

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

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MASTER DRAWING LIST

DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE
A-PL-PC11-0-0	D	1	HS PAPER TAPE RDR & PUNCH
C-DI-PC11-0-1	D	1	DRAWING INDEX
D-CS-M7810-0-1	#	4	PC11 INTERFACE
D-MU-PC11-0-MU	B	1	MODULE UTILIZATION
A-PL-PC11-0-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	P.J.
D	2/72	00004	P.J.
E	7/72	00005	P.J.
F	5/74	00006	P.J.
H	5/77	00007	H.D. (D.P.)
J	4/78	00008	H.D. (D.P.)

DRN. MARCOUITE	DATE 4/2/70
CHK'D. PF YFFER	DATE 4/14/70
ENG. <i>P.J.</i>	DATE 5/4/70
PROJ. ENG.	DATE 5/4/70
PROD. <i>Alan Duda</i>	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 (50HZ)	
SIZE CODE A M L	NUMBER PC11-0
DIST.	REV. J
SHEET 1 OF 1	ML

DEC FORM NO. 16-1033
ORA 103

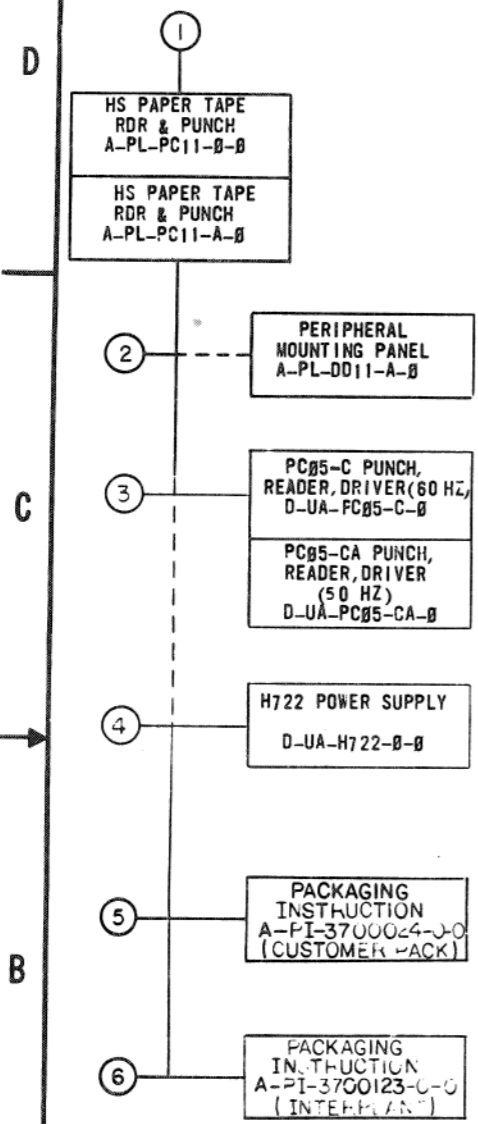
DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				QUANTITY / VARIATION															
MADE BY P. MARCOTTE		CHECKED AL PFYFFER		SECTION															
DATE 4/2/70		DATE 4/14/70		1															
ENG <i>P.E. Jamson</i>		PROD <i>MacPhail</i>		ISSUED SECT.															
DATE 5/4/70		DATE 5/5/70		1															
ITEM NO.	DWG NO. / PART NO.	DESCRIPTION		PC11-0-0 (60HZ)	PC11-A-0 (50HZ)														
	A-PL-DD11-A-0	PERIPHERAL MOUNTING PANEL		1	1	(IF REQUIRED)													
	A-PL-PC11-0-MU	MODULE UTILIZATION		1	1														
	C-SC-1209856-0-01	MODULE HOLDER		A/R	A/R														
	D-UA-BC08J-6-0	BC08J CABLE 6FT.		*	*														
	D-UA-PC05-C-0	PC05-C, PUNCH, READER, DRIVER		1															
	D-UA-PC05-CA-0	PC05-CA, PUNCH, READER, DRIVER			1														
	D-AR-PC11-0-4	OPTION ARRANGEMENT		1															
	D-UA-BC08J-10-0	BC08J CABLE 10 FT.		*	*														
	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. BC08J-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				ASSY NO.		SIZE CODE		NUMBER				REV.		ECO NO.					
HS PAPER TAPE RDR & PUNCH						A PL		PC11-0-0				D		PC11-00008					
SHEET 1 OF 1				DIST. G															

DEC FORM NO. DRA 110

ML

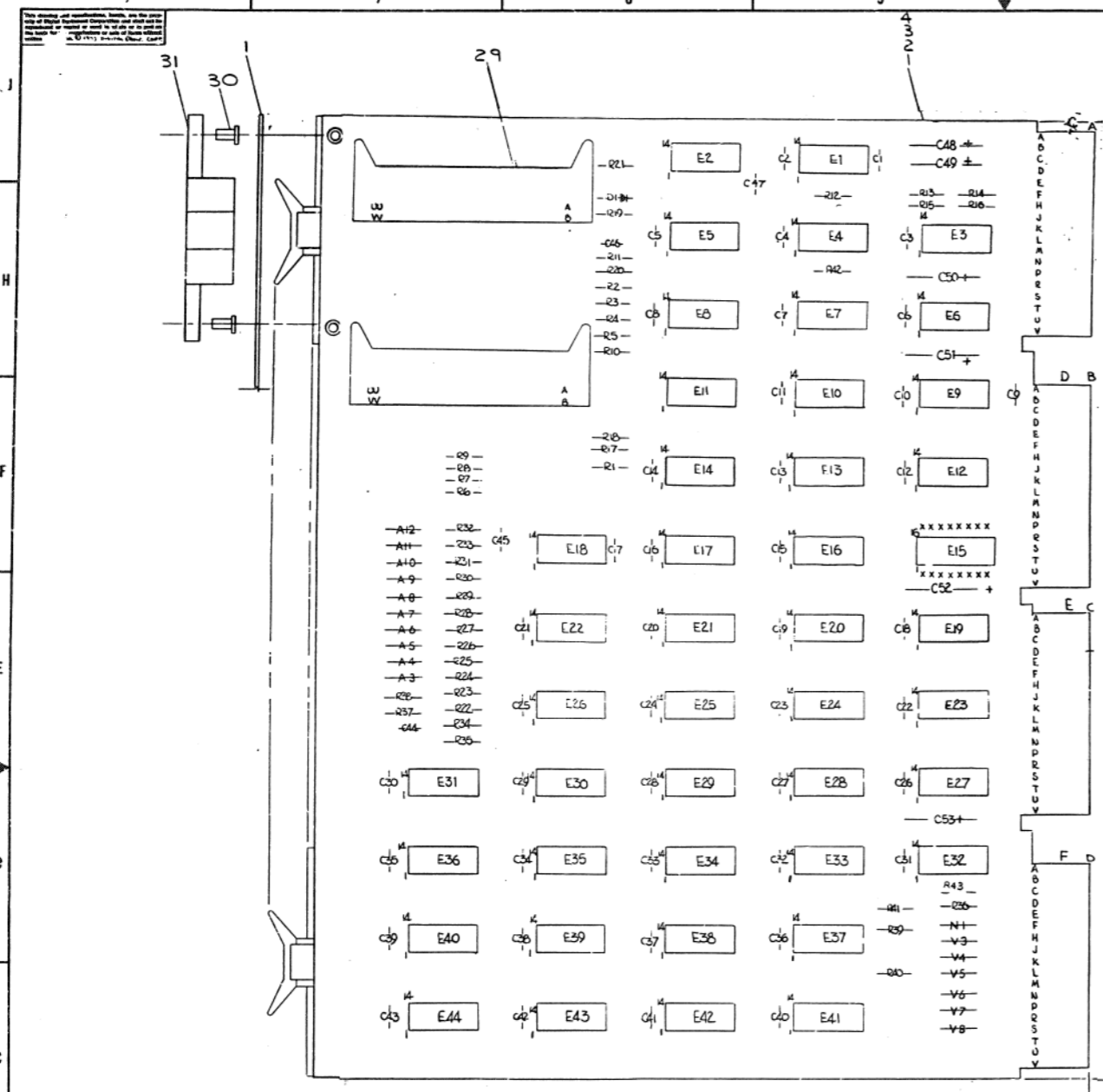
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		MECHANICAL			USAGE		ELECTRICAL			USAGE	
FIND NO.	DESCRIPTION	PART NO.	PROD	CUST	FC	FIND NO.	DESCRIPTION	PART NO.	PROD	CUST	FC
1.	HS PAPER TAPE RDR & PUNCH HS PAPER TAPE RDR & PUNCH (PL) BC8J CABLE MODULE HOLDER	A-PL-PC11-B-0 A-PL-PC11-A-0 D-UA-BC8J-6-0 C-SC-1209856-0-01				1.	HS PAPER TAPE RDR & PUNCH HS PAPER TAPE RDR & PUNCH PC11 INTERFACE MODULE UTILIZATION MODULE UTILIZATION (PL) PC11/PRII TEST PROCEDURE ACCESSORY LIST	A-ML-PC11-B A-ML-PC11-A D-CS-M7810-0-1 D-MU-PC11-B-MU A-PL-PC11-B-MU A-SP-PC11-0-5 A-AL-PC11-0-6			
2.	PERIPHERAL MOUNTING PANEL DRAWING INDEX	A-PL-DD11-A-0 C-D1-DD11-A-1									
3.	PC85-C, PUNCH, READER, DRIVER PC85-C, PUNCH, READER DRIVER (PL) DRAWING INDEX PC85-CA, PUNCH, READER DRIVER PC85-CA, PUNCH, READER DRIVER (PL)	D-UA-PC85-C-0 A-PL-PC85-C-0 D-D1-PC85-B-1 D-UA-PC85-CA-0 A-PL-PC85-CA-0									
4.	H722 POWER SUPPLY H722 POWER SUPPLY PANEL, MOUNTING PROTECTION COVER	D-UA-H722-B-0 A-PL-H722-B-0 D-1A-5308863-B-0 B-MD-5302903-B-0				4.	H722 POWER SUPPLY	D-CS-H722-B-1			
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 -20x13x40x1-1/2 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									



REV.	CHANGE NO.	DATE	BY	CHK'D
A	1	4-3-70	JANSON	
B	2	5/4/70	JANSON	
C	3	5/5/70	JANSON	
D	4		JANSON	

FIRST USED ON OPTION/MODEL PDP11	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST				
UNLESS OTHERWISE SPECIFIED	DRN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
UNLESS OTHERWISE SPECIFIED	CHK'D	DATE	TITLE	
DIMENSION IN INCHES		DATE	DRAWING INDEX (PC11)	
TOLERANCES		DATE	SIZE CODE NUMBER REV.	
DECIMALS ± .005	FRACTIONS ± 1/64	DATE	C DI PC11-0-1	D
ANGLES ± 0°30'		DATE	SCALE NONE	
FINAL SURFACE QUALITY		DATE	SHEET 1 OF 1	
REMOVE BURRS AND BREAK SHARP CORNERS		DATE	DIST. G	
MATERIAL	NEXT HIGHER ASSY			
+ + +	A-ML-PC11-0			
FINISH				
+ + +				

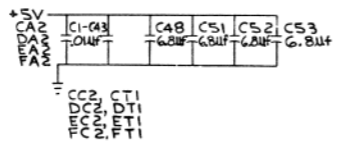


PIN NOMENCLATURE
MODULE SYSTEM UNIT

A	C
B	D
C	E
D	F

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.

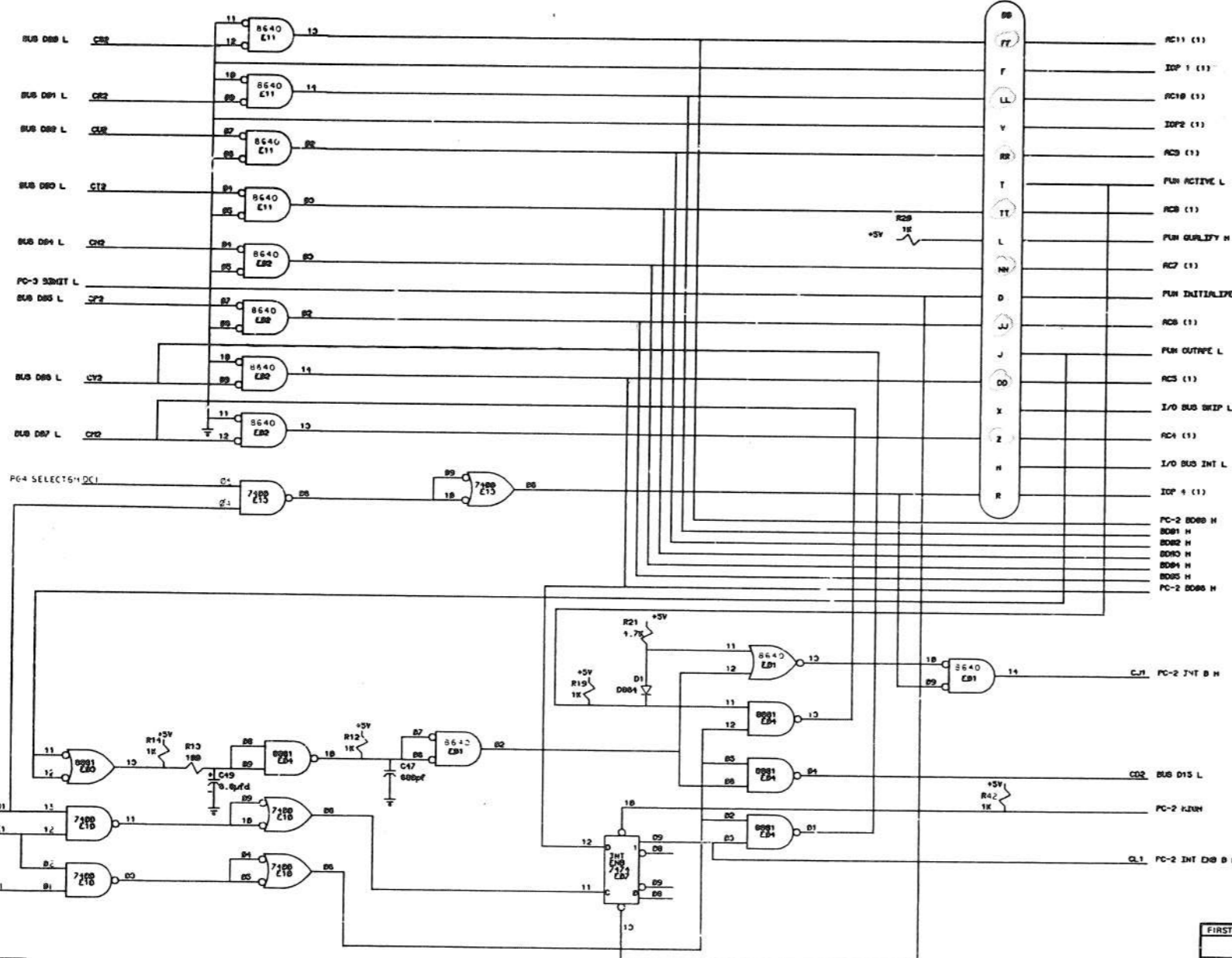
DEC 8640	
IC TYPE	C40 +5V
ITEM NO.	AWG FROM TO PT
PIN LOCATIONS	
JUMPER LIST	



QTY	REF DESIGNATION	DESCRIPTION	PART NO.	ITEM NO.
17	W1	JUMPER WIRE	9107560-01	34
25	R41, R42, R43, R44, R45, R46, R47, R48, R49, R50, R51, R52, R53, R54, R55, R56, R57, R58, R59, R60, R61, R62, R63, R64, R65, R66, R67, R68, R69, R70, R71, R72, R73, R74, R75, R76, R77, R78, R79, R80, R81, R82, R83, R84, R85, R86, R87, R88, R89, R90, R91, R92, R93, R94, R95, R96, R97, R98, R99, R100, R101, R102, R103, R104, R105, R106, R107, R108, R109, R110, R111, R112, R113, R114, R115, R116, R117, R118, R119, R120, R121, R122, R123, R124, R125, R126, R127, R128, R129, R130, R131, R132, R133, R134, R135, R136, R137, R138, R139, R140, R141, R142, R143, R144, R145, R146, R147, R148, R149, R150, R151, R152, R153, R154, R155, R156, R157, R158, R159, R160, R161, R162, R163, R164, R165, R166, R167, R168, R169, R170, R171, R172, R173, R174, R175, R176, R177, R178, R179, R180, R181, R182, R183, R184, R185, R186, R187, R188, R189, R190, R191, R192, R193, R194, R195, R196, R197, R198, R199, R200, R201, R202, R203, R204, R205, R206, R207, R208, R209, R210, R211, R212, R213, R214, R215, R216, R217, R218, R219, R220, R221, R222, R223, R224, R225, R226, R227, R228, R229, R230, R231, R232, R233, R234, R235, R236, R237, R238, R239, R240, R241, R242, R243, R244, R245, R246, R247, R248, R249, R250, R251, R252, R253, R254, R255, R256, R257, R258, R259, R260, R261, R262, R263, R264, R265, R266, R267, R268, R269, R270, R271, R272, R273, R274, R275, R276, R277, R278, R279, R280, R281, R282, R283, R284, R285, R286, R287, R288, R289, R290, R291, R292, R293, R294, R295, R296, R297, R298, R299, R300, R301, R302, R303, R304, R305, R306, R307, R308, R309, R310, R311, R312, R313, R314, R315, R316, R317, R318, R319, R320, R321, R322, R323, R324, R325, R326, R327, R328, R329, R330, R331, R332, R333, R334, R335, R336, R337, R338, R339, R340, R341, R342, R343, R344, R345, R346, R347, R348, R349, R350, R351, R352, R353, R354, R355, R356, R357, R358, R359, R360, R361, R362, R363, R364, R365, R366, R367, R368, R369, R370, R371, R372, R373, R374, R375, R376, R377, R378, R379, R380, R381, R382, 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R549, R550, R551, R552, R553, R554, R555, R556, R557, R558, R559, R560, R561, R562, R563, R564, R565, R566, R567, R568, R569, R570, R571, R572, R573, R574, R575, R576, R577, R578, R579, R580, R581, R582, R583, R584, R585, R586, R587, R588, R589, R590, R591, R592, R593, R594, R595, R596, R597, R598, R599, R600, R601, R602, R603, R604, R605, R606, R607, R608, R609, R610, R611, R612, R613, R614, R615, R616, R617, R618, R619, R620, R621, R622, R623, R624, R625, R626, R627, R628, R629, R630, R631, R632, R633, R634, R635, R636, R637, R638, R639, R640, R641, R642, R643, R644, R645, R646, R647, R648, R649, R650, R651, R652, R653, R654, R655, R656, R657, R658, R659, R660, R661, R662, R663, R664, R665, R666, R667, R668, R669, R670, R671, R672, R673, R674, R675, R676, R677, R678, R679, R680, R681, R682, R683, R684, R685, R686, R687, R688, R689, R690, R691, R692, R693, R694, R695, R696, R697, R698, R699, R700, R701, R702, R703, R704, R705, R706, R707, R708, R709, R710, R711, R712, R713, R714, R715, R716, R717, R718, R719, R720, R721, R722, R723, R724, R725, R726, R727, R728, R729, R730, R731, R732, R733, R734, R735, R736, R737, R738, R739, R740, R741, R742, R743, R744, R745, R746, R747, R748, R749, R750, R751, R752, R753, R754, R755, R756, R757, R758, R759, R760, R761, R762, R763, R764, R765, R766, R767, R768, R769, R770, R771, R772, R773, R774, R775, R776, R777, R778, R779, R780, R781, R782, R783, R784, R785, R786, R787, R788, R789, R790, R791, R792, R793, R794, R795, R796, R797, R798, R799, R800, R801, R802, R803, R804, R805, R806, R807, R808, R809, R810, R811, R812, R813, R814, R815, R816, R817, R818, R819, R820, R821, R822, R823, R824, R825, R826, R827, R828, R829, R830, R831, R832, R833, R834, R835, R836, R837, R838, R839, R840, R841, R842, R843, R844, R845, R846, R847, R848, R849, R850, R851, R852, R853, R854, R855, R856, R857, R858, R859, R860, R861, R862, R863, R864, R865, R866, R867, R868, R869, R870, R871, R872, R873, R874, R875, R876, R877, R878, R879, R880, R881, R882, R883, R884, R885, R886, R887, R888, R889, R890, R891, R892, R893, R894, R895, R896, R897, R898, R899, R900, R901, R902, R903, R904, R905, R906, R907, R908, R909, R910, R911, R912, R913, R914, R915, R916, R917, R918, R919, R920, R921, R922, R923, R924, R925, R926, R927, R928, R929, R930, R931, R932, R933, R934, R935, R936, R937, R938, R939, R940, R941, R942, R943, R944, R945, R946, R947, R948, R949, R950, R951, R952, R953, R954, R955, R956, R957, R958, R959, R960, R961, R962, R963, R964, R965, R966, R967, R968, R969, R970, R971, R972, R973, R974, R975, R976, R977, R978, R979, R980, R981, R982, R983, R984, R985, R986, R987, R988, R989, R990, R991, R992, R993, R994, R995, R996, R997, R998, R999, R1000			

ETCH BOARD REV		E	
DESIGNER		ECS	
CHECKED		ECS	
DATE		10/1/78	
SCALE		1/1	
SHEET		1 OF 1	
REV			
ECS		M7810-0-1	
DEC NO.		DEC NO.	
EIA NO.		EIA NO.	
TITLE		PC-1	
SHEET		1 OF 1	
DATE		10/1/78	

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NOTES:
 1. THE FOLLOWING PINS ARE ENCLOSED ON BOTH THE PUNCH AND THE READER CORN:
 B.A.C.E.H.F.H.P.S.U.M.T.PB.CC.EE.
 M.H.BE.PP.PP.BB.UU.VV
 2. THE FOLLOWING PINS ARE NOT USED BY THE PUNCH CORN: X.H.BB

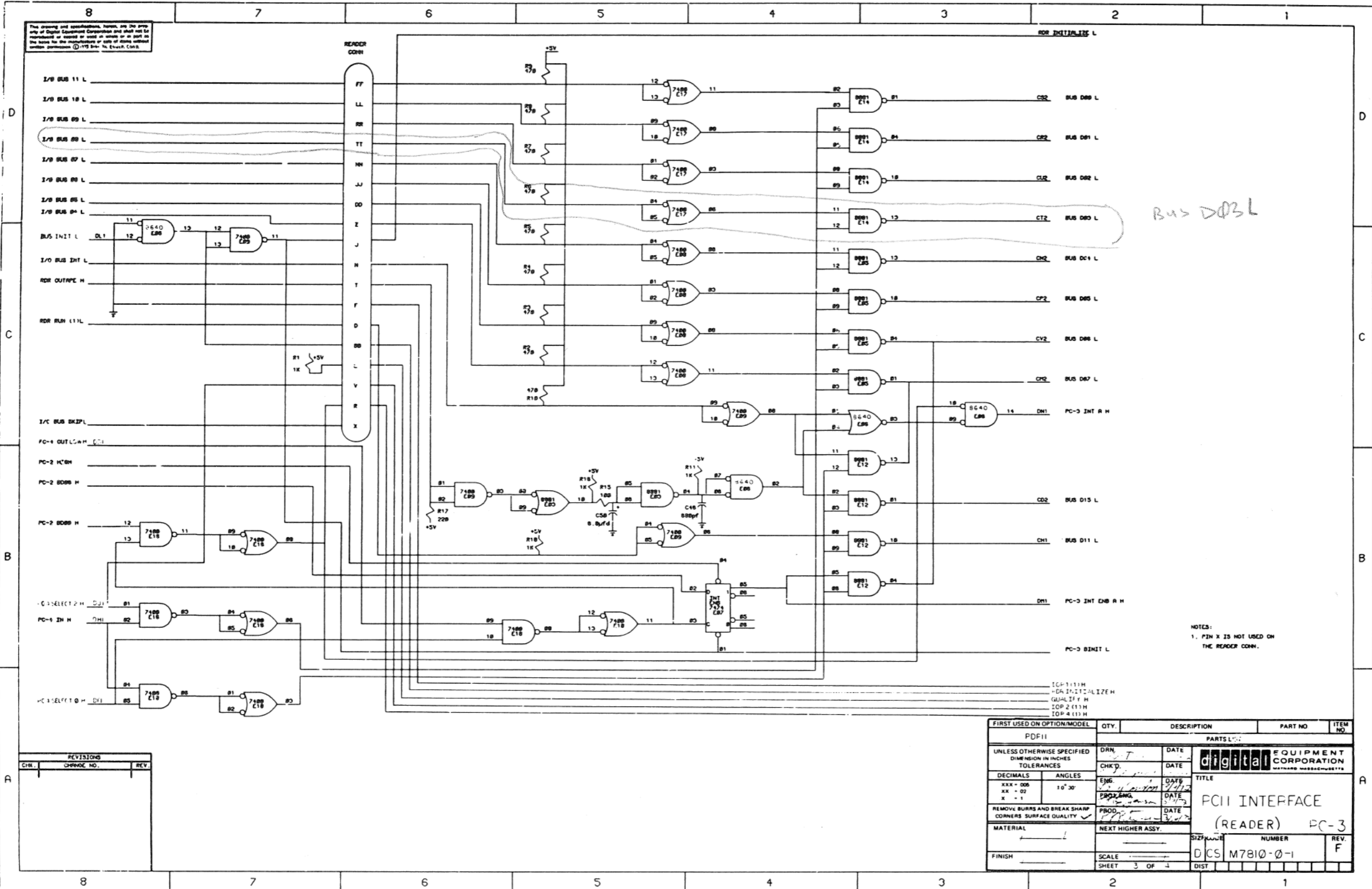
PC-2 B0 IN H	PC-2 B0 OUT H	PC-4 B0 OUT H	BUS B04 IN H	BUS B04 OUT H	BUS B05 IN H	BUS B05 OUT H	BUS B06 OUT H
1	2	3	4	5	6	7	8
16 D02	15 DE2	14 DF2	13 DG2	12 DJ2	11 DK2	10 DL2	9 DM2
BUS B07 L	BUS B07 H	BUS B08 L	BUS B08 H	PC-1 REQUEST L	BUS B07 IN H	BUS B07 OUT H	BUS B08 IN H

REVISIONS		
CHK.	CHANGE NO.	REV.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDF11				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES.				
TOLERANCES				
DECIMALS	ANGLES	DATE		
XXX - 008	10° 30'	DRN	DATE	
XX - 72		CHK'D	DATE	
X - 1		ENG	DATE	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL				
NEXT HIGHER ASSY.				
FINISH				
SCALE				
SHEET 2 OF 4				

digital EQUIPMENT CORPORATION
 TITLE: PII INTERFACE (PUNCH) PC-2
 SIZE CODE: DCS M7810-0-1
 NUMBER: F
 REV. F

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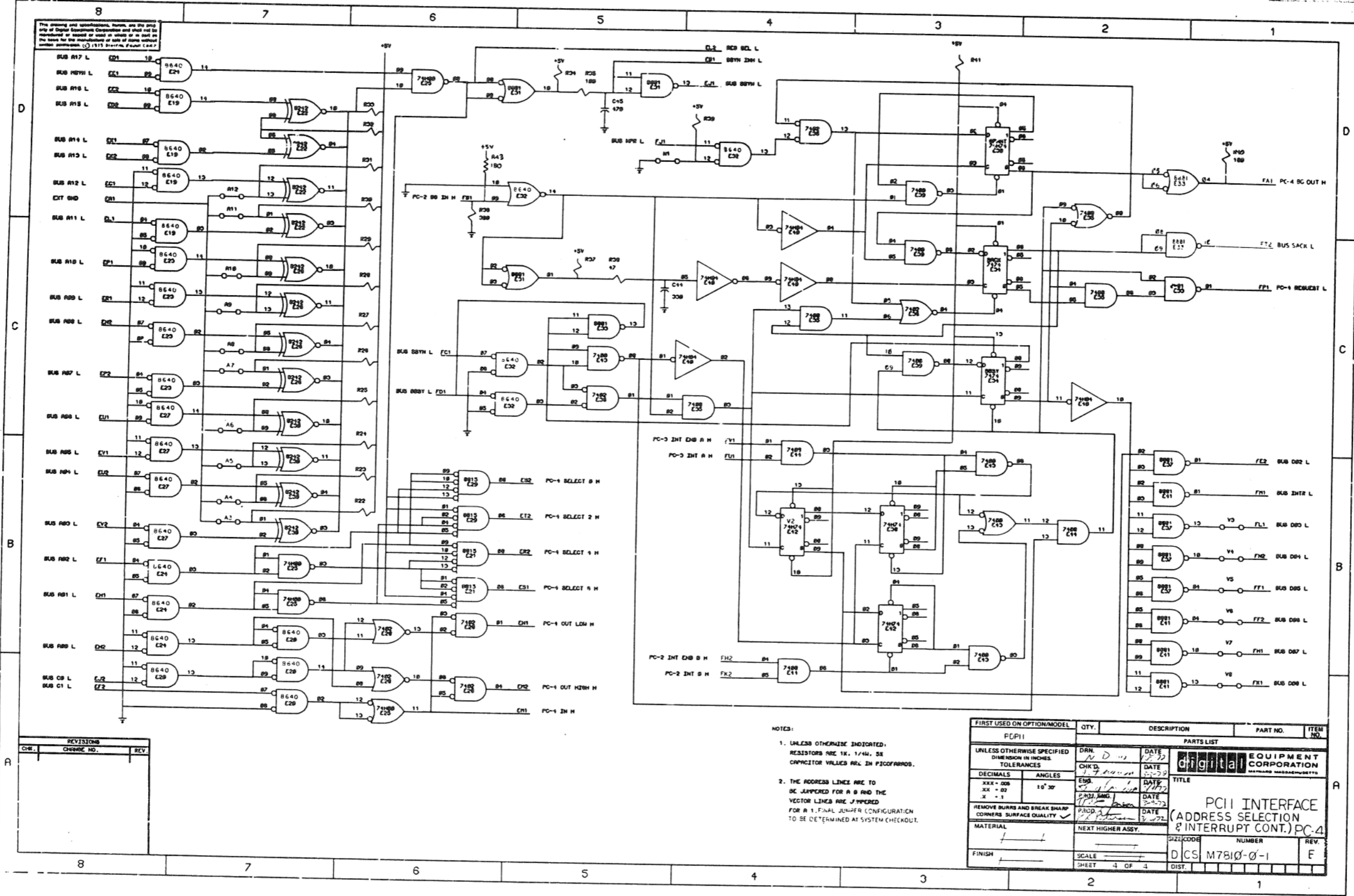
BUS D03L

NOTES:
1. PIN X IS NOT USED ON THE READER CONN.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
PDF11				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	TITLE		
XXX - 006	10' 30"	PCI INTERFACE		
XX - 02	X - 1	(READER) PC-3		
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL	NEXT HIGHER ASSY.	SIZE	NUMBER	REV.
FINISH	SCALE	DCS	M7810-0-1	F
	SHEET 3 OF 4	DIST.		

REVISIONS		
CHR.	CHANGE NO.	REV.

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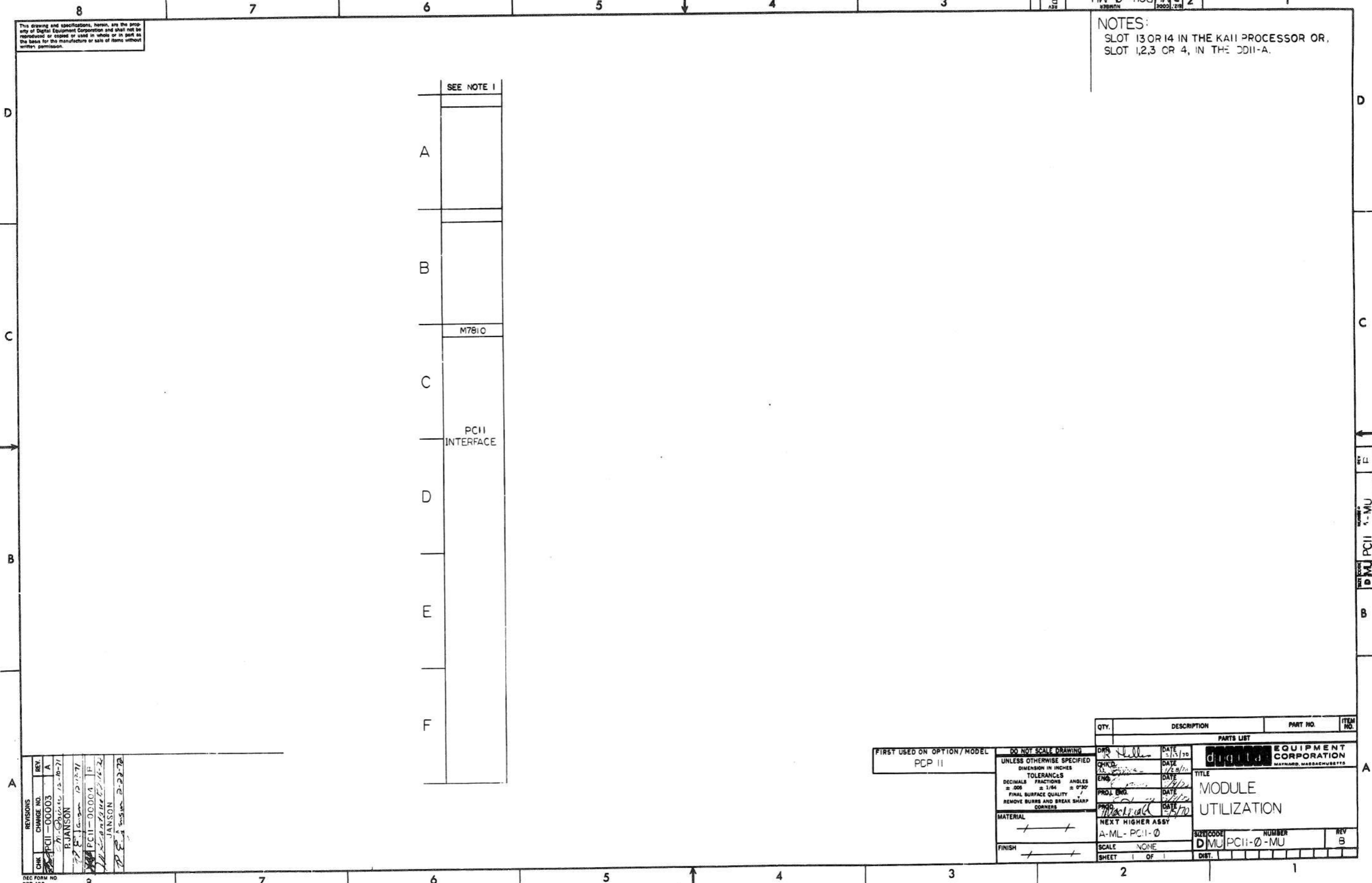
- NOTES:
- UNLESS OTHERWISE INDICATED, RESISTORS ARE 1K, 1/4W, 5% CAPACITOR VALUES ARE IN PICOFARADS.
 - THE ADDRESS LINES ARE TO BE JUMPED FOR A 8 AND THE VECTOR LINES ARE JUMPED FOR A 1. FINAL JUMPER CONFIGURATION TO BE DETERMINED AT SYSTEM CHECKOUT.

FIRST USED ON OPTION/MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
FCP11				
UNLESS OTHERWISE SPECIFIED DIMENSION IN INCHES TOLERANCES				
DECIMALS	ANGLES	PARTS LIST		
XXX - .008	10' 30"	DRN	DATE	Digital EQUIPMENT CORPORATION <small>MARLBOROUGH MASS 01901</small> TITLE PCI INTERFACE (ADDRESS SELECTION & INTERRUPT CONT.) PC-4
XX - .02		CHK'D	DATE	
X - .1		ENG	DATE	
		PROD	DATE	
REMOVE BURRS AND BREAK SHARP CORNERS SURFACE QUALITY				
MATERIAL	NEXT HIGHER ASSY.			
FINISH	SCALE	SIZE/CODE	NUMBER	REV.
	SHEET 4 OF 4	DCS	M7810-0-1	E

REVISIONS		
CHK.	CHANGE NO.	REV.

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



REV.	CHANGE NO.	DATE	BY	CHK.
A	0003	12-10-77	R. JANSON	
B	0004	12-12-77	R. JANSON	
C	0004	12-12-77	R. JANSON	
D	0004	12-22-78	R. JANSON	

FIRST USED ON OPTION/MODEL
 PCP 11

DO NOT SCALE DRAWING
 UNLESS OTHERWISE SPECIFIED
 DIMENSION IN INCHES
 TOLERANCES
 DECIMALS FRACTIONS ANGLES
 ± .005 ± 1/64 ± 0°30'
 FINAL SURFACE QUALITY
 REMOVE BURRS AND BREAK SHARP CORNERS

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
		DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	
	TITLE MODULE UTILIZATION		
	NEXT HIGHER ASSY A-ML-PCII-0	SCALE NONE	REV B
	SHEET 1 OF 1	DIST.	

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ENGINEERING SPECIFICATION

DATE 9/11/70

TITLE PC11/PR11 TEST PROCEDURE

REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY	DATE
A	/	00003	P. JANSON	12-71	P.E. Janson	12-0-71
B		00004	P. JANSON	2-72	P.E. Janson	2-22-72

REVISIONS

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ENG *P.E. Janson* APPR *P.E. Janson* SIZE CODE A SP NUMBER PC11-0-5 REV B
DEC FORM NO 16-1022 SHEET 1 OF 5

TITLE PC11/PR11 TEST PROCEDURE

2.6.4 If for some reason one of the other slots in the D111 must be used, each preceding (unused) D slot must contain a G277.

FOR EXAMPLE: If the option modules are installed in C, D, E & F four, slots D01, D02 & D03 must contain G277 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 SWI 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	8.0	PC11
PRG5	See 3.5.3	PC11
PRG6	See 3.5.4	PC11
PRG7	See 3.5.5	PC11
PRG10	See 3.5.5	PC11, PR11
PRG11	See 3.5.5	PC11, PR11
PRG12	See 3.5.6	PC11
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.

DEC FORM NO 16-1022
D2A 108

SIZE CODE A SP NUMBER PC11-0-5 REV B
SHEET 3 OF 5

ENGINEERING SPECIFICATION

TITLE PC11/PR11 TEST PROCEDURE

1.0 TEST EQUIPMENT

- 1.1 A known good PC11 module
- 1.2 A 455 scope and voltage probe.
- 1.3 Extender modules
- 1.3.1 2 double width
- 1.4.1 Small option test station equipped with:
 - 1.4.1.1 KAL processor
 - 1.4.2 4K of memory
 - 1.4.3 D111 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 D111 located in the test stand as follows:
 - 2.6.1 M781J 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 77755J
 - 2.6.3 Vector assignment: cut all "V" jumpers except V5, V4 and V3. Cut N1. This gives vector address 7J

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D2A 108

SIZE CODE A SP NUMBER PC11-0-5 REV B
SHEET 2 OF 5

TITLE PC11/PR11 TEST PROCEDURE

4.1.2 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 "cap" registration 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 7665037-0-0.

4.0 FAILURES

- 4.1 Adjustment failures may occur during testing. All adjustments are present, 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 test 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.

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D2A 108

SIZE CODE A SP NUMBER PC11-0-5 REV B
SHEET 4 OF 5

TITLE PC11/PR11 TEST PROCEDURE

- 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.

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

DIGITAL EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ACCESSORY LIST

LEGEND

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

QUANTITY / VARIATION

MADE BY K. HAMEL
DATE 6/16/72
ENG *Paul E. Janson*
DATE 6-22-72

CHECKED 6/16/72
DATE *[Signature]*
PROD
DATE

SECTION
ISSUED SECT.

ITEM NO.	DWG NO. / PART NO.	DESCRIPTION	QUANTITY / VARIATION			KIT CHECK	BY	DATE	INSTALLATION CHECK	BY	DATE
			PC11 (60 HZ)	PC11A (50 HZ)	PC11 (50/60 HZ)						
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	Revtron	Punch Manual	1	1	1						
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 HIGH SPEED READER AND PUNCH (PDP-11)	ASSY. NO.	SIZE CODE A AL	NUMBER PC11-0-6	REV. B	ECO NO PC11-00008
	SHEET 1 OF 1	DIST.			