø-Ø B-MD-5302903-Ø-Ø			
5.	PACKAGING INST. (CUST. PACK) OUTER SHIPPING CARTON INNER SHIPPING CARTON BOTTOM PAD FRONT SPACER SIDE SPACER REAR SUPPORT TOP SPACER TORO PAD POLY BAG -20×13×40×1-1/2 MIL.	A-PI-3700024-0-0 A-PS-9905046-0-0 A-PS-9905047-0-0 A-PS-9905053-0-0 A-PS-9905054-0-0 A-PS-9905055-0-0 A-PS-9905052-0-0 A-PS-9905056-0-0 A-PS-9905044-1-0 A-PS-9905129-7-0			
6.	PACKAGING INST. (INTERPLANT) TAPELESS CARTON SPECIAL DIE CUT ONE PIECE FOLDER QUAD MODULE BOOK PACK POLY BAG	A-PI-3700123-0-0 A-PS-9905348-0-0 A-PS-9905348-1-0 A-PS-9905348-2-0 A-PS-9905072-0-0 A-PS-9905129-7-0			

ELECTRICAL			USAGE		
FIND NO.	DESCRIPTION	PART NO.	PROD	CUST	FC
1.	HS PAPER TAPE RDR & PUNCH HS PAPER TAPE RDR & PUNCH PC11 INTERFACE MODULE UTILIZATION MODULE UTILIZATION (PL) PC11/PR11 TEST PROCEDURE ACCESSORY LIST	A-ML-PC11-Ø A-ML-PC11-A D-CS-M781Ø-Ø-1 D-MU-PC11-Ø-MU A-PL-PC11-Ø-MU A-SP-PC11-Ø-5 A-AL-PC11-0-6			
4.	H722 POWER SUPPLY	D-CS-H722-Ø-1			

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

REVISIONS		
CHK	CHANGE NO.	REV.
FV	PC11-00001	A
	PC11-00004	B
	PC11-00005	C
	PC11-00006	D

FIRST USED ON OPTION/MODEL: PDP11

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 4-3-70
CHK'D. DATE 5/4/70
ENG. DATE
PROJ. ENG. DATE
PROD. DATE 5/5/70
NEXT HIGHER ASSY A-ML-PC11-Ø
SCALE NONE
SHEET 1 OF 1

digital EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

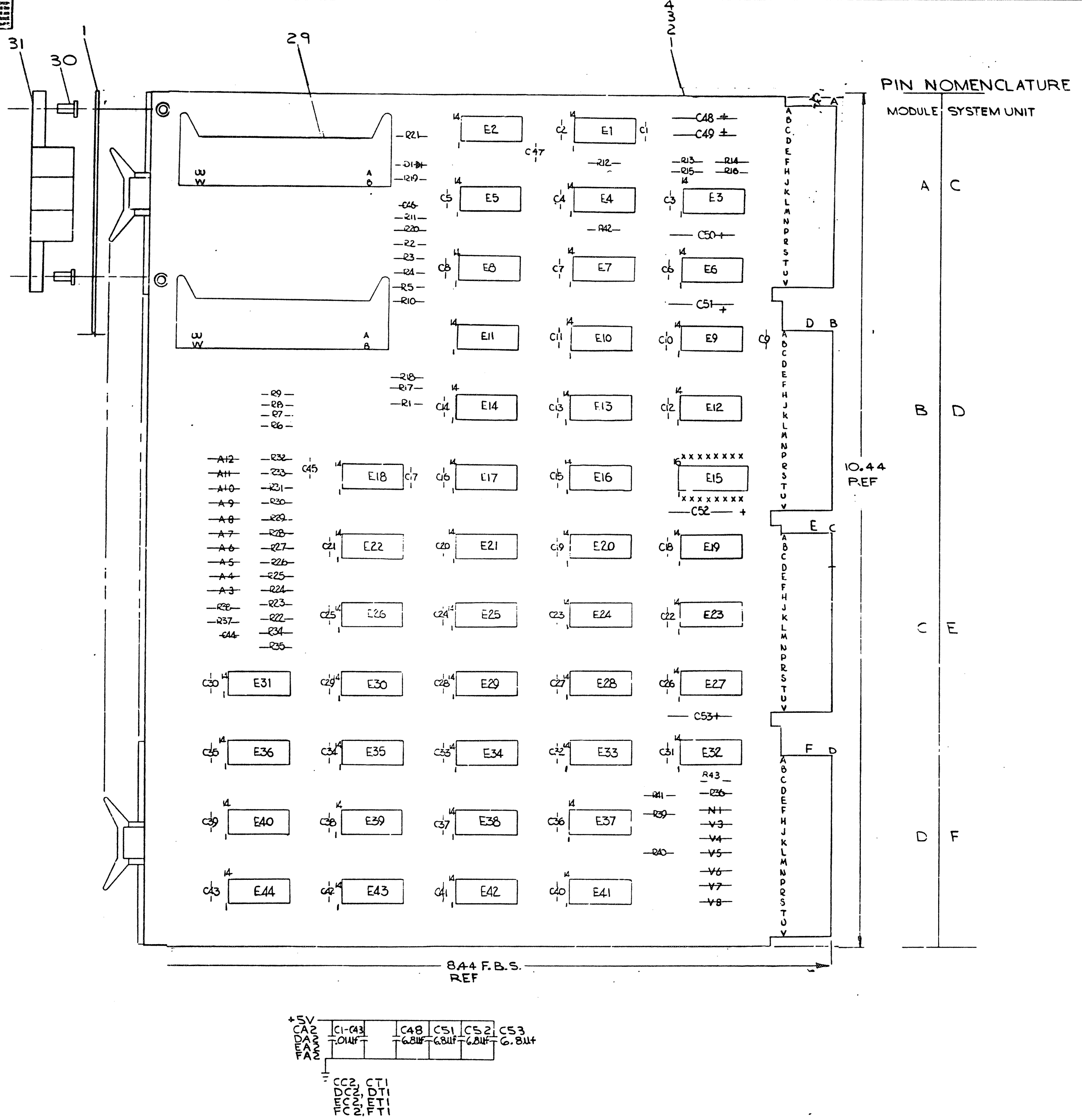
TITLE: DRAWING INDEX (PC11)

SIZE C | CODE DI | NUMBER PC11-Ø-1 | REV. D

DIST. G

DEC FORM NO. DRC 100

NOTES:
1.) PIN NOTATION THROUGHOUT IS ORDERED UPON MODULE PLACEMENT IN THE SYSTEM UNIT. MODULE REFERENCE ALONE IS OBTAINED BY CONVERTING THE FIRST LETTER ACCORDING TO THE PIN NOMENCLATURE CHART AT THE LEFT.
2.) JUMPERS TO BE USED AT CONNECTIONS A3-A12, N1, AND V3-V8.
3. DEC 8640'S WERE PHASED IN AS 380 REPLACEMENTS. ANY 380 FAILURES SHOULD BE REPLACED BY 8640.



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
17	W1 — W17	JUMPER WIRE	9107560-01	34
25	R1, R11, R12, R14, R16, R18-R20, R22-R34, R37, R39, R41, R42	RES 1K 1/4W 5%	1300365	33
1		I.C. SOCKET	1209838	32
4		HANDLE, FLIP CHIP MAGENTA	9008337-06	31
8		EYELET #GS-4-7 STIMPSON	9006732	30
2		BERG 40 PIN CONNECTOR	1209941	29
2	E38, E42	I.C. DEC 74H74	1909667	28
2	E35, E44	I.C. DEC 7408	1910155	27
2	E28, E36	I.C. DEC 7402	1909004	26
1	E25	I.C. DEC 74H00	1909056	25
3	E22, E26, E30	I.C. DEC 8242	1909712	24
2	E21, E29	I.C. DEC 8815	1909713	23
9	E8-E10, E13, E16-E18, E39, E43	I.C. DEC 7400	1905575	22
2	E7, E34.	I.C. DEC 7474	1905547	21
3	E3-E5, E12, E14, E31, E33, E37, E41	I.C. DEC 8881	190976	20
10	E1, E2, E6, E11, E19, E20, E23, E24, E27, E32.	I.C. DEC 8640	[illegible]1469	19
1	E40	I.C. DEC 74H04	1909931	18
1	R38	RES 47 1/4W 5%	1300202	17
1	R36	RES 390 1/4W 5%	1300303	16
1	R21	RES 4.7K 1/4W 5%	1300447	15
1	R17	RES 220 1/4W 5%	1300271	14
3	R13, R15, R35	RES 100 1/4W 5%	1300229	13
5	R2-R10	RES 470 1/4W 5%	1300316	12
2	R40, R43	RES 180 1/4W 5%	1301322	11
1	D1	DIODE D664	1100114	10
6	C48-C53	CAPACITOR 6.8 MFD 35V 10%	1005306	9
2	C46, C47	CAPACITOR 680 PF 100V 5%	1000026	8
1	C45	CAPACITOR 470 PF 100V 5%	1000024	7
1	C44	CAPACITOR 330 PF 100V 5%	1000023	6
43	C1-C43	CAPACITOR .01 MFD 50V 20%	1001610	5
REF		MODULE E.C.O. HISTORY	8-MH-M7810-0-6	4
REF		ASSY DRILLING HOLE LAYOUT	D-AH-M7810-0-5	3
REF		X-Y COORDINATE HOLE LOCATION	K-CO-M7810-0-4	2
1		ETCHED CIRCUIT BOARD	5008882	1

PARTS LIST

ETCH BOARD REV E

IC TYPE	GND	+5V
DEC 8640	7	8

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

IC PIN LOCATIONS

ITEM NO.	AWG	FROM PT	TO PT

JUMPER LIST

DEC NO.	EIA NO.	DEC NO.	EIA NO.
D664	1N3606		

SEMICONDUCTOR CONVERSION CHART

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

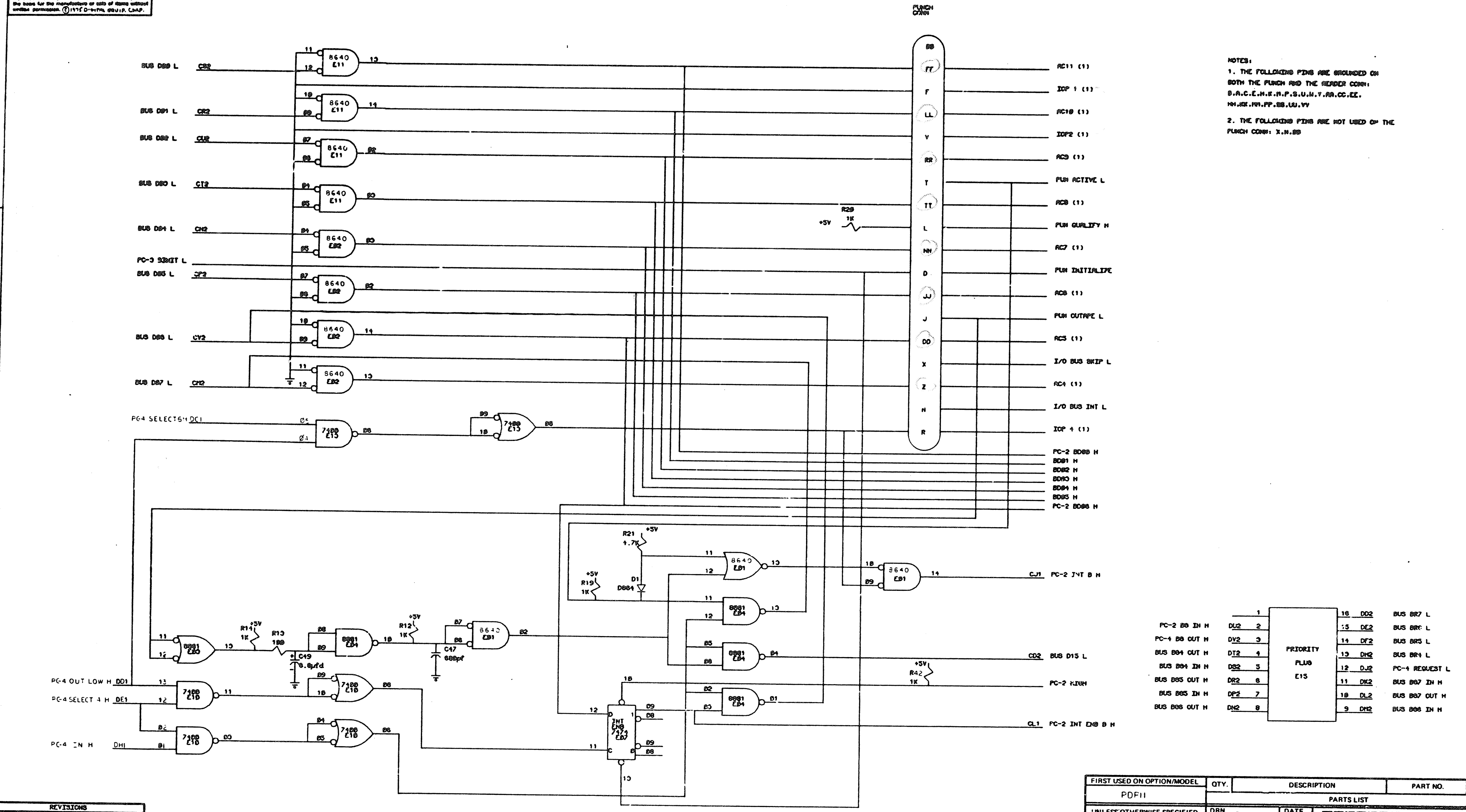
TITLE: PCII INTERFACE

PC-1

SIZE E CODE CS NUMBER M7810-0-1 REV. F

SCALE NONE SHEET 1 OF 1

E CS M7810-0-1 F



NOTES:

1. THE FOLLOWING PINS ARE GROUNDED ON BOTH THE PUNCH AND THE READER CONN: B,A,C,E,H,K,M,P,S,U,W,Y,AA,CC,EE, HH,KK,MM,PP,SS,UU,VV

2. THE FOLLOWING PINS ARE NOT USED ON THE PUNCH CONN: X,N,BB

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11		PARTS LIST		

UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES. TOLERANCES

DECIMALS	ANGLES
.XXX = .005 .XX = .02 .X = .1	±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL

FINISH

DRN. — DATE 1-25-72
CHK'D. — DATE
ENG. — DATE
PROJ. ENG. — DATE 3-9-72
PROD. — DATE

NEXT HIGHER ASSY.

SCALE

SHEET 2 OF 4

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE

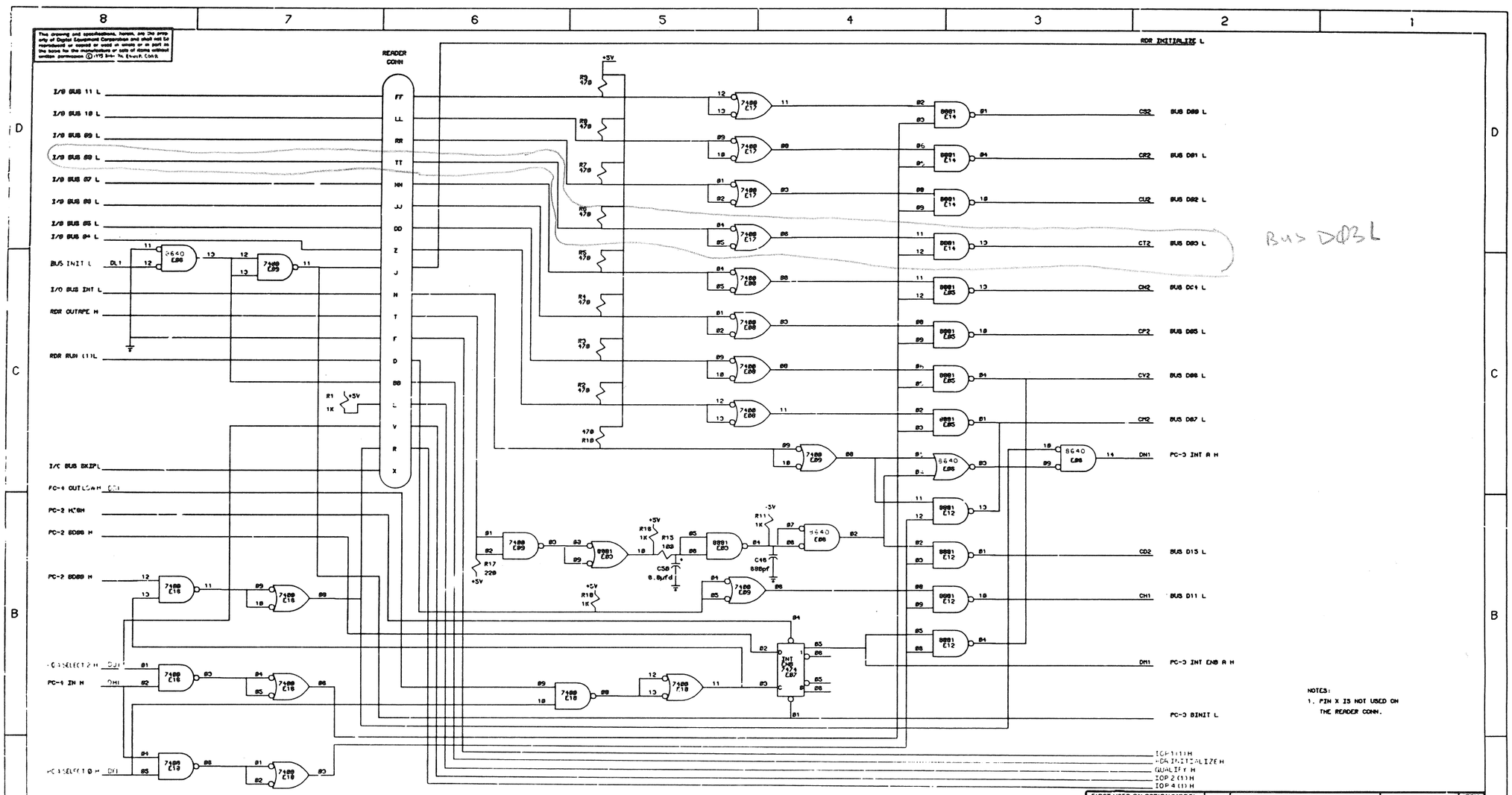
PCII INTERFACE (PUNCH) PC-2

SIZE	CODE	NUMBER	REV.
D	CS	M781Ø-Ø-1	F

DIST.

REVISIONS

CHK.	CHANGE NO.	REV.



REVISIONS		
CHK	CHANGE NO.	REV.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO	ITEM NO
PDP11		PARTS L...		

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

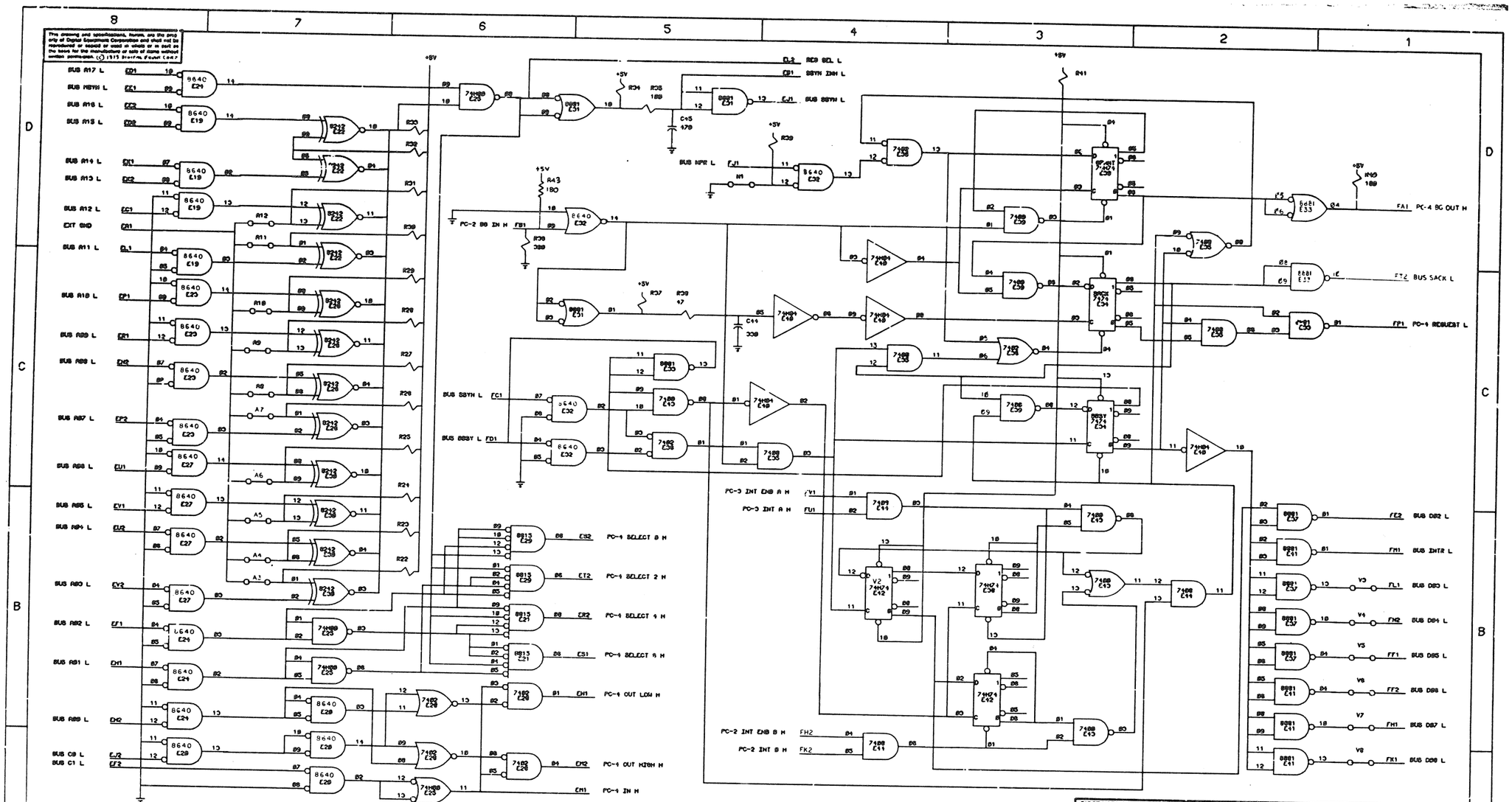
		DATE
DRN.	T	
CHK'D.		
ENG.		3/4/72
PROJ. ENG.		3/4/72
PROD.		3/4/72
NEXT HIGHER ASSY.		
SCALE		
SHEET	3 OF 4	

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: PCII INTERFACE (READER) PC-3

SIZE	NUMBER	REV.
D	CS M7810-0-1	F

DIST



REVISIONS		
CHK.	CHANGE NO.	REV.

NOTES:

1. UNLESS OTHERWISE INDICATED:
   RESISTORS ARE 1K, 1/4W, 5%
   CAPACITOR VALUES ARE IN PICOFARADS.

2. THE ADDRESS LINES ARE TO
   BE JUMPERED FOR A 0 AND THE
   VECTOR LINES ARE JUMPERED
   FOR A 1. FINAL JUMPER CONFIGURATION
   TO BE DETERMINED AT SYSTEM CHECKOUT.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDP11	PARTS LIST			

UNLESS OTHERWISE SPECIFIED
DIMENSION IN INCHES.
TOLERANCES

DECIMALS	ANGLES
.XXX ± .005 .XX ± .02 .X ± .1	±0° 30'

REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY ✓

MATERIAL

FINISH

		DATE
DRN.	N D	1-7-72
CHK'D.		3-3-72
ENG.		3/7/72
PROJ. ENG.		3-9-72
PROD.	R L Peterson	3/-/72

NEXT HIGHER ASSY.

SCALE

SHEET 4 OF 4

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE

PC11 INTERFACE
(ADDRESS SELECTION
& INTERRUPT CONT.) PC-4

SIZE	CODE	NUMBER	REV.
D	CS	M7810-0-1	E

DIST.

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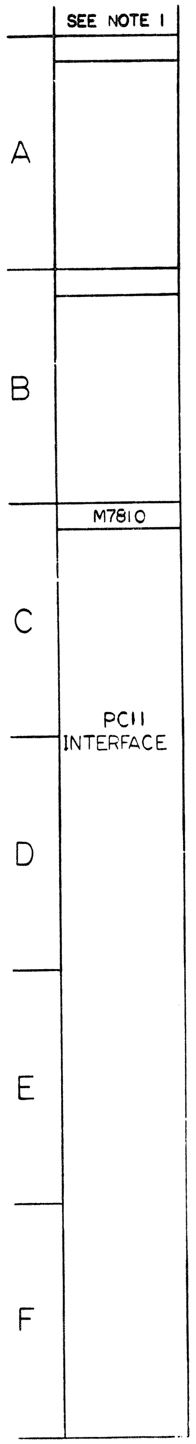
NOTES:
SLOT 13 OR 14 IN THE KA11 PROCESSOR OR, SLOT 1,2,3 OR 4, IN THE DD11-A.



REVISIONS		
CHK	CHANGE NO.	REV.
	PC11-00003	A
	P. JANSON 12-10-71	
	PC11-00004	F
	JANSON 2-22-72	

FIRST USED ON OPTION/MODEL: PDP 11

DO NOT SCALE DRAWING
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 —

QTY.	DESCRIPTION	PART NO.	ITEM NO.

PARTS LIST

DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: MODULE UTILIZATION

NEXT HIGHER ASSY: A-ML-PC11-Ø
SCALE: NONE
SHEET 1 OF 1

SIZE: D CODE: MU NUMBER: PC11-Ø-MU REV: B

DEC FORM NO. DRD 100

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

PARTS LIST

MADE BY P. MARCOTTE	CHECKED AL PFYFFER	SECTION
DATE 3/26/70	DATE 4/24/70	1
ENG [illegible] Jonson	PROD Hugo Durald	ISSUED SECT.
DATE 5/4/70	DATE 5/5/70	1

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION
	M7810	PC11 INTERFACE	1
	5408776	PRIORITY JUMPER LEVEL *4	1

TITLE	ASSY NO.	SIZE	CODE	NUMBER	REV.	ECO NO.
MODULE UTILIZATION	D-MU-PC11-0-MU	A	PL	PC11-0-MU	B	PC11-00004
	SHEET 1 OF 1	DIST				

DEC FORM NO.
DRA 110

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 9/1/70

TITLE PC11/PR11 TEST PROCEDURE

REVISIONS

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A		PC11-00003	P. JANSON	12-7	D.E. Janson	12-8-71
B		PC11-00004	P. JANSON	2-72	D.E. Janson	2-22-72

ENG	APPD	SIZE	CODE	NUMBER	REV
D.E. Janson		A	SP	PC11-0-5	B

DEC FORM NO. DRA 107

ENGINEERING SPECIFICATION — CONTINUATION SHEET

TITLE PC11/PR11 TEST PROCEDURE

1.0 TEST EQUIPMENT

1.1 A known good **PC11 module**
1.2 A 453 scope and voltage probes.
1.3 Extender modules

1.3.1 2 double wiath
1.4 Small option test station equipped with:
1.4.1 KA11 processor
1.4.2 4K of memory
1.4.3 DD11 option panel with 3 G727 grant continuity boards
1.4.4 Tape loader
1.4.5 Test stand
1.4.6 Teletype
1.4.7 H722 step down transformer

2.0 TEST SET UP

2.1 Remove PC05 or PC05R from its carton
2.2 Remove chassis track slides from PC or PR to permit installation into test station cabinet
2.3 Remove metal cover over the modules to permit installation of I/O cables
2.4 Install PCO to be tested in the chassis tracks provided in the test station cabinet
2.5 Connect AC power to the PCO:
2.5.1 115 VAC @ 60HZ to PC11 or PR11
2.5.2 115 VAC @ 50HZ to PC11A or PR11A by using the output of the H722 step down transformer
2.6 Install PC11/PR11 modules in the DD11 located in the test stand as follows:
2.6.1 M781Ø in slots C,D,E,F, with a level #4 priority plug installed.
2.6.2 Address assignment: cut all "A" jumpers except A4 and A7 this gives address 77755Ø
2.6.3 Vector assignment: cut all "V" jumpers except V5, V4 and V3. Cut N1. This gives Vector address 7Ø

SIZE	CODE	NUMBER	REV
A	SP	PC11-0-5	B

DEC FORM NO 16-1022 DRA 10B

CONTINUATION SHEET

TITLE PC11/PR11 TEST PROCEDURE

2.6.4 If for some reason one of the other slots in the DD11 must be used, each preceding (unused) D slot must contain a G727.
FOR EXAMPLE: If the option modules are installed in C, D, E & F four, slots D01, D02 & D03 must contain G727 grant continuity modules.

2.7 Connect I/O cables as follows:
2.7.1 Reader cable (BC08J) from the reader plug on the M781 to slot B9 in the PCO logic.
2.7.2 Punch cable (BC08J) from the punch plug on the M781 to slot B10 in the PCO logic.
2.8 Turn on power to the PCO with the switch located on the rear of the PCO.

3.0 PC11/PR11 TESTING

3.1 If not previously loaded, load the diagnostic (Maindec 11-D2BA) into memory via the tape loader.
3.1.1 Put halt switch down, set the switch register to all 0's. Depress the LOAD ADDR switch and then hit the START switch (to initialize).
3.1.2 Place tape in reader.
3.1.3 Depress feed switch on reader.
3.1.4 Depress SW1 switch on loader control panel.
3.1.5 After tape is read, if END light comes on, the tape is loaded correctly. If ERROR light comes on go back to step 3.1.1 and reload tape.
3.2 The diagnostic (D2BA) consists of 12 different tests. All of these tests have a loading address of 200, but have varying switch register settings for starting.
3.3 Below is a table which lists the tests, run times (as indicated) for one successful pass of the test, and use of the test as it applies to the PC11 or PR11.

Test	Run Time (Min.)	Use
PRG0	3.0	PC11, PR11
PRG1	3.5	PC11, PR11
PRG2	1.5	PC11
PRG3	8.0	PC11
PRG4	See 3.5.3	PC11
PRG5	See 3.5.4	PC11
PRG6	See 3.5.5	PC11
PRG7	See 3.5.5	PC11, PR11
PRG10	See 3.5.5	PC11, PR11
PRG11	See 3.5.5	PC11
PRG12	See 3.5.6	PC11, PR11
PRG13	See 3.5.6	PC11

3.4 To run any test, set the switch register to 200 and hit load addr key. Set the switch register equal to the number of the test to be run and hit the start key. Operating instructions will be typed out along with normal switch register settings. Follow the instructions and set the switch register as desired, then hit continue.

SIZE	CODE	NUMBER	REV
A	SP	PC11-0-5	B

DEC FORM NO DRA 10BA

CONTINUATION SHEET

TITLE PC11/PR11 TEST PROCEDURE

For more specific switch settings refer to sections 4.1 to 4.12 of the diagnostic abstract.
3.5 Diagnostic Testing Sequence
3.5.1 Run one pass (for time given in table 3.3) each of PRG0, PRG1 and PRG2.
3.5.2 Run one pass of PRG3 for the time indicated in table 3.3. Pick a section of the data portion of the tape just punched and test it by inserting it into a tape registration guide (Friden # T8118). If the tape punched doesn't fit the guide, run PRG13 to determine if the punch speed is correct. Adjust to correct speed and rerun PRG3 with guide test (3.5.2)
3.5.3 If no failures occurred in the testing done in 3.5.2, run test PRG4 using the tape just punched.
3.5.4 Run PRG5 as follows:
1. After operating instructions have been typed out take the special binary count tape (D2G4) and load it into the reader.
2. Set switches to all 0's hit the start key.
3. At the end of the data portion of the tape being read, the computer will stop.
4. Using the tape just punched instead of D2G4, repeat steps 1-3 two more times.
3.5.5 Tests PRG6-PRG11 are not to be run during normal testing except as trouble shooting aids.
3.5.6 Run one pass each of PRG12 and PRG13 using the 30 second testing period for PRG12.
3.6 If any of the tests run in 3.5.1 to 3.5.6 cause failures, refer to section 4.0.
3.7 Vibrate the PC11/PR11 module. (M7810) while running PRG5. Use a standard vibrating wand, as described in DEC standard 7665057-0-0.

4.0 FAILURES

4.1 Adjustment failures may occur during testing. All adjustments are preset, but should a minor adjustment be necessary, use the following procedure:
PCO reader setup
Dated March 18, 1970
Written by C. A. Youse (of Special Products, Peripheral Equipment Engineering, located at 4-5)
4.2 When a defective module is detected, it should be tagged and returned to the stockroom for replacement.
4.2.1 After a module replacement, start retest at step 3.4.
4.3 Note: Any failure of the PCO other than noted in 4.1 constitutes a problem sufficient to remove the PCO from the station and send it back to off-line testing for examination.

5.0 HEAT TEST

5.1 Heat test should be run only after successful completion of all previously indicated tests.

SIZE	CODE	NUMBER	REV
A	SP	PC11-0-5	B

DEC FORM NO DRA 10A

5.2 For PR11 heat testing run PRG1. For PC11 heat testing run PRG5 as indicated in 3.5.4.
5.3 Start diagnostic. Close the bottom door of the heat chamber, turn on the heater (heater control is preset to 50°C).
5.3.1 Start the computer running the test indicated in 5.2.
5.3.2 Close the bottom door of the heat chamber and turn on the heater (heater control is preset to 50°C).
5.3.3 When 50°C is reached, the top light on the heater control box will go out. Continue running the diagnostic for 10 minutes more with the door closed.
5.3.4 If no errors occur, turn off the heater, open the bottom door and allow it to cool.
5.3.5 NOTE: Do not stop the program until the temperature has returned to normal (ambient).
5.4 If unit fails in heat, refer to the typeout and the program write up, then go to 4.0 of this procedure.

6.0 TEST COMPLETION

6.1 Disconnect I/O cables and AC power.
6.2 For PC11, remove tape from unit and empty the chad box.
6.3 Remove PCO from test station.
6.4 Replace cover over modules and chassis tracks on PCO.
6.5 Put tested unit back into shipping container and send to the stockroom.

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

MADE BY K. HAMEL DATE 6/16/72	CHECKED 6/16/72 DATE	SECTION
ENG Paul E. Janson DATE 6-22-72	PROD DATE	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: PC11 (60 HZ)	PC11A (50 HZ)	PR11 (50/60 HZ)	KIT CHECK BY ____ DATE ____	INSTALLATION CHECK BY ____ DATE ____
1	DEC-11-HPCB-D	PC11 Control Engineering Drawings	1	1	1		
2	DEC-11-HPCC-D	Maintenance Manual	1	1	1		
3	L1BKIT-11-PC11	Software Kit	1	1	1		
4	DEC-00-PC0A-D(1)	PC04/PC05 Maintenance Manual (Vol. 1)	1	1	1		
5	DEC-00-PC04/5 Dwg.	PC04/PC05 Engineering Drawings (Vol. 2)	1	1	1		
~~6~~	~~Reytron~~	~~Punch Manual~~	~~1~~	~~1~~	~~0~~		
7	36-5356	Punch Paper	4	4	0		
8	74-5300	Chad Box	1	1	0		
	NOTE: ITEMS 9 AND 10 MUST BE ADDED FOR FIELD ADD-ONS ONLY:						
9	90-8851	Mounting Hardware Bag	1	1	1		
10	91-9673-06	AC Line Cord 6'	1	1	1		
11	9906228	BOX *	1	1			
12	23760A9	BOOTSTRAP ROM, PC11 *	1	1			
		* ITEMS 11 & 12 SUPPLIED BY VOLUME MANUFACTURER.					

TITLE	ASSY. NO.	SIZE	CODE	NUMBER	REV.	ECO NO
HIGH SPEED READER AND PUNCH (PDP-11)	SHEET 1 OF 1	A	AL	PC11-0-6	B	PC11-00008
		DIST.				

ML