digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

MASTER DRAWING LIST

CODE	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE
BS	D-1D-45-2	B	1	LCH & DCH-IDA & IDC CONTROL
BS	D-1D-45-3		1	MEM. EXTENSION CONT. TYPE 15A
BS	D-1D-45-4	A	1	MEM. RENAME
BS	D-1D-45-5	A	1	RESTRICT MODE & MEMORY PROTECTION LOGIC
BS	D-1D-45-6		1	SH/RO LOGIC, PROGRAM FLAG & RING MODE
BS	D-1D-45-7		1	SBS TYPE 20 CONTROL
BS	D-1D-45-8	B	2	ACCUMULATOR REG.
BS	D-1D-45-9		1	IN-OUT INPUT MIXER
BS	D-1D-45-10		1	IN-OUT MIXER OPTION
BS	D-1D-45-11		1	TRAP BUFFER
BS	D-1D-45-12		1	STANDARD IN-OUT TRANSFER CONTROL
BS	D-1D-45-13		1	OPTIONAL IOT CONTROL
BS	D-1D-45-15		1	SKIP,SWAP & MID LOGIC SH/RO PULSE GEN INST. BK LOGIC
BS	D-1D-45-16		1	GENERAL CONTROL & TIMING
BS	D-1D-45-18	A	1	ACCUMULATOR CONTROL
BS	D-1D-45-32	A	1	INSTRUCTION REGISTER & DECODING
BS	D-1D-45-33	A	1	MA,MB, IO & PC TRANSFER LOGIC
BS	D-1D-45-51		1	PROGRAM COUNTER
BS	D-1D-45-52		1	MEMORY ADDRESS REGISTER
BS	D-1D-45-53		1	MEMORY BUFFER REGISTER
BS	D-1D-45-54		1	IO REGISTER
BS	D-1D-45-55	A	1	SBS TYPE 20 PRIORITY CHAIN
BS	D-1D-45-56		1	CLOCK
BS	D-1D-45-57		1	AUTOMATIC MUL/DIV
BS	D-1D-45-61	A	1	READER CONTROL
BS	D-1D-45-62		1	PUNCH CONTROL
BS	D-1D-45-63		1	TYPEWRITER CONTROL
BS	D-1D-45-64		1	MEMORY BUS INTERFACE
BS	D-1D-45-79		1	OPERATOR CONTROL PANEL
BS	D-1D-45-82		2	SPECIAL MICRO PROGRAMMED IOT&IOT COMMAND
WD	D-1D-45-21	B	1	1A-MA FF, 1B-PC FF, 1C-AC CONTROL
WD	D-1D-45-25		1	1D-+1→PC,SH/RO-1E-PF,SH/LOGIC-1F-IR
WD	D-1D-45-22	A	1	1H-TIME PULSES-1J-SPG IOT-1K RUN CYCLE DF, BREAK
WD	D-1D-45-30	B	1	1L-LCH & DCH CONTROL
WD	D-1D-45-26	B	1	2Y-2Z MEM. EXT. TYPE 15A RENAMG.&PROT.LOGIC

REV.	ECO	ENG	DATE
A	321	F. P	12/17/64
B	360	F.P.&B.M.	4/23/65
C	365	W.M.	6/3/65
D	367	W.M.	7/19/65

MADE BY 8/31/64 P. Daigneault
CHECKER 11/22/64
ENG 11/22/64

TITLE PDP-1D-45

FOR

SHEET 1 OF 4 | CODE MDL | DWG. NO. A-1D-45 | REV. LET. D

DR-8

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

MASTER DRAWING LIST

CODE	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE
WD	D-1D-45-24	A	1	2A-AC SHIFT-2B-AC FF-2C-AC LOGIC
WD	D-1D-45-46	A	1	2D-MB FF-2E MBG.
WD	D-1D-45-47		1	2F-IO SHIFT-2H-IO FF-2J-IO LOGIC
WD	D-1D-45-48		1	2K-2L HIGH SPEED MUL & DIV TYPE 10
WD	D-1D-45-27	A	1	RACKS 3C AND 3D
WD	D-1D-45-31	A	1	3H, 3J, 3K IO CONTROL
WD	D-1D-45-28		1	3L IN-OUT MIXER OPTION
WD	D-1D-45-29		1	TAPER PIN PANELS & IN-OUT PLUG FOR OPTIONAL EQUIPMENT
WD	D-1D-45-49		1	R1A,R1B,R1C-BREAK SYSTEM PRIORITY CHAIN TYPE 20
WD	D-1D-45-50		1	R1D BREAK SYSTEM CONTROL TYPE 20
WD	D-1D-45-65	A	1	11A-11B-11C READER PUNCH & TELETYPE CONTROL
WD	D-1D-45-81	A	1	SCR DRIVER 823-RACK 11F
WD	C-21009	A	1	SWITCH PLATE
WD	D-1D-45-83		1	SPECIAL MICRO PROGRAMMED IOT&IOT COMMAND WIRING
FD	D-1D-45-17	A	1	CYCLE ZERO & DEFER CYCLE
FD	D-1D-45-19		1	CYCLE ONE FLOW DIAGRAM
FD	D-1D-45-23		1	SPECIAL CYCLES & LCH & DCH CYCLES
CD	D-1D-45-14		1	CABLE DIAGRAM
CD	C-1D-45-14		1	CABLE DIAGRAM
CL	A-1D-45-35		1	INTERFACE BETWEEN 630-3 & PDP-1D-45
CL	A-1D-45-36		12	IM 0-17 IN
CL	A-1D-45-37		1	DISPLAY 30A
CL	A-1D-45-38		2	CLOCK IOM
CL	A-1D-45-39		1	PDP-1D-45 TO 23 DRUM 3F PLUG 5
CL	A-1D-45-40		2	SBS BK
CL	A-1D-45-41		2	20 SBS 3H26 INTO SBS LOGIC
CL	A-1D-45-42		2	SBS 20
CL	A-1D-45-43		3	IO PROCESSOR
CL	A-1D-45-44		2	MUL/DIV
CL	A-1D-45-45		1	MA,EMA INDICATORS
CL	A-1D-45-58		1	TA LINES
CL	A-1D-45-59		1	PC INDICATORS
CL	A-1D-45-60		1	MSC INDICATORS

REV.	ECO	ENG	DATE

MADE BY 8/31/64 P. Daigneault	CHECKER	ENG
TITLE PDP-1D-45		
FOR		
SHEET 2 OF 4	CODE MDL	DWG. NO. A-1D-45
		REV. LET. D

DR-6

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

MASTER DRAWING LIST

CODE	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE
CL	A-1D-45-66	A	4	DIODES FOR PDP-1D-45
CL	A-1D-45-67		6	PDP-1D TERMINATIONS
CL	A-1D-45-68		1	IR INDICATORS
CL	A-1D-45-69		1	PF INDICATORS SENSE SW. SINGLE INSTRUCTION
				SINGLE STEP
CL	A-1D-45-70		1	CONTROL SW'D
CL	A-1D-45-71		1	READER INTO READER LOGIC
CL	A-1D-45-72		1	MBD IOT
CL	A-1D-45-73		1	4113 INVERTERS
CL	A-1D-45-74		1	TYPEWRITER INTO TYPEWRITER LOGIC
CL	A-1D-45-75		1	PDP-1D TERMINATORS FROM NAC & MEMORY LITES
CL	A-1D-45-76		1	NAC & MEMORY LITES
CL	A-1D-45-77		1	SOCKET WIRING
CL	A-21410		2	TYPE 20 SEQUENCE BREAK INDICATORS
CL	A-21413		2	TYPE 20 SEQUENCE BREAK INDICATOR
CL	A-21416		4	3.3K SERIES RESISTORS TO INDICATOR FOR SBS
				TYPE 20 PDP-1
CL	A-21417		1	D-003 DIODE SBS TYPE 20 PDP-1
CL	A-21418		1	82 TERMINATOR SBS TYPE 20 PDP-1
CL	A-20059-3		1	IO BUFF FROM IOT ⟶ IO PANEL
CL	A-20059-12		1	TYPE BUFFERS
CL	A-20059-13		1	RDR BUFFERS
CL	A-20059-14		1	RDR & PUNCH PULSES IOT ⟶ IO
CL	A-20040		1	TW LINES
CL	A-20042		1	AC INDICATORS
CL	A-20043		2	IO INDICATORS
CL	A-20307		2	RDR INDICATORS
CL	A-20308		2	TO OUTPUTS
CL	A-20309		2	PUN & TYPE INDICATORS
CL	A-1D-45-84		3	SPECIAL MICRO PROGRAMMED IOT&IOT COMMAND
S	A-1D-45-78		3	EXPLANATORY NOTES FOR CYCLE DIAGRAMS
WL	A-20061		5	1A-1B-1C
WL	A-20062		6	1D-1E-1F
WL	A-20063		4	2A-2B-2C
WL	A-20064		3	2D-2E
WL	A-20065		1	2F-2H-2J
WL	A-20066		2	1H-1J-1K
WL	A-20059		1	AC 0 b ⟶ TO IOT

REV.	ECO	ENG	DATE

MADE BY	CHECKER	ENG
8/31/64 P. Daigneault		

TITLE: PDP-1D-45

FOR:

SHEET	CODE	DWG. NO.	REV. LET.
3 OF 4	MDL	A-1D-45	D

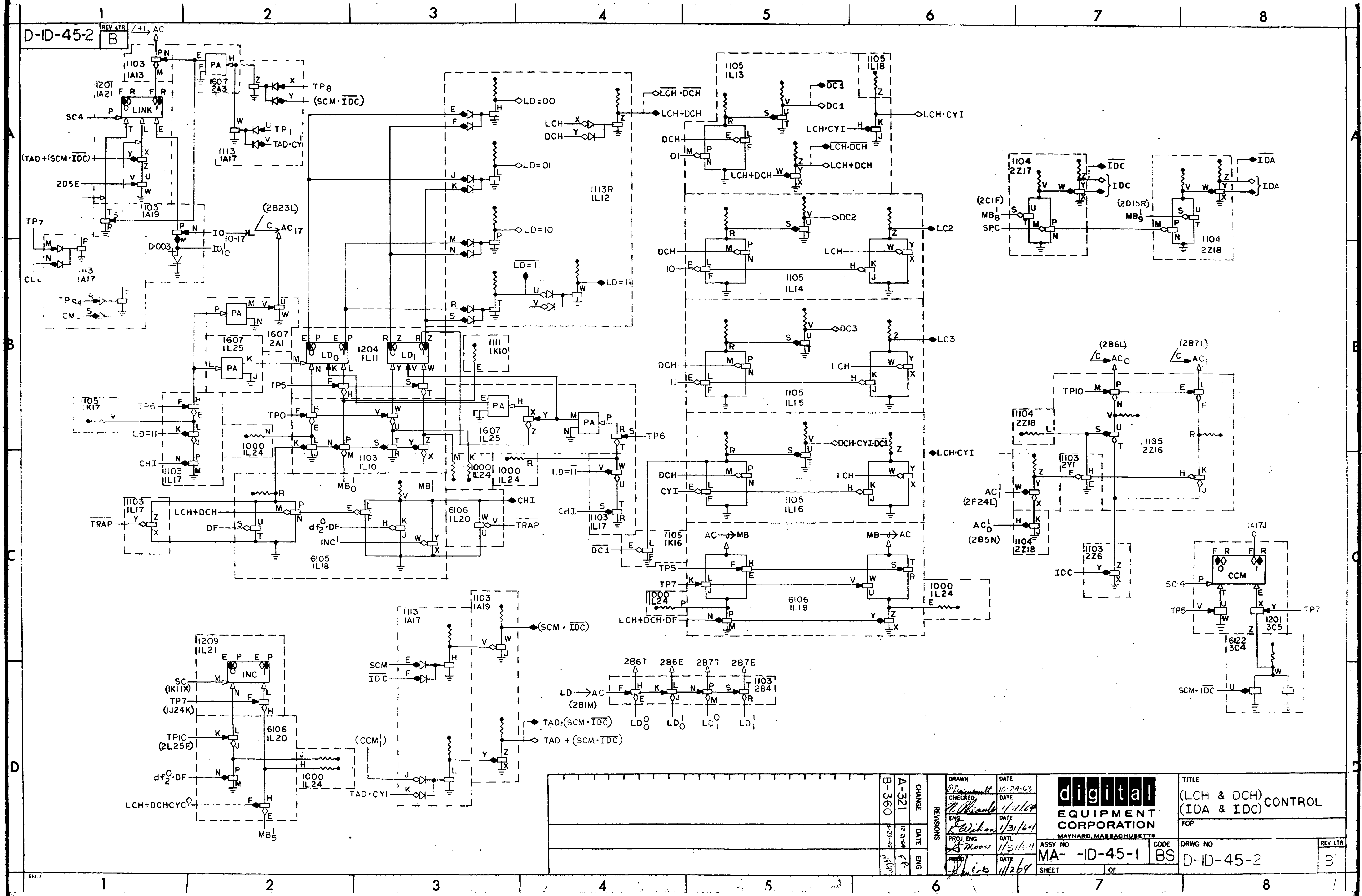
digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

MASTER DRAWING LIST

CODE	DWG. NO.	REV. LET.	NO. OF SHEETS	TITLE
WL	A-20059-1		1	MB1 1685 DRIVERS TO IOT OUTPUTS
WL	A-20059-2		1	I/O OUTPUTS IOT-IO
WL	A-20059-4		1	IM(A) RDR. BUFF's
WL	A-20059-5		1	IM(B) TYP. BUFF
WL	A-20059-6		1	IM(C)
WL	A-20059-7		1	IM(D)
WL	A-20059-8		1	IOT-IM 5
WL	A-20059-9		1	IM(F)
WL	A-20059-10		1	IM(G)
WL	A-20059-11		1	IM(H)
MDL	A-121D-1		1	121D CORE MEMORY PROCESSOR
MDL	D-1D-45-80		1	BS & WD LIST
UML	A-1D-45-20-1	A	1	UTILIZATION MODULE LOCATION
UML	A-1D-45-20-2	A	1	
UML	A-1D-45-20-3	B	1	
UML	A-1D-45-20-4	A	1	
UML	A-1D-45-20-5	A	1	
UML	A-1D-45-20-6	A	1	
UML	A-1D-45-20-7	A	1	
UML	A-1D-45-20-8	A	1	
UML	A-1D-45-20-9	A	1	
UML	A-1D-45-20-10	A	1	
UML	A-1D-45-20-11	A	1	
UML	A-1D-45-20-12	A	1	
UML	A-1D-45-20-13	A	1	
UML	A-1D-45-20-14	A	1	
UML	A-1D-45-20-15	A	1	
UML	A-1D-45-20-16	A	1	UTILIZATION MODULE LOCATION

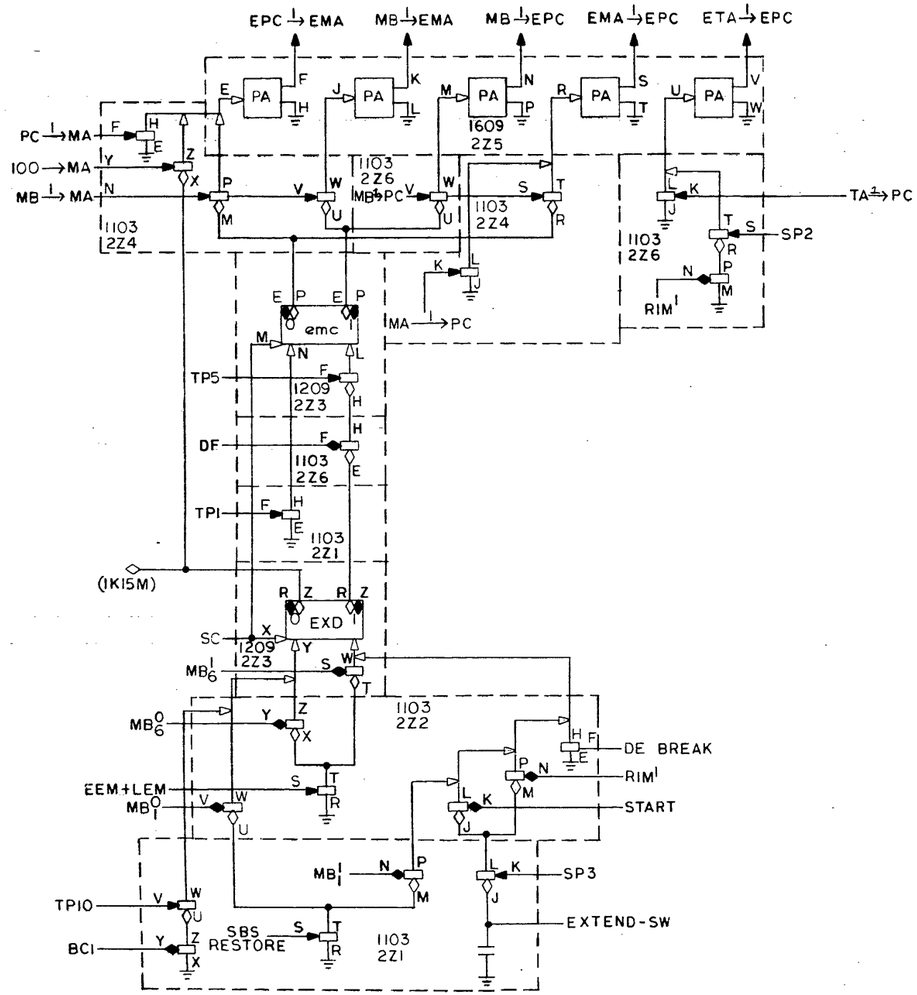
REV.	ECO	ENG	DATE

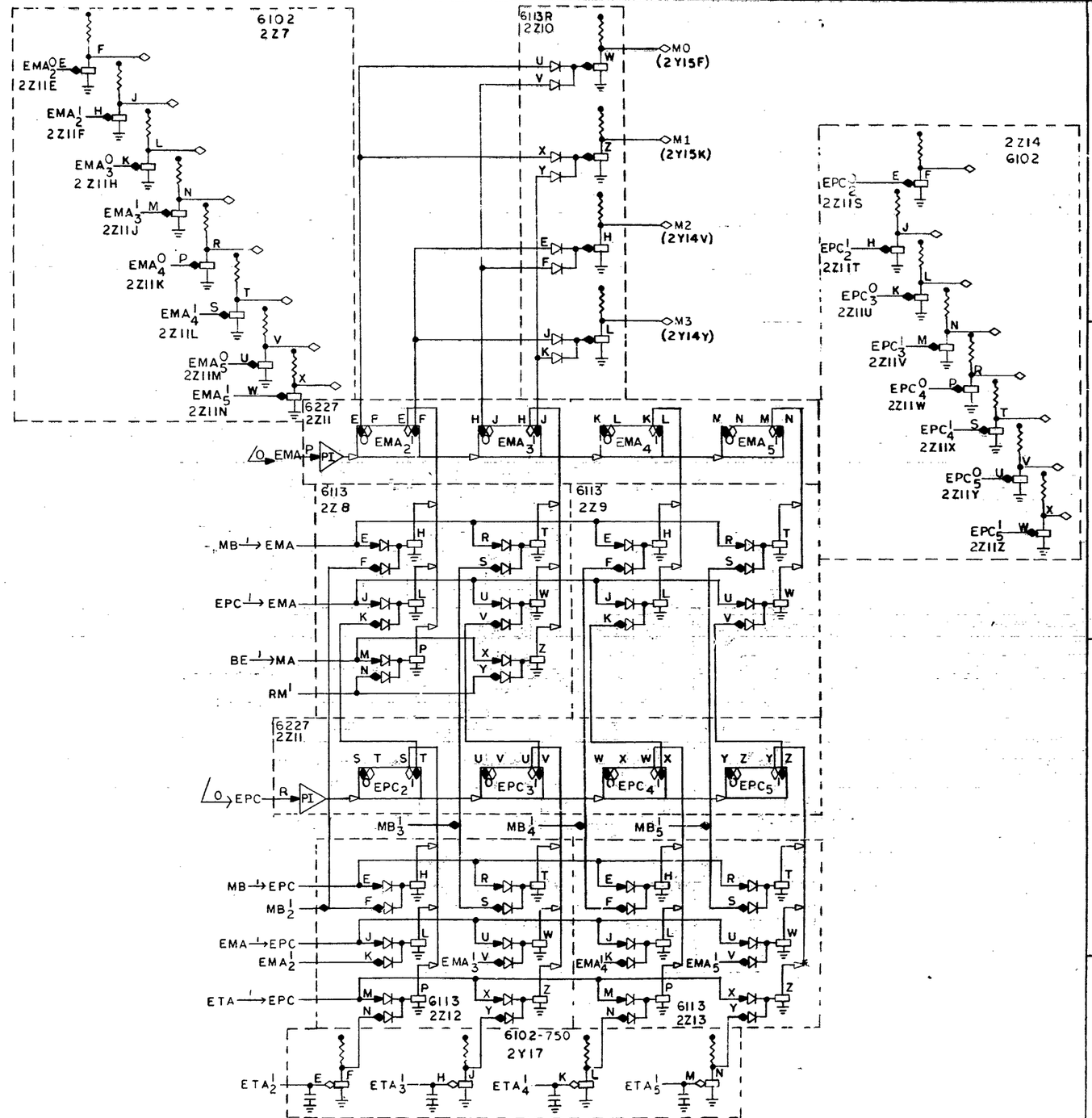
MADE BY 8/31/64 P. Daigneault	CHECKER	ENG
TITLE PDP-1D-45		
FOR		
SHEET 4 OF 4	CODE MDL	DWG. NO. A-1D-45 REV. LET. D



D-ID-45-2
REV LTR B
1 2 3 4 5 6 7 8
A B C D
LINK
PA
LD0
LD1
INC
CCM
1204 1L11
1113R 1L12
1105 1L13
1105 1L14
1105 1L15
1105 1L16
6106 1L19
6105 1L18
6106 1L20
1105 2Z16
1104 2Z17
1104 2Z18
LD=00
LD=01
LD=10
LD=11
LCH·DCH
LCH+DCH
LCH·CYI
DC1
DC2
DC3
LC2
LC3
IDA
IDC
TRAP
CHI
AC→MB
MB→AC
(SCM·IDC)
TAD·(SCM·IDC)
TAD + (SCM·IDC)
LD→AC
CHANGE
REVISIONS
A-321
B-360
DATE
ENG
DRAWN
CHECKED
PROJ ENG
PROD
10-24-63
digital
EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS
ASSY NO MA-1D-45-1
CODE BS
TITLE
(LCH & DCH) (IDA & IDC) CONTROL
FOR
DRWG NO D-ID-45-2
REV LTR B
SHEET
OF

D-ID-45-3 REV LTR





NOTE:
UNLESS OTHERWISE INDICATED
CAPICITORS ARE .1 MFD

CHANGE	DATE	ENG
REVISIONS		

DRAWN	DATE	10-1-63
CHECKED	DATE	1/31/64
ENG	DATE	1/31/64
PROJ ENG	DATE	11-31-64
PROD	DATE	11/264

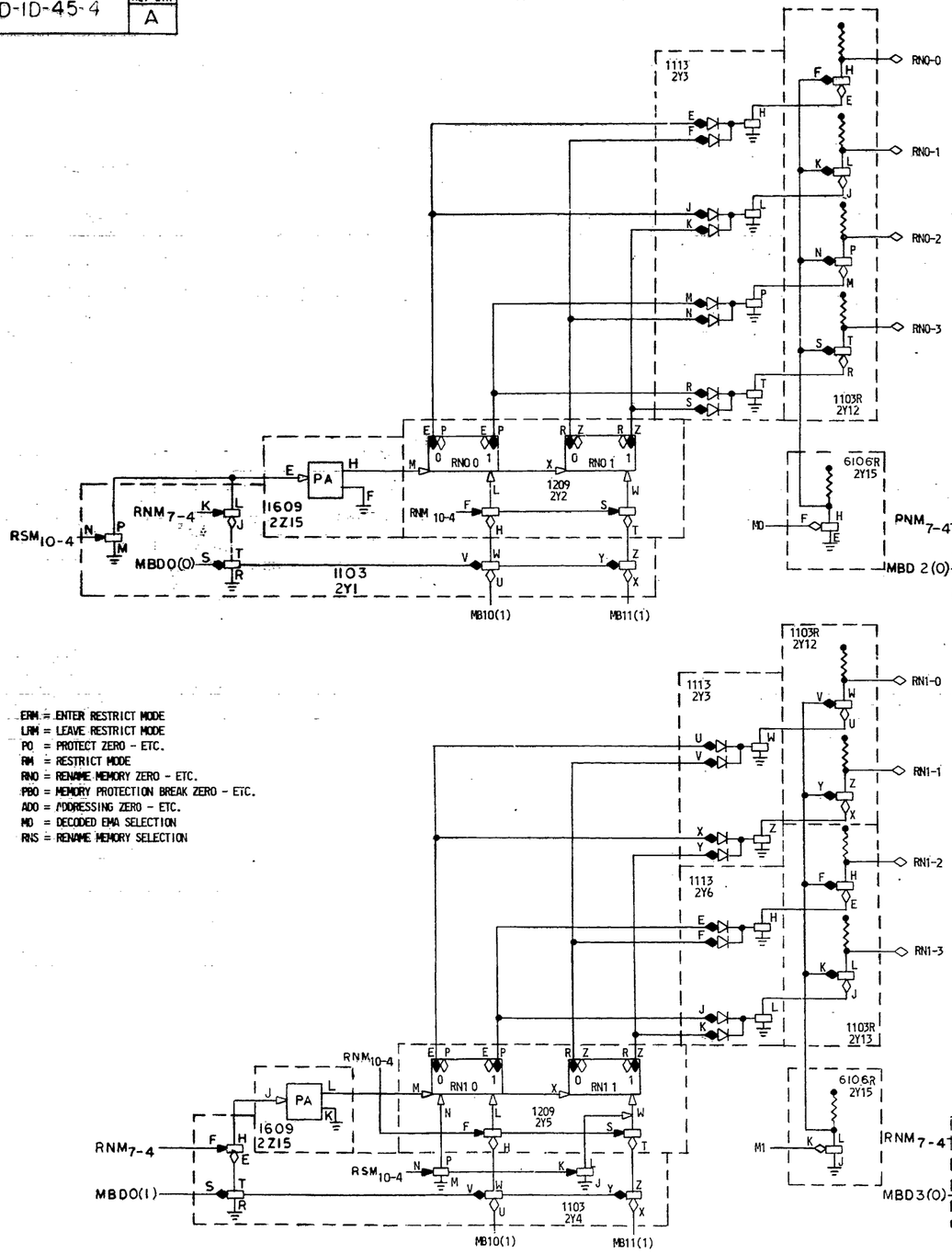
digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

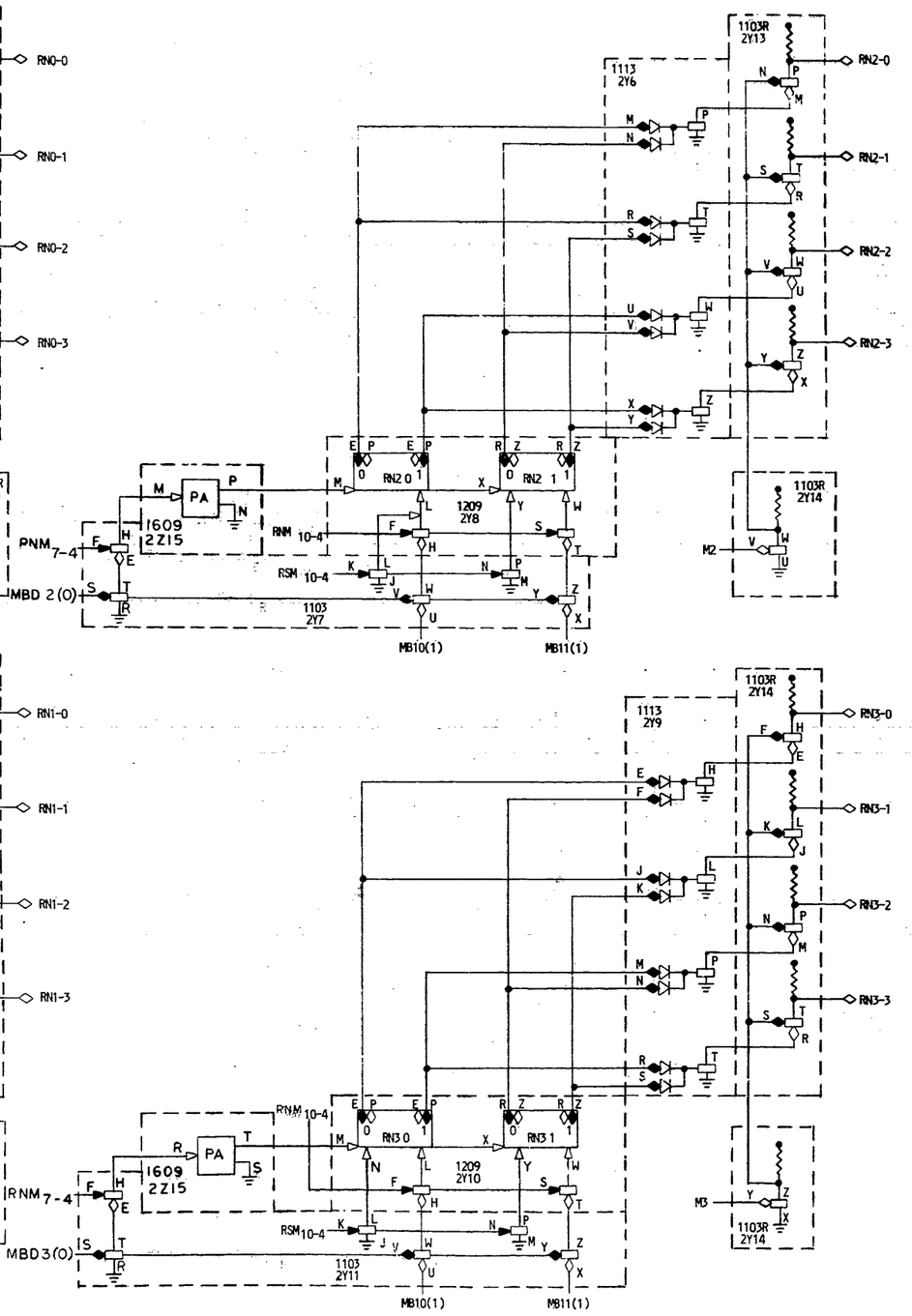
TITLE: MEMORY EXTENSION CONTROL TYPE 15A
FOR:
ASSY NO: MA- -ID-45-1 | CODE: BS | SHEET | OF
DRWG NO: D-ID-45-3 | REV LTR:

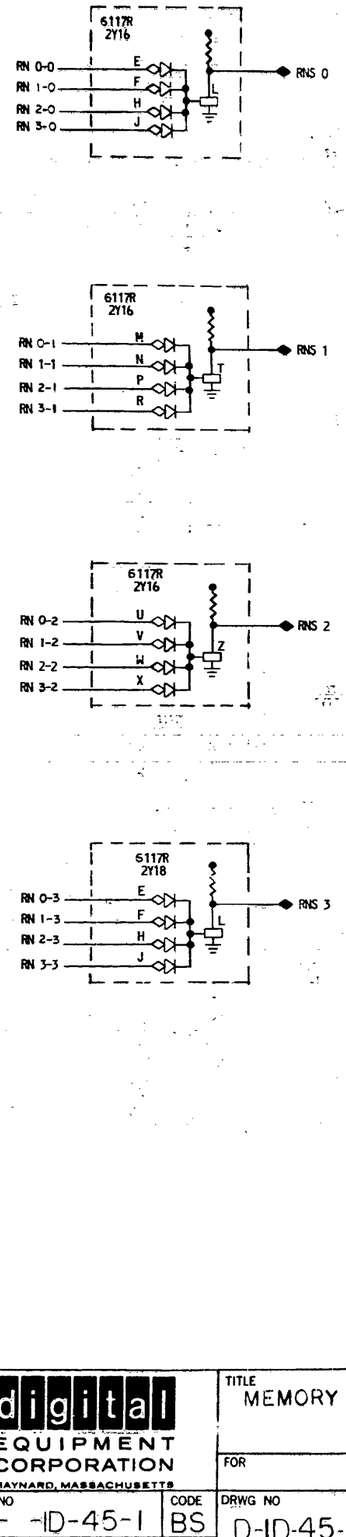
BKL-2

D-ID-45-4 | REV LTR A

ERM = ENTER RESTRICT MODE
LRM = LEAVE RESTRICT MODE
PO = PROTECT ZERO - ETC.
RM = RESTRICT MODE
RNO = RENAME MEMORY ZERO - ETC.
PBO = MEMORY PROTECTION BREAK ZERO - ETC.
ADO = ADDRESSING ZERO - ETC.
MO = DECODED EMA SELECTION
RNS = RENAME MEMORY SELECTION







REVISIONS			
A-321	CHANGE		
12-1964	DATE		
GR	ENG		

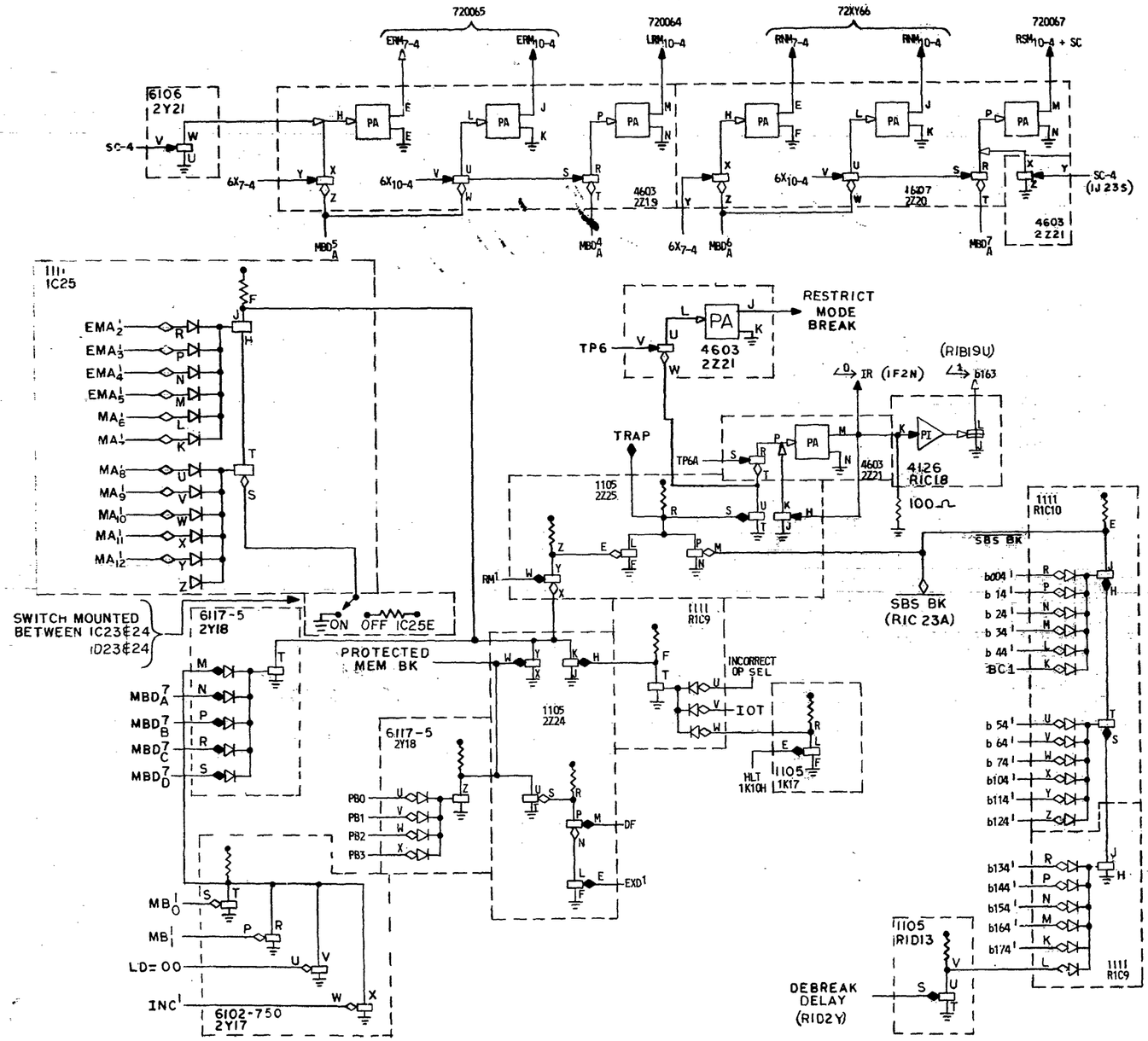
DRAWN	DATE	10-11-63
CHECKED	DATE	10/17/63
ENG	DATE	
PROJ ENG	DATE	
PROD	DATE	11/2/64

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: MEMORY RENAME
FOR:
ASSY NO: MA- -ID-45-1 | CODE: BS
DRWG NO: D-ID-45-4 | REV LTR: A
SHEET | OF

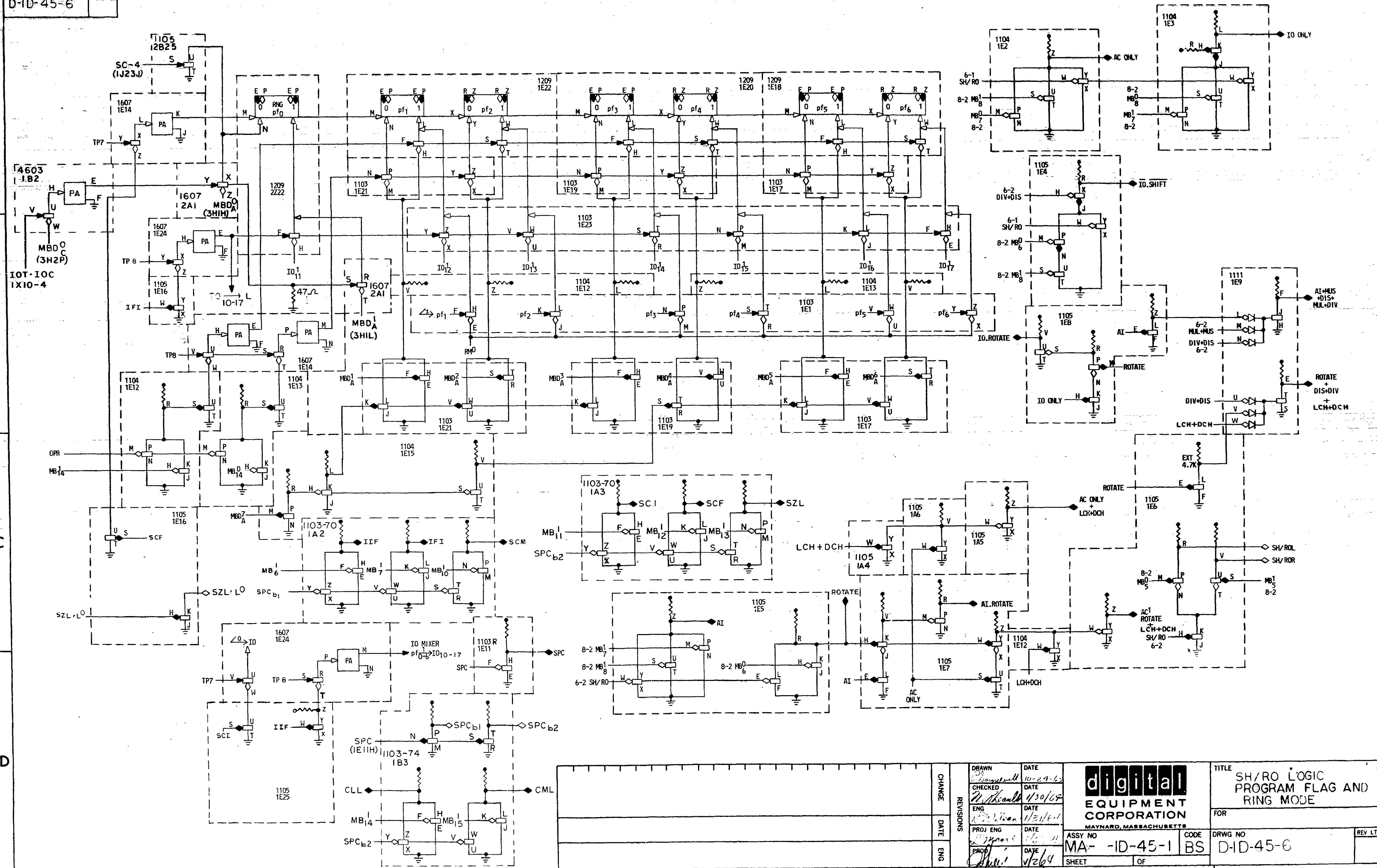
DKE 2

D-ID-45-5 REV LTR A



REVISIONS					
A-360	CHANGE	DRAWN	DATE 10-22-63	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE RESTRICT MODE AND MEMORY PROTECTION LOGIC
4-28-64	DATE	CHECKED	DATE 1/30/64		FOR
	ENG	ENG	DATE 1/31/64		
		PROJ ENG	DATE 1/31/64	ASSY NO MA- -ID-45-1 CODE BS	DRWG NO D-ID-45-5 REV LTR A
		PROG	DATE 11/2/64	SHEET OF	

D-ID-45-6



DRAWN	[illegible]	DATE 10-29-63
CHECKED	[illegible]	DATE 1/30/64
ENG	[illegible]	DATE 1/31/64
PROJ ENG	[illegible]	DATE [illegible]
PROD	[illegible]	DATE 1/2/64

REVISIONS: CHANGE / DATE / ENG

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: SH/RO LOGIC PROGRAM FLAG AND RING MODE

FOR

ASSY NO MA- -ID-45-1 | CODE BS | DRWG NO D-ID-45-6 | REV LTR

SHEET OF

D-ID-45-7

NOTE
A1 — IO ACTIVE
A2 — USER ACTIVE
A3 — AWAIT
A4 — REFERENCE

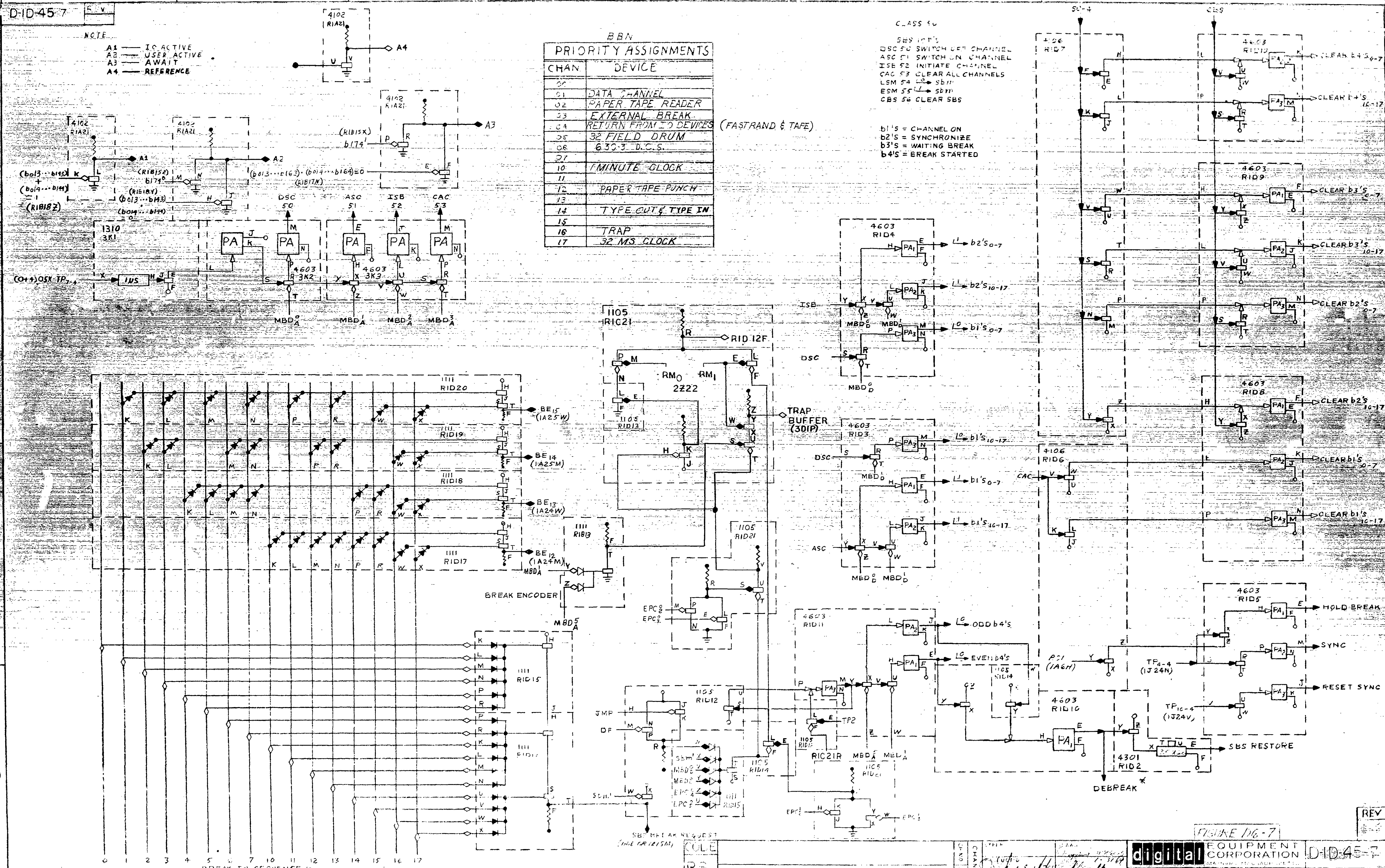
BBN

PRIORITY ASSIGNMENTS	
CHAN	DEVICE
00	
01	DATA CHANNEL
02	PAPER TAPE READER
03	EXTERNAL BREAK
04	RETURN FROM IO DEVICES (FASTRAND & TAPE)
05	32 FIELD DRUM
06	630-3 D.C.S.
07	
10	1 MINUTE CLOCK
11	
12	PAPER TAPE PUNCH
13	
14	TYPE OUT & TYPE IN
15	
16	TRAP
17	32 MS CLOCK

CLASS 50

SBS IOT'S
DSC 50 SWITCH OFF CHANNEL
ASC 51 SWITCH ON CHANNEL
ISB 52 INITIATE CHANNEL
CAC 53 CLEAR ALL CHANNELS
LSM 54 $L^0 \rightarrow$ sbm
ESM 55 $L^1 \rightarrow$ sbm
CBS 56 CLEAR SBS

b1'S = CHANNEL ON
b2'S = SYNCHRONIZE
b3'S = WAITING BREAK
b4'S = BREAK STARTED



THIS DWG TAKEN FROM D-21404 REV-D-2

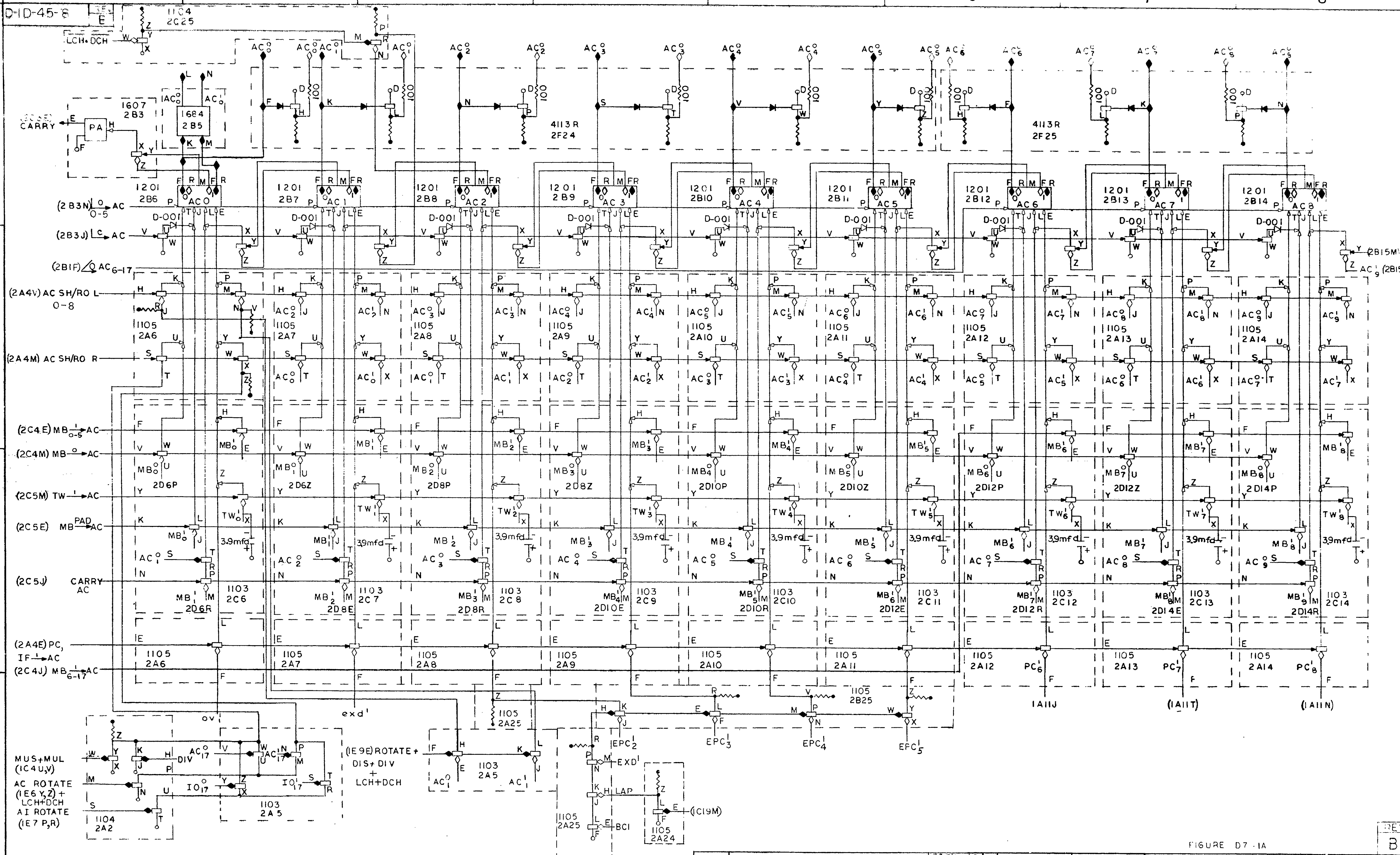
FIGURE D6-7

digital EQUIPMENT CORPORATION

D-ID-45-7

SEQUENCE BREAK SYSTEM TYPE 20, CONTROL PERIPHERAL

REV



THIS DWG TAKEN FROM D-20004 REV-B-2

FIGURE D7-1A

CODE	
BS	

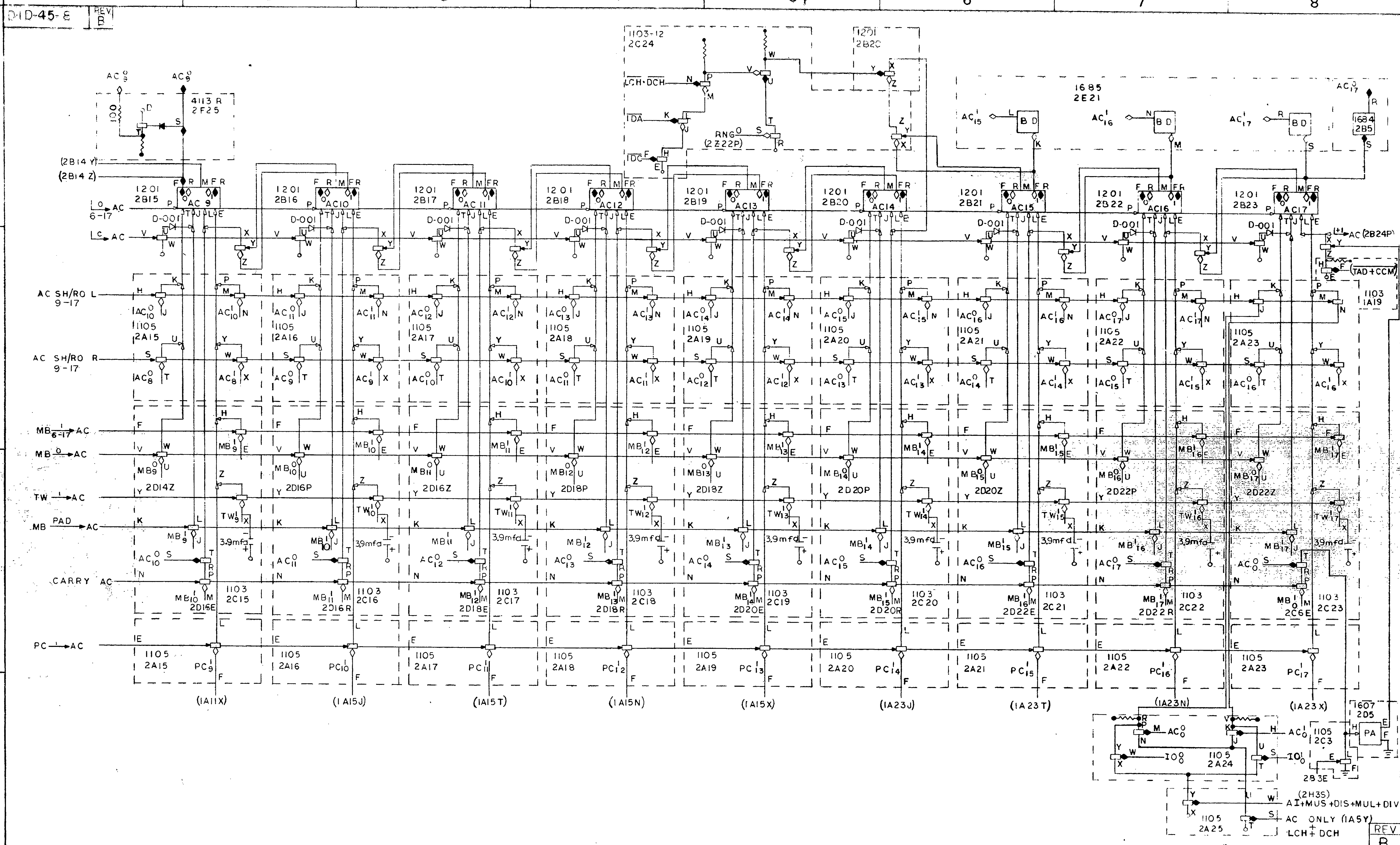
REV B

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

D-1D-45-8

ACCUMULATOR PDP-1D-45

SHEET 1 OF 2



THIS DWG. TAKEN FROM
D-20004 REV-B3

CODE BS

CHANGE

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

ACCUMULATOR

D-ID-45-8

SHEET 2 OF 2

D-ID-45-B

(2H9F) IV0 (2H9K) IM1 (2H9N) IM2 (2H9S) IM3 (2H9V) IM4 (2H9Y) IM5 (2H5F) IM6 (2H5K) IM7 (2H5N) IM8

4603 2J4 · 4603 2J7 · 4603 2J12

4129 2J3 · 4129 2J5 · 4129 2J8 · 4129 2J11 · 4129 2J13

(2J1E) RB→IO
(3J8J) CKS
RCK (3K24J)
DRA

E READER

RB0 LP DRM0 · RB1 RBS DRM1 · RB2 tyo CK2 DRM2 · RB3 TBS CK3 DRM3 · RB4 puno CK4 DRM4 · RB5 LOCK CK5 DRM5 · RB6 SBM CK6 DRM6 · RB7 CK7 DRM7 · RB8 CK8 DRM8

(2J13S) (2J13U) (2J13W) (2J13Y)

4129 2J2 · 4129 2J6 · 4129 2J9 · 4129 2J10 · 4129 2J14

(CTB35TP IC-4) 3K2E

(2J14S) (2J14U) (2J14W) (2J14Y)

CTB0 (2H15S) IM9 · CTB1 (2H15V) IM10 · CTB2 (2H15Y) IM11 · CTB3 (2H21F) IM12 · CTB4 (2H21K) IM13 · CTB5 (2H21N) IM14 · CTB6 (2H21S) IM15 · CTB7 (2H21V) BUSY DRUM IM16 · CTB8 (2H21Y) 630 FLAG IM17

4603 2J15 · 4603 2J20 · 4603 2J23

4129 2J13 · 4129 2J16 · 4129 2J19 · 4129 2J21 · 4129 2J24

(2J13E) (2J13H) (3J13K) (3J13M)

RB9 CK9 DRM9 · RB10 CK10 DRM10 · RB11 CK11 DRM11 · RB12 CK12 DRM12 · RB13 CK13 DRM13 · RB14 CK14 DRM14 · RB15 CK15 DRM15 · RB16 TELE CK16 DRM16 · RB17 DRM CK17 DRM17

4129 2J14 · 4129 2J17 · 4129 2J18 · 4129 2J22 · 4129 2J23

(2J14E) (2J14H) (2J14K) (2J14M)

CTB9 · CTB10 · CTB11 · CTB12 · CTB13 · CTB14 · CTB15 · CTB16 · CTB17

FIG. D9-2

THIS DWG TAKEN FROM
D-2DD12 REV-B1

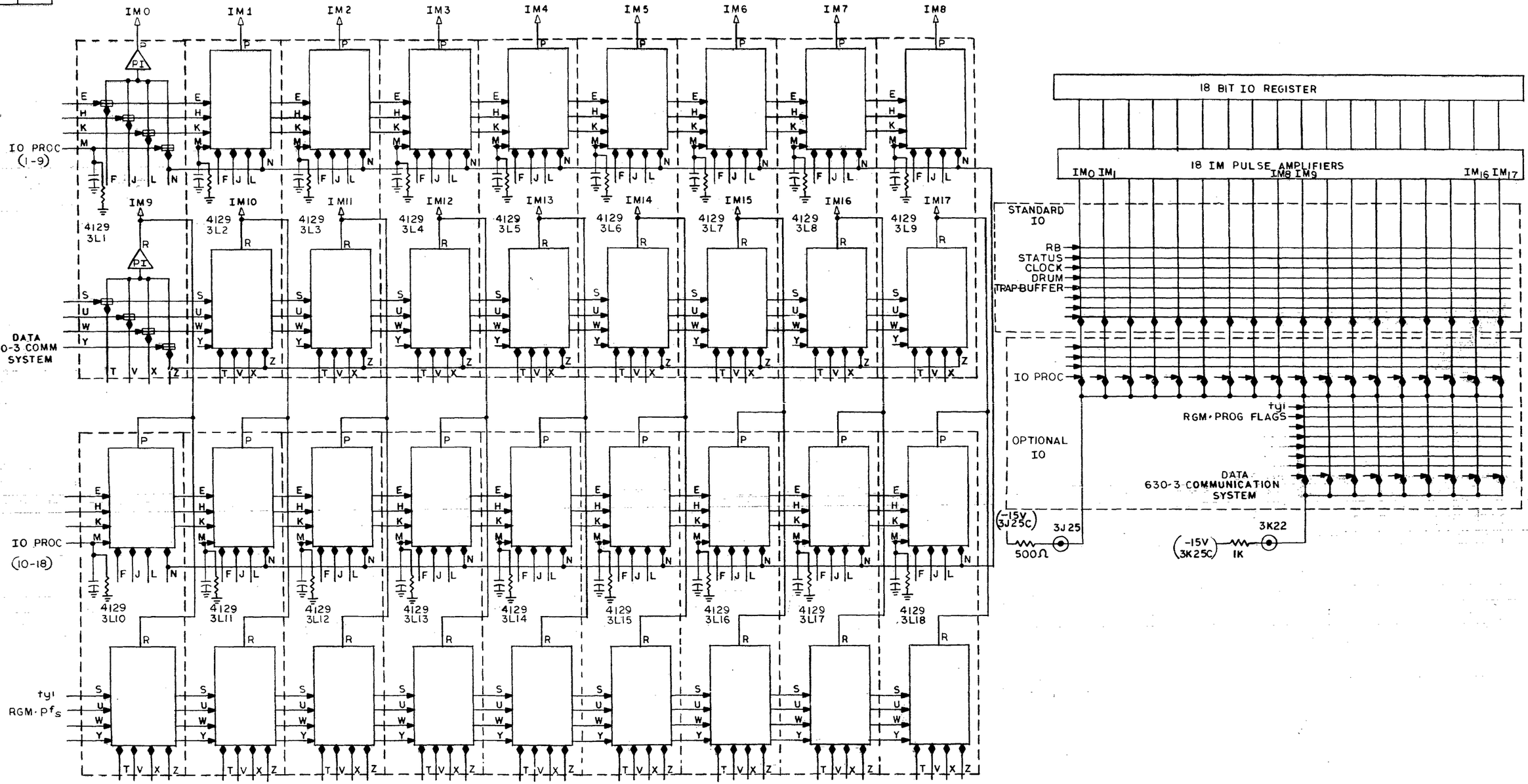
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: IN-OUT INPUT MIXER

FOR

SYS NO: MA- -ID-45-1 | CODE: BS | DRWG NO: D-ID-45-B | REV LTR:

D-ID-45-10 REV LTR



NOTE:
UNLESS OTHERWISE INDICATED
CAPACITORS ARE 680 MMFD
RESISTORS ARE 100Ω

CHANGE	DATE	ENG

REVISIONS

DRAWN	9-30-63	
CHECKED	11/1/64	
ENG	11/2/64	
PROJ ENG	11/2/64	
PROG	11/2/64	

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: IN-OUT MIXER OPTION
FOR

ASSY NO: MA- -ID-45-1 | CODE: BS | DRWG NO: D-ID-45-10 | REV LTR
SHEET | OF

D-ID-45-II

REV LTR

TPB
3H21
ROW 2

4102R
3D8

4102R
3D7

4223
3D2

4223
3D3

(2Z21J) L
RESTRICT
MODE
BREAK

SC+CTB ⟶ TRAP
(3K5E)

IOT
(IF23L)

HLT
(IK17E)

PROTECTED
MEMORY BREAK
(2Y18Z)

MB_5 MB_6 MB_7 MB_8 MB_9 MB_{10} MB_{11} MB_{12} MB_{13} MB_{14} MB_{15} MB_{16} MB_{17}

4113
3D4

4113
3D5

4113
3D6

4102-R
3D1

INCORRECT
OP CODE
SELECTION
(IF18K)

Jmp i
(00XI 5)

SEQ BK CONTROL
(RIC2IZ)

NOTE:
1. CHECK TRAP BUFFER CTB 720035

REVISIONS	CHANGE	DATE	ENG

DRAWN	DATE	12-3-63
CHECKED	DATE	10/17/64
ENG	DATE	11/2/64
PROJ ENG	DATE	11/2/64
PROD	DATE	11/2/64

digital
EQUIPMENT
CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: TRAP BUFFER

FOR

ASSY NO: MA- -ID-45-1 | CODE: BS

DRWG NO: D-ID-45-II | REV LTR

SHEET | OF

BKL2

D-ID-45-12

4113R 3H5 — MBD$_B^{C}$ E, MBD$_B^{H}$ I, MBD$_B^{I}$ J, L

4113R 3H1 — MBD$_A^{0}$ E, MBD$_A^{1}$ J, MBD$_A^{2}$ M, MBD$_A^{3}$ R, MBD$_A^{4}$ U, MBD$_A^{5}$ X, Z

4113R 3H2 — MBD$_A^{6}$ E, MBD$_A^{7}$ J, MBD$_C^{0}$ M, MBD$_C^{1}$ R, MBD$_C^{2}$ U, MBD$_C^{3}$ X, Z

4113R 3H3 — MBD$_C^{4}$ E, MBD$_C^{5}$ J, MBD$_C^{6}$ M, MBD$_C^{7}$ R, MBD$_D^{0}$ U, MBD$_D^{1}$ X, Z

4113R 3H4 — MBD$_D^{2}$ E, MBD$_D^{3}$ J, MBD$_D^{4}$ M, MBD$_D^{5}$ R, MBD$_D^{6}$ U, MBD$_D^{7}$ X, Z

4113R 3H6 — MBD$_B^{2}$ E, MBD$_B^{3}$ J, MBD$_B^{4}$ M, MBD$_B^{5}$ R, MBD$_B^{6}$ U, MBD$_B^{7}$ X, Z

Pf$_1$ (IE1F), Pf$_2$ (IE1K), Pf$_3$ (IE1N), Pf$_4$ (IE1S), Pf$_5$ (IE1V), Pf$_6$ (IE1Y)

4603 3J22 — PA$_1$ H, F; PA$_2$ L, K; PA$_3$ P, N

4603 3J23 — PA$_1$ H, F; PA$_2$ L, K; PA$_3$ P, N

(BF) H, (DK) L, (FN) P — (A)E, (C)J, (E)M — TYPE SYNC — 4112 3J24

(H)S T, (K)V W, (N)Y Z — (G)R, (J)U, (L)X

ALL INPUTS FROM 3H25 ROW1

1685 3J11 — BD$_1$ L, K; BD$_2$ N, M; BD$_3$ R, S; BD$_4$ T, U — 3H13P, 3H13R, 3H13S, 3H13T — Pf$_1$, Pf$_2$, Pf$_3$, Pf$_4$

1685 3J12 — BD$_1$ L, K; BD$_2$ N, M; BD$_3$ R, S; BD$_4$ T, U — 3H13U, 3H13V, 3H23V, 3H23W — Pf$_5$, Pf$_6$, NAC (3J19S), $\overline{\text{NAC}}$ (3J19T)

4214 3J15 — FDJ, FDJ — O rcp I; L N, L N — O pcp I; T V, T V — C tcp I; X Z, X Z — O dcp I

4106 3J16 — (3J4E) RPA F, H, L, P, S, T, W, Z; (3J4J) RPB K, V, R, U, X; E, J, M

4106 3J17 — (3J6E) PPA F, H, L, S, T; (3J4M) TYO N, P, Y; (3J6J) PPB K, L, V, W, R, U, X; E, J, M

1107 3J18 — (3J7E) DPY F, H, Y, Z, X; E

1103 3J18 — (IK25M) ICT C, U, V, W; (2D11R) MB$_5$ C, K, J, L; (2D13N) MB$_6$ I, N, M; (2D11T) MB$_5$ R, S, T, P; NAC

1103R 3J19 — (2D13L) MB$_6^{0}$ V, U, W; NAC S, T, R

THIS DWG. TAKEN FROM D-CO054 REV-E-1

0X·TP$_{7-4}$ 1X·TP$_{7-4}$ 2X·TP$_{7-4}$ 3X·TP$_{7-4}$ 4X·TP$_{7-4}$ 5X·TP$_{7-4}$ 6X·TP$_{7-4}$ 7X·TP$_{7-4}$

4603 3H7 — PA$_1$ H, E, V, F; PA$_2$ U, L, S, R; PA$_3$ Y, X, V, U, S, R, P, N; MBD$_B^{0}$ W, MBD$_B^{1}$ T

4603 3H9 — PA$_1$ Y, X, V, F; PA$_2$ U, L, S, R; PA$_3$ Y, X, V, U, S, R, P, N; MBD$_B^{2}$ Z, MBD$_B^{3}$ W, MBD$_B^{4}$ T

4603 3H11 — PA$_1$ Y, X, V, F; PA$_2$ U, L, S, R; PA$_3$ Y, X, V, U, S, R, P, N; MBD$_B^{5}$ Z, MBD$_B^{6}$ W, MBD$_B^{7}$ T

IOT·IOC′ — 1X·TP$_{10-4}$ — 3X·TP$_{10-4}$ — 5X·TP$_{10-4}$ — 7X·TP$_{10-4}$

4603 3H8 — PA$_1$ H, E, V, F; PA$_2$ U, L, S, R; PA$_3$ Y, X, V, U, S, R, P, N; MBD$_B^{0}$ W, MBD$_B^{1}$ T

4603 3H10 — PA$_1$ Y, X, V, F; PA$_2$ U, L, S, R; PA$_3$ Y, X, V, U, S, R, P, N; MBD$_B^{2}$ Z, MBD$_B^{3}$ W, MBD$_B^{4}$ T

4603 3H12 — PA$_1$ Y, X, V, F; PA$_2$ U, L, S, R; PA$_3$ Y, X, V, U, S, R, P, N; MBD$_B^{5}$ Z, MBD$_B^{6}$ W, MBD$_B^{7}$ T

IOT·IOC′ — 0X·TP$_{10-4}$ — 2X·TP$_{10-4}$ — 4X·TP$_{10-4}$ — 6X·TP$_{10-4}$

TP$_{10-4}$ — (2H4V) IO ON IOT

(IDIOW) EXT. PC

4603 3J21 — PA$_2$ K, L, U, V, W

READER IO, DRA — (A), (C), (E), (G), (J) — (L), (N), (R), (T), (V) — (3H9J) 3X·TP$_{7-4}$ — 4110 3J25

(3J5J) IO ON TYI

ALL TAPER PIN INPUTS FROM 3H25 ROW2

3H25 ROW1 — (R), (S), (T), (U), (V), (W)

3A25 ROW3 — (R), (S), (T), (U), (V), (W) — 4110 3J13

4129 3J20 — P, R, S, U, W, Y

(3H22V3) READER RETURN — E, H, K, M

(3H25A3) PUNCH DONE

(3H25C3) TYO DONE

(3H25E3) DPY DONE — F, J, L, N

rcp′ pcp′ tcp′ dcp′

RPB rim′ — 1104 3J3 — M, P, K, H, N, J

(0+4)03X·TP$_{10-4}$ — (J18F) IOT DONE

(3J25R) ON TYE (0+4)001 — (0+4)002 — (0+4)003 — ON TYI (0+4)004 — (0+4)005 — ON PPA (0+4)006 — ON PPB (0+4)008 — XX07 — XX07

(0+4)00X·TP$_{7-4}$ — MBD$_A^{4}$, MBD$_A^{5}$, MBD$_A^{6}$

4603 3J4 — PA$_1$ H, F; PA$_2$ L, K; PA$_3$ P, N; MBD$_A^{1}$ T, MBD$_A^{2}$ N

4603 3J5 — PA$_1$ H, F; PA$_2$ L, K; PA$_3$ P, N; MBD$_A^{3}$ W, MBD$_A^{4}$ T

4603 3J6 — PA$_1$ H, F; PA$_2$ L, K; PA$_3$ P, N; MBD$_A^{5}$ Z, MBD$_A^{6}$ W

4603 3J7 — PA$_1$ H, F; PA$_2$ L, K; PA$_3$ P, N; MBD$_A^{7}$ T

XX0X·TP$_{10-4}$

RRB (0+4)030, CKS (0+4)033, CBS (0+4)056 — LSM sbm (0+4)054, ESM sbm (0+4)055, EEM+LEM (0+4)074

4603 3J8 — PA$_1$ H, F; PA$_2$ L, K; PA$_3$ P, N; MBD$_A^{0}$ T, MBD$_A^{3}$ W, MBD$_A^{6}$ Z

4603 3J9 — PA$_1$ H, F; PA$_2$ L, K; PA$_3$ P, N; MBD$_A^{4}$ T, MBD$_A^{5}$ W, MBD$_A^{4}$ Z

(0+4)05X·TP$_{7-4}$ — (0+4)07X·TP$_{10-4}$

(0+4)00X·TP$_{10-4}$ (0+4)00X·TP$_{7-4}$ (0+4)03X·TP$_{10-4}$ (0+4)05X·TP$_{7-4}$ (0+4)07X·TP$_{10-4}$

4503 3J14 — PA$_1$ J, L, K; PA$_2$ M, P, N; 0X·TP$_{10-4}$, 0X·TP$_{7-4}$

4603 3J10 — PA$_1$ E, H, F; PA$_2$ J, L, K; PA$_3$ M, P, N; 3X·TP$_{10-4}$, 5X·TP$_{7-4}$, 7X·TP$_{10-4}$

1104 3J3 — S, R, T, Y, X, Z, V

MBD$_D^{0}$ V, U, W; MBD$_D^{4}$ Y, X, Z; MBD$_C^{0}$ R, S, T

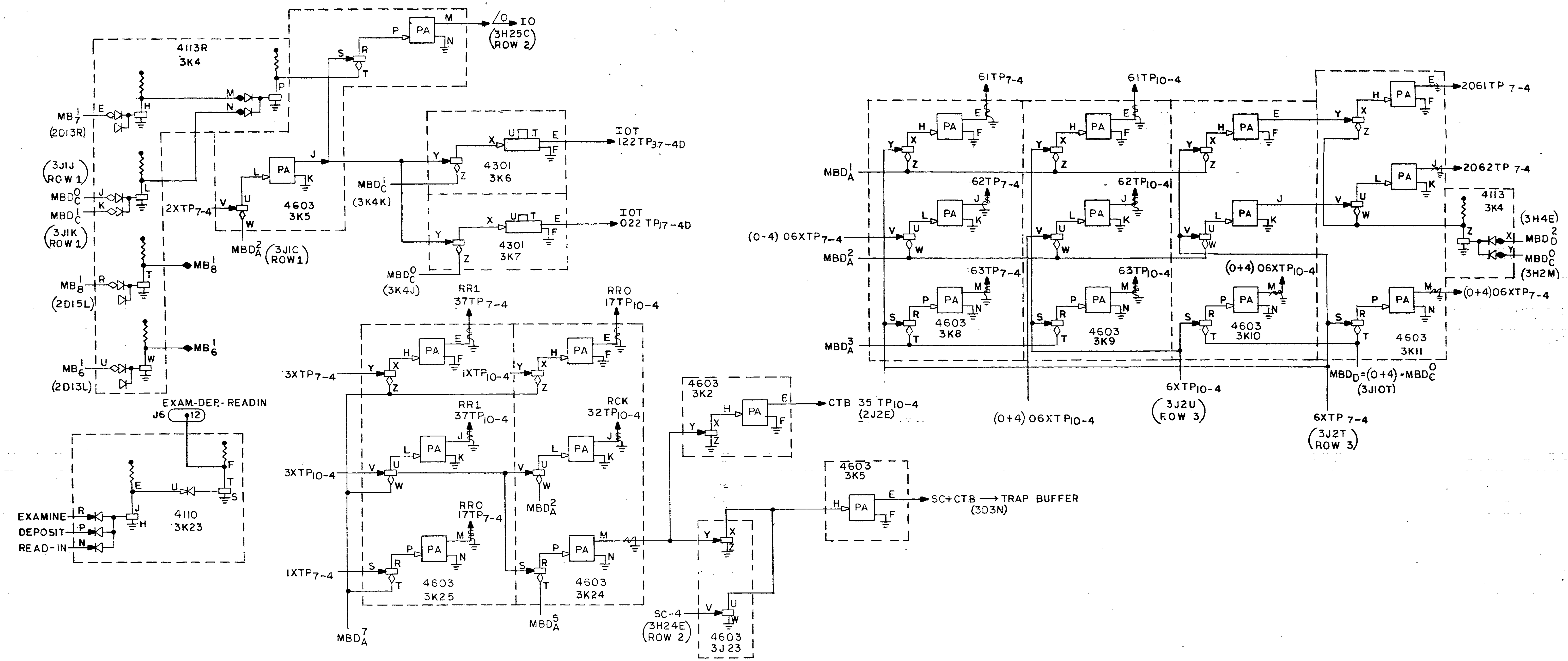
4603 3J22 — PA$_2$ K, L, U, V, W

FIGURE D9-1

DRAWN	DATE 12-11-63	digital EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS	TITLE: STANDARD IN-OUT TRANSFER CONTROL
CHECKED	DATE		FOR
ENG	DATE 12/24/63	ASSY NO MA- -ID-0-1	CODE BS
MGR	DATE 2/6/64	SHEET	OF
ENG	DATE 11/26/64	DRWG NO D-ID-45-12	REV LTR

SNOWDEN

D-1D-45-13



DRAWN	DATE 12-4-63
CHECKED	DATE 1/30/64
ENG	DATE 1/31/64
PROJ ENG	DATE 11/2/64
PROD	DATE 11/26/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE OPTIONAL IN-OUT TRANSFER CONTROL

FOR

ASSY NO MA- -1D-45-1 CODE BS

SHEET OF

DRWG NO D-1D-45-13 REV LTR

DID-45-14

PUNCH

READER

A-20311

A-20310

MA-OUT INDICATOR PANEL

OPERATOR PANEL

11F

BS-D-10-45-62 WD-D-10-45-61

11A READER LOGIC

BS-D-10-45-61 WD-D-10-45-65

11B TELETYPE PUNCH LOGIC

BS-D-10-45-62 WD-D-10-45-65

11C TYPEWRITER CONTROL & LOGIC 2

BS-D-10-45-63 WD-D-10-45-15

A-20307 TO INDICATORS

A-20308 TO I/O OUTPUTS

A-20309 TO PUNCH

A-20309 TO READER

A-20308 TO TYPEWRITER

1A MA

BS-D-10-45-52 WD-D-10-45-21

A-10-45-45 TO I/O CATCH

1B PC

BS-D-10-45-51 WD-D-10-45-21

A-10-45-58 TO TA LINES (1822)

A-10-45-59 TO INDICATORS

1C AC CONTROL

BS-D-10-45-18 WD-D-10-45-21

A-10-45-42

1D +1 PC SP, PC

BS-D-10-45-15 WD-D-10-45-25

A-10-45-72 TO READ SW

1E PF & SP LOGIC

BS-D-10-45-5 WD-D-10-45-25

A-10-45-69 TO INDICATORS

1F IR

BS-D-10-45-32 WD-D-10-45-25

A-10-45-68 IR INDICATORS

1H TIME PULSES

BS-D-10-45-16 WD-D-10-45-22

A-10-45-44 TO MUL & DIV

1J PB + PB-1ST

BS-D-10-45-16 WD-D-10-45-22

A-10-45-70 TO CONTROL PANEL

1K RUN SCALE OR BRKPT

BS-D-10-47-16 WD-D-10-45-22

A-10-45-60 TO CONTROL

1L ← 9 → BLANK

LCH-DCH WD-D-10-45-30

BS-D-10-45-5

2Y MEMORY EXTENSION TYPE 15A RELOCATION & PROTECTION & TRAP LOGIC

BS-D-10-45- WD-D-10-45-26

2Z MEMORY EXTENSION TYPE 15F RELOCATION AND PROTECTION & TRAP LOGIC

BS-D-10-45- WD-D-10-45-26

2A AC SHIFT

BS-D-10-45-6 WD-D-10-45-24

2B AC

BS-D-10-45-6 WD-D-10-45-24

A-20042 TO INDICATORS

2C AC LOGIC

BS-D-10-45-6 WD-D-10-45-24

A-20040 TO TW LINES

2D MB

BS-D-10-45-53 WD-D-10-45-46

A-20043 TO INDICATORS

2E MQR

BS-D-10-45-53 WD-D-10-45-46

2F IO SHIFT

BS-D-10-45-54 WD-D-10-45-47

2H IO

BS-D-10-45-54 WD-D-10-45-47

2J LOW MQR

BS-D-10-45-9 WD-D-10-45-47

2K MUL & DIV

BS-D-10-45-57 WD-D-10-45-46

2L MUL & DIV

BS-D-10-45-57 WD-D-10-45-46

3C TRAP

WD-D-10-45-27

BS-D-10-45-11

MA DRIVERS 24 25

WD-D-10-45-27

BS-D-10-45-64

MEMORY TRANSIEVIER BOARD

3D

BS-D-10-45-11 WD-D-10-45-27

26 PIN COAX J4 J5 J6

TYPE 32 DP/M

TPY DPY 6.30

A-20059-14 11B27

A-10-45-73

3H IOT CONTROL

BS-D-10-45-13 WD-D-10-45-31

A-20059-13 11B26

A-20059-12 11L27

A 20059-13 11A27

3J IOT CONTROL

BS-D-10-45-13 WD-D-10-45-31

3K

BS-D-10-45-12 WD-D-10-45-31

3L ADDITIONAL IO INPUT MIXER

BS-D-10-45-12 WD-D-10-45-28

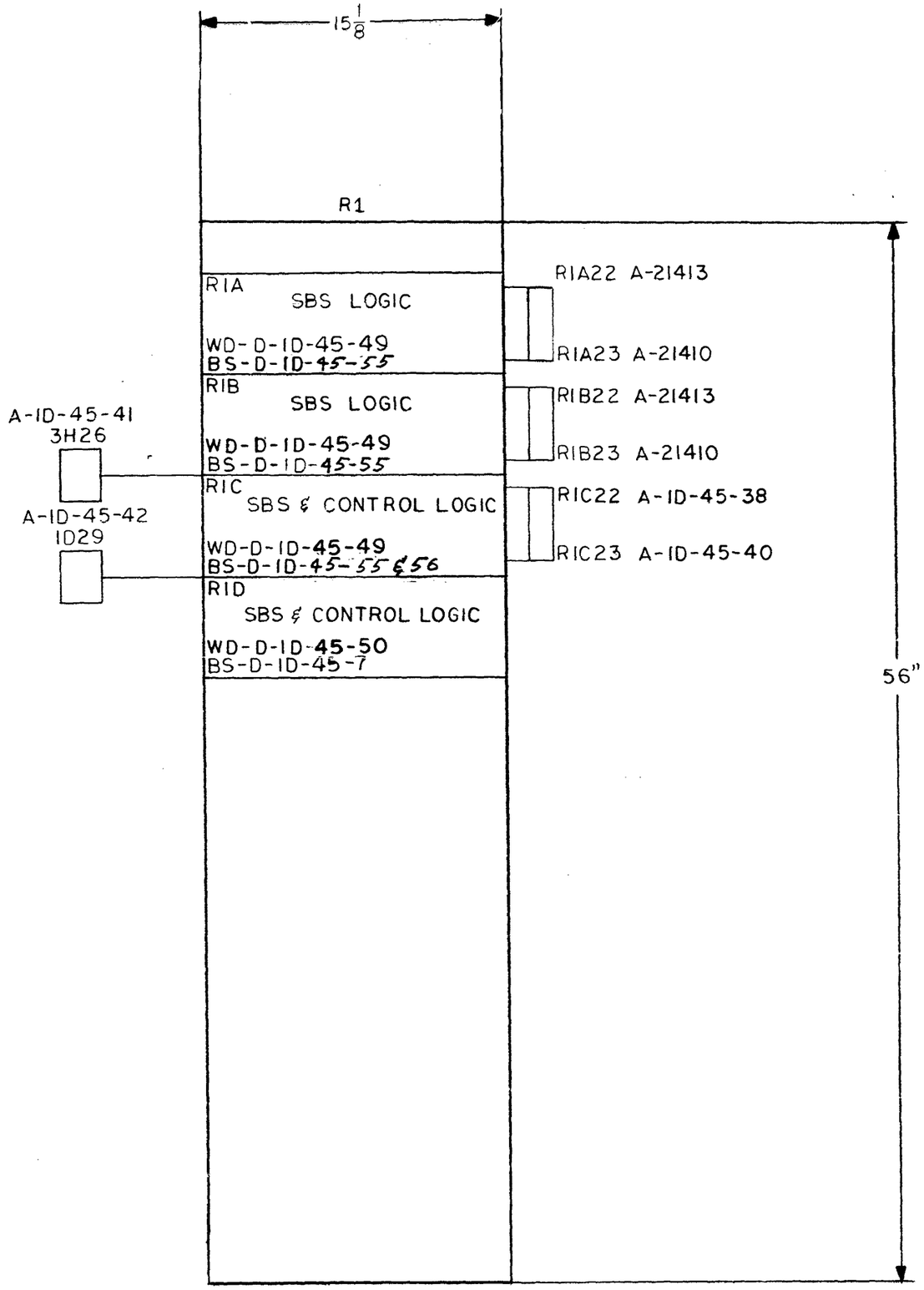
NOTE:

- [ ] LETTERS TO BE IN CAPITAL LETTERS
- [ ] NUMBERS TO BE ARABIC NUMERALS
- [ ] LETTERS TO BE IN LOWERCASE FOR EXTERNAL DEVICES

FRONT VIEW

SIZE	CHANGE	TITLE	DRAWN	digital EQUIPMENT CORPORATION	D-ID-45-14
CD			B	CABLE DIAGRAM	

D-ID-45-14 REV



CHANGE	DATE	ENG

REVISIONS

DRAWN	R. Raymbault	DATE 2-1-64
CHECKED	[illegible]	DATE 11/2/64
ENG	[illegible]	DATE 11/2/64
PROJ. ENG	[illegible]	DATE 11/2/64
PROD	[illegible]	DATE 11/2/64

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

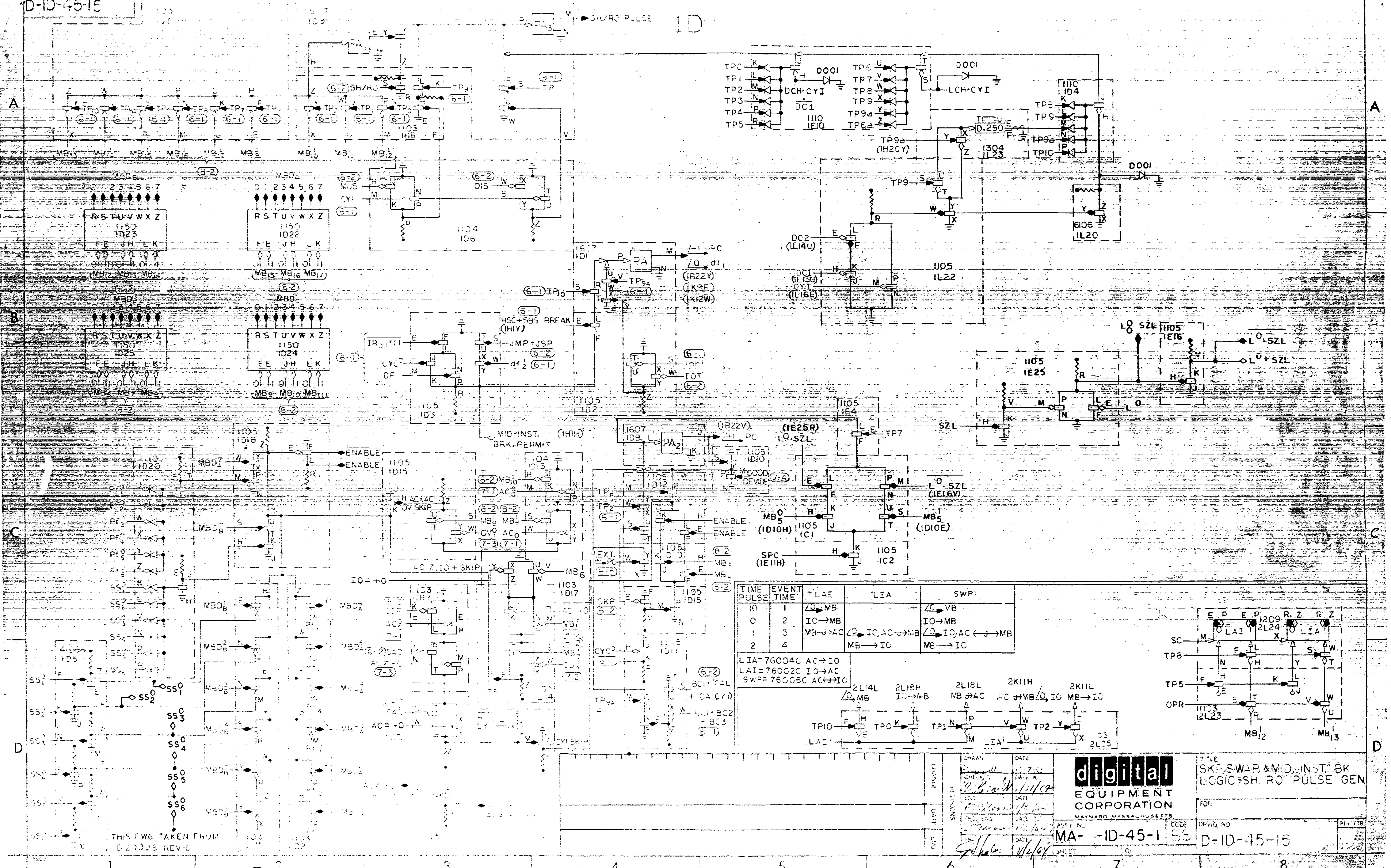
ASSY NO E-ID-45-1 | CODE CD
SCALE | SHEET 2 OF 2

TITLE: CABLE DIAGRAM

FOR PDP-ID-45

DRWG NO C-ID-45-14 | REV LTR

D-ID-45-15



TIME PULSE	EVENT TIME	LAI	LIA	SWP
10	1	$\angle 0 \rightarrow$ MB		$\angle 0 \rightarrow$ MB
0	2	IO→MB		IO→MB
1	3	MB→AC	$\angle 0 \rightarrow$ IO, AC→MB	$\angle 0 \rightarrow$ IO, AC↔MB
2	4		MB→IO	MB→IO

LIA = 760040 AC→IO
LAI = 760020 IO→AC
SWP = 760060 AC↔IO

digital EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS

TITLE: SKP, SWAP, & MID. INST. BK LOGIC & SH/RO PULSE GEN.

ASSY NO: MA- -ID-45-1
DRWG NO: D-ID-45-15

D-ID-4516

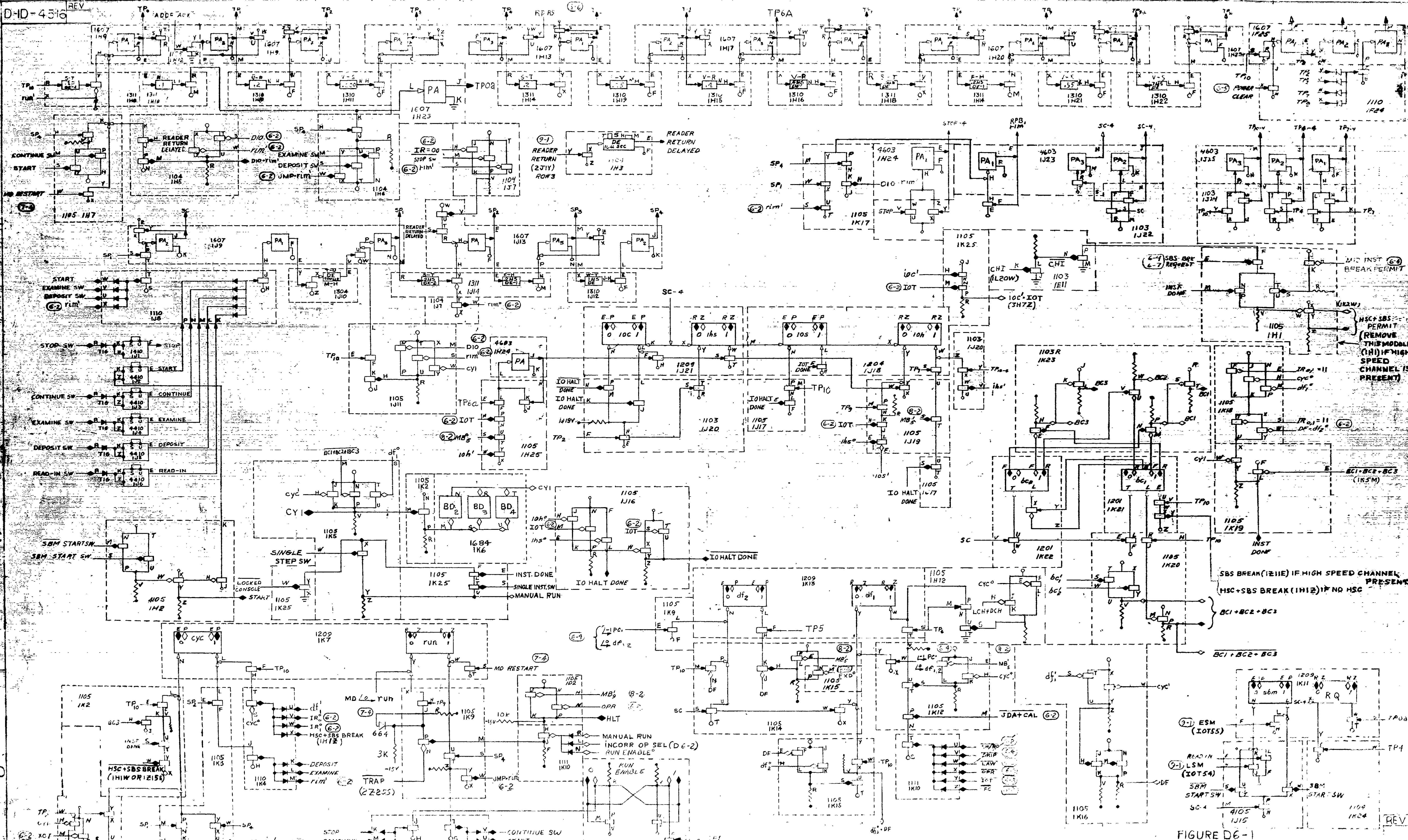


FIGURE D6-1

THIS DWG. TAKEN FROM D-20007 REV-6

GENERAL CONTROL / TIMING PDP-1D

digital EQUIPMENT CORPORATION D-ID-4516

D-ID-45-17

TIME PULSE NUMBER

EXAMPLE ALL CYCLES

DEFER CYCLE

EVENTS COMMON TO CYCLE ZERO

CYC IF PREV INST WAS ACT IOT SWAP

CYC IF PREV INST WAS SHIFT

CYC (or EXT to HSC) IF PREV INST = IOT

① MB_{0}^{1} = SH/RO RIGHT
MB_{1}^{1} = SH/RO LEFT
MB_{2}^{1} = SHIFT R/L
MB_{3}^{1} = ROTATE R/L
$MB_{4}MB_{5}$ = SH/RO R/L THE AC
$MB_{6}MB_{7}$ = SH/RO R/L THE IO
$MB_{8}^{1}MB_{9}^{1}$ = SH/RO R/L AC & IO COMBINED
$MB_{10}^{1}MB_{11}^{1}$ = NO ACTION

② MB_{15-17} DECODED =
0 - SELECT NO PROG FLAG
1 - SKIP IF PROG FLAG #1 IS A ZERO
2 - SKIP IF PROG FLAG #2 IS A ZERO
3 - SKIP IF PROG FLAG #3 IS A ZERO
4 - SKIP IF PROG FLAG #4 IS A ZERO
5 - SKIP IF PROG FLAG #5 IS A ZERO
6 - SKIP IF PROG FLAG #6 IS A ZERO
7 - SKIP ONLY IF ALL PROG FLAGS = ZERO

MB_{12-14} DECODED =
0 = SELECT NO CONSOLE SWITCH
1 = SKIP IF CONSOLE SW #1 = ZERO
2 = SKIP IF CONSOLE SW #2 = ZERO
3 = SKIP IF CONSOLE SW #3 = ZERO
4 = SKIP IF CONSOLE SW #4 = ZERO
5 = SKIP IF CONSOLE SW #5 = ZERO
6 = SKIP IF CONSOLE SW #6 = ZERO
7 = SKIP ONLY IF ALL CONSOLE SW = ZERO

MB_{8}^{1} = SKIP IF AC = +0 (IF ALL ZEROS)
MB_{10}^{1} = SKIP IF AC POS
MB_{9}^{1} = SKIP IF AC NEG
MB_{8}^{1} = SKIP IF OVERFLOW FF = 0
MB_{7}^{1} = SKIP IF IO = POS
MB_{6}^{1} = SKIP IF IO ≠ ZERO

③ MB_{14}^{1} = SET SELECTED PROG FLAG TO ONE
MB_{14}^{0} = CLEAR SELECTED PROG

MB_{15-17} DECODED =
0 = NO SELECTION
1 = PROG FLAG #1
2 = PROG FLAG #2
3 = PROG FLAG #3
4 = PROG FLAG #4
5 = PROG FLAG #5
6 = PROG FLAG #6
7 = ALL PROG FLAGS

MB_{12-13} DECODED
00 = NOP
01 = AC → IO
10 = IO → AC
11 = AC ⇄ IO

④ SEND OPERATION PULSE TO INPUT OUTPUT EQUIPMENT AS FOLLOWS:
MB_{6-11} DECODED
00 - NO ACTION
01 - TAPE READER & MODE
02 - TAPE READER BINARY (SING MODE
03 - TYPEWRITER OUTPUT
04 - TYPEWRITER INPUT
05 - PUNCH & F
06 - PUNCH BINARY
07 - DISPLAY

OTHER IOT OPERATION PULSES GENERATED AS INSTRUCTION ADDED

32 — READ CLOCK
64 — LEAVE RESTRICT MODE (LRM)
65 — ENTER RESTRICT MODE (ERM)
66 — RENAME MEMORY (RNM)
67 — RESET MEMORY NAME (RSM)
35 — CHECK TRAP BUFFER CTB
37 — RRI
17 — RRO
60, 61, 62, 63 } TYPE 23 DRUM
22 — 630 DATA COMMUNICATION SYS
10 — LEAVE RING MODE (LRG)
11 — ENTER RING MODE (ERG)

⑤ MB_{5}^{1} = REVERSE SKP SENSE
MB_{6}^{1} = IOR TO IO FROM FLAGS
MB_{7}^{1} = IOR TO FLAGS FROM IO
MB_{8}^{1} = IDC
MB_{9}^{1} = IDA
MB_{10}^{1} = SPECIAL COMPLEMENT
MB_{11}^{1} = SPECIAL CLR IO
MB_{12}^{1} = SPECIAL CLR FLAGS
MB_{13}^{1} = SKP ON ZERO LINK
MB_{14}^{1} = CLR LINK
MB_{15}^{1} = COMPLEMENT LINK
MB_{16}^{0} = IO /IOR AC
MB_{16}^{0-17} = IO /XOR AC
MB_{16-17}^{1} = ADD IO → AC

PDP-1 TIMING CHAIN

MEMORY CONTROL TIMING CHAIN

PDP-1 TIMING WITH MEMORY CONTROL

THIS LOGIC TAKEN FROM D20035 REV-2

CODE FD

REV A

digital EQUIPMENT CORPORATION D-ID-45-17

DEFER, LATER CYCLES

REV A

TRANSFER LOGIC

ARITHMETIC LOGIC

OVERFLOW LOGIC

FOR MUL/DIV OPTION ONLY

ALL A BIT ORIGINATION

1104 IC24 PRESENT ONLY FOR MUL/DIV OPTION

THIS DWG TAKEN FROM D-20014 REV B-6

CODE BS

digital EQUIPMENT CORPORATION D-ID-40-16

ACCUMULATOR CONTROL BOARD

D-ID-43-19

CYCLE ONE

THIS DWG TAKEN FROM D-LF-034 REV E

CODE
FD

digital EQUIPMENT CORPORATION D-ID-43-19

CYCLE ONE FLOW DIAGRAM

D-ID-45-20-1 A

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
4301	4106	4303																						
READY	READY D-62-C4 READY D-62-C5 START PUNCH D-62-C5 READY D-62-C5	START PUNCH																						
D-62-C4		D-62-C5																						

DRWG. # WAS D-ID-45-20 SH. 1 OF 16 A-321

Engineering	5-7-64	
Manufacturing	11/2/64	
Quality Assurance	11/2/64	
Drafting	11/2/64	

digital EQUIPMENT CORPORATION

UML

TITLE: UTILIZATION MODULE LOCATION

D-ID-45-20-1 A

D-ID-45-20

1	C	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
4301	4106	4303																						

READY
D-62-C4

READY
D-62-C5

READY

START PUNCH

START PUNCH
D-62-C5

READY
D-62-C5

D-62-C4

D-62-C5

A							A
	11F						11F
B							B
C							C
D							D

1	2	3	4	5	6	7	8

Designed 3-17-64
Drawn 11/2/64
Traced 11/2/64
Checked 11/2/64

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE
UTILIZATION MODULE LOCATION

SIZE UML
DWG. NO. D-ID-45-20

SHT 1 OF 16

D-ID-45-20-2 REV. LTR A

UTILIZATION MODULE LOCATION

Slot	IIA	IIB	IIC
1	4410 STROBE PETR D-61	1703 TC6 D-63-C1 TC5 D-63-C1 TC4 D-63-C1 TC3 D-63-C1 TC2 D-63-C1 TC1 D-63-C1 TC0 D-63-C1 TAB D-63-C1 TAB D-63-C1	4301 D_4 D-63-A3
2	4301 ∠→RC D-61-B1	1703 B-SPACE D-63-C2 B-SPACE D-63-C2 CR CAM D-63-C2 CR CAM D-63-C2 SHIFT D-63-C2 SHIFT-UP D-63-C2 SHIFT-DOWN D-63-C2 SPACE D-63-C2 SPACE D-63-C2	4410 SET TP D-63-A1
3	4301 ∠→RC D-61-A1	4105 TYO DONE D-63-B1 D_4 D-63-A2 TYO DONE D-63-B1 TYO DONE D-63-B1 TYO DONE D-63-B1	4410 STROBE TYPE D-63-A2
4	4603 READER RETURN D-61-B2 READER ∠0→10 D-61-B2 SHIFT RB D-61-B2	4111 SHIFT D-63-C4 SHIFT D-63-C4	4301 STROBE TYPE D-63-A2
5	4105 STROBE PETR D-61-C4 READER ∠→10 D-61-B2 READER RETURN D-61-B2 SHIFT RB D-61-B1 READER ∠→10 D-61-B2	4603 STROBE PETR D-61-C5 TYPE SYNC D-63-A3	4301 SET TBB D-63-A4
6	4201 RC_2 D-61-B3	4410 SYNC D-62-B1	4301 D_2 D-63-B4
7	4201 RC_1 D-61-B3	4105 PUNCH DONE D-62-B2 ∠0→PB D-62-B3 SET PUN_0 D-62-B2 FEED HOLD D-61-C5 PUNCH DONE D-62-B2	4105 TMC D-63-A5 FEED HOLD D-61-C5 TMC D-63-A5 D_2 D-63-B4 TMC D-63-A5
8	4106 SET RCL^0 D-61-B4 COMP RC_1 D-61-B3 COMP RC2 D-61-B3 SET RCL D-61-B3 COMP RCL D-61-B3 SET RBY D-61-B3	4209 PUNCH D-62-B2	4209 TYO_0 D-63-A4
9	4209 RBY D-61-B3 RCL D-61-B4	4301 DELAY & PUNCH DONE D-62-A3	4105 TYO DONE D-63-B2 SET TYO_0 D-63-A3 STROBE TYPE D-63-A1 TYO DONE D-63-B2 SET TYO_0 D-63-A4
10	4603 STROBE PETR D-61-C4 CLEAR RC_2 D-61-C2 CLEAR RB D-61-B4	4603 PUNCH DONE D-62-A3 POWER CLEAR D-62-B3 ∠0→PB D-62-B4	4603 TYO DONE D-63-B2 CLR TB_{12-17} D-63-B5 SET TB^1_{12-17} D-63-B5
11	4214 RB_0 D-61-A2 RB_1 D-61-A2 RB_2 D-61-A2 RB_3 D-61-A3	4410 CLEAR RC_2 D-61-C2	4105 SET TBB D-63-B3 SET TBB_1 D-63-B3 SET TBB_0 D-63-B3 CLEAR TB_{12-17} D-63-B4 D_2 D-63-B3
12	4128 SHIFT RB D-61-A1 SHIFT RB D-61-A1	4214 PB_{10} D-62-B4 PB_{11} D-62-B5 PB_{12} D-62-B5 PB_{13} D-62-B5	4110 STROBE TYPE D-63-A1 SET TBB_0 D-63-B3
13	4214 RB_4 D-61-A3 RB_5 D-61-A3 RB_6 D-61-A4 RB_7 D-61-A4	4214 PB_{14} D-62-B6 PB_{15} D-62-B6 PB_{16} D-62-B7 PB_{17} D-62-B7	4110 SET TB^1_{12} D-63-B5 SET TB^1_{13} D-63-B6
14	4128 SHIFT RB D-61-A3 SHIFT RB D-61-A3	4128 PB_{10-17} D-62-B7 PB_{10-17} D-62-B6	4110 SET TB^1_{14} D-63-B6 SET TB^1_{15} D-63-B7
15	4214 RB_8 D-61-A5 RB_9 D-61-A5 RB_{10} D-61-A5 RB_{11} D-61-A6	4128 PB_{10-17} D-62-B7 PB_{10-17} D-62-B6	4110 SET TB^1_{16} D-63-B7 SET TB^1_{17} D-63-B8
16	4128 SHIFT RB D-61-A5 SHIFT RB D-61-A5	4113R SD_6 D-62-B5 SD_4 D-62-B6 SD_3 D-62-B7 SD_5 D-62-B6 SD_2 D-62-B7 SD_1 D-62-B7	4126 SET TBS^0 D-63-A3 SET TBS^1 D-63-A3 SET TBB^0 D-63-A3 SET TBB^1 D-63-A3
17	4214 RB_{12} D-61-A6 RB_{13} D-61-A6 RB_{14} D-61-A7 RB_{15} D-61-A7	4113R PUNCH ON D-62-A4 SD_8 D-62-B5 SD_7 D-62-B5 SD FEED HOLD D-62-B8 SD_{1-8} D-62-B4 SD_{1-8} D-62-B4	4128 SET TB^1_{12-17} D-63-B6 SET TB^1_{12-17} D-63-B6
18	4128 SHIFT RB D-61-A6 SHIFT RB D-61-A6	4680 SD_8 D-62-A5 SD_7 D-62-A5 SD_6 D-62-A6	4128 SET TB^1_{12-17} D-63-B6 SET TB^1_{12-17} D-63-B6
19	4214 RB_{16} D-61-A8 RB_{17} D-61-A8 FEED HOLE D-61-C6	4680 SD_8 D-62-A5 SD_7 D-62-A5 SD_6 D-62-A5	4214 TB_{14} D-63-B6 TB_{15} D-63-B7 TB_{16} D-63-B7 TB_{17} D-63-B8
20	4128 SET RB^1_{10-17} D-61-A5 SET RB^1_{10-17} D-61-A5	4680 SD_5 D-62-A6 SD_4 D-62-A6 SD_3 D-62-A7	4214 TBS D-63-A3 TBB D-63-A3 TB_{12} D-63-B5 TB_{13} D-63-B6
21	4106 SET RB^1_{10} D-61-B5 SET RB^1_{10} D-61-B5 CLR RC_2 D-61-C2 SET RB^1_{11} D-61-B6 SET RB^1_{11} D-61-B6 CLR RC_2 D-61-C2	4680 SD_5 D-62-A6 SD_4 D-62-A6 SD_3 D-62-A7	4113R TB_{12} D-63-A5 TB_{14} D-63-A6 TB_{15} D-63-A7 TB_{13} D-63-A6 TB_{16} D-63-A7 TB_{17} D-63-A8
22	4105 STROBE PETR D-61-C3 STROBE PETR D-61-C3 STROBE PETR D-61-C3 STROBE PETR D-61-C4 STROBE PETR D-61-C4	4680 SD_2 D-62-A7 SD_1 D-62-A8 SD FEED HOLD D-62-A8	4681 SD TB^1_{12} D-63-A5 SD TB^1_{14} D-63-A6 SD TB^1_{13} D-63-A6
23	1669 RB^1_0 D-61-B7 RB^1_1 D-61-B7 RB^1_2 D-61-B7 RB^1_3 D-61-B7 RB^1_4 D-61-B7 RB^1_5 D-61-B7 RB^1_6 D-61-B7 RB^1_7 D-61-B7 RB^1_8 D-61-B7	4680 SD_2 D-62-A7 SD_1 D-62-A8 SD FEED HOLD D-62-A8	4681 SD TB_{15} D-63-A7 SD TB_{16} D-63-A7 SD TB_{17} D-63-A8
24	1669 RB^1_9 D-61-C7 RB^1_{10} D-61-C7 RB^1_{11} D-61-C7 RB^1_{12} D-61-C7 RB^1_{13} D-61-C7 RB^1_{14} D-61-C7 RB^1_{15} D-61-C7 RB^1_{16} D-61-B7 RB^1_{17} D-61-B7	4110 CR D-63-C3	4681 SD TBB^1 D-63-A3 TCM D-63-A5
25	1669 RC_1 D-61-B8 RC_2 D-61-B8 BINARY D-61-B8 CLUTCH D-61-B8 CLUTCH D-61-B4 BREAK D-61-B4	1669 PUN^1 D-62-A4 PB^1_{10} D-62-A4 PB^1_{11} D-62-A4 PB^1_{12} D-62-A4 PB^1_{13} D-62-A4 PB^1_{14} D-62-A4 PB^1_{15} D-62-A4 PB^1_{16} D-62-A4 PB^1_{17} D-62-A4	1669 TYO D-63-D7 STATUS D-63-D7 BLACK D-63-D7 12 D-63-D7 13 D-63-D7 14 D-63-D7 15 D-63-D7 16 D-63-D7 17 D-63-D7

DWG # WAS D-ID-45-20 SH. 2 OF 16 A-321

CHANGE | DATE | ENG | REVISIONS

DRAWN: Marcoulh 3-17-64
CHECKED: N. Skinik 4/1/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: UTILIZATION MODULE LOCATION

CODE UML

DWG. NO. D-ID-45-20-2 REV. LTR A

SHEET 1 OF 1

D-ID-46-20 REV. 20

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	4210	4301	4301	4401	4105	4401	4401	4106	4209	4603	4214	4128	4214	4128	4214	4128	4214	4128	4214	4128	4136	4105	1669	1669	1669
A	STROBE PETR D-61-C5	$\overline{A_{4-1}}$ RC D-61-B1	$\overline{A_{4-1}}$ RC D-61-A1	READER RETURN D-61-B2	STROBE PETR D-61-C4	RC$_2$ D-61-B3	RC$_1$ D-61-B3	SET RCL D-61-B4	RB^1 D-61-B3	STROBE PETR D-61-C4	RB$_0$ D-61-A2	SHIFT RB D-61-A1	RB$_4$ D-61-A3	SHIFT RB D-61-A3	RB$_8$ D-61-A5	SHIFT RB D-61-A5	RB$_{12}$ D-61-A6	SHIFT RB D-61-A6	RB$_{16}$ D-61-A8	SET RB$_{10-17}$ D-61-A5	SET RB$_{10}$ D-61-B5	STROBE PETR D-61-C3	RB$^1_0$ D-61-B7	RB$^1_8$ D-61-C7	RC$_2$ D-61-B8
				READER D-61-B2	READER RETURN D-61-B2			COMP RC$_1$ D-61-B3			RB$_1$ D-61-A2		RB$_5$ D-61-A3		RB$_9$ D-61-A5		RB$_{13}$ D-61-A6		RB$_{17}$ D-61-A8		SET RB$^1_{10}$ D-61-B5		RB$^1_1$ D-61-B7	RB$^1_9$ D-61-C7	RC$_1$ D-61-B8
				SHIFT RB D-61-B2	SHIFT RB D-61-B*			COMP RC$_2$ D-61-B3			RB$_2$ D-61-A2	SHIFT RB D-61-A1	RB$_6$ D-61-A4	SHIFT RB D-61-A3	RB$_{10}$ D-61-A5	SHIFT RB D-61-A5	RB$_{14}$ D-61-A7	SHIFT RB D-61-A6	FEED HOLE D-61-C6	SET RB$_{10-17}$ D-61-A5	SET RB$^1_{11}$ D-61-B6	STROBE PETR D-61-C3	RB$^1_2$ D-61-B7	RB$^1_{10}$ D-61-C7	BINARY D-61-B8
					READER D-61-B2			SET RCL D-61-B3	RCL D-61-B4	CLEAR RC$_2$ D-61-C2											SET RB$^1_{11}$ D-61-B6	STROBE PETR D-61-C3	RB$^1_3$ D-61-B7	RB$^1_{11}$ D-61-C7	CLUTCH D-61-B8
								COMP RCL D-61-B3		CLEAR RB D-61-B4	RB$_3$ D-61-A3	SHIFT RB D-61-A1	RB$_7$ D-61-A4	SHIFT RB D-61-A3	RB$_{11}$ D-61-A6	SHIFT RB D-61-A5	RB$_{15}$ D-61-A7	SHIFT RB D-61-A6	FEED HOLE D-61-C6	SET RB$_{10-17}$ D-61-A5	CLR RC$_2$ D-61-C2	STROBE PETR D-61-C4	RB$^1_4$ D-61-B7	RB$^1_{12}$ D-61-C7	
								SET RBY D-61-B3													SET RB$^1_{11}$ D-61-B6	STROBE PETR D-61-C4	RB$^1_5$ D-61-B7	RB$^1_{13}$ D-61-C7	
																					CLR RC$_2$ D-61-C2		RB$^1_6$ D-61-B7	RB$^1_{14}$ D-61-C7	
																							RB$^1_7$ D-61-B7	RB$^1_{15}$ D-61-C7	CLUTCH D-61-B4
																							RB$^1_8$ D-61-B7	RB$^1_{16}$ D-61-B7	BREAK D-61-B4
	1703	1703	4105	4111	4603	4410	4105	4209	4301	4603	4410	4214	4214	4128	4128	4113R	4113R	4680	4680	4680	4680	4680	4680	4110	1669
B	TC$_6$ D-63-C1	B-SPACE D-63-C2	TYO DONE D-63-B1	SHIFT D-63-C4			PUNCH DONE D-62-B2	PUNCH D-62-B2	DELAY & PUNCH DONE D-62-A3	PUNCH DONE D-62-A3		PB$_{10}$ D-62-B4	PB$_{14}$ D-62-B6	PB$_{10-17}$ D-62-B7	PB$_{10-17}$ D-62-B7	SD$_6$ D-62-B5	PUNCH ON D-62-A4	SD$_8$ D-62-A5	SD$_8$ D-62-A5	SD$_5$ D-62-A6	SD$_5$ D-62-A6	SD$_2$ D-62-A7	SD$_2$ D-62-A7	CR D-63-C3	PUN^1 D-62-A4
	TC$_5$ D-63-C1	B-SPACE D-63-C2					/0 PB D-62-B3			POWER CLEAR D-62-B3						SD$_4$ D-62-B6	SD$_8$ D-62-B5								PB$^{10}_1$ D-62-A4
	TC$_4$ D-63-C1	CR CAM D-63-C2	D$_4$ D-63-A2									PB$_{11}$ D-62-B5	PB$_{15}$ D-62-B6			SD$_3$ D-62-B7	SD$_7$ D-62-B5	SD$_7$ D-62-A5	SD$_7$ D-62-A5	SD$_4$ D-62-A6	SD$_4$ D-62-A6	SD$_1$ D-62-A8	SD$_1$ D-62-A8		PB$^1_{11}$ D-62-A4
	TC$_3$ D-63-C1	CR CAM D-63-C2			STROBE PETR D-61-C5		SET PUN$_0$ D-62-B2									SD$_5$ D-62-B6	SD FEED HOLD D-62-B6								PB$^{12}_1$ D-62-A4
	TC$_2$ D-63-C1	SHIFT D-63-C2	TYO DONE D-63-B1	SHIFT D-63-C4		SYNC D-62-B1						PB$_{12}$ D-62-B5	PB$_{16}$ D-62-B7	PB$_{10-17}$ D-62-B6	PB$_{10-17}$ D-62-B6	SD$_2$ D-62-B7	SD$_{1-8}$ D-62-B4	SD$_6$ D-62-A6	SD$_6$ D-62-A5	SD$_3$ D-62-A7	SD$_3$ D-62-A7	SD FEED HOLD D-62-A8	SD FEED HOLD D-62-A8		PB$^{13}_1$ D-62-A4
	TC$_1$ D-63-C1	SHIFT-UP D-63-C2			TYPE SYNC D-63-A3		FEED HOLD D-61-C5			/0 PB D-62-B4															PB$^{14}_1$ D-62-A4
	TC$_0$ D-63-C1	SHIFT-DOWN D-63-C2	TYO DONE D-63-B1				PUNCH DONE D-62-B2					PB$_{13}$ D-62-B5	PB$_{17}$ D-62-B7			SD$_1$ D-62-B7	SD$_{1-8}$ D-62-B4	SD$_6$ D-62-A6	SD$_6$ D-62-A5	SD$_3$ D-62-A7	SD$_3$ D-62-A7	SD FEED HOLD D-62-A8	SD FEED HOLD D-62-A8		PB$^{15}_1$ D-62-A4
	TAB D-63-C1	SPACE D-63-C2																							PB$^{16}_1$ D-62-A4
	TAB D-63-C1	SPACE D-63-C2	TYO DONE D-63-B1																						PB$^{17}_1$ D-62-A4
	4301	4410	4410	4301	4301	4301	4105	4209	4105	4603	4105	4110	4110	4110	4110	4126	4128	4128	4214	4214	4113R	4681	4681	4681	1669
C	D$_4$ D-63-A3	SET, TPS D-63-A1	STROBE TYPE D-63-A2	STROBE TYPE D-63-A2	SET TBB D-63-A4	D$_2$ D-63-B4	TMC D-63-A5	TYO$_0$ D-63-A4	TYO DONE D-63-B2	TYO DONE D-63-B2	SET TBB D-63-B3	STROBE TYPE D-63-A1	SET TB$^1_{12}$ D-63-B5	SET TB$^1_{14}$ D-63-B6	SET TB$^1_{16}$ D-63-B7	SET TBS^0 D-63-A3	SET	SET TB$^1_{12-17}$ D-63-B6	SET TB$^1_{12-17}$ D-63-B6	TB$_{14}$ D-63-B6	TB$_5$ D-63-A3	TB$_{12}$ D-63-A5	SD TB$^1_{12}$ D-63-A5	SD TB$_{15}$ D-63-A7	SD TBB* D-63-A3	TYC D-63-D7
							FEED HOLD D-61-C5		SET TYO$_0$ D-63-A3		SET TBB$_1$ D-63-B3					SET TBS^1 D-63-A3				TB$_{15}$ D-63-B7	TB$_2$ D-63-A3	TB$_{14}$ D-63-A6				STATUS D-63-D7
							TMC D-63-A5		STROBE TYPE D-63-A1	CLR TB$^1_{12-17}$ D-63-B5	SET TBB$_0$ D-63-B3					SET TBS^0 D-63-A3						TB$_{15}$ D-63-A7	SD TB$^1_{14}$ D-63-A6	SD TB$_{16}$ D-63-A7	TDM D-63-A5	BLACK D-63-D7
							D$_2$ D-63-B4	TYO$_0$ D-63-A4	TYO DONE D-63-B1	SET TB$^1_{12-17}$ D-63-B5	OLEAR TB$^1_{12-17}$ D-63-B1	SET TBB$_0$ D-63-B3	SET TB$^1_{13}$ D-63-B6	SET TB$^1_{15}$ D-63-B7	SET TB$^1_{17}$ D-63-B8	SET TBB^1 D-63-A3	SET TB$^1_{12-17}$ D-63-B6	SET TB$^1_{12-17}$ D-63-B6	TB$_{16}$ D-63-B7	TB$_{12}$ D-63-B5	TB$_{13}$ D-63-A6	SD TB$^1_{13}$ D-63-A6	SD TB$_{17}$ D-63-A8		T2 D-63-D7
							TMC D-63-A5		SET TYO$_0$ D-63-A4	D$_1$ D-63-B3										TB$_{17}$ D-63-B8	TB$_3$ D-63-B6	TB$_{10}$ D-63-A7				T3 D-63-D7
																						TB$_{17}$ D-63-A8				T4 D-63-D7
																										T5 D-63-D7
																										T6 D-63-D7
																										T7 D-63-D7

D

CHANGE	REVISIONS	DRAWN M. Ingersoll	DATE 8-NOV-84	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE UTILIZATION MODULE LOCATION		
DATE		CHECKED	DATE		FOR		
ENG		ENG	DATE				
		PROJ ENG	DATE	ASSY NO	CODE UML	DRWG NO D-ID-46-20	REV
		PROG	DATE	SHEET 2 OF 16			

D-ID-45-20-3 REV LTR B

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1105	1103-70	1103-70	1105	1105	1105	1111	1103	1607	1607	1104	1209	1103-74	1209	1105	1209	1113	1209	1103	1209	1201	1209	1104	1104	1104
100 → MA D-33-B2	IIF D-6-C2	SCI D-6-C4			PC 1 → MA D-33-A2			MA 1 → PC D-33-D8	PC 1 → MA D-33-A3	SET MA 6-1 D-52-B7		/C → AC D-18-D4		SET MA 11-1 D-52-C4		(SCM IDC) D-2-C3		COMPLEMENT AC 17 D-8-2-B8				SET MA 14 1 D-52-C6	SET MA 12-1 D-52-D5	SET MA 14-1 D-52-D6
	IFI D-6-C3	SCF D-6-C4	AC SH/ROR 9-17 D-18-B6	AC SH/ROL 0-8 D-18-A6	BE 1 → MA D-33-A2	MB 1 → MA D-33-B3	PC 1 → MA D-33-A3	100 1 → MA D-33-B3	MB 1 → MA D-33-A3	SET MA 8-1 D-52-B8	MA 6 D-52-A7	/A → AC D-2-A1	MA 8 D-52-A8	SET MA 10-1 D-52-C4	MA 10 D-52-C4	TAD (CCM 1) D-2-D3	MA 12 D-52-C5	SET 1 LINK D-2-A1	MA 14 D-52-C6	LINK D-2-A1	MA 16 D-52-C6	SET MA 16-1 D-52-C7		
MB 1 → MA	SCM D-6-C3	SZL D-6-C5												SET MA 12-1 D-52-C5		SET 0 LINK D-2-B1		SET 0 LINK D-2-A1				SET MA 15-1 D-52-C7	SET MA 13-1 D-52-D6	SET MA 15-1 D-52-D7
D-33-B1	IFI D-6-C3	SZL D-6-C5			MB 1 → MA D-33-B2	/D → MA D-33-B3	BE 1 → MA D-33-A3			SET MA 7-1 D-52-B7	MA 7 D-52-A7		MA 9 D-52-C3	SET MA 11-1 D-52-C4	MA 11 D-52-C4	COMPLEMENT LINK D-2-B1	MA 13 D-52-C5	(SCM IDC) D-2-C3	MA 15 D-52-C7		MA 17 D-52-C8	SET MA 18-1 D-52-C8		
	IIF D-6-C2	SCI D-6-C4	AC ONLY + LCH + DCH D-6-C6	AC ONLY + LCH + DCH D-6-C6	AC ONLY + LCH + DCH D-6-C6					SET MA 9-1 D-52-C3				SET MA 13-1 D-52-C5		/A → AC D-2-A2		TAD+(SCM+IDC) D-2-D3						
4401	4603	1103-74	1105	1607	1103	1103	1103	1103	1103	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1103	1103	1103
	SET RNG PFO D-6-A1	CLL D-6-A3		TA 1 → PC D-33-C8	MB 1 → PC D-33-C6		SET PC 11-1 D-51-C3	SET PC 11-1 D-51-D3	SET PC 11-1 D-51-D3														SET PC 17-1 D-51-D8	SET PC 17-1 D-51-D8	SET PC 17-1 D-51-C8
		CML D-6-D3					SET PC 10-1 D-51-C3	SET PC 10-1 D-51-D3	SET PC 10-1 D-51-D3													SET PC 16-1 D-51-D7	SET PC 16-1 D-51-D7	SET PC 16-1 D-51-C7
		SPC_{b1} D-6-D3		MB 1 → PC D-33-C8	/D → PC D-33-C7	/D → PC D-33-C7	SET PC 9-1 D-51-C2	SET PC 9-1 D-51-D2	SET PC 9-1 D-51-D2	PC 6 D-51-A6	PC 7 D-51-A8	PC 8 D-51-A8	PC 9 D-51-C2	PC 10 D-51-C2	PC 11 D-51-C3	PC 12 D-51-C4	PC 13 D-51-C5	PC 14 D-51-C6	PC 15 D-51-C6	PC 16 D-51-C7	PC 17 D-51-C8	SET PC 15-1 D-51-D6	SET PC 15-1 D-51-D6	SET PC 15-1 D-51-C6
POWER CLEAR D-33-D5		SPC_{b2} A-6-D3	MD 1 → PC D-33-C5				SET PC 8-1 D-51-A8	SET PC 8-1 D-51-B8	SET PC 8-1 D-51-B8													SET PC 14-1 D-51-D6	SET PC 14-1 D-51-D6	SET PC 14-1 D-51-C6
	POWER CLEAR D-33-D5	CML D-6-D3		/0 → PC D-33-C8	MB 1 → PC D-33-C7	TA 1 → PC D.33-D7	SET PC 7-1 D-51-A7	SET PC 7-1 D-51-B7	SET PC 7-1 D-51-B7													SET PC 13-1 D-51-D5	SET PC 13-1 D-51-D5	SET PC 13-1 D-51-C5
		CLL D-6-D3					SET PC 6-1 D-51-A6	SET PC 6-1 D-51-B6	SET PC 6-1 D-51-B6													SET PC 12-1 D-51-C4	SET PC 12-1 D-51-D4	SET PC 12-1 D-51-C4
1105	1105	1104	1104	1103	1105	1105	1103	1105	1103	1104	1111	1105	1105	1110	1103	1105	1105	1105	1105	1111	1105	1103	1104	1111
	MB PAD → AC D-18-B6			AC SH/ROL 0-8 D-18-A6			TW 1 → AC D-18-B6	TW 1 → AC D-18-B5	MB PAD → AC D-18-B6	+1 → AC D-18-C4	MB PAD → AC D-18-C5	CARRY → AC D-18-C5		+1 → AC D-18-D3		/0 → AC_{0-5} D-18-C2	PC 1 → AC D-18-B1		/0 → AC_{0-5} D-18-C3		MB 1 → AC_{6-17} D-18-B1	MB 1 → AC_{6-17} D-18-A3	MB PAD → AC D-18-B7	TRAP	
CY 1 SKIP D-15-C5	CY1 SKIP D-15-C5	AC SH/ROL 0-8 D-18-A5	AC SH/ROR 9-17 D-18-A5	AC SH/ROR 9-17 D-18-A6	/C → AC D-18-D2	/C → AC D-18-D1	/C → AC D-18-D3	MB PAD → AC D-18-B5	CARRY → AC D-18-B6	MB PAD → AC D-18-B5	CARRY → AC D-18-C5	+1 → AC D-18-C3	/0 → AC 0-5 D-18-C1	PC 1 → AC D-18-C2	/0 → AC_{0-5} D-18-B3	PC 1 → AC D-18-C1	/0 → AC 0-5 D-18-C2	PC 1 → AC D-18-C3	/0 → AC_{0-5} D-18-D2	MB 1 → AC_{0-5} D-18-A1	MB 1 → AC_{0-5} D-18-A1	MB 0 → AC D-18-A3	+1 → AC D-18-C3	
	SET OV_2 D-18-A5		MUS + MUL D-18-B7	AC SH/ROR 9-17 D-18-A6											PC 1 → AC D-18-C2	/0 → AC 0-5 D-18-D2	PC 1 → AC D-18-B1	/0 → AC 0-5 D-18-C3	/0 → AC_{0-5} D-18-D2	AC+1 D-18-D2	MB 0 → AC D-18-A1	MB 1 → AC_{6-17} D-18-A1	MB 0 → AC D-18-A3	CARRY → AC D-18-B7	
	LOCKED CONSOLE D-18-A4	TW 1 → AC D-18-B6	AC SH/ROL 0-8 D-18-A6											PC 1 → AC D-18-B3	/0 → AC 0-5 D-18-D2	PC 1 → AC D-18-B1	/0 → AC 0-5 D-18-C3				MB 0 → AC D-18-B2			

REVISIONS						
CHANGE	DATE	ENG				
B-360	4-23-65	RP				
A-321	12/64	DJP				

Drawing Sheet 3

DRAWN M. MARIANO	DATE 7/8/64	
CHECKED	DATE	
ENG	DATE	
PROJ. ENG	DATE	
PROD	DATE	

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

ASSY NO — CODE UML

SHEET 1 OF 1

TITLE UTILIZATION MODULE LOCATION

FOR

DRWG NO D-ID-45-20-3 — REV LTR B

D-ID-45-20 REV LTR

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1103	1103-70	1103 70	1105	1105	1103	1111	1103	1607	1607	1103	1209	1103-74	1209	1105	1209	1113	1209	1103	1209	1201	1209	1104	1104	1104
1D0 → MA D-33-B2	1IF D-6 C2	SC1 D-6-C4	AC SH/ROR 9-17 D-18-B6	AC SH/ROL 0-8 D-18-A6	PC 1→ MA D-33-A2	MB 1→ MA D-33-B3	PC 1→ MA D-33-A3	MA 1→ PC D-33-D8	PC 1→ MA D-33-A3	SET MA 6-1 D-52-B7	MA 6 D-52-A7	/C → AC D-18-D4	MA 8 D-52-A8	SET MA 11-1 D-52-C4	MA 10 D-52-C4	(SCM IDC) D-2-C3	MA 12 D-52-C5	COMPLEMENT AC 17 D-8-2-B8	MA 14 D-52-C6	LINK D-2-A1	MA 16 D-52-C6	SET MA 14-1 D-52-C6	SET MA 12-1 D-52-D5	SET MA 14-1 D-52-D6
MB → MA D-33-B1	IFI D-6-C3	SCF D-6-C4			BE 1→ MA D-33-A2		PC 1→ MA D-33-A3	100 1→ MA D-33-B3	MB 1→ MA D-33-A3	SET MA 8-1 D-52-B8		/1 → AC D-2-A1		SET MA 10-1 D-52-C4		TAD (SCM IDC) D-2-D3		SET 1 LINK D-2-A1				SET MA 16-1 D-52-C7		
	SCM D-6-C3	SZL D-6-C5			MB 1→ MA D-33-B2			/0 → MA D-33-B3	BE 1→ MA D-33-A3	SET MA 7-1 D-52-B7				SET MA 12-1 D-52-C5		SET 0 LINK D-2-B1		SET 1 LINK D-2-A1				SET MA 15-1 D-52-C7	SET MA 13-1 D-52-D6	SET MA 15-1 D-52-D7
	IFI D-6-C3	SZL D-6-C5								SET MA 9-1 D-52-C3				SET MA 11-1 D-52-C5		COMPLEMENT LINK D-2-B1		SET 0 LINK D-2-A1				SET MA 18-1 D-52-C8		
	1IF D-6 C2	SCF D-6-C4	AC ONLY + LCH + DCH D-6-C6	AC ONLY + LCH + DCH D-6-C6	AC ONLY + LCH + DCH D-6-C6											/A → AC D-2-A2			(SCM IDC) D-2-C3						
		SCI D-6-C4																TAD (SCM IDC) D-2-D3						
4401	4603	1103-74	1105	1607	1103	1103	1103	1103	1103	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1103	1103	1103
	SET RNG PEO D-6-A1	CLL D-6-A3		TA 1→ PC D-33-C8	MB 1→ PC D-33-C6			SET PC 11-1 D-51 C3	SET PC 11-1 D-51 D3	SET PC 11-1 D-51-D3												SET PC 17-1 D-51-D8	SET PC 17-1 D-51-D8	SET PC 17-1 D-51-C8
		CML D-6-D3						SET PC 10-1 D-51 C3	SET PC 10-1 D-51-D3	SET PC 10-1 D-51-D3												SET PC 16-1 D-51-D7	SET PC 16-1 D-51-D7	SET PC 16-1 D-51-C7
		SPC b1 D-6-D3		MB 1→ PC D-33-C8	/0 → PC D-33-C7	/0 → PC D-33-C7		SET PC 9-1 D-51-C2	SET PC 9-1 D-51-D2	SET PC 9-1 D-51-D2												SET PC 15-1 D-51-D6	SET PC 15-1 D-51-D6	SET PC 15-1 D-51-C6
		SPC b2 A-6-D3	MB 1→ PC D-33-C5					SET PC 8-1 D-51-A8	SET PC 8-1 D-51-B8	SET PC 8-1 D-51-B8												SET PC 14-1 D-51-D6	SET PC 14-1 D-51-D6	SET PC 14-1 D-51-C6
		CML D-6-D3		/0 → PC D-33-C8	MB 1→ PC D-33-C7	TA 1→ PC D.33-D7		SET PC 7-1 D-51-A7	SET PC. 7-1 D-51 B7	SET PC 7-1 D-51-B7												SET PC 13-1 D-51-D5	SET PC 13-1 D-51-D5	SET PC 13-1 D-51-C5
		CL D-6-D3						SET PC 6-1 D-51-A6	SET PC 6-1 D-51 B6	SET PC 6-1 D-51 B6												SET PC 12-1 D-51-C4	SET PC 12-1 D-51-D4	SET PC 12-1 D-51-C4
1105	1105	1104	1104	1103	1105	1105	1103	1105	1103	1104	1111	1105	1105	1110	1103	1105	1105	1105	1105	1111	1105	1103	1104	
POWER CLEAR D-33-D5	PAD MB → AC D-18-B6		AC Sh/ ROR 9-17 D-18-A5	AC SH/ROL 0-8 D-18-A5	PC 1→ AC D-18-B1	TW 1→ AC D-18-B6	TW 1→ AC D-18-B5	MB PAD → AC D-18-B6	/1 → AC D-18-C4		CARRY → AC D-18-C5	/0 → AC 0-5 D-18-C2		/1 → AC D-18-D3		/0 → AC 0-5 D-18-C2		MB 1→ AC 6-17 D-18-B1	/0 → AC 0-5 D-18-C3		MB 1→ AC 6-17 D-18-A3	MB PAD → AC D-18-B7	
CY 1 SKIP D-15-C5	CY1 SKIP D-15-C5			AC SH/ROL 0-8 D-18-A5	PC 1→ AC D-18-C1				MB PAD → AC D-18-B5		MB PAD → AC D-18-C5	/1 → AC D-18-C3		/0 → AC 0-5 D-18-C1		/0 → AC 0-5 D-18-D2		/0 → AC 0-5 D-18-C2				MB 0 → AC D-18-A1		
	SET CY 2 D-18-A5		MUS + MUL D-18-B7	AC SH/ROR 9-17 D-18-A6	/C → AC D-18-D2	/C → AC D-18-D1	/C → AC D-18-D3					/1 → AC D-18-C3		PC 1→ AC D-18-C2		/C → AC D-18-D2		/C → AC 0-5 D-18-C3			MB 1→ AC 0-5 D-18-A1			
		LOCKED CONSOLE D-18-A6	TW 1→ AC D-18-B6	AC SH/ROL 0-8 D-18-A6					CARRY → AC D-18-B6		CARRY → AC D-18-C5				PC 1→ AC D-18-B3		PC 1→ AC D-18-B1			MB 1→ AC 0-5 D-18-B3			
																				MB 1→ AC 6-17 D-18-A1		MB 1→ AC 6-17 D-18-B2		
																				MB 0 → AC D-18-A1		MB 0 → AC D-18-A3		
																						CARRY → AC D-18-B7		

1		2		3		4		5		6		7		8										

CHANGE	DATE	ENG	REVISIONS

DRAWN M. MARIANO	DATE 7/8/74	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CHECKED	DATE	
ENG	DATE	
PROJ ENG	DATE	
PROD	DATE	

TITLE: UTILIZATION MODULE LOCATION

FOR

ASSY NO | CODE UML | DRWG NO D-ID-45-20 | REV LTR

SHEET | OF

D-ID-45-20-4 A

Row ID-A

Slot	Module	Signals
1	1607	ε→PC D-33-A4; 0→EPC D-33-C8; ε1→PC D-15-B4
2	1105	ε→PC D-15-B4; HALT D-16-C4; ε1→PC D-15-B4
3	1105	MID-INST BRK+PERM D-15-B3
4	1110	SH/RO PULSE D-15-A7
5	4106R	SS_1^0 D-15-D1; SS_2^0 D-15-D1; SS_3^0 D-15-D1; SS_4^0 D-15-D1; SS_5^0 D-15-D1; SS_6^0 D-15-D1
6	1104	SH/RO PULSE D-15-E3
7	1103	SH/RO PULSE D-15-A2
8	1103	SH/RO PULSE D-15-A3
9	1607	SH/RO PULSE D-15-A2; ε1→PC D-15-C4; SH/RO PULSE D-15-A2
10	1105	CY 1 SKIP D-15-C4; ε1→PC D-15-C4
11	1105	ε1→PC D-15-D4
12	1105	CY 1 SKIP D-15-C4; ε1→PC D-15-C4
13	1104	AC + AC-OV SKIP D-15-C4
14	1105	AC Z, 10 + SKIP D-15-C3
15	1105	ε1→PC D-15-C4; AC Z, 10 SKIP D-15-C3; ε1→PC D-15-C4; AC + AC-OV SKIP D-15-C3
16	1105	AC=+0 D-15-D3; CY 1 SKIP D-15-D3
17	1103	CY 1 SKIP D-15-C3; AC Z, 10 SKIP D-15-C3
18	1105	ENABLE D-15-C2; ENABLE D-15-C2
19	1103	AC Z, 10 SKIP D-15-D2
20	1110	AC Z, 10 + SKIP D-15-C1; ENABLE D-15-C1
21	1103	AC Z, 10 + SKIP D-15-D2
22	1150	MBD_A^0 … MBD_A^7 D-15-B2 (each)
23	1150	MBD_B^0 … MBD_B^7 D-15-B1 (each)
24	1150	MBD_C^0 … MBD_C^7 D-15-B2 (each)
25	1150	MBD_D^0 … MBD_D^7 D-15-B1 (each)

Row IE-B

Slot	Module	Signals
1	1103	SET PF1-1 D-6-B3; SET PF2-1 D-6-B4; SET PF3-1 D-6-B4; SET PF4-1 D-6-B5; SET PF5-1 D-6-B6; SET PF6-1 D-6-B6
2	1104	AC ONLY D-6-A7
3	1104	IO ONLY D-6-A8
4	1104	ε1→PC D-15-C5; IO-SHIFT D-6-B7
5	1105	ROTATE D-6-D5; AI D-6-D4
6	1105	ROTATE + DIS + DIV + LCH + DCH D-6-C7; SH/ROL SH/ROR D-6-C7; AC^1 ROTATE + LCH + DCH D-6-D7
7	1105	AI ROTATE D-6-D6; AC^1 ROTATE + LCH + DCH D-6-D6
8	1105	AI + MUS + DIS + MUL + DIV D-6-B8; IO ROTATE D-6-B7
9	1111	AI + MUS + DIS + MUL + DIV D-6-B8; ROTATE + DIS + DIV + LCH + DCH D-6-B8
10	1110	SH/RO PULSE D-15-A5
11	1103	SPC D-6-D3; CHI D-16-B6; HSC + SBS BREAK PERMIT D-16-B7; IO≠0 D-57-B8
12	1104	SET PF_{1-6}^1 D-6-C1; AC^1 ROTATE + LCH + DCH D-6-D6
13	1104	SET PF_{1-6}^0 D-6-C2
14	1607	SET PF^1 1-6 D-6-B2; CLEAR PF0-6 D-6-A1; SET PF 0 1-6 D-6-A2
15	1104	SET PF1-3 D-6-C2; SET PF4-6 D-6-C3
16	1105	SZL→L^0 D-6-C2; CLEAR PF0-6 D-6-C1; IO→L 10-17
17	1103	SET PF_5 D-6-B5; SET PF5-0 D-6-A5; SET PF_6 D-6-B6; SET PF6-1 D-6-A6
18	1209	PF_5 D-6-A5; PF_6 D-6-A6
19	1103	SET PF_3 D-6-B4; SET PF3-0 D-6-A4; SET PF_4 D-6-B4; SET PF4-0 D-6-B5
20	1209	PF_3 D-6-A4; PF_4 D-6-A4
21	1103	SET PF_1 D-6-B3; SET PF1-0 D-6-A3; SET PF_2 D-6-B3; SET PF1-0 D-6-A3
22	1209	PF_1 D-6-A3; PF_2 D-6-A3
23	1103	SET PF6-1 D-6-B6; SET PF5-1 D-6-B5; SET PF4-1 D-6-B5; SET PF3-1 D-6-B4; SET PF2-1 D-6-B4; SET PF1-1 D-6-B3
24	1607	IO→L 10-17 D-6-B2; IO MIXER PF→IO 0-6 10-17 D-6-D2
25	1105	L^0 SZL D-15-B7; ε→IO D-6-D2; IO MIXER PF→IO 0-6 10-17 D-6-D2

Row IF-C

Slot	Module	Signals
1	1105	G→IR D-32-D1; SET RIM-0 D-32-D3
2	1103	MB^1→IR D-32-D2; 0→IR D-32-C1; MB^1→IR D-32-D2; SET RIM-0 D-32-D2
3	1607	MB^1→IR D-32-C2; 0→IR D-32-C2
4	1104	00 D-32-A1; 01 D-32-A2
5	1104	11 D-32-A3; 10 D-32-A2
6	1209	IR_0 D-32-C2; IR_1 D-32-C3
7	1103	SET IR3-1 D-32-D4; SET IR1-1 D-32-D3; DIV D-32-D4
8	1209	IR_2 D-32-C3; IR_3 D-32-C4
9	1209	IR_4 D-32-C4; RIM D-32-D2
10	1150	000 D-32-C4; 001 D-32-C4; 010 D-32-C4; 011 D-32-C4; 100 D-32-C4; 101 D-32-C4; 110 D-32-C4; 111 D-32-C4
11	1103R	JMP D-32-C5; JSP D-32-B5; SKP D-32-B5; SH/RO D-32-B5; LAW D-32-B5; IOT D-32-A5
12	1103R	ADD D-32-C6; SUB D-32-B6; IDX D-32-B6; ISP D-32-B6; SAD D-32-B6; SAS D-32-A6
13	1103R	LAC D-32-C6; LIO D-32-B6; DAC D-32-B6; DAP D-32-B6; DIP D-32-B6; DIO D-32-A6
14	1103R	00 D-32-A7; AND D-32-B7; IOR D-32-B7; XOR D-32-B7; XCT D-32-B7; LCH D-32-C7
15	1103R	SPC D-32-A5; MUS + MUL D-32-A6; DZM D-32-A6; DCH D-32-A7; 36 D-32-A6; JDA + CAL D-32-7
16	1103R	DPR D-32-A5; DIS + DIV D-32-A6; TAD+CYC D-32-A8
17	1111	INCORR OP SEL D-32-C5
18	1104	INCORR OP SEL D-32-C5; AF_2^0 JSP D-32-B2; AF_2^0 JSP D-32-B2; INCORR OP SEL D-32-C5
19	1105	JMP + JSP D-32-C7; JMP+RIM^1 D-32-D7
20	1105	AF_2^0 (JMP+JSP) D-32-B1; AF_2^0+JSP D-32-B1
21	1105	SH/RO D-32-B2; SH/RO(b) D-32-B3; JSP(b) D-32-B3
22	1104	DIS D-32-D5; DIS(b) D-32-D5; OPR(b) D-32-D5
23	1105	IOT D-32-D8; BCI + (CY 1 + CAL + JDA) D-32-C8
24	1110	POWER CLEAR D-16-A8; $TP_{0-7-3-2}$ D-16-A8
25	1607	D-16-A8; D-16-A8; D-16-A8

DRWG. # WAS D-ID-45-20 SH 4 OF 16 A-321

CHANGE | DATE | ENG — REVISIONS

DRAWN M. MARIANO DATE 7/10/64
CHECKED DATE
ENG DATE
PROJ ENG DATE
PROD DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION

FOR

ASS'Y NO. CODE UML DRWG NO D-ID-45-20-4 REV A

SHEET 1 OF 1

D-ID-45-2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	1607	1105	1105	1110	4100R	1104	1103	1103	1607	1105	1105	1105	1104	1103	1105	1105	1103	1105	1103	1110	1103	1150	1150	1150	1150
A	EMA D-33-F4	PC D-15-B4		SH/RO PULSE D-15-A7	SS_1^0 D-15-D1 SS_2^0 D-15-D1 SS_3^0 D-15-D1 SS_4^0 D-15-D1 SS_5^0 D-15-D1 SS_6^0 D-15-D1	SH/RO PULSE D-15-B3	SH/RO PULSE D-15-B2	SH/RO PULSE D-15-A3	SH/RO PULSE D-15-A2 PC D-15-C4 SH/RO PULSE D-15-A2	CY + 1 SKIP D-15-C4 $\overline{1}$ PC D-15-C4	PC D-15-D4	CY + 1 SKIP D-15-C4 $\overline{1}$ PC D-15-C4	AC + AC-OV SKIP D-15-C4	AC Z_10 + SKIP D-15-C3	PC D-15-C4 AC Z_10 SKIP D-15-C3 PC D-15-C4 AC + AC-OV SKIP D-15-C3	AC+0 D-15-D3 CY + 1 SKIP D-15-D3	CY + 1 SKIP D-15-C3 AC Z_10 + SKIP D-15-C3	ENABLE D-15-C2 ENABLE D-15-C2	AC Z_10 SKIP D-15-D2	AC Z_10 + SKIP D-15-C1 ENABLE D-15-C1	AC Z_10 + SKIP D-15-D2	MBD_A^2 D-15-B2 MBD_A^3 D-15-B2 MBD_A^4 D-15-B2 MBD_A^5 D-15-B2 MBD_A^6 D-15-B2 MBD_A^7 D-15-B2	MBD_B^2 D-15-B1 MBD_B^3 D-15-B1 MBD_B^4 D-15-B1 MBD_B^5 D-15-B1 MBD_B^6 D-15-B1 MBD_B^7 D-15-B1	MBD_C^2 D-15-B2 MBD_C^3 D-15-B2 MBD_C^4 D-15-B2 MBD_C^5 D-15-B2 MBD_C^6 D-15-B2 MBD_C^7 D-15-B2	MBD_D^2 D-15-B1 MBD_D^3 D-15-B1 MBD_D^4 D-15-B1 MBD_D^5 D-15-B1 MBD_D^6 D-15-B1 MBD_D^7 D-15-B1
1D	EPC D-33-C8	HALT D-16-C4	MID-INST BRK+PERM D-15-B3																						
	PC D-15-B4	PC D-15-B3																							
B	1107	1104	1104	1104	1105	1105	1105	1105	1111	1110	1103	1104	1104	1607	1104	1105	1103	1209	1103	1209	1103	1209	1103	1607	1105
	SET PF1-1 D-6-B3			PC D-15-C5	ROTATE D-6-D5	ROTATE + DIS + DIV + LCH + DCH D-6-C7		AI + MUS + DIS + MUL + DIV D-6-B8	AI + MUS + DIS + MUL + DIV D-6-B8		SPC D-6-D3			SET PF $\overline{1}$ 1-6 D-6-B2	SET PF1-3 D-6-C2		SET PF_5 D-6-B5	PF_5 D-6-A5	SET PF_3 D-6-B4	PF_3 D-6-A4	SET PF_1 D-6-B3	PF_1 D-6-A3	SET PF6-1 D-6-B6	10-17 D-6-B2	L^0 SZL D-15-B7
	SET PF2-1 D-6-B4										CHI D-16-B6						SET PF5-0 D-6-A5		SET PF3-0 D-6-A4		SET PF1-0 D-6-A3		SET PF5-1 D-6-B5		
	SET PF3-1 D-6-B4				AI D-6-D4	SH/ROL SH/ROR D-6-C7	AI ROTATE D-6-D6	IO ROTATE D-6-B7		SH/RO PULSE D-15-A5	HSC + SBS BREAK PERMIT D-16-B7	SET PF_{1-6}^1 D-6-C1	SET PF_{1-6}^0 D-6-C2	CLEAR PF0-6 D-6-A1	SET PF4-6 D-6-C3	CLEAR PF0-6 D-6-C1	SET PF_6 D-6-B6	PF_6 D-6-A6	SET PF_4 D-6-B4	PF_4 D-6-A4	SET PF_2 D-6-B3	PF_2 D-6-A3	SET PF4-1 D-6-B5		
1E	AC UNC+ D-6-A7	IO ONLY D-6-A8	IO-SHIFT D-6-B7						ROTATE + DIS + DIV + LCH + DCH D-6-B8		IO≠0 D-57-B8												SET PF3-1 D-6-B4		0→10 D-6-D2
	SET PF4-1 D-6-B5					AC¹ ROTATE + LCH + DCH D-6-D7	AC¹ ROTATE + LCH + DCH D-6-D6					AC¹ ROTATE + LCH + DCH D-6-D6		SET PF 0 1-6 D-6-A2		IO→L 10-17							SET PF2-1 D-6-B4	IO MIXER PF→IO D-6 10-17	IO MIXER L→IO PF 0-6 D-6-D2 10-17
	SET PF5-1 D-6-B6																						SET PF1-1 D-6-B3	D-6-D2	D-6-D2 10-17
	SET PF6-1 D-6-B6																								
C	1105	1103	1607	1104	1104	1209	1103	1209	1209	1150	1103R	1103R	1103R	1103R	1103R	1103R	1111	1104	1105	1105	1105	1104	1105	1110	1607
	G-IR D-32-C1	$\overline{1}$ MB→IR D-32-D2	$\overline{1}$ MB→IR D-32-C2	00 D-32-A1	11 D-32-A3	IR_0 D-32-C2	SET IR3-1 D-32-D4	IR_2 D-32-C3	IR_4 D-32-C4	000 D-32-C4 001 D-32-C4 010 D-32-C4 011 D-32-C4	JMP D-32-C5 JSP D-32-B5 SKP D-32-B5	ACD D-32-C6 SUB D-32-B6 IDX D-32-B6	LAC D-32-C6 LIO D-32-B6 DAC D-32-B6	00 D-32-A7 AND D-32-B7 IOR D-32-B7	SPC D-32-A5 MUS + MUL D-32-A6 DZM D-32-A6	DPR D-32-A5 DIS + DIV D-32-A6		INCORR OP SEL D-32-C5	INCORR OP SEL D-32-C5 AF_2^0 JSP D-32-B2 AF_2^1 JSP D-32-B2 INCORR OP SEL D-32-C5	JMP + JSP D-32-C7 JMP+RIM D-32-C7	AF_2^0 (JMP+JSP) D-32-B1 AF_2^0 +JSP D-32-B1	SH/RO D-32-B2 SH/RO(2) D-32-B3 JSP(2) D-32-B3	DIS D-32-D5 DIS(2) D-32-D5 OPR(2) D-32-D5	IOT D-32-D6 AC1 + (CY 1 + CAL + JDA) D-32-C6	POWER CLEAR D-16-A8 $TP_{0-7-3-2}$ D-16-A8	D-16-A8 D-16-A8 D-16-A8
	SET RIM-0 D-32-D3	SET RIM-0 D-32-D2	0→R D-32-C2	01 D-32-A2	10 D-32-A2	IR_1 D-32-C3	SET IR1-1 D-32-D3	IR_3 D-32-C4	RIM D-32-D2	100 D-32-C4 101 D-32-C4 110 D-32-C4 111 D-32-C4	SH/RC D-32-B5 LAW D-32-B5 IOT D-32-A5	ISP D-32-B6 SAD D-32-A6 SAS D-32-A6	DAP D-32-B6 DIP D-32-B6 DIO D-32-A6	XOR D-32-B7 XCT D-32-B7 LCH D-32-C7	DCH D-32-A7 36 D-32-A6 JDA + CAL D-32-A7	TAD+DYC D-32-A8								
D																									

	1	2	3	4	5	6	7	8

DRAWN	M. MAFFEO	DATE	7/10/69	
CHECKED		DATE		
ENG		DATE		
PROJ ENG		DATE		
PROJ		DATE		

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

TITLE: UTILIZATION MODULE LOCATION
FOR
ASSY NO | CODE: UML | DRWG NO: D-ID-45-2 | REV
SHEET

ID-45-20-5 | A

UTILIZATION MODULE LOCATION

Slot	IH module	IH signals	IJ module	IJ signals	IK module	IK signals
1	110[illegible]	HSC + SBS BREAK PERMIT D-16-B8	4410	STOP D-16-B1	1105	SET CYC-0 D-16-D1
2	4105	START D-16-C1	4410	START D-16-B1	1105	SET CYC-0 D-16-D1 CY 1 D-16-[illegible] SET CYC-0 D-16-D1
3	1304	READER RETURN DELAYED D-16-A4	4410	CONTINUE D-16-B1	1105	SET CYC-1 D-16-D2 SET CYC-0 D-16-D2
4			4410	EXAMINE D-16-B1	1110	SET CYC-1 D-16-D2
5	1104	TP 0 D-16-A1 DIO RIM^1 D-16-A2	4410	DEPOSIT D-16-B1	1105	CY 1 D-16-C2 MANUAL RUN D-16-C2
6	1104	TP 0A D-16-A2	4410	READ-IN D-16-C1	1684	CY 1 D-16-C3
7	1105	TP 0 D-16-A1	1104	SP 2 D-16-A3 SP 2 D-16-B3	1209	CYC D-16-C2 RUN D-16-C3
8	1311	TP 0 D-16-A1	1110	SP 1 D-16-B2 SC D-16-B1	1110	RUN $ENABLE^0$ D-16-D3 SET RUN-1 D-16-D3
9	1607	TP 0 D-16-A1 TP 2 D-16-A2 TP 1 D-16-A1	1607	SP 1 D-16-B2 SC D-16-B1 SP 1 D-16-B3	1105	SET DF_2^0 D-16-C4 SET RUN-0 D-16-D3 SET RUN-1 D-16-D3
10	1310	TP 2 D-16-A2	1304	SP 1 D-16-B2	1111	SET RUN-0 D-16-D4 SET DF_1^1 D-16-D6
11	1310	TP 3 D-16-A2	1105	SP 1 D-16-B3	1209	SBM D-16-D8 RQ D-16-D8
12	1105	SET DF_1^1 D-16-C6 TP 1 D-16-A2	1310	SP 4 D-16-B4	1105	SET DF_1^1 D-16-D6 SET DF_1^0 D-16-D6
13	1607	TP 5 D-16-A4 TP 3 D-16-A3 TP 4 D-16-A3	1607	SP 2 D-16-B3 SP 4 D-16-B4 SP 3 D-16-B4	1209	DF 2 D-16-C5 DF 1 D-16-C6
14	1311	TP 9 D-16-A6 TP 5 D-16-A4	1311	SP 3 D-16-B4 SP 2 D-16-B3	1105	SET DF_2^1 D-16-D5 SET DF_2^0 D-16-D5 SET DF_1^0 D-16-D5
15	1310	TP 6A D-16-A5	4105	SET SBM^0 D-16-D8 SET SBM D-16-D8 SET SBM^0 D-16-D8 SET SBM^1 D-16-D8	1105	SET DF_1^0 D-16-D5 SET DF_2^1 D-16-D5 SET DF_1^0 D-16-D5
16	1310	TP 7 D-16-A5	1105	$\overline{IO\ HALT}$ $\overline{DONE}$ D-16-C4	1105	DCH·CY 1·$\overline{DCI}$ D-2-C4 DF D-16-D7
17	1607	TP 7 D-16-A5 TP 6 D-16-A4 TP 6A D-16-A5	1105	SET IOS^1 D-16-B5 SET IOS^1 D-16-B5 SET ICH^1 D-16-C5	1105	TRAP D-5-C4 RPB RIM^1 D-16-A5
18	1311	TP 0A D-16-A1 TP 8 D-16-A6	1204	IOS D-16-B5 IOH D-16-B6	1105	INST DONE D-16-B8
19	1310	TP 6 D-16-A4	1105	SET IOH^0 D-16-B5 SET IOH^1 D-16-B5 SET IOH^0 D-16-B5	1105	INST DONE D-16-C8 RUN $ENABLE^1$ D-16-D4 RUN $ENABLE^0$ D-16-D4 RUN $ENABLE^1$ D-16-D4 INST DONE D-16-C8
20	1607	TP 8 D-16-A6 TP 9A D-16-A7 TP 9 D-16-A6	1103	SET IOC D-16-B4 SET IOC^1 D-16-B4 SET IOC^0 D-16-B4 SET IHS^0 D-16-B4 SET IOH^1 D-16-B6	1105	SET BC_1^0 D-16-C7 COMPLEMENT BC 1 D-16-C7
21	131[illegible]	TP 9A D-16-A7	1209	IOC D-16-B4 IHS D-16-B4	1201	BC 1 D-16-C7
22	1310	TP 10 D-16-A7	1103	RPB RIM^1 D-16-A6 SC-4 D-16-A7 STOP-4 D-16-A6	1201	BC 2 D-16-C6
23	160[illegible]	TP 10 D-16-A[illegible] TP 0A D-16-A3	4603	RPB RIM^1 D-16-A6 SC-4 D-16-A7 SC-4 D-16-A7	1103R	BC 3 D-16-B6 BC 3 D-16-B7 BC 1 D-16-B7 BC 1 D-16-B7 BC 2 D-16-B7
24	46[illegible]	STOP-4 D-16-A6 SET OC-1 IHS-1 IOH-0 D-16-B3	1103	TP 7-4 D-16-A8 TP 4-4 D-16-A8 TP 10-4 D-16-A7	1104	SET RQ^0 D-16-D8
25	[illegible]	SET IOC^1 IHS IOH^0 D-16-B3	4603	TP 7-4 D-16-A8 TP 4-4 D-16-A8 TP 10-4 D-16-A7	1105	MANUAL RUN D-16-C3 IOC^1 IOT D-16-B6 MANUAL RUN D-16-C3 MANUAL RUN D-16-C3

DRWG. # WAS D-ID-45-20 SH.5 CF 16 A-321

CHANGE | DATE | ENG | REVISIONS

DRAWN M. MARIANO	DATE 7/13/64		
CHECKED	DATE		
ENG	DATE		
PROJ ENG	DATE		
PROD	DATE		

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION

FOR

ASSY NO | CODE UML | DRWG NO D-ID-45-20-5 | REV LTR A

SHEET 1 OF 1

D-ID-45-2[illegible]

IH

Slot	1	2	3	4	5	6	7	8	9	10	11	12	13
Type	[illegible]	4105	1304		1104	1104	1105	[illegible]	1607	1310	[illegible]	1105	1607
Use	[illegible] BREAK PERMIT D-16-B8	START D-16-C1	READER RETURN DELAYED D-16-A4		TP 0 D-16-A1 DIG RUN D-16-A2	TP 0A D-16-A2	TP 0 D-16-A1	TP 0 D-16-A1	TP 0 D-16-A1 TP 2 D-16-A2 TP 1 D-16-A?	TP 2 D-16-A2	TP 3 D-16-A2	SET DF1 D-16-C6 TP 1 D-16-A2	TP 5 D-16-A4 TP 3 D-16-A3 TP 4 D-16-A3

Slot	14	15	16	17	18	19	20	21	22	23	24	25
Type	[illegible]	[illegible]	[illegible]	1607	[illegible]	1310	1607	[illegible]	1310	1607	4607	1105
Use	TP 9 D-16-A5 TP 5 D-16-A4	TP 6A D-16-A5	TP 7 D-16-A5	TP 7 D-16-A5 TP 6 D-16-A4 TP 6A D-16-A5	TP 0A D-16-A? TP 8 D-16-A6	TP 6 D-16-A4	TP 8 D-16-A6 TP 9A D-16-A7 TP 9 D-16-A6	TP 9A D-16-A7	TP 10 D-16-A7	TP 10 D-16-A7 TP 0A D-16-A3	STOP-4 D-16-A6 SET ICC-1 IHS-1 ICH-0 D-16-B3	SET ICC IHS ICH D-16-B3

IJ

Slot	1	2	3	4	5	6	7	8	9	10	11	12	13
Type	4410	4410	4410	4410	4410	4410	1104	1110	1607	1304	1105	1310	1607
Use	STOP D-16-B?	START D-16-B1	CONTINUE D-16-B1	EXAMINE D-16-B1	DEPOSIT D-16-B1	READ-IN D-16-C1	TP 2 D-16-A5 SP 2 D-16-B3	SP 1 D-16-B2 SC D-16-B1	SP 1 D-16-B2 SC D-16-B1 SP 1 D-16-B3	SP 1 D-16-B2	SP 1 D-16-B3	SP 4 D-16-B4	SP 2 D-16-B3 SP 4 D-16-B4 SP 3 D-16-B4

Slot	14	15	16	17	18	19	20	21	22	23	24	25
Type	1311	4105	1105	1105	1204	1105	1103	1205	1103	4603	1103	4603
Use	SP 3 D-16-B4 SP 2 D-16-B3	SET SBM0 D-16-D8 SET SBM D-16-D8 SET SBM0 D-16-D8 SET SBM1 D-16-D8	IO HALT DONE D-16-C4	SET IOS1 D-16-B5 SET IOS1 D-16-B5 SET ICH1 D-16-C5	IOS D-16-B5 ICH D-16-B6	SET ICH0 D-16-B5 SET ICH1 D-16-B5 SET ICH0 D-16-B5	SET IOC D-16-B4 SET IOC1 D-16-B4 SET ICC0 D-16-B4 SET IHS0 D-16-B4 SET ICH1 D-16-B6	IOC D-16-B4 IHS D-16-B4	RPB RIM1 D-16-A6 SC-4 D-16-A7 STOP-4 D-16-A6	RPB RIM1 D-16-A6 SC-4 D-16-A7 SC-4 D-16-A7	TP 7-4 D-16-A8 TP 4-4 D-16-A8 TP 10-4 D-16-A7	TP 7-4 D-16-A8 TP 4-4 D-16-A8 TP 10-4 D-16-A7

IK

Slot	1	2	3	4	5	6	7	8	9	10	11	12	13
Type	1105	1105	1105	1110	1105	1604	1209	1110	1105	1111	1209	1105	1209
Use	SET CYC-1 D-16-C1	SET CYC-0 D-16-C1 CY 1 D-16-C? SET CYC-0 D-16-C1	SET CYC-1 D-16-C2 SET CYC-1 D-16-C2	SET CYC-1 D-16-C2	CY 1 D-16-C2 MANUAL RUN D-16-C2	CY 1 D-16-C3	CYC D-16-C2 RUN D-16-C3	RUN ENABLE0 D-16-D3 SET RUN-1 D-16-D3	SET DF2 D-16-C4 SET RUN-0 D-16-D3 SET RUN-1 D-16-C?	SET RUN-0 D-16-D4 SET DF1 D-16-D6	SBM D-16-D8 RC D-16-D8	SET DF1 D-16-D6 SET DF1 D-16-D6	DF 2 D-16-D5 DF 1 D-16-D6

Slot	14	15	16	17	18	19	20	21	22	23	24	25
Type	1105	1105	1105	1105	1105	1105	1105	1201	1201	1103R	1104	1105
Use	SET DF2 D-16-D5 SET DF2 D-16-D5 SET DF2 D-16-D5	SET DF2 D-16-D5 SET DF2 D-16-D5 SET DF2 D-16-D5	DCH•CY 1-DCT D-2-C4 DF D-16-D7	TRAP D-5-C4 RPB RIM D-16-A5	INST DONE D-16-B8	INST DONE D-16-C8 RUN ENABLE1 D-16-D4 RUN ENABLE0 D-16-D4 RUN ENABLE1 D-16-D4 INST DONE D-16-C8	SET BC D-16-C7 COMPLEMENT BC D-16-C7	BC 1 D-16-C7	BC 2 D-16-C6	BC-3 D-16-B6 BC 3 D-16-B7 BC [illegible] D-16-B7 BC [illegible] D-16-B7 BC 2 D-16-B7	SET RQ0 D-16-D8	MANUAL RUN D-16-C3 ICC-ICT D-16-B6 MANUAL RUN D-16-C3 MANUAL RUN D-16-C3

CHANGE	REVISIONS	DRAWN	DATE
DATE		A. [illegible]	[illegible]-64
ENG		CHECKED	DATE
		ENG	DATE
		PROJ. ENG	DATE
		PROJ.	DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: UTILIZATION MODULE LOCATION

FOR

ASSY NO | CODE UML | DRWG NO D-ID-45-20 | SHEET [illegible]

D-ID-45-20-6 | REV LTR A

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
								1209	1103	1204	1113R	1105	1105	1105	1105	1103	6105	6106	6106	1209	1105	1304	1000	1607
								RMB 2 D-5-D6	SET LD_0^0 D-2-B2	LD 0 D-2-B2	LD=00 D-2-A3	DC 1 D-2-A5	DC 2 D-2-B5	DC 3 D-2-B5	DCH•CYI•$\overline{DCT}$ D-2-C5	$b \rightarrow AC_{17}$ D-2-B1	CHI D-2-C3	AC → MB D-2-C5	SET INC[1] D-2-D2	INC D-2-D2				COMPLEMENT LD 0 D-2-B3
											LD=01 D-2-A3	LCH CYI D-2-A6	LC 2 D-2-B5	LC 3 D-2-B5	LCH•CYI D-2-C6				SET INC[0] D-2-D2		SH/RO PULSE D-15-B5	SH/RO PULSE D-15-B6		CLR LD D-2-B2
									SET LD_0^1 D-2-B2		LD=10 D-2-B3													
								RBM 1 D-5-D6	SET LD_1^0 D-2-B3	LD 1 D-2-B3	LD=11 D-2-B3	DC 1 D-2-A5	DC 2 D-2-B5	DC 3 D-2-B5	DCH•CYI•$\overline{DCL}$ D-2-C5	COMPLEMENT LD 1 D-2-C2	SET LD D-2-C2	MB → AC D-2-C6	CHI D-2-C3					COMPLEMENT LD 1 D-2-B4
									SET LD_1^1 D-2-B3		LD=11 D-2-B4								SH/RO PULSE D-15-B7					
											LCH + DCH D-2-A4	LCH + DCH D-2-A5	LC 2 D-2-B6	LC 3 D-2-B6	LCH•CYI D-2-C6	SET LD D-2-C1	CHI D-2-C3							

REVISIONS	CHANGE	DATE	ENG
	DRWG. # WAS D-ID-45-20 SH 6 OF 16 A-321	12/16/64	RP

DRAWN	M. MARIANO	DATE 7/13/64
CHECKED		DATE
ENG		DATE
PROJ ENG		DATE
PROD		DATE

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: UTILIZATION MODULE LOCATION
FOR

ASSY NO | CODE UML | DRWG NO D-ID-45-20-6 | REV LTR A

SHEET 1 OF 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
									1209	1103	1204	1113R	1105	1105	1105	1105	1103	6105	6106	6106	1209	1105	1304	1000	1607
IL									RMB 2 D-5-D6 RBM 1 D-5-D6	SET LD^0_0 D-2-B2 SET LD^1_0 D-2-B2 SET LD^0_1 D-2-B3 SET LD^1_1 D-2-B3	LD 0 D-2-B2 LD 1 D-2-B3	LD=00 D-2-A3 LD=01 D-2-A3 LD=10 D-2-B3 LD=11 D-2-B3 LD=11 D-2-B4 LCH + DCH D-2-A4	DC 1 D-2-A5 LCH CY1 D-2-A6 DC 1 D-2-A5 LCH + DCH D-2-A5	DC 2 D-2-B5 LC 2 D-2-B5 DC 2 D-2-B5 LC 2 D-2-B6	DC 3 D-2-B5 LC 3 D-2-B5 DC 3 D-2-B5 LC 3 D-2-B6	DCH•CY1•$\overline{DC1}$ D-2-C5 LCH•CY1 D-2-C6 DCH•CY1•$\overline{DC1}$ D-2-C5 LCH•CY1 D-2-C6	0 → AC_{17} D-2-B1 COMPLEMENT LD 1 D-2-C2 SET LD D-2-C1	CH1 D-2-C3 SET LD D-2-C2 CH1 D-2-C3	AC—J→MB D-2-C5 MB—J→AC D-2-C6	SET INC^1 D-2-D2 SET INC^0 D-2-D2 CH1 D-2-C3 SH/RO PULSE D-15-B7	INC D-2-D2	SH/RO PULSE D-15-B5	SH/RO PULSE D-15-B6		COMPLEMENT LD 0 D-2-B3 CLR LD D-2-B2 COMPLEMENT LD 1 D-2-B4

CHANGE | DATE | ENG — REVISIONS

DRAWN M. MARIANO DATE 7/15/64
CHECKED DATE
ENG DATE
PROJ ENG DATE
DATE

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION

FOR

ASSY NO | CODE UML | DRWG NO D-ID-45-20 | REV

SHEET 5 OF 15

D-1D-45-20-7 | REV LTR A

2Y

Slot	Module	Signals
1	1103	C → AC_0 D-2-C7; CLR RN0 0 / RN0 1 D-4-B1; SET RN0 0(1) D-4-B2; SET RN0 1(1) D-4-B3
2	1209	RN0 0 D-4-B2; RN0 1 D-4-B3
3	1113	RN0-0 D-4-A3; RN0-1 D-4-A3; RN0-2 D-4-A3; RN0-3 D-4-A3; RN1-0 D-4-D3; RN1-1 D-4-D3
4	1103	CLR RN 10 / CLR RN 11 D-4-D1; SET RN 11(1) D-4-D3; SET RN10(0) D-4-D2; CLR RN2-0 / RN2-1 D-4-B4; SET RN 10(1) D-4-D2; SET RN 11(1) D-4-D3
5	1209	RN 1-0 D-4-D2; RN 1-1 D-4-D3
6	1113	RN1-2 D-4-C3; RN1-3 D-4-C3; RN2-0 D-4-A6; RN2-1 D-4-A6; RN2-2 D-4-A6; RN2-3 D-4-B6
7	1103	CLR RN2-0 / RN2-1 D-4-B4; SET RN2-1(1) D-4-B5; SET RN2-1(0) D-4-B5; CLR RN2-0 / RN2-1 D-4-B4; SET RN2-0(1) D-4-B5; SET RN2-1(1) D-4-B5
8	1209	RN2-0 D-4-B5; RN2-1 D-4-B5
9	1113	RN3-0 D-4-C6; RN3-1 D-4-C6; RN3-2 D-4-C6; RN3-3 D-4-C6
10	1209	RN3-0 D-4-D5; RN3-1 D-4-D5
11	1103	CLR RN3-0 / RN3-1 D-4-D4; SET RN3-0(1) D-4-D5; SET RN3-1(1) D-4-D5; CLR RN3-0 / RN3-1 D-4-D4; SET RN3-0(1) D-4-D5; SET RN3-1(1) D-4-D5
12	1103R	RN0-0 D-4-A3; RN0-1 D-4-A3; RN0-2 D-4-A3; RN0-3 D-4-A3; RN1-0 D-4-C3; RN1-1 D-4-C3
13	1103R	RN1-2 D-4-C3; RN1-3 D-4-C3; RN2-0 D-4-A6; RN2-1 D-4-A6; RN2-2 D-4-A6; RN2-3 D-4-A6
14	1103R	RN3-0 D-4-C6; RN3-1 D-4-C6; RN3-2 D-4-C6; RN3-3 D-4-C6; RN2-0-1-2-3 D-4-B6; RN3-0-1-2-3 D-4-D6
15	6106R	RN0-0-1-2-3 D-4-B3; RN1-0-1-2-3 D-4-D3; PB0 D-6-B7; PB1 D-5-B7; PB2 D-5-B7; PB3 D-5-B8
16	6117R	RNS 0 D-4-A7; RNS 1 D-4-A7; RNS 2 D-4-B7
17	6102-750	EPC_2^1 D-3-D6; EPC_3^1 D-3-D6; EPC_4^1 D-3-D7; EPC_5^1 D-3-D7; TRAP D-5-C2
18	6117R	RNS 3 D-4-C7; TRAP D-5-C1; TRAP D-5-C2
19	4214	P3 D-5-C8; P2 D-5-C7; P1 D-5-C7; P0 D-5-C6
20	4216	SET P3(1) D-5-C8; SET P2(1) D-5-C6; SET P1(1) D-5-C7; SET P0(1) D-5-C6
21	6106	PB1 D-5-B7; PB0 D-5-B7; PB1 D-5-B7; ERM 7-4 D-5-A1; SET RM^0 D-5-C5
22	6106-49	SEL_1^1 D-5-A7; PB2 D-5-B7; SEL_1^0 D-5-A8; PB3 D-5-B8
23	1103R	SEL_0 + SEL_1 D-5-B6; SEL_0^1 + SEL_1^0 D-5-B7; SEL_0^0 + SEL_1^1 D-5-B7; SEL_1^0 + SEL_1^0 D-5-B8; SEL_0^1 D-5-A7; SEL_0^0 D-5-A7
24	[illegible]	SEL [illegible] D-5-B6; SEL^0 D-5-B7; SEL_1^1 D-5-B7; SEL_1^0 D-5-B8
25	6684	SEL 0 D-5-A; SEL_0 D-5-A7; SEL_1^1 D-5-A8; SEL_1^0 D-5-A8

2Z

Slot	Module	Signals
1	1103	SET MC^0 D-3-B2; SET EXD^1 D-3-C2; SET EXD D-3-C2; SET EXD^0 D-3-C1
2	1103	SET EXD^1 D-3-C2; SET EXD D-3-C2; SET EXD^0 D-3-C2
3	1209	EMC D-3-B2; EXD D-3-B2
4	1103	EPC —1→ EMA D-3-A1; EMA —1→ EPC D-3-A2; EPC —1→ EMA D-3-A1; EMA —1→ ECP D-3-A3; MB —1→ EMA D-3-A2; EPC —1→ EMA D-3-A1
5	1609	EPC —1→ EMA D-3-A2; MB —1→ EMA D-3-A2; MB —1→ EPC D-3-A2; EMA —1→ EPC D-3-A3; ETA —1→ EPC D-3-A3
6	1103	SET EMC^1 D-3-B2; ETA —1→ EPC D-3-A3; MB —1→ EPC D-3-A2; C → AC 0, C → AC 1 D-2-C7
7	6102	EMA_2^0 D-3-A4; EMA_2^1 D-3-A5; EMA_3^0 D-3-A5; EMA_3^1 D-3-A5; EMA_4^0 D-3-A5; EMA_4^1 D-3-B5; EMA_5^0 D-3-B5; EMA_5^1 D-3-B5
8	6113	EMA_2^1 D-3-B6; EMA_3^1 D-3-B6
9	6113	EMA_4^1 D-3-B7; EMA_5^1 D-3-B7
10	6113R	M2 D-3-A6; M3 D-3-A6; M0 D-3-A6; M1 D-3-A6
11	6227	EMA_2 D-3-B6; EMA_3 D-3-B6; EMA_4 D-3-B7; EMA_5 D-3-B7; EPC_2 D-3-C6; EPC_3 D-3-C6; EPC_4 D-3-C7; EPC_5 D-3-C7
12	6113	EPC_2^1 D-3-C6; EPC_3^1 D-3-C6
13	6113	EPC_4^1 D-3-C7; EPC_5^1 D-3-C7
14	6102	EPC_2^0 D-3-A8; EPC_2^1 D-3-A8; EPC_3^0 D-3-A8; EPC_3^1 D-3-B8; EPC_4^0 D-3-B8; EPC_4^1 D-3-B8; EPC_5^0 D-3-B8; EPC_5^1 D-3-B6
15	1609	CLR RN0-0 / RN0-1 D-4-B2; CLR RN1-0 / RN1-1 D-4-D2; CLR RN2-0 / RN2-1 D-4-B4; CLR RN3-0 / RN3-1 D-4-D4
16	1105	C → AC 1 D-2-B8; C → AC 0 D-2-B7; C → AC 1, C → AC 0 D-2-C6
17	1104	IDC D-2-A7
18	1104	C AC 0, C AC 1 D-2-C7; IDA D-2-A8
19	4603	ERM_{7-4} D-5-A2; ERM_{10-4} D-5-A2; LRM_{10-4} D-5-A3
20	1607	RNM_{7-4} D-5-A3; RNM_{10-4} D-5-A4; RSM_{10-4} + SC D-5-A4
21	4603	RESTRICT MODE BREAK D-5-B4; 0 → IR D-5-B4
22	1209	RNG PF0 D-6-A2; RM D-5-B5
23	1685	RM 0 D-5-A6; RM 1 D-5-A5
24	1105	TRAP D-5-C3
25	1105	TRAP D-5-B3; 0 → IR D-5-B4; TRAP D-5-B3; 0 → IR D-5-B3; TRAP D-5-B3

CHANGE	A-321	DRWG. # WAS D-1D-45-20 SH. 7 OF 16
DRAWN	[illegible signature]	DATE 4/1/64
CHECKED	[illegible signature]	DATE [illegible]
ENG		DATE
PROJ ENG		DATE
PROD		DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: UTILIZATION MODULE LOCATION

FOR:

ASSY NO | CODE UML | DRWG NO D-1D-45-20-7 | REV LTR A

SHEET 1 OF 1

D-1D-45-20 REV LTR

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1103	1209	1113	1103	1209	1113	1103	1209	1113	1209	1103	1103R	1103R	1103R	6100R	6117R	6102-750	6117R	4214	4216	6106	6106-49	1103R	6113R	6664
/C → AC 0 D-2-C7		RN0-0 D-4-A3	CLR RN 10 CLR RN 11 D-4-D1		RN1-2 D-4-C3	CLR RN2-0 RN2-1 D-4-B4		RN3-0 D-4-C6		CLR RN3-0 RN3-1 D-4-D4	RN0-0 D-4-A3	RN1-2 D-4-C3	RN3-0 D-4-C6	RN0-0-1-2-3 D-4-B3		EPC$_2^1$ D-3-D6		P3 D-5-C8		PB1 D-5-B7	SEL$_1^1$ D-5-A7	SEL$_0^1$ + SEL$_1^1$ D-5-B6	SEL$_1^1$ D-5-B6	SEL$_C$ D-5-A7
	RN0 0 D-4-B2	RN0-1 D-4-A3	SET RN 11(1) D-4-D1	RN1-0 D-4-D2		SET RN2-1(1) D-4-B5	RN2-0 D-4-B5	RN3-1 D-4-C6	RN3-0 D-4-D5	SET RN3-0(1) D-4-D5	RN0-1 D-4-A3	RN1-3 D-4-C3	RN3-1 D-4-C6	RN1-0-1-2-3 D-4-D3	RN5 0 D-4-A7	EPC$_3^1$ D-3-D6	RN5 3 D-4-C7			PB0 D-5-B7	PB2 D-5-B7	SEL$_0^1$ + SEL$_1^0$ D-5-B7	SEL$_1^0$ D-5-B7	
CLR RN0 0 RN0 1 D-4-B1		RN0-2 D-4-A3	SET RN10(0) D-4-D2		RN2-0 D-4-A6	SET RN2-1(0) D-4-B5		RN3-2 D-4-C6		SET RN3-1(1) D-4-D5	RN0-2 D-4-A3	RN2-0 D-4-A6	RN3-2 D-4-C6	P30 D-5-B7		EPC$_4^1$ D-3-D7		P2 D-5-C7	SET P3(1) D-5-C8			SEL$_0^0$ + SEL$_1^1$ D-5-B7		SEL$_0^0$ D-5-A7
		RN0-3 D-4-A3	CLR RN2-0 RN2-1 D-4-B4		RN2-1 D-4-A6	CLR RN2-0 RN2-1 D-4-B4		RN3-3 D-4-C6		CLR RN3-0 RN3-1 D-4-D4	RN0-3 D-4-A3	RN2-1 D-4-A6	RN3-3 D-4-C6	P31 D-5-B7	RN5 1 D-4-A7	EPC$_5^1$ D-3-D7	TRAP D-5-C1	P1 D-5-C7	SET P2(1) D-5-C6	PB1 D-5-B7	SEL$_1^0$ D-5-A8	SEL$_1^0$ + SEL$_1^0$ D-5-B8	SEL$_1^1$ D-5-B7	SEL$_1^1$ D-5-A8
SET RN0 0(1) D-4-B2	RN0 1 D-4-B3	RN1-0 D-4-D3	SET RN 10(1) D-4-D2	RN 1-1 D-4-D3	RN2-2 D-4-A6	SET RN2-0(1) D-4-B5	RN2-1 D-4-B5		RN3-1 D-4-D5	SET RN3-0(1) D-4-D5	RN1-0 D-4-C3	RN2-2 D-4-A6	RN2-0-1-2-3 D-4-B6	PB2 D-5-B7	RN5 2 D-4-B7	TRAP D-5-C2	TRAP D-5-C2	P0 D-5-C6	SET P1(1) D-5-C7	ERM 7-4 D-5-A1	PB3 D-5-B8	SEL$_0^1$ D-5-A7	SEL$_1^0$ D-5-B8	
SET RN0 1(1) D-4-B3		RN1-1 D-4-D3	SET RN 11(1) D-4-D3		RN2-3 D-4-B6	SET RN2-1(1) D-4-B5				SET RN3-1(1) D-4-D5	RN1-1 D-4-C3	RN2-3 D-4-A6	RN3-0-1-2-3 D-4-D6	PB3 D-5-B8					SET P0(1) D-5-C6	SET RM^0 D-5-C5		SEL$_0^0$ D-5-A7		SEL$_1^0$ D-5-A8
1103	1103	1209	1103	1609	1103	6102	6113	6113	6113R	6227	6113	6113	6102	1609	1105	1104	1104	4603	1607	4603	1209	1685	1105	1105
SET MC^0 D-3-B2			EPC $\xrightarrow{1}$ EMA D-3-A1	EPC $\xrightarrow{1}$ EMA D-3-A2	SET EXC^1 D-3-B2	EMA$_2^0$ D-3-A4			M2 D-3-A6	EMA$_2$ D-3-B6			EPC$_2^0$ D-3-A8	CLR RN0-0 RN0-1 D-4-B2	/C → AC 1 D-2-B8	C AC 0 C AC 1 D-2-C7		ERM$_{7-4}$ D-5-A2	RM$_{7-4}$ D-5-A3		RING PF0 D-6-A2			TRAP D-5-B3
SET EXD^1 D-3-C2	SET EXD^1 D-3-C2	EMC D-3-B2	EMA $\xrightarrow{1}$ EPC D-3-A2	MR $\xrightarrow{1}$ EMA D-3-A2		EMA$_1^1$ D-3-A5	EMA$_2^1$ D-3-B6	EMA$_4^1$ D-3-B7	M3 D-3-A6	EMA$_3$ D-3-B6	EPC$_2^1$ D-3-C6	EPC$_4^1$ D-3-C7	EPC$_2^1$ D-3-A8											/0 → IR D-5-B4
			EPC $\xrightarrow{1}$ EMA D-3-A1	MB $\xrightarrow{1}$ EPC D-3-A2	ETA $\xrightarrow{1}$ EPC D-3-A3	EMA$_3^0$ D-3-A5				EMA$_4$ D-3-B7			EPC$_3^0$ D-3-A8	CLR RN1-0 RN1-1 D-4-D2				ERM$_{10-4}$ D-5-A2	RM$_{10-4}$ D-5-A4	RESTRICT MODE BREAK D-5-B4			TRAP D-5-C3	TRAP D-5-B3
SET EXD D-3-C2	SET EXD D-3-C2	EXD D-3-B2	EMA $\xrightarrow{1}$ ECP D-3-A3	EMA $\xrightarrow{1}$ EPC D-3-A3		EMA$_3^1$ D-3-A5				EMA$_5$ D-3-B7			EPC$_3^1$ D-3-B8		/C → AC 0 D-2-B7	IDC D-2-A7	IDA D-2-A8					RM 0 D-5-A6		/0 → IR D-5-B3
			MB $\xrightarrow{-1}$ EMA D-3-A2	ETA $\xrightarrow{1}$ EPC D-3-A3	MB $\xrightarrow{1}$ EPC D-3-A2	EMA$_4^0$ D-3-B5	EMA$_3^1$ D-3-B6	EMA$_5^1$ D-3-B7	M0 D-3-A6	EPC$_2$ D-3-C6	EPC$_3^1$ D-3-C6	EPC$_5^1$ D-3-C7	EPC$_4^0$ D-3-B8	CLR RN2-0 RN2-1 D-4-B4				LRM$_{10-4}$ D-5-A3	RSM$_{10-4}$ + SC D-5-A4	/0 → IR D-5-B4	RM D-5-B5	RM 1 D-5-A5		TRAP D-5-B3
SET EXD^0 D-3-C1	SET EXD^0 D-3-C2		EPC $\xrightarrow{1}$ EMA D-3-A1		/C → AC 0 /C → AC 1 D-2-C7	EMA$_5^0$ D-3-B5			M1 D-3-A6	EPC$_3$ D-3-C6			EPC$_4^1$ D-3-B8	CLR RN3-0 RN3-1 D-4-D4	/C → AC 1 /C → AC 0 D-2-C6									
						EMA$_5^1$ D-3-B5				EPC$_4$ D-3-C7			EPC$_5^0$ D-3-B8											
										EPC$_5$ D-3-C7			EPC$_5^1$ D-3-B8											

REVISIONS	CHANGE	DATE	ENG

DRAWN		DATE
CHECKED		DATE
ENG		DATE
PROJ ENG		DATE
PROJ		DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: UTILIZATION MODULE LOCATION

FOR

ASSY NO	CODE	DRWG NO	REV LTR
	UML	D-1D-45-20	

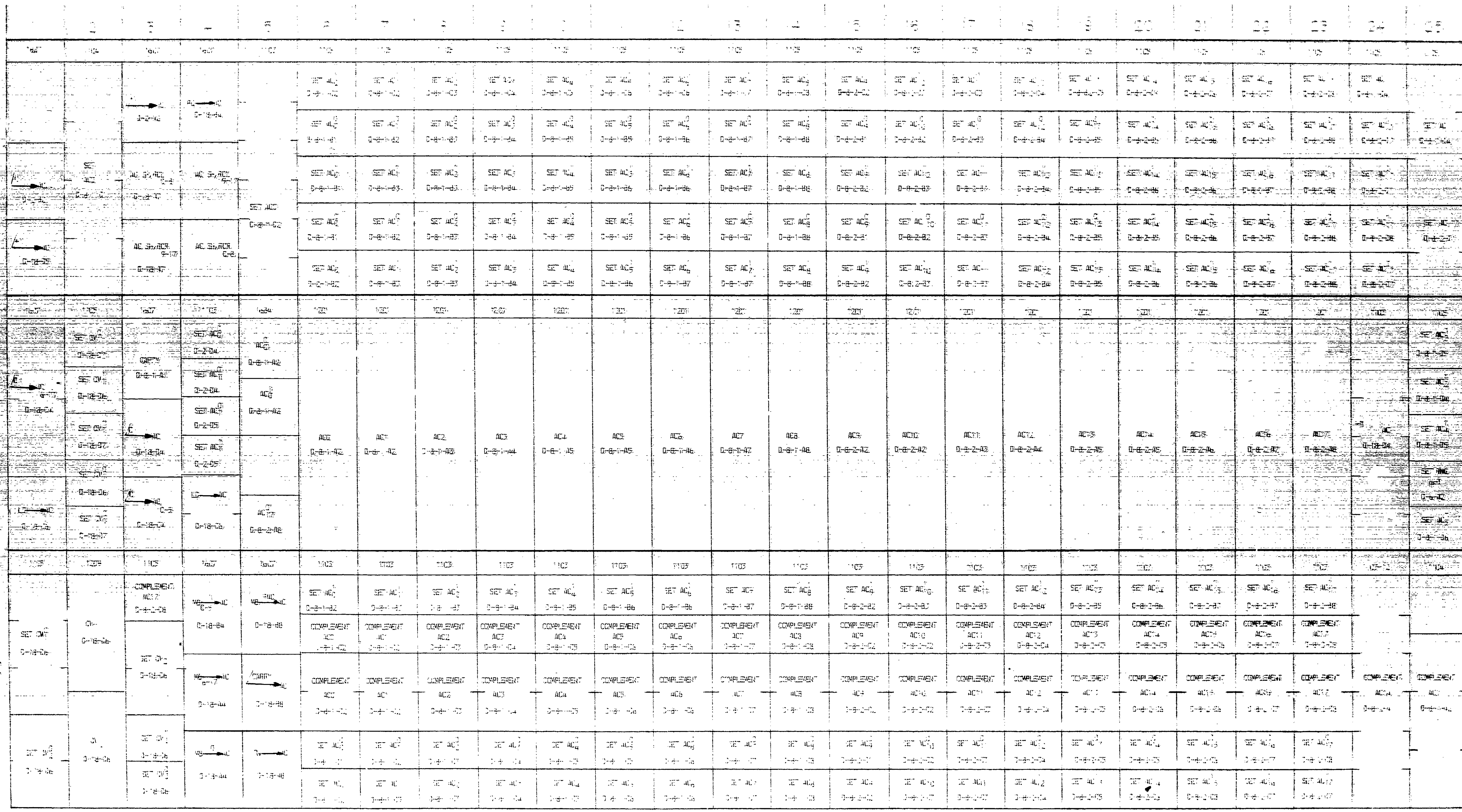
SHEET 7 OF 15

D-ID-45-20-8 REV A

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1607	1104	1607	1607	1103	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105	1105
		+1 → AC D-2-A2	PC → AC D-18-B4		SET AC_0^1 D-8-1-C2	SET AC_1^1 D-8-1-C2	SET AC_2^1 D-8-1-C3	SET AC_3^1 D-8-1-C4	SET AC_4^1 D-8-1-C5	SET AC_5^1 D-8-1-C6	SET AC_6^1 D-8-1-C6	SET AC_7^1 D-8-1-C7	SET AC_8^1 D-8-1-C8	SET AC_9^1 D-8-2-C2	SET AC_{10}^1 D-8-2-C3	SET AC_{11}^1 D-8-2-C3	SET AC_{12}^1 D-8-2-C4	SET AC_{13}^1 D-8-B2-C5	SET AC_{14}^1 D-8-2-C5	SET AC_{15}^1 D-8-2-C6	SET AC_{16}^1 D-8-2-C7	SET AC_{17}^1 D-8-2-C8	SET AC D-8-1-D4	
					SET AC_0^0 B-8-1-B1	SET AC_1^0 D-8-1-B2	SET AC_2^0 D-8-1-B3	SET AC_3^0 D-8-1-B4	SET AC_4^0 D-8-1 B5	SET AC_5^0 D-8-1-B5	SET AC_6^0 D-8-1-B6	SET AC_7^0 D-8-1-B7	SET AC_8^0 D-8-1-B8	SET AC_9^0 D-8-2-B1	SET AC_{10}^0 D-8-2-B2	SET AC_{11}^0 D-8-2-B3	SET AC_{12}^0 D-8-2-B4	SET AC_{13}^0 D-8-2-B5	SET AC_{14}^0 D-8-2-B5	SET AC_{15}^0 D-8-2-B6	SET AC_{16}^0 D-8-2-B7	SET AC_{17}^0 D-8-2-B8	SET AC_{17}^1 D-8-2-D7	SET AC D-8-1-D4
2A	SET ACO D-8-1-D1	AC SH/ROL 0-8 D-18-A7	AC SH/ROL 9-17	SET ACO D-8-1-D2	SET AC_0^1 D-8-1-B1	SET AC_1^1 D-8-1-B3	SET AC_2^1 D-8-1-B3	SET AC_3^1 D-8-1-B4	SET AC_4^1 D-8-1-B5	SET AC_5^1 D-8-1-B6	SET AC_6^1 D-8-1-B6	SET AC_7^1 D-8-1-B7	SET AC_8^1 D-8-1-B8	SET AC_9^1 D-8-2-B2	SET AC_{10}^1 D-8-2-B3	SET AC_{11}^1 D-8-2-B3	SET AC_{12}^1 D-8-2-B4	SET AC_{13}^1 D-8-2-B5	SET AC_{14}^1 D-8-2-B6	SET AC_{15}^1 D-8-2-B6	SET AC_{16}^1 D-8-2-B7	SET AC_{17}^1 D-8-2-B8	SET AC_{17}^0 D-8-2-D7		2A
					SET AC_0^0 D-8-1-B1	SET AC_1^0 D-8-1-B2	SET AC_2^0 D-8-1-B3	SET AC_3^0 D-8-1-B4	SET AC_4^0 D-8-1-B5	SET AC_5^0 D-8-1-B5	SET AC_6^0 D-8-1-B6	SET AC_7^0 D-8-1-B7	SET AC_8^0 D-8-1-B8	SET AC_9^0 D-8-2-B1	SET AC $^0_{10}$ D-8-2-B2	SET AC_{11}^0 D-8-2-B3	SET AC_{12}^0 D-8-2-B4	SET AC_{13}^0 D-8-2-B5	SET AC_{14}^0 D-8-2-B5	SET AC_{15}^0 D-8-2-B6	SET AC_{16}^0 D-8-2-B7	SET AC_{17}^0 D-8-2-B8	SET AC_{17}^1 D-8-2-D8	SET AC 17 D-8-2-D7
		AC SH/ROR 9-17 D-18-A7	AC SH/ROR 0-8		SET AC_0^0 D-8-1-B2	SET AC_1^0 D-8-1-B3	SET AC_2^0 D-8-1-B3	SET AC_3^0 D-8-1-B4	SET AC_4^0 D-8-1-B5	SET AC_5^0 D-8-1-B6	SET AC_6^0 D-8-1-B7	SET AC_7^0 D-8-1-B7	SET AC_8^0 D-8-1-B8	SET AC_9^0 D-8-2-B2	SET AC_{10}^0 D-8.2-B3	SET AC_{11}^0 D-8-2-B3	SET AC_{12}^0 D-8-2-B4	SET AC_{13}^0 D-8-2-B5	SET AC_{14}^0 D-8-2-B6	SET AC_{15}^0 D-8-2-B6	SET AC_{16}^0 D-8-2-B7	SET AC_{17}^0 D-8-2-B8	SET AC_{17}^1 D-8-2-D8		
1607	1105	1607	1103	1684	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1201	1103	1105
	SET OV_1^0 D-18-D7	CARRY D-8-1-A1	SET AC_0^0 D-2-D4	AC_0^0 D-8-1-A2																				SET AC_3^1 D-8-1-D5
+0 → AC 6-17 D-18-C4	SET OV_1^1 D-18-D6		SET AC_1^1 D-2-D4	AC_0^1 D-8-1-A2																				SET AC_2^1 D-8-1-D4
	SET OV_1^1 D-18-D7	+1 → AC D-18-D4	SET AC_1^0 D-2-D5																				+1 AC D-18-D4	SET AC_4^1 D-8-1-D5
	SET OV_1^0 D-18-D6	0 → AC 0-5	LD → AC D-18-C6		ACO D-8-1-A2	AC1 D-8-1-A2	AC2 D-8-1-A3	AC3 D-8-1-A4	AC4 D-8-1-A5	AC5 D-8-1-A5	AC6 D-8-1-A6	AC7 D-8-1-A7	AC8 D-8-1-A8	AC9 D-8-2-A2	AC10 D-8-2-A2	AC11 D-8-2-A3	AC12 D-8-2-A4	AC13 D-8-2-A5	AC14 D-8-2-A5	AC15 D-8-2-A6	AC16 D-8-2-A7	AC17 D-8-2-A8		SET RNG PC^0 D-6-A2
LD → AC D-18-C6	SET OV_1^0 D-18-D7	D-18-C4	D-18-C6	AC_{17}^0 D-8-2-A8																				SET AC_5^1 D-8-1-D6
1105	1209	1105	1607	1607	1103	1103	1103	1103	1103	1103	1103	1103	1103	1103	1103	1103	1103	1103	1103	1103	1103	1103	1103-12	1104
		COMPLEMENT AC17 D-8-2-D8	MB 1 → AC 0-5	MB PAD → AC	SET AC_0^1 D-8-1-B2	SET AC_1^1 D-8-1-B3	SET AC_2^1 D-8-1-B3	SET AC_3^1 D-8-1-B4	SET AC_4^1 D-8-1-B5	SET AC_5^1 D-8-1-B6	SET AC_6^1 D-8-1-B6	SET AC_7^1 D-8-1-B7	SET AC_8^1 D-8-1-B8	SET AC_9^1 D-8-2-B2	SET AC_{10}^1 D-8-2-B3	SET AC_{11}^1 D-8-2-B3	SET AC_{12}^1 D-8-2-B4	SET AC_{13}^1 D-8-2-B5	SET AC_{14}^1 D-8-2-B6	SET AC_{15}^1 D-8-2-B7	SET AC_{16}^1 D-8-2-B7	SET AC_{17}^1 D-8-2-B8			
SET OV_1^0 D-18-D6	OV_1 D-18-D6		D-18-B4	D-18-B8	COMPLEMENT ACO D-8-1-C2	COMPLEMENT AC1 D-8-1-C2	COMPLEMENT AC2 D-8-1-C3	COMPLEMENT AC3 D-8-1-C4	COMPLEMENT AC4 D-8-1-C5	COMPLEMENT AC5 D-8-1-C6	COMPLEMENT AC6 D-8-1-C6	COMPLEMENT AC7 D-8-1-C7	COMPLEMENT AC8 D-8-1-C8	COMPLEMENT AC9 D-8-2-C2	COMPLEMENT AC10 D-8-2-C2	COMPLEMENT AC11 D-8-2-C3	COMPLEMENT AC12 D-8-2-C4	COMPLEMENT AC13 D-8-2-C5	COMPLEMENT AC14 D-8-2-C5	COMPLEMENT AC15 D-8-2-C6	COMPLEMENT AC16 D-8-2-C7	COMPLEMENT AC17 D-8-2-C8			
2C		SET OV_2 D-18-D6	MB 1 → AC 6-17 D-18-A4	CARRY → AC D-18-B8	COMPLEMENT ACO D-8-1-C2	COMPLEMENT AC1 D-8-1-C2	COMPLEMENT AC2 D-8-1-C3	COMPLEMENT AC3 D-8-1-C4	COMPLEMENT AC4 D-8-1-C5	COMPLEMENT AC5 D-8-1-C6	COMPLEMENT AC6 D-8-1-C6	COMPLEMENT AC7 D-8-1-C7	COMPLEMENT AC8 D-8-1-C8	COMPLEMENT AC9 D-8-2-C2	COMPLEMENT AC10 D-8-2-C2	COMPLEMENT AC11 D-8-2-C3	COMPLEMENT AC12 D-8-2-C4	COMPLEMENT AC13 D-8-2-C5	COMPLEMENT AC14 D-8-2-C6	COMPLEMENT AC15 D-8-2-C6	COMPLEMENT AC16 D-8-2-C7	COMPLEMENT AC17 D-8-2-C8	COMPLEMENT AC14 D-8-2-4	COMPLEMENT AC1 D-8-1-A2	2C
SET OV_2^0 D-18-D6	OV_2 D-18-D6	SET OV_2^1 D-18-D6	MB 0 → AC D-18-A4	TW 1 → AC D-18-A8	SET AC_0^0 D-8-1-C1	SET AC_1^0 D-8-1-C2	SET AC_2^0 D-8-1-C3	SET AC_3^0 D-8-1-C4	SET AC_4^0 D-8-1-C5	SET AC_5^0 D-8-1-C5	SET AC_6^0 D-8-1-C6	SET AC_7^0 D-8-1-C7	SET AC_8^0 D-8-1-C8	SET AC_9^0 D-8-2-C1	SET AC_{10}^0 D-8-2-C2	SET AC_{11}^0 D-8-2-C3	SET AC_{12}^0 D-8-2-C4	SET AC_{13}^0 D-8-2-C5	SET AC_{14}^0 D-8-2-C5	SET AC_{15}^0 D-8-2-C6	SET AC_{16}^0 D-8-2-C7	SET AC_{17}^0 D-8-2-C8			
		SET OV_2^0 D-18-D6			SET AC_0^1 D-8-1-C2	SET AC_1^1 D-8-1-C3	SET AC_2^1 D-8-1-C3	SET AC_3^1 D-8-1-C4	SET AC_4^1 D-8-1-C5	SET AC_5^1 D-8-1-C6	SET AC_6^1 D-8-1-C6	SET AC_7^1 D-8-1-C7	SET AC_8^1 D-8-1-C8	SET AC_9^1 D-8-2-C2	SET AC_{10}^1 D-8-2-C3	SET AC_{11}^1 D-8-2-C3	SET AC_{12}^1 D-8-2-C4	SET AC_{13}^1 D-8-2-C5	SET AC_{14}^1 D-8-2-C6	SET AC_{15}^1 D-8-2-C8	SET AC_{16}^1 D-8-2-C7	SET AC_{17}^1 D-8-2-C7			

DRWG #	CHANGE	REVISIONS	DRAWN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE UTILIZATION MODULE LOCATION
D-ID-45-20 (WAS A-321)	DATE	DATE	R. Mariano	11/9/64		FOR
SH 8 OF 16	ENG	ENG	CHECKED	DATE		
12-21-64			ENG	DATE	ASSY NO	CODE UML
			PROJ ENG	DATE		DRWG NO D-ID-45-20-8 REV LTR A
			PROD	DATE	SHEET 1 OF 1	

D-D-45-20



CHANGE | DATE | ENG

REVISIONS

DRAWN	DATE
CHECKED	DATE
ENG	DATE
PROJ ENG	DATE
PROD	DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION

FOR

ASSY NO. | CODE JML | DRWG NO. D-D-45-20

SHEET

D-1D-45-20-9 REV LTR A

	1	2	3	4	5	6	7	8	9	10	11	12
	1105	1111	1105	1103	1607	1204	1684	1204	1684	1204	1684	1204
2D	/0 → MB D-33-A5 AC —J→ MB 0-5 D-33-A6 AC —J→ MB 6-11 D-33-B6	AC —J→ MB 0-5 D-33-A5 AC —J→ MB 6-11 D-33-B5	/0 → MB D-33-A5 AC —J→ MB 6-11 D-33-B6 AC —J→ MB 0-5 D-33-A6	/0 → MB D-33-A6	COMPLEMENT AC17 D-8-2-A8 AC —J→ MB 12-17 D-33-A8 /0 → MB D-33-A8	MB0 D-53-A2 MB1 D-53-A2	MB^{0}_{0} D-53-A2 MB^{1}_{0} D-53-A2 MB^{0}_{1} D-53-A2 MB^{1}_{1} D-53-A3	MB2 D-53-A3 MB3 D-53-A4	MB^{0}_{2} D-53-A3 MB^{1}_{2} D-53-A3 MB^{0}_{3} D-53-A4 MB^{1}_{3} D-53-A4	MB4 D-53-A5 MB5 D-53-A5	MB^{0}_{4} D-53-A5 MB^{1}_{4} D-53-A5 MB^{0}_{5} D-53-A5 MB^{1}_{5} D-53-A5	MB6 D-53-A6 MB7 D-53-A7
	1104	1607	1607	1103	1607	1103	1685	1103	1111	1103	1685	1103
2E	/0 → MB D-33-A7 10^{1} → MB D-33-B7 /0 → MB D-33-A7	/C → 10 12-17 D-33-D4 /C → 10 0-5 D-33-D4 /C → 10 6-11 D-33-D4	/C → MB 12-17 D-33-A8 /C → MB 0-5 D-33-A8 /C → MB 6-11 D-33-A8	AC —J→ MB 0-5 D-33-B8 AC —J→ MB 6-11 D-33-B8 10 —J→ MB D-33-B8	AC —J→ MB 0-5 D-33-B8 AC —J→ MB 6-11 D-33-B8 10 —J→ MB D-33-A8	SET MB^{0}_{0} D-53-B1 SET MB^{1}_{0} D-53-B2 SET MB^{0}_{1} D-53-B2 SET MB^{1}_{1} D-53-B3	MB^{1}_{0} D-53-A2 MB^{1}_{2} D-53-A3 MB^{1}_{1} D-53-A3 MB^{1}_{3} D-53-A4	SET MB^{0}_{2} D-53-B3 SET MB^{1}_{2} D-53-B3 SET MB^{0}_{3} D-53-B4 SET MB^{1}_{3} D-53-B4	AC —J→ MB 12-17 D-33-B5	SET MB^{0}_{4} D-53-B4 SET MB^{1}_{4} D-53-B5 SET MB^{0}_{5} D-53-B5 SET MB^{1}_{5} D-53-B6	MB^{1}_{4} D-53-A5 MB^{1}_{6} D-53-A6 MB^{1}_{5} D-53-A5 MB^{1}_{7} D-53-A7	SET MB^{0}_{6} D-53-B6 SET MB^{1}_{6} D-53-B6 SET MB^{0}_{7} D-53-B6 SET MB^{1}_{7} D-53-B7
	1105	1103	1607	1103	1104	1104	1104	1104	1104	1104	1104	1104
2F	/0 → 10 D-33-C1 10 SH/ROR 9-17 D-33-D1	10 SH/ROR 9-17 D-33-D2 10 SH/ROR 0-8 D-33-C2 10 SH/ROR 9-17 D-33-D2 10 SH/ROL 0-8 D-33-C2	10 SH/ROR 9-8 D-33-C4 10 SH/ROL 0-8 D-33-C4 10 SH/ROR 9-17 D-33-C4	SET 10^{0}_{0} D-54-A1 SET 10^{1}_{1} D-54-A2 SET 10^{1}_{0} D-54-B2 SET 10^{0}_{0} D-54-B1	SET 10^{0}_{0} D-54-A1 SET 10^{1}_{0} D-54-A2 SET 10^{0}_{0} D-54-A1 SET 10^{1}_{0} D-54-A2	SET 10^{0}_{1} D-54-A2 SET 10^{1}_{1} D-54-A3 SET 10^{0}_{1} D-54-A2 SET 10^{1}_{1} D-54-A3	SET 10^{0}_{2} D-54-A3 SET 10^{1}_{2} D-54-A3 SET 10^{0}_{2} D-54-A3 SET 10^{1}_{2} D-54-A3	SET 10^{0}_{3} D-54-A4 SET 10^{1}_{3} D:54-A4 SET 10^{0}_{3} D-54-A4 SET 10^{1}_{3} D-54-A4	SET 10^{0}_{4} D-54-A4 SET 10^{1}_{4} D-54-A5 SET 10^{0}_{4} D-54-A4 SET 10^{1}_{4} D-54-A5	SET 10^{0}_{5} D-54-A5 SET 10^{1}_{5} D-54-A5 SET 10^{0}_{5} D-54-A5 SET 10^{1}_{5} D-54-A5	SET 10^{0}_{6} D-54-A6 SET 10^{1}_{6} D-54-A6 SET 10^{0}_{6} D-54-A6 SET 10^{1}_{6} D-54-A6	SET 10^{0}_{7} D-54-A6 SET 10^{1}_{7} D-54-A7 SET 10^{0}_{7} D-54-A6 SET 10^{1}_{7} D-54-A7

	13	14	15	16	17	18	19	20	21	22	23	24	25
	1684	1204	1684	1204	1684	1204	1684	1204	1684	1204	1684	1103	1111
2D	MB^{0}_{6} D-53-A6 MB^{1}_{6} D-53-A6 MB^{0}_{7} D-53-A7 MB^{1}_{7} D-53-A7	MB8 D-53-A8 MB9 D-53-C2	MB^{0}_{8} D-53-A7 MB^{1}_{8} D-53-A8 MB^{0}_{9} D-53-C2 MB^{1}_{9} D-53-C2	MB10 D-53-C2 MB11 D-53-C3	MB^{0}_{10} D-53-C2 MB^{1}_{10} D-53-C2 MB^{0}_{11} D-53-C3 MB^{1}_{11} D-53-C3	MB12 D-53-C4 MB13 D-53-C5	MB^{0}_{12} D-53-C4 MB^{1}_{12} D-53-C4 MB^{0}_{13} D-53-C4 MB^{1}_{13} D-53-C5	MB14 D-53-C5 MB15 D-53-C6	MB^{0}_{14} D-53-C5 MB^{1}_{14} D-53-C5 MB^{0}_{15} D-53-C6 MB^{1}_{15} D-53-C6	MB16 D-53-C7 MB17 D-53-C8	MB^{0}_{16} D-53-C7 MB^{1}_{16} D-53-C7 MB^{0}_{17} D-53-C7 MB^{1}_{17} D-53-C8	$FF^{1}_{1} \cdot FF^{0}_{2}$ D-18-B3 $MB^{1}_{6-17} \rightarrow AC$ D-18-A4 $MB^{1}_{0-5} \rightarrow AC$ D-18-B4 $FF^{1}_{1} \cdot FF^{1}_{2}$ D-18-B7 /CARRY → AC D-18-B7 MB —PAD→ AC D-18-B8	AC=10R-0 D-18-D8
	1103	1103	1685	1103	1607	1103	1685	1103	1685	1103	1685	1111	1111
2E	AC —J→ MB 12-17 D-33-B6 AC —J→ MB 12-17 D-33-B7 AC —J→ MB 12-17 D-33-B7	SET MB^{0}_{8} D-53-B7 SET MB^{1}_{8} D-53-B8 SET MB^{0}_{9} D-53-C1 SET MB^{1}_{9} D-53-C2	MB^{1}_{8} D-53-A8 MB^{1}_{10} D-53-B2 MB^{1}_{9} D-53-B2 MB^{1}_{11} D-53-B3	SET MB^{0}_{10} D-53-C2 SET MB^{1}_{10} D-53-C2 SET MB^{0}_{11} D-53-C3 SET MB^{1}_{11} D-53-C3	SET RMB^{1}_{2} D-5-D5 SET RMB^{1}_{3} D-5-D6	SET MB^{0}_{12} D-53-C4 SET MB^{1}_{12} D-53-C4 SET MB^{C}_{13} D-53-C4 SET MB^{1}_{13} D-53-C5	MB^{1}_{12} D-53-B4 MB^{1}_{14} D-53-B5 MB^{1}_{13} D-53-B5 MB^{1}_{15} D-53-B6	SET MB^{0}_{14} D-53-C5 SET MB^{1}_{14} D-53-C6 SET MB^{0}_{15} D-53-C6 SET MB^{1}_{15} D-53-C6	AC^{1}_{15} D-8-2-A6 AC^{1}_{16} D-8-2-A7 AC^{1}_{17} D-8-2-A8	SET MB^{0}_{16} D-53-C7 SET MB^{1}_{16} D-53-C7 SET MB^{0}_{17} D-53-C7 SET MB^{1}_{17} D-53-C8	MB^{1}_{16} D-53-B7 MB^{1}_{17} D-53-B7	AC=+0 D-18-C8	AC=+0 D-18-C8
	1104	1104	1104	1104	1104	1104	1104	1104	1104	1104	1103	4113R	4113R
2F	SET 10^{0}_{8} D-54-A7 SET 10^{1}_{8} D-54-A8 SET 10^{0}_{8} D-54-A7 SET 10^{1}_{8} D-54-A8	SET 10^{0}_{9} D-54-C1 SET 10^{1}_{9} D-54-C2 SET 10^{0}_{9} D-54-C1 SET 10^{1}_{9} D-54-C2	SET 10^{0}_{10} D-54-C2 SET 10^{1}_{10} D-54-C3 SET 10^{0}_{10} D-54-C2 SET 10^{1}_{10} D-54-C3	SET 10^{0}_{11} D-54-C3 SET 10^{1}_{11} D-54-C3 SET 10^{0}_{11} D-54-C3 SET 10^{1}_{11} D-54-C3	SET 10^{0}_{12} D-54-C4 SET 10^{1}_{12} D-54-C4 SET 10^{0}_{12} D-54-C4 SET 10^{1}_{12} D-54-C4	SET 10^{0}_{13} D-54-C4 SET 10^{1}_{13} D-54-C5 SET 10^{0}_{13} D-54-C4 SET 10^{1}_{13} D-54-C5	SET 10^{0}_{14} D-54-C5 SET 10^{1}_{14} D-54-C5 SET 10^{0}_{14} D-54-C5 SET 10^{1}_{14} D-54-C5	SET 10^{0}_{15} D-54-C6 SET 10^{1}_{15} D-54-C6 SET 10^{0}_{15} D-54-C6 SET 10^{1}_{15} D-54-C6	SET 10^{0}_{16} D-54-C6 SET 10^{1}_{16} D-54-C7 SET 10^{0}_{16} D-54-C6 SET 10^{1}_{16} D-54-C7	SET 10^{0}_{17} D-54-C7 SET 10^{1}_{17} D-54-C8 SET 10^{0}_{17} D-54-C7 SET 10^{1}_{17} D-54-C8	SET 10^{1}_{17} D-54-C8 SET 10^{0}_{17} D-54-C7 SET 10^{1}_{17} D-54-C8 SET 10^{1}_{17} D-54-C7 SET 10^{0}_{17} D-54-C	AC^{0}_{0} D-8-1-A2 AC^{0}_{1} D-8-1-A5 AC^{0}_{2} D-8-1-A3 AC^{0}_{3} D-8-1-A4 AC^{0}_{4} D-8-1-A5 AC^{0}_{5} D-8-1-A6	AC^{0}_{6} D-8-1-A6 AC^{0}_{7} D-8-1-A7 AC^{0}_{8} D-8-1-A7 AC^{0}_{9} D-8-1-A1

CHANGE	DATE	ENG
A-321 DWG # WAS D-IP-45-20 SHEET 9	12-18-64	E.R.

REVISIONS

DRAWN M. Mariano DATE 7/21/64
CHECKED DATE 11/4/64
ENG DATE
PROJ ENG DATE
PROD DATE

digital
EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION
FOR
ASSY NO
CODE UML
DRWG NO D-ID-45-20-9
REV LTR A
SHEET 1 OF 1

D-ID-45-20 REV LTR

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
1105	1111	1105	1103	1607	1204	1684	1204	1684	1204	1684	1204	1684	1204	1684	1204	1684	1204	1684	1204	1684	1204	1684		1111
/0 → MB D-33-A5				COMPLEMENT AC17 D-8-2-A8		MB_0^0 D-53-A2		MB_2^0 D-53-A3		MB_4^0 D-53-A5		MB_6^0 D-53-A6		MB_8^0 D-53-A7		MB_{10}^0 D-53-C2		MB_{12}^0 D-53-C4		MB_{14}^0 D-53-C5		MB_{16}^0 D-53-C7		
AC → MB 0-5 D-33-A5	AC → MB 0-5 D-33-A5	/0 → MB D-33-A5			MB0 D-53-A2	MB_0^1 D-53-A2	MB2 D-53-A3	MB_2^1 D-53-A3	MB4 D-53-A5	MB_4^1 D-53-A5	MB6 D-53-A6	MB_6^1 D-53-A6	MB8 D-53-A8	MB_8^1 D-53-A8	MB10 D-53-C2	MB_{10}^1 D-53-C2	MB12 D-53-C4	MB_{12}^1 D-53-C4	MB14 D-53-C5	MB_{14}^1 D-53-C5	MB16 D-53-C7	MB_{16}^1 D-53-C7		
D-33-A6			/0 → MB D-33-A6	AC → MB 12-17 D-33-A8																				AC=10R-0 D-18-D8
AC → MB 6-11 D-33-B6	AC → MB 6-11 D-33-B5	AC → MB 6-11 D-33-B6		/0 → MB D-33-A8	MB1 D-53-A2	MB_1^0 D-53-A2	MB3 D-53-A4	MB_3^0 D-53-A4	MB5 D-53-A5	MB_5^0 D-53-A5	MB7 D-53-A7	MB_7^0 D-53-A7	MB9 D-53-C2	MB_9^0 D-53-C2	MB11 D-53-C3	MB_{11}^0 D-53-C3	MB13 D-53-C5	MB_{13}^0 D-53-C4	MB15 D-53-C6	MB_{15}^0 D-53-C6	MB17 D-53-C8	MB_{17}^0 D-53-C7		
D-33-B6		AC → MB 0-5 D-33-A6				MB_1^1 D-53-A3		MB_3^1 D-53-A4		MB_5^1 D-53-A5		MB_7^1 D-53-A7		MB_9^1 D-53-C2		MB_{11}^1 D-53-C3		MB_{13}^1 D-53-C5		MB_{15}^1 D-53-C6		MB_{17}^1 D-53-C8		
1104	1607	1607	1103	1607	1103	1685	1103	1111	1103	1685	1103	1103	1103	1685	1103	1607	1103	1685	1103	1685	1103	1685	1111	1111
/0 → MB D-33-A7	/C → IO 12-17 D-33-D4	/C → MB 12-17 D-33-A8	AC → MB 0-5 D-33-B8	AC → MB 0-5 D-33-B8	SET MB_0^0 D-53-B1	MB_0^1 D-53-A2	SET MB_2^0 D-53-B3	AC → MB 12-17 D-33-B5	SET MB_4^0 D-53-B4	MB_4^1 D-53-A5	SET MB_6^0 D-53-B6	AC → MB 12-17 D-33-B6	SET MB_8^0 D-53-B7	MB_8^1 D-53-A8	SET MB_{10}^0 D-53-C2	SET RMB_2^1 D-5-D5	SET MB_{12}^0 D-53-C4	MB_{12}^1 D-53-B4	SET MB_{14}^0 D-53-C5	AC_{15}^1 D-8-2-A6	SET MB_{16}^0 D-53-C7	MB_{16}^1 D-53-B7		AC=+0 D-18-C6
IO → MB D-33-B7					SET MB_0^1 D-53-B2		SET MB_2^1 D-53-B3		SET MB_4^1 D-53-B5		SET MB_6^1 D-53-B6		SET MB_8^1 D-53-B8	MB_{10}^1 D-53-B2	SET MB_{10}^1 D-53-C2		SET MB_{12}^1 D-53-C4		SET MB_{14}^1 D-53-C6	AC_{16}^1 D-8-2-A7	SET MB_{16}^1 D-53-C7			
/0 → MB D-33-A7	/C → IO 6-11 D-33-D4	/C → MB 6-11 D-33-A8	IO → MB D-33-B8	IO → MB D-33-A8	SET MB_0^0 D-53-B2	MB_1^1 D-53-A3	SET MB_3^0 D-53-B4		SET MB_5^0 D-53-B5	MB_5^1 D-53-A5	SET MB_7^0 D-53-B6	AC → MB 12-17 D-33-B7	SET MB_9^0 D-53-C1	MB_9^1 D-53-B2	SET MB_{11}^0 D-53-C3	SET RMB_3^1 D-5-D6	SET MB_{13}^0 D-53-C4	MB_{13}^1 D-53-B5	SET MB_{15}^0 D-53-C6	AC_{17}^1 D-8-2-A8	SET MB_{17}^0 D-53-C7	MB_{17}^1 D-53-B7		D-18-C8
					SET MB_1^1 D-53-B3	MB_3^1 D-53-A4	SET MB_3^1 D-53-B4		SET MB_5^1 D-53-B6	MB_7^1 D-53-A7	SET MB_7^1 D-53-B7	AC → MB 12-17 D-33-B7	SET MB_9^1 D-53-C2	MB_{11}^1 D-53-B3	SET MB_{11}^1 D-53-C3		SET MB_{13}^1 D-53-C5	MB_{15}^1 D-53-B6	SET MB_{15}^1 D-53-C6		SET MB_{17}^1 D-53-C8			
1105	1103	1607	1103	1104	1104	1104	1104	1104	1104	1104	1104	1104	1104	1104	1104	1104	1104	1104	1104	1104	1104	1103	4113R	4113R
/0 → IO D-33-C1	IC SH/ROR 9-17 D-33-D2	IC SH/ROR 9-8 D-33-C4	SET IO_0^0 D-54-A1	SET IO_0^0 D-54-A1	SET IO_0^0 D-54-A2	SET IO_1^0 D-54-A2	SET IO_2^0 D-54-A3	SET IO_3^0 D-54-A4	SET IO_4^0 D-54-A4	SET IO_5^0 D-54-A5	SET IO_6^0 D-54-A6	SET IO_7^0 D-54-A6	SET IO_8^0 D-54-A7	SET IO_9^0 D-54-C1	SET IO_{10}^0 D-54-C2	SET IO_{11}^0 D-54-C3	SET IO_{12}^0 D-54-C4	SET IO_{13}^0 D-54-C4	SET IO_{14}^0 D-54-C5	SET IO_{15}^0 D-54-C6	SET IO_{16}^0 D-54-C6	SET IO_{17}^0 D-54-C7	SET IO_{17}^1 D-54-C8	AC_0^0 D-8-1-A2	AC_6^0 D-8-1-A6
			SET IO_0^1 D-54-A1	SET IO_0^1 D-54-A2	SET IO_1^1 D-54-A3	SET IO_2^1 D-54-A3	SET IO_3^1 D-54-A4	SET IO_4^1 D-54-A5	SET IO_5^1 D-54-A5	SET IO_6^1 D-54-A6	SET IO_7^1 D-54-A7	SET IO_8^1 D-54-A8	SET IO_9^1 D-54-C2	SET IO_{10}^1 D-54-C3	SET IO_{11}^1 D-54-C3	SET IO_{12}^1 D-54-C4	SET IO_{13}^1 D-54-C5	SET IO_{14}^1 D-54-C5	SET IO_{15}^1 D-54-C6	SET IO_{16}^1 D-54-C7	SET IO_{17}^1 D-54-C8	SET IO_{17}^1 D-54-C7	AC_1^0 D-8-1-A3	AC_7^0 D-8-1-A7
IC SH/ROR 9-17 D-33-D1	IC SH/ROR 0-8 D-33-C2	IC SH/ROL 0-8 D-33-C4	SET IO_0^0 D-54-B2	SET IO_0^0 D-54-A1	SET IO_1^0 D-54-A2	SET IO_2^0 D-54-A3	SET IO_3^0 D-54-A4	SET IO_4^0 D-54-A4	SET IO_5^0 D-54-A5	SET IO_6^0 D-54-A6	SET IO_7^0 D-54-A6	SET IO_8^0 D-54-A7	SET IO_9^0 D-54-C1	SET IO_{10}^0 D-54-C2	SET IO_{11}^0 D-54-C3	SET IO_{12}^0 D-54-C4	SET IO_{13}^0 D-54-C4	SET IO_{14}^0 D-54-C5	SET IO_{15}^0 D-54-C6	SET IO_{16}^0 D-54-C6	SET IO_{17}^0 D-54-C7	SET IO_{17}^1 D-54-C7	AC_2^0 D-8-1-A3	AC_8^0 D-8-1-A7
				SET IO_0^1 D-54-A2	SET IO_1^1 D-54-A3	SET IO_2^1 D-54-A3	SET IO_3^1 D-54-A4	SET IO_4^1 D-54-A5	SET IO_5^1 D-54-A5	SET IO_6^1 D-54-A6	SET IO_7^1 D-54-A7	SET IO_8^1 D-54-A8	SET IO_9^1 D-54-C2	SET IO_{10}^1 D-54-C3	SET IO_{11}^1 D-54-C3	SET IO_{12}^1 D-54-C4	SET IO_{13}^1 D-54-C5	SET IO_{14}^1 D-54-C5	SET IO_{15}^1 D-54-C6	SET IO_{16}^1 D-54-C7	SET IO_{17}^1 D-54-C8			
	IC SH/ROR 9-17 D-33-D2	IC SH/ROR 9-17 D-33-C4	SET IO_0^0 D-54-B1																					
	IC SH/ROL 0-8 D-33-C2																							

CHANGE	DATE	ENG

REVISIONS

DRAWN	M. Mariano	DATE 11/21/64
CHECKED		DATE
ENG		DATE
PROJ ENG		DATE
PROD		DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

ASSY NO | CODE UML | SHEET | OF

TITLE UTILIZATION MODULE LOCATION

FOR

DRWG NO D-ID-45-20 REV LTR

D-ID-45-20-10 REV LTR A

2H

Slot	Module	Contents
1	4113	PBS^1 D-61-D5
2	1105	0 →IO D-33-B1; IO SH/RGL 0-8 D-33-C1
3	1103	RB→IO D-61-D5; /0→IO D-33-B3; RB→IO D-61-D5; SET IO_0 D-54-B1
4	1103	/0→IO D-33-B2; MB 1→IO D-33-C2; /0→IO D-33-B2
5	1607	MB 1→IO D-33-C3; IO SH/RGL 9-17 D-33-C4; /0→IO D-33-B3
6	1204	IO_0 D-54-A2; IO_1 D-54-A2
7	1685	IO_0^0 D-54-A2; IO_1^0 D-54-A2; IO_0^1 D-54-A2
8	1204	IO_2 D-54-A3; IO_3 D-54-A4
9	1103	SET IO_0^1 D-54-B2; SET IO_1^1 D-54-B2; SET IO_2^1 D-54-B3; SET IO_3^1 D-54-B4; SET IO_4^1 D-54-B5; SET IO_5^1 D-54-B6
10	1204	IO_4 D-54-A5; IO_5 D-54-A5
11	1685	IO_2^0 D-54-A3; IO_3^0 D-54-A4; IO_4^0 D-54-A4; IO_5^0 D-54-A5
12	1204	IO_6 D-54-A6; IO_7 D-54-A7
13	1685	IO_6^0 D-54-A6; IO_7^0 D-54-A7; IO_8^0 D-54-A7; IO_9^0 D-54-B2
14	1204	IO_8 D-54-A8; IO_9 D-54-C2
15	1103	SET IO_6^1 D-54-36; SET IO_7^1 D-54-B7; SET IO_8^1 D-54-B8; SET IO_9^1 D-54-D2; SET IO_{10}^1 D-54-D2; SET IO_{11}^1 D-54-B3
16	1204	IO_{10} D-54-C2; IO_{11} D-54-C3
17	1685	IO_{10}^0 D-54-B2; IO_{11}^0 D-54-B3; IO_{12}^0 D-54-B4; IO_{13}^0 D-54-B4
18	1204	IO_{12} D-54-C4; IO_{13} D-54-C4
19	1685	IO_{14}^0 D-54-B5; IO_{15}^0 D-54-B6; IO_{16}^0 D-54-B7; IO_{17}^0 D-54-B8
20	1204	IO_{14} D-54-C5; IO_{15} D-54-C6
21	1103	SET IO_{12}^1 D-54-D4; SET IO_{13}^1 D-54-D5; SET IO_{14}^1 D-54-D5; SET IO_{15}^1 D-54-D6; SET IO_{16}^1 D-54-D7; SET IO_{17}^1 D-54-D7
22	1204	IO_{16} D-54-C7; IO_{17} D-54-C8
23	1104	SET IO_{17} D-54-D8
24	1111	IO→0 D-57-B7
25	1111	IO→0 D-57-B8

2J

Slot	Module	Contents
1	4603	■→IO D-61-D5
2	4129	IM_0 D-9-B1; IM_1 D-9-B2
3	4129	IM_0 D-9-A1; IM_1 D-9-A2
4	4603	IM_0 D-9-A1; IM_1 D-9-A2; IM_2 D-9-A3
5	4129	IM_2 D-9-A3; IM_3 D-9-A3
6	4129	IM_2 D-9-B3; IM_3 D-9-B3
7	4603	IM_3 D-9-A3; IM_4 D-9-A4; IM_5 D-9-A5
8	4129	IM_5 D-9-A5; IM_4 D-9-A4
9	4129	IM_5 D-9-B5; IM_4 D-9-B4
10	4129	IM_6 D-9-B6; IM_7 D-9-B6
11	4129	IM_6 D-9-A7; IM_7 D-9-A7
12	4603	IM_6 D-9-A6; IM_7 D-9-A6; IM_8 D-9-A7
13	4129	IM_8 D-9-A7; IM_9 D-9-C1
14	4129	IM_8 D-9-A7; IM_9 D-9-D1
15	4603	IM_9 D-9-C1; IM_{10} D-9-C2; IM_{11} D-9-C3
16	4129	IM_{11} D-9-C3; IM_{10} D-9-C2
17	4129	IM_{11} D-9-D3; IM_{10} D-9-D2
18	4129	IM_{12} D-9-D3; IM_{13} D-9-D4
19	4129	IM_{12} D-9-C3; IM_{13} D-9-C4
20	4603	IM_{12} D-9-C3; IM_{13} D-9-C4; IM_{14} D-9-C5
21	4129	IM_{14} D-9-C5; IM_{15} D-9-C6
22	4129	IM_{14} D-9-D5; IM_{15} D-9-D6
23	4603	IM_{15} D-9-C6; IM_{16} D-9-C7; IM_{17} D-9-C7
24	4129	IM_{17} D-9-C8; IM_{16} D-9-C7
25	4129	IM_{17} D-9-D8; IM_{16} D-9-D7

2K

Slot	Module	Contents
1		
2	1311	MD /C→MB D-57-E1; MDF-IC C → D-57-E8
3	1105	MD RESTART /→RUN,TPO D-57-B6; MD /C→MB D-57-B1
4	1607	GOOD DIVIDE D-57-B2; MD /C→AC D-57-B2
5	1105	MD /C→AC D-57-D1; MD /C→AC D-57-D1
6	4113	MD /C→IO D-57-D1; MD /C→AC D 57 D1
7	1105	MD /C→IO D-57-D2
8	1607	MD CARRY D-57-D2; MD /C→IO D-57-C2; MD /C→AC D-57-D2
9	1105	AC=-0 D-57-B4; MD CARRY D-57-D1
10	1105	AC IO=+0 D-57-D3; MUL + DIV D-57-A5
11	1607	MD;AC—J→MB /0→IO D-57-A3; MD;MB—1→IO D-57-A3
12	1111	SCR=22 D-57-A8
13	1111	SCR=21 D-57-A7; SCR=Ø D-57 A7
14	1105	SPQ D-57-A5; SET SMB^1 D-57-A5; SET SRM^1 D-57-A6
15	1209	SMB D-57-A5; SRM D-57-A6
16	1105	MD 0 RUN D-57-A6; SET SRM^1 D-57-A6; MD;MB—1→TO D-57-B3
17	4113	MDP-11 D-57-C8; DIV-CY 1→TP10 D-57-A1; MUL-CY 1→TP10 D-57-A1
18	1607	MUL•CY 1→TP10 D-57-A2; DIV•CY 1→TP10 D-57-A1; CLR SCR D-57-A1
19	1201	SCR 4 D-57-A5
20	1201	SCR 3 D-57-A4
21	1201	SCR 2 D-57-A3
22	1201	SCR 1 D-57-A3
23	1201	SCR 0 D-57-A2
24		
25		

DRWG # WAS D-ID-45-20 SH 10 OF 16 A-321

CHANGE | DATE | ENG | REVISIONS

DRAWN | DATE
CHECKED | DATE
ENG | DATE
PROJ. ENG | DATE
PROD | DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION

FOR

ASSY NO | CODE UML | DRWG NO D-ID-45-20-10 | REV A

SHEET OF

D-ID-45-2C

Slot	2H module	2H	2J module	2J	2K module	2K
1	4113	RBS[1] D-61-D5	4603	RB → IO D-61-D5		
2	1105	0 → IO D-33-B1; IO SH/RCL 0-8 D-33-C1	4129	IM_0 D-9-B1; IM_1 D-9-B2	1311	MD /C → MB D-57-B1; MDP→IO /0 → MB D-57-C8
3	1105	RB → IO D-61-D5; /0 → IO D-33-B3; RB → IO D-61-D5; SET IO_0 D-54-B1	4129	IM_0 D-9-A1; IM_1 D-9-A2	1105	MD RESTART /1 → RUN, TP0 D-57-B6; MD /C → MB D-57-B1
4	1103	/0 → IO D-33-B2; MB 1 → IO D-33-C2; /0 → IO D-33-B2	4603	IM_0 D-9-A1; IM_1 D-9-A2; IM_2 D-9-A3	1607	GOOD DIVIDE D-57-B2; MD /C → AC D-57-B2
5	1607	MB 1 → IO D-33-C3; IO SH/RCL 9-17 D-33-C4; /0 → IO D-33-B3	4129	IM_2 D-9-A3; IM_3 D-9-A3	1105	MD /C → AC D-57-D1; MD /C → AC D-57-D1
6	1204	IO_0 D-54-A2; IO_1 D-54-A2	4129	IM_2 D-9-B3; IM_3 D-9-B3	4113	MD /C → IO D-57-D1; MD /C → AC D-57-D1
7	1685	IO_0^0 D-54-A2; IO_1^0 D-54-A2; IO_0^1 D-54-A2	4603	IM_3 D-9-A3; IM_4 D-9-A4; IM_5 D-9-A5	1105	MD /C → IO D-57-D2
8	1204	IO_2 D-54-A3; IO_3 D-54-A4	4129	IM_5 D-9-A5; IM_4 D-9-A4	1607	MD CARRY D-57-D2; MD /C → IO D-57-C2; MD /C → AC D-57-D2
9	1103	SET IO_0^1 D-54-B2; SET IO_1^1 D-54-B2; SET IO_2^1 D-54-B3; SET IO_3^1 D-54-B4; SET IO_4^1 D-54-B5; SET IO_5^1 D-54-B6	4129	IM_5 D-9-B5; IM_4 D-9-B4	1105	AC=-0 D-57-B4; MD CARRY D-57-D1
10	1204	IO_4 D-54-A5; IO_5 D-54-A5	4129	IM_6 D-9-B6; IM_7 D-9-B6	1105	AC IO=+0 D-57-D3; MUL + DIV D-57-A5
11	1685	IO_2^0 D-54-A3; IO_3^0 D-54-A4; IO_4^0 D-54-A4; IO_5^0 D-54-A5	4129	IM_6 D-9-A7; IM_7 D-9-A7	1607	MD;AC —J→ MB; /0 → IO D-57-A3; MD;MB 1 → IO D-57-A3
12	1204	IO_6 D-54-A6; IO_7 D-54-A7	4603	IM_6 D-9-A6; IM_7 D-9-A6; IM_8 D-9-A7	1111	SCR=22 D-57-A8
13	1685	IO_6^0 D-54-A6; IO_7^0 D-54-A7; IO_8^0 D-54-A7; IO_9^0 D-54-B2	4129	IM_8 D-9-A7; IM_9 D-9-C1	1111	SCR=21 D-57-A7; SCR=Ø D 57 A7
14	1204	IO_8 D-54 A8; IO_9 D-54-C2	4129	IM_8 D-9-A7; IM_9 D-9-D1	1105	SPQ D-57-A5; SET SMB[1] D-57-A5; SET SRM[1] D-57-A6
15	1103	SET IO_6^1 D-54-B6; SET IO_7^1 D-54-B7; SET IO_8^1 D-54-B8; SET IO_9^1 D-54-D2; SET IO_{10}^1 D-54-D2; SET IO_{11}^1 D-54-D3	4603	IM_9 D 9 C1; IM_{10} D-9-C2; IM_{11} D-9-C3	1209	SMB D-57-A5; SRM D-57-A6
16	1204	IO_{10} D-54-C2; IO_{11} D-54-C3	4129	IM_{11} D-9-C3; IM_{10} D-9-C2	1105	MD 0 RUN D-57-A6; SET SRM[1] D 57-A6; MD;MB 1 → IO D-57 B3
17	1685	IO_{10}^0 D-54-B2; IO_{11}^0 D-54-B3; IO_{12}^0 D-54-B4; IO_{13}^0 D-54-B4	4129	IM_{11} D-9-D3; IM_{10} D-9-D2	4113	MDP-11 D-57-C8; DIV•CY 1•TP10 D-57-A1; MUL•CY 1•TP10 D-57-A1
18	1204	IO_{12} D-54-C4; IO_{13} D-54-C4	4129	IM_{12} D-9-D3; IM_{13} D-9-D4	1607	MUL•CY 1•TP10 D-57-A2; DIV•CY 1•TP10 D-57-A1; CLR SCR D-57-A1
19	1685	IO_{14}^0 D-54-B5; IO_{15}^0 D-54-B6; IO_{16}^0 D-54-B7; IO_{17}^0 D-54-B8	4129	IM_{12} D-9-C3; IM_{13} D-9-C4	1201	SCR 4 D-57-A5
20	1204	IO_{14} D-54-C5; IO_{15} D-54-C6	4603	IM_{12} D-9-C3; IM_{13} D-9-C4; IM_{14} D-9-C5	1201	SCR 3 D-57-A4
21	1103	SET IO_{12}^1 D-54-D4; SET IO_{13}^1 D-54-D5; SET IO_{14}^1 D-54-D5; SET IO_{15}^1 D-54-D6; SET IO_{16}^1 D-54-D7; SET IO_{17}^1 D-54-D7	4129	IM_{14} D-9-C5; IM_{15} D-9-C6	1201	SCR 2 D-57-A3
22	1204	IO_{16} D-54-C7; IO_{17} D-54-C8	4129	IM_{14} D-9-D5; IM_{15} D-9-D6	1201	SCR 1 D-57-A3
23	1104	SET IO_{17}^0 D-54-D8	4603	IM_{15} D-9-C6; IM_{16} D-9-C7; IM_{17} D-9-C7	1201	SCR 0 D-57-A2
24	1111	IO=+0 D-57-B7	4129	IM_{17} D-9-C8; IM_{16} D-9-C7		
25	1111	IO=+0 D-57-B8	4129	IM_{17} D-9-D8; IM_{16} D-9-D7		

DRAWN M. Mariano DATE
CHECKED DATE
ENG DATE
PROJ ENG DATE
PROD DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION

FOR

ASSY NO | CODE UML | DRWG NO D-ID-45-2C | REV LTR

SHEET OF

D-1D-45-20-11 REV LTR A

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	1105	1607	1311	1310	1607	1311	1310	1105	1607	1311	1105	1311	1607	1310	1607	1311	1607	1311	1607		1104	1103	1209	1103
2L	(SCR=22) + (SCR=0) AC_0 D-57-C6	MDP-1 D-57-C1	MDP-2 D-57-C2	MDP-3 D-57-C3	MDP-3 D-57-C3	MDP-4 D-57-C3	MDP-5 D-57-C4	(SCR=22) + (SCR=0) AC_0 D-57-C5	7-3 D-57-C6	MD RESTART 1→RUN, TPO D-57-B5	MD RESTART 1→RUN, TPO D-57-B5	MDP-8 D-57-C6	MDP-9 D-57-C7	MDP-11 D-57-B8	IO→MB MDP-12 D-57-C7	IO→MB MDP-12 D-57-C7	MDP-6 DELAYED D-57-B6	MB→J→AC MDP-13 D-57-D8	MDP-6 DELAYED D-57-B6		MD→IO D-57-C3	SET LAI^0 D-15-D8	LAI D-15-C8	0→MB MDP-10 D-15-D5
	MDP-1 D-57-C6				MDP-4 D-57-C3				MUL SHIFT D-57-C5	MD RESTART 1→RUN, TPO D-57-C5	SCR=22 D-57-A8		0→MB MDP- D-57-C8	0→MB MDP-11 D-57-C8			(MB→J→AC) MDP-13 D-57-C8		MDP-6 DELAYED D-57-B7			SET LAI^0 D-15-D8		IO→MB MDP-12 D-15-D6
	MDP-2 D-57-C2	MDP-2 D-57-C2									MD RESTART 1→RUN, TPO D-57-B5											(MB→J→AC) MDP-13 D-57-C8		MB→J→AC MDP-13 D-15-D6
					MDP-5 D-57-C4			MDP-5 D-57-C4	MD RESTART 1→RUN, TPO D-57-C5		MUL D-57-A4 ÷ DIV D-57-A4	0→MB MDP-10 D-57-C7	MDP-8 D-57-C7		MD RESTART 1→RUN, TPO D-57-B6	MDP-14 D-57-D7	MDP-14 D-57-C7	MDP-6 DELAYED D-57-B6			SET LAI^1 D-15-D8		MD:AC→J→MB 0→IO D-57-B3
	MDP-1 D-57-C6																					SET LAI^1 D-15-D8	LIA D-15-C8	MD: AC→J→MB; 0→IO D-15-D6
																						MDP-14 D-57-D7		MD: MB→1→IO D-15-D7

CHANGE	DATE	ENG
DRWG. #. WAS: D-1D-45-20 SH. 11 OF 16 A-321 12-Feb-64 R.		

REVISIONS

DRAWN	M Navaro	DATE 9/3/64
CHECKED ENG	R Blewett	DATE 11/3/64
PROJ ENG		DATE
PROD		DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: UTILATION MODULE LOCATION

FOR

ASSY. NO | CODE UML | DRWG NO D-1D-45-20-11 | REV LTR A

SHEET 1 OF 1

D-ID-45-20

REV LTR

2L

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Type		1105	1607	1311	1310	1607	1311	1310	1105	1607	1311	1105	1311	1607	1310	1607	1311	1607	1311	1607		1104	1103	1209	1103
Use		(SCR=22) → (SCR=0) AC D-57-C6 MDP-1 D-57-C6 MDP-2 D-57-C2 MDP-1 D-57-C6	MDP-1 D-57-C1 MDP-2 D-57-C2	MDP-2 D-57-C2	MDP-3 D-57-C3	MDP-3 D-57-C3 MDP-4 D-57-C3 MDP-5 D-57-C4	MDP-4 D-57-C3	MDP-5 D-57-C4	(SCR=22) → (SCR=0) AC D-57-C5 MDP-5 D-57-C4	7-3 D-57-C6 MUL SHIFT D-57-C5 MD RESTART 1 → RUN, TPO D-57-C5	MD RESTART 1 → RUN, TPO D-57-C5	MD RESTART 1 → RUN, TPO D-57-B5 SCR=22 D-57-A8 MD RESTART 1 → RUN, TPO D-57-B5 MUL D-57-A4 DIV D-57-A4	MDP-8 D-57-C6 0 → MB MDP-10 D-57-C7	MDP-9 D-57-C7 C → MB MDP- D-57-C8 MDP-8 D-57-C7	0 → MB MDP-9 D-57-C7	MDP-11 D-57-B8 0 → MB MDP-10 D-57-C8 MD RESTART 1 → RUN, TPO D-57-B6	IO → MB MDP-12 D-57-C7 MDP-14 D-57-D7	IO → MB MDP-12 D-57-C7 (MB →J→ AC) MDP-13 D-57-C8 MDP-14 D-57-C7	MB →J→ AC MDP-13 D-57-D8 MDP-6 DELAYED D-57-B6	MDP-6 DELAYED D-57-B6 MDP-6 DELAYED D-57-B7		MD C → IO D-57-C3	SET LAI 0 D-15-D8 SET LIA 0 D-15-D8 (MB →J→ AC) MDP-13 D-57-C8 SET LAI 1 D-15-D8 SET LIA 1 D-15-D8 MDP-14 D-57-D7	LAI D-15-C8 LIA D-15-C8	0 → MB MDP-10 D-15-D5 IO → MB MDP-12 D-15-D6 MB →J→ AC MDP-13 D-15-D6 MD:AC →J→ MB 0 → IO D-57-B3 MD: AC →J→ MB; 0 → IO D-15-D6 MD: MB →1→ IO D-15-D7

2L

CHANGE	REVISIONS	DRAWN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE UTILATION MODULE LOCATION
DATE		CHECKED	DATE		FOR
ENG		ENG	DATE	ASSY NO	CODE	DRWG NO D-ID-45-20	REV LTR
		PROJ ENG	DATE		
		PROD	DATE	SHEET OF	

D-ID-45-20-12 REV LTR A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
3C	1Ø3	1Ø3	12Ø4	6122	12Ø1										6684	6684	6684	6684	6684	6684				1665	
3C	→ MB D-33-A6 $FF_1^1 + FF_2^1$ D-33-A6 $I0 \xrightarrow{1} MB$ D-33-A8 $FF_1^1 + FF_2^1$ D-33-A8 FF_2^1 D-18-A8 SC-4 D-32-C1	TP5 D-32-C2 SF_1 D-32-C2 TP5 D-32-C2 SF_2 D-32-C2 FF_1^1 D-32-B2 $FF_1^1 + FF_2^1$ D-32-B2	FF_1 & FF_2 A B D-32-C2	SF_1 D-32-C3 SF_2 D-32-C3 $FF_1^1 \cdot FF_2^0$ D-32-C5 $FF_1^1 \cdot FF_2^1$ D-32-C6 $SCM \cdot \overline{IDC}$ D-2-C8	CCM D-2-C8										RQ^1 D-64-A3	EMA_2^0 D-64-A4 EMA_2^1 D-64-A4 EMA_3^0 D-64-A5 EMA_3^1 D-64-A5	EMA_4^1 D-64-B1 EMA_5^1 D-64-B2 MA_6^1 D-64-B2 MA_7^1 D-64-B3	MA_8^1 D-64-B3 MA_9^1 D-64-B3 MA_{10}^1 D-64-B4 MA_{11}^1 D-64-B4	MA_{12}^1 D-64-B5 MA_{13}^1 D-64-B5 MA_{14}^1 D-64-B6 MA_{15}^1 D-64-B6	MA_{16}^1 D-64-37 MA_{17}^1 D-64-B7 RD RQ D-64-B7 WR RQ D-64-B8	22 PIN AMPHENOL			TP8 + MB_1^1 D-64-C1 TP8 + MB_3^1 D-64-C2 TP8 + MB_5^1 D-64-C3 TP8 + MB_7^1 D-64-C4 TP8 + MB_{11}^1 D-64-C6 TP8 + MB_{13}^1 D-64-C7 TP8 + MB_{15}^1 D-64-C8 TP8 + MB_{17}^1 D-64-C8	
3D	4102R	4223	4223	4113	4113	4113	4102R	4102R																1665	
3D	1 D-11-C1 3 D-11-C2	0 D-11-A1 1 D-11-A1 2 D-11-A2 3 D-11-A2 4 D-11-A3 5 D-11-A3 6 D-11-A4 7 D-11-A4 8 D-11-A4	9 D-11-A5 10 D-11-A5 11 D-11-A6 12 D-11-A6 13 D-11-A6 14 D-11-A7 15 D-11-A7 16 D-11-A8 17 D-11-A8	0 D-11-B1 2 D-11-B1 4 D-11-B2 5 D-11-B3 3 D-11-B2 1 D-11-B1	6 D-11-B3 8 D-11-B4 10 D-11-B5 11 D-11-B5 9 D-11-B4 7 D-11-B4	12 D-11-B6 14 D-11-B7 16 D-11-B7 17 D-11-B8 15 D-11-B7 13 D-11-B6	9b D-11-A5 10b D-11-A5 11b D-11-A6 12b D-11-A6 13b D-11-A7 14b D-11-A7 15b D-11-A7 16b D-11-A8 17b D-11-A8	0b D-11-A1 1b D-11-A1 2b D-11-A2 3b D-11-A2 4b D-11-A3 5b D-11-A3 6b D-11-A4 7b D-11-A4 8b D-11-A4																TP8 + MB_0^1 D-64-C1 TP8 + MB_2^1 D-64-C2 TP8 + MB_4^1 D-64-C3 TP8 + MB_6^1 D-64-C4 TP8 + MB_8^1 D-64-C4 TP8 + MB_{10}^1 D-64-C5 TP8 + MB_{12}^1 D-64-C6 TP8 + MB_{14}^1 D-64-C7 TP8 + MB_{16}^1 D-64-C8	

REVISIONS			
A-321	DWG # WAS D-ID-45-20 SHEET 12	12-18-64	
	CHANGE	DATE	ENG

DRAWN N. Marano DATE 8/6/64
CHECKED DATE 11/2/64
ENG. DATE
PROJ. ENG DATE
PROD DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION

FOR

ASSY NO | CODE UML | DRWG NO D-ID-45-20-12 | REV LTR A

SHEET 1 OF 1

D-1D-45-20 REV LTR

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
														6684	6684	6684	6684	6684	6684				1665	
3C														RQ^1 D-64-A3	EMA^0_2 D-64-A4	EMA^1_4 D-64-B1	MA^1_8 D-64-B3	MA^1_{12} D-64-B5	MA^1_{16} D-64-B7	22 PIN AMPHENOL			TP8 + MB^1_1 D-64-C1 TP8 + MB^1_3 D-64-C2 TP8 + MB^1_5 D-64-C3 TP8 + MB^1_7 D-64-C4	3C
															EMA^1_2 D-64-A4	EMA^1_5 D-64-B2	MA^1_9 D-64-B3	MA^1_{13} D-64-B5	MA^1_{17} D-64-B7				TP8 + MB^1_{11} D-64-C6 TP8 + MB^1_{13} D-64-C7 TP8 + MB^1_{15} D-64-C8 TP8 + MB^1_{17} D-64-C8	
															EMA^0_3 D-64-A5	MA^1_6 D-64-B2	MA^1_{10} D-64-B4	MA^1_{14} D-64-B6	RD RQ D-64-B7					
															EMA^1_3 D-64-A5	MA^1_7 D-64-B3	MA^1_{11} D-64-B4	MA^1_{15} D-64-B6	WR RQ D-64-B8					
4102R	4223	4223	4113	4113	4113	4102R	4102R																1665	
B 3D	0 D-11-A1	9 D-11-A5	0 D-11-B1	6 D-11-B3	12 D-11-B6	9b D-11-A5	0b D-11-A1																TP8 + MB^0_0 D-64-C1	B 3D
1 D-11-C1	1 D-11-A1	10 D-11-A5				10b D-11-A5	1b D-11-A1																TP8 + MB^1_2 D-64-C2	
	2 D-11-A2	11 D-11-A6	2 D-11-B1	8 D-11-B4	14 D-11-B7	11b D-11-A6	2b D-11-A2																TP8 + MB^1_4 D-64-C3	
	3 D-11-A2	12 D-11-A6	4 D-11-B2	10 D-11-B5	16 D-11-B7	12b D-11-A6	3b D-11-A2																TP8 + MB^1_6 D-64-C4	
	4 D-11-A3	13 D-11-A6				13b D-11-A7	4b D-11-A3																TP9 + MB^1_8 D-64-C4	
3 D-11-C2	5 D-11-A3	14 D-11-A7	5 D-11-B3	11 D-11-B5	17 D-11-B8	14b D-11-A7	5b D-11-A3																TP8 + MB^1_{10} D-64-C5	
	6 D-11-A4	15 D-11-A7				15b D-11-A7	6b D-11-A4																TP8 + MB^1_{12} D-64-C6	
	7 D-11-A4	16 D-11-A8	3 D-11-B2	9 D-11-B4	15 D-11-B7	16b D-11-A8	7b D-11-A4																TP8 + MB^1_{14} D-64-C7	
	8 D-11-A4	17 D-11-A8				17b D-11-A8	8b D-11-A4																TP8 + MB^1_{16} D-64-C8	
			1 D-11-B1	7 D-11-B4	13 D-11-B6																			

CHANGE	DATE	ENG

REVISIONS

DRAWN	M Marrazzo	DATE	8/6/64
CHECKED		DATE	11/5/19
ENG		DATE	
PROJ ENG		DATE	
PROD		DATE	

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

ASSY NO		CODE	UML
SHEET	12	OF	16

TITLE UTILIZATION MODULE LOCATION

FOR

DRWG NO D-1D-45-20 REV LTR

D-ID-45-20-13 | REV LTR A

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
4113R	4113R	4113R	4113R	4113R	4113R	4603	4603	4603	4603	4603	4603									TPB				
MBD_A^0 D-12-A1	MBD_A^6 D-12-A1	MBD_C^4 D-12-B1	MBD_D^2 D-12-B1	MBD_B^0 D-12-A3	MBD_B^2 D-12-B1	0X→TP_{7-4} + 1X→TP_{7-4} D-12-A4	0X→TP_{10-4} + 1X→TP_{10-4} D-12-A4	2X→TP_{7-4} D-12-A4	2X→TP_{10-4} D-12-A4	5X→TP_{7-4} D-12-A5	5X→TP_{10-4} D-12-A5													
MBD_A^1 D-12-A1	MBD_A^7 D-12-A1	MBD_C^5 D-12-B1	MBD_D^3 D-12-B1	MBD_B^1 D-12-A3	MBD_B^3 D-12-B1																			
MBD_A^2 D-12-A2	MBD_C^0 D-12-A2	MBD_C^6 D-12-B2	MBD_D^4 D-12-B2		MBD_B^4 D-12-B2	0X→TP_{7-4} D-12-A4	0X→TP_{10-4} D-12-A4	3X→TP_{7-4} D-12-A4	3X→TP_{10-4} D-12-A4	6X→TP_{7-4} D-12-A5	6X→TP_{10-4} D-12-A5													
MBD_A^3 D-12-A2	MBD_C^1 D-12-A2	MBD_C^7 D-12-B2	MBD_D^5 D-12-B2		MBD_B^5 D-12-B2																			
MBD_A^4 D-12-A3	MBD_C^2 D-12-A3	MBD_D^0 D-12-B3	MBD_D^6 D-12-B3		MBD_B^6 D-12-B3	1X→TP_{7-4} D-12-A4	1X→TP_{10-4} D-12-A4	4X→TP_{7-4} D-12-A5	4X→TP_{10-4} D-12-A5	7X→TP_{7-4} D-12-A5	7X→TP_{10-4} D-12-A5													
MBD_A^5 D-12-A3	MBD_C^3 D-12-A3	MBD_D^1 D-12-B3	MBD_D^7 D-12-B3		MBD_B^7 D-12-B3																			
		1104	4603	4603	4603	4603	4603	4603	4603	1685	1685	4110	4603	4214	4106	4106	1103	1103R	4129	4603	4603	4603	4112	4110
		RBB D-12-A6	RPA D-12-A6	0→TB D-12-A6	PPA D-12-A7	DPY D-12-A8	RRB D-12-B7	LSM 0→SBM D-12-B7	(0 + 4)03X TP_{10-4} D-12-C7	PF_1^1 D-12-C1	PF_5^1 D-12-C2	EXT +1→PC D-12-B5		RCP D-12-C3	SET RCP[1] D-12-C3	SET PCP[1] D-12-D5	SET DCP[1] D-12-D5			0→IO ON IOT D-12-B4	1→PF_1 D-12-C1	1→PF_4 D-12-C2	1→PF_1 D-12-C1	
										PF_2^1 D-12-C1	PF_6^1 D-12-C2		(0 + 4)00X TP_{10-4} D-12-C6	PCP D-12-C4		SET TCP[1] D-12-D5			IOT DONE D-12-B6	IOT DONE D-12-B6	1→PF_2 D-12-C1	1→PF_5 D-12-C2	1→PF_2 D-12-C1	0→IO ON IOT D-12-C4
			RPB D-12-A6	0→IO D-12-A7	0→PB D-12-A7	0→DB D-12-A8	CKS D-12-B7	1 ESM →SBM D-12-B7	(0 + 4)05X TP_{7-4} D-12-C8	PF_3^1 D-12-C1	NAC D-12-C3	IOT DONE D-12-B5		TCP D-12-C5	SET RCP[0] D-12-D3	SET PCP D-12-D4	NAC D-12-D1	NAC D-12-D2			EXT 1→PC D-12-B5	1→PF_3 D-12-C1	1→PF_6 D-12-C3	1→PF_4 D-12-C2	
			TY0 D-12-A6	TY1 D-12-A7	PPB D-12-A8	0→PB ON PPB D-12-A8	CBS D-12-B7	EEM + LEM D-12-B8	(0 + 4)07X TP_{10-4} D-12-C8	PF_4^1 D-12-C1	NAC D-12-C3		(0 + 4) 00X TP_{7-4} D-12-C6	DCP D-12-C6		SET TCP[0] D-12-D5	SET DCP[0] D-12-D5	NAC D-12-D1					1→PF_5 D-12-C2	
																							1→PF_6 D-12-C3	
	4603		4113R	4603	4301	4301	4603	4603	4603	4603													4110	4603	4603
	CTB 35 TP_{10-4} D-13-D5		0→IO D-13-A1	SC + CTB TRAP BUFFER D-13-C5	122 TP_{37-40} D-13-A3	022 TP_{17-40} D-13-B3	61 TP_{7-4} D-13-A5	61 TP_{10-4} D-13-A6	2061 TP_{7-4} D-13-A7	2061 TP_{7-4} D-13-A8														RR0 17 TP_{10-4} D-13-B4	RR1 37 TP_{7-4} D-13-B3
			MB_8^1 D-13-B1	0→IO D-13-A2			62 TP_{7-4} D-13-B5	62 TP_{10-4} D-13-B6	2062 TP_{7-4} D-13-B7	2062 TP_{7-4} D-13-A8												EXAMINE DEPOSIT READ-IN D-13-C1		RCK 32 TP_{10-4} D-13-B4	RR 37 TP_{10-4} D-13-B3
			MB_6^1 D-13-B1				63 TP D-13-B5	63 TP D-13-B6	(0 + 4)06X TP_{10-4} D-13-B7	(0 + 4)06X TP_{7-4} D-13-B8														CTB 35 TP_{10-4} D-13-C4	RR0 17 TP_{7-4} D-13-C3
			2062 TP_{7-4} D-13-B8																					

3H 3J 3K

DRWG. # WAS D-ID-45-20 SH. 13 OF 16 A-321	CHANGE	DATE	ENG
		12-21-64	KR

REVISIONS

DRAWN		DATE
CHECKED		DATE
ENG		DATE
PROJ ENG		DATE
PROD		DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: UTILIZATION MODULE LOCATION

FOR

ASSY NO | CODE UML | DRWG NO D-ID-45-20-13 | REV LTR A | SHEET 1 OF 1

REV. YB

D-IP-45-20

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
4113F	4113F	4113F	4113F	4113F	4113F	4603	4603	4603	4603	4603	4603									TPS				
MEC$^{2}_{A}$ D-12-A7	MEC$^{2}_{A}$ D-12-A1	MEC$^{2}_{C}$ D-12-B1	MEC$^{2}_{C}$ D-12-B1	MEC$^{2}_{E}$ D-12-B3	MEC$^{2}_{E}$ D-12-B1	2X→TP$_{7-4}$ 1X→TP$_{7-4}$ D-12-A4	2X→TP$_{10-4}$ 1X→TP$_{10-4}$ D-12-A4	3X→TP$_{7-4}$ D-12-A4	3X→TP$_{10-4}$ D-12-A4	5X→TP$_{7-4}$ D-12-A5	5X→TP$_{10-4}$ D-12-A5													
MEC$^{3}_{A}$ D-12-A1	MEC$^{3}_{A}$ D-12-A1	MEC$^{3}_{C}$ D-12-B1	MEC$^{3}_{C}$ D-12-B1	MEC$_{E}$ D-12-B5	MEC$^{3}_{E}$ D-12-B1																			
MEC$^{4}_{A}$ D-12-A2	MEC$^{4}_{A}$ D-12-A2	MEC$^{4}_{C}$ D-12-B2	MEC$^{4}_{C}$ D-12-B2		MEC$^{4}_{E}$ D-12-B2	4X→TP$_{7-4}$ D-12-A4	4X→TP$_{10-4}$ D-12-A4	5X→TP$_{7-4}$ D-12-A4	5X→TP$_{10-4}$ D-12-A4	6X→TP$_{7-4}$ D-12-A5	6X→TP$_{10-4}$ D-12-A5													
MEC$^{5}_{A}$ D-12-A2	MEC$^{5}_{A}$ D-12-A2	MEC$^{5}_{C}$ D-12-B2	MEC$^{5}_{C}$ D-12-B2		MEC$^{5}_{E}$ D-12-B2																			
MEC$^{2}_{A}$ D-12-A3	MEC$^{2}_{E}$ D-12-A3	MEC$^{2}_{E}$ D-12-B3	MEC$^{2}_{E}$ D-12-B3		MEC$^{2}_{E}$ D-12-B3	1X→TP$_{7-4}$ D-12-A4	1X→TP$_{10-4}$ D-12-A4	4X→TP$_{7-4}$ D-12-A5	4X→TP$_{10-4}$ D-12-A5	7X→TP$_{7-4}$ D-12-A5	7X→TP$_{10-4}$ D-12-A5													
MEC$^{3}_{A}$ D-12-A3	MEC$^{3}_{E}$ D-12-A3	MEC$^{3}_{E}$ D-12-B3	MEC$^{3}_{E}$ D-12-B3		MEC$^{3}_{E}$ D-12-B3																			
		1104	4603	4603	4603	4603	4603	4603	4603	1685	1685	4110	4603	4214	4106	4106	1103	1103R	4129	4603	4603	4603	4112	4110
		R6B D-12-A6	RPA D-12-A6	T3 D-12-A6	PPA D-12-A7	DPY D-12-A8	RRB D-12-B7	LSM C SBM D-12-B7	(Q + 4)03X TP$_{10-4}$ D-12-C7	PF$^{1}_{1}$ D-12-C1	PF$^{5}_{2}$ D-12-C2	EXT PC D-12-B5		RCP D-12-C3	SET RCP^{1} D-12-C3	SET PCP^{1} D-12-B5	SET DCP^{1} D-12-B5						PF$_{1}$ D-12-C1	PF$_{4}$ D-12-C2	PF$^{1}_{1}$ D-12-C1
			RPB D-12-A6	T0 D-12-B7	PB D-12-A7	CB D-12-A8	CKS D-12-B7	ESM SBM D-12-B7	(Q + 4)05X TP$_{10-4}$ D-12-C8	PF$^{1}_{2}$ D-12-C7	PF$^{5}_{6}$ D-12-C2			PCP D-12-C4		SET TCP^{1} D-12-B5						PF$_{2}$ D-12-C1	PF$_{5}$ D-12-C2	PF$^{1}_{3}$ D-12-C1
			TY0 D-12-A6	TY1 D-12-A7	PPB D-12-A8	CB ON PPB D-12-A8	CBS D-12-B7	EEN + LEM D-12-B8	(Q + 4)07X TP$_{10-4}$ D-12-C8	PF$^{1}_{3}$ D-12-C1	NAC D-12-C3	IOT DONE D-12-B5	(Q + 4) 00X TP$_{7-4}$ D-12-C6	TCP D-12-C5	SET RCP^{0} D-12-B3	SET PCP D-12-B4	NAC D-12-B1	NAC D-12-B2	IOT DONE D-12-B6					G IO ON IOT D-12-C4
										PF$^{1}_{4}$ D-12-C1	NAC D-12-C3			DCP D-12-C6		SET TCP^{0} D-12-B5	SET DCP^{0} D-12-B5	NAC D-12-B1		EXT PC D-12-B5			PF$_{3}$ D-12-C2	PF$^{1}_{5}$ D-12-C2
																							PF$_{6}$ D-12-C3	PF$^{1}_{6}$ D-12-C3
	4603		4113R	4603	4301	4301	4603	4603	4603	4603													4110	4603	4603
	CTB 35 TP$_{10-4}$ D-13-C5			SC + CTB TRAP BUFFER D-13-C5			e1 TP$_{7-4}$ D-13-A5	e1 TP$_{10-4}$ D-13-A6	2061 TP$_{7-4}$ D-13-A7	2061 TP$_{7-4}$ D-13-A8													RR0 17 TP$_{10-4}$ D-13-B4	RR1 37 TP$_{7-4}$ D-13-B3
			MB$^{1}_{E}$ D-13-B1	C D-13-A3	122 TP$_{37-40}$ D-13-A3	022 TP$_{17-40}$ D-13-B3	e2 TP$_{7-4}$ D-13-B5	e2 TP$_{10-4}$ D-13-B6	2062 TP$_{7-4}$ D-13-B7	2062 TP$_{7-4}$ D-13-A8											EXAMINE DEPOSIT REACTION D-13-C1		RR0 32 TP$_{10-4}$ D-13-B4	RR1 37 TP$_{10-4}$ D-13-B3
			MB$^{1}_{D}$ D-13-B1	D-13-A3			e3 TP D-13-B5	e3 TP D-13-B6	(Q + 4)06X TP$_{10-4}$ D-13-B7	(Q + 4)06X TP$_{7-4}$ D-13-B8													CTB 35 TP$_{10-4}$ D-13-C4	RR0 37 TP$_{7-4}$ D-13-C3
			2062 TP$_{7-4}$ D-13-B8																					

CHANGE	DATE	ENG

REVISIONS

DRAWN	DATE
CHECKED	DATE
ENG	DATE
PROJ. ENG	DATE
PROD	DATE

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: CONTROL MODULE LOCATION

FOR

ASSY NO | CODE | DRWG NO: D-IP-45-20

SIZE | REV

SHEET | OF

D-ID-45-20-14 REV LTR A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4219	4219	4129							
3L	IM0 D-10-A2	IM1 D-10-A2	IM2 D-10-A3	IM3 D-10-A3	IM4 D-10-A4	IM5 D-10-A4	IM6 D-10-A5	IM7 D-10-A5	IM8 D-10-A6	IM9 D-10-C2	IM10 D-10-C2	IM11 D-10-C3	IM12 D-10-C3	IM13 D-10-C4	IM14 D-10-C4	IM15 D-10-C5	IM16 D-10-C5	IM17 D-10-C6							
	IM9 D-10-B2	IM10 D-10-B2	IM11 D-10-B3	IM12 D-10-B3	IM13 D-10-B4	IM14 D-10-B4	IM15 D-10-B5	IM16 D-10-B5	IM17 D-10-B6																

3L

DRWG. # WAS D-ID-45-20 SH. 14 OF 16
A-321

CHANGE | DATE | ENG
REVISIONS

DRAWN M. Marciano DATE 8/11/64
CHECKED DATE 11/2/64
ENG DATE
PROJ ENG. DATE
PROD DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION

FOR

ASSY NO | CODE UML | DRWG NO D-ID-45-20-14 | REV LTR A

SHEET 1 OF 1

D-1D-45-20 REV LTR

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4129	4219	4219	4129							
IM0 D-10-A2	IM1 D-10-A2	IM2 D-10-A3	IM3 D-10-A3	IM4 D-10-A4	IM5 D-10-A4	IM6 D-10-A5	IM7 D-10-A5	IM8 D-10-A6	IM9 D-10-C2	IM10 D-10-C2	IM11 D-10-C3	IM12 D-10-C3	IM13 D-10-C4	IM14 D-10-C4	IM15 D-10-C5	IM16 D-10-C5	IM17 D-10-C6							
IM9 D-10-B2	IM10 D-10-B2	IM11 D-10-B3	IM12 D-10-B3	IM13 D-10-B4	IM14 D-10-B4	IM15 D-10-B5	IM16 D-10-B5	IM17 D-10-B6																

CHANGE	DATE	ENG.

REVISIONS

DRAWN		DATE
CHECKED		DATE 11/21/69
ENG		DATE
PROJ ENG		DATE
PROD		DATE

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

ASSY NO | CODE UML | SHEET 14 OF 16

TITLE UTILIZATION MODULE LOCATION

FOR

DRWG NO D-1D-45-20 | REV LTR

D-ID-45-20-15 A

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
A	4128	4214	4126	4214	4128	4128	4214	1103R	1103R	4113	4214	4128	1111	4128	4214	4113	1103R	1103R	4214	4128	4102				
	0 → b1's 0-7 D-55-B1	b000 D-55-B2	SET b002 D-55-B2	b002 D-55-B2	RESET SYNC D-55-B2	HOLD BREAK D-55-A2	b003 D-55-A2	SET b004 D-55-A2	SET b034 D-55-A3	SET b004 D-55-A1	b004 D-55-A2	0 → EVEN B4's D-55-A2	NO BREAK 0-3 D-55-A5	SET b004-b034 D-55-A1	b044 D-55-A5	SET b044 D-55-A5	SET b074 D-55-A7	SET b054 D-55-A6	b043 D-55-A6	HOLD BREAK D-55-A5	A3 D-7-A3				
		b011 D-55-B2	SET b012 D-55-B2	b012 D-55-B2			b013 D-55-A2	SEQ 0 D-55-A2	SEQ 2 D-55-A3	SET b024 D-55-A3	b014 D-55-A2				b054 D-55-A6	SET b064 D-55-A7	SEQ 6 D-55-A7	SEQ 4 D-55-A6	b053 D-55-A6		A2 D-7-A2				
		b021 D-55-B3		b022 D-55-B3	1 → b2's 0-7 D-55-B2	SYNC D-55-A2	b023 D-55-A3	SET b024 D-55-A2	SET b034 D-55-A4	SET b034 D-55-A4	b024 D-55-A3	0 → ODD B4's D-55-A2	NO BREAK 4-7 D-55-B5	HOLD BREAK D-55-A5	b064 D-55-A7	SET b074 D-55-A8	SET b073 D-55-A8	SET b064 D-55-A6	b063 D-55-A7	SYNC D-55-A5	A1 D-7-A1				
		b031 D-55-B4	SET b032 D-55-B4	b032 D-55-B4			b033 D-55-A4	SEQ 1 D-55-A2	SEQ 3 D-55-A4		b034 D-55-A4				b074 D-55-A8	NO BREAK 0-7 D-55-B5	SEQ 7 D-55-A8	SEQ 5 D-55-A6	b073 D-55-A8		A3 D-7-A3				
								SET b024 D-55-A3	b033 D-55-A4	SET b044 D-55-A5							b073 D-55-A8	SET b064 D-55-A7			A4 D-7-A3				
B	4128	4214	4126	4214	4128	4128	4214	1103R	1103R	4113	4214	4128	1111	4128	4214	4113	1103R	1103R	4214	4128					
	0 → b1's 10-17 D-55-D1	b101 D-55-D2	SET b102 D-55-D2	b102 D-55-D2	RESET SYNC D-55-D1	HOLD BREAK D-55-C1	b103 D-55-C2	SET b114 D-55-C2	SET b134 D-55-C3	SET b104 D-55-C1	b104 D-55-C2	0 → EVEN B4's D-55-C1	NO BREAK 0-13 D-55-C5	HOLD BREAK D-55-C1	b144 D-55-C6	SET b141 D-55-C5	SET b174 D-55-C7	SET b154 D-55-C6	b143 D-55-C6	HOLD BREAK D-55-C5					
		b111 D-55-D2	SET b112 D-55-D3	b112 D-55-D2			b113 D-55-C2	SEQ 10 D-55-C2	SEQ 12 D-55-C3	SET b124 D-55-C3	b114 D-55-C2				b154 D-55-C6	SET b164 D-55-C7	SEQ 16 D-55-C7	SEQ 14 D-55-C6	b153 D-55-C6						
		b121 D-55-D3	SET b122 D-55-D3	b122 D-55-D3	1 → b2's 10-17 D-55-D1	SYNC D-55-C1	b123 D-55-C3	SET b124 D-55-C2	SET b133 D-55-C4	SET b134 D-55-C4	b124 D-55-C3	0 → ODD B4's D-55-C1	TRAP BUFFER D-7-C4	HOLD BREAK D-55-C5	b164 D-55-C7	SET b174 D-55-C8	SET b173 D-55-C8	SET b164 D-55-C6	b163 D-55-C7	SYNC D-55-C5					
		b131 D-55-D4	SET b132 D-55-D4	b132 D-55-D4			b133 D-55-C4	SET b124 D-55-C3	SET b143 D-55-C5	NO BREAK 0-3 D-55-C5	b134 D-55-C4				b174 D-55-C8	b173 D-55-C8	SEQ 17 D-55-C8	SEQ 15 D-55-C6	b173 D-55-C8						
																	SET b173 D-55-C8	SET b164 D-55-C6							
C	4410	4604	4202	4410	4225	4225	4111	4603	1111	1111	4128	4214	4126	4214	4128	4128	4214	4126	4214	4128	1105				
	SET 1 FFA D-56-C6	CK_{2-9} D-56-B1	FFA D-56-B5	CLEAR CK_{2-9} D-56-C1	CK_2 D-56-A1	CK_{10} D-56-A5	SEQ BK D-56-C3	1 MINUTE SEQ BK D-56-C3	$\overline{SBS\ BK}$ D-5-C5	$\overline{SBS\ BK}$ D-5-C5	RESET SYNC D-55-B5	b042 D-55-B6	SET b042 D-55-B6	b041 D-55-B6	0 → b1's 0-7 D-55-B5	RESET SYNC D-55-D5	b142 D-55-D6	SET b142 D-55-D6	b141 D-55-D6	0 → b1's 10-17 D-55-D5	0 → b4's D-7-B5				
		SEQ BK D-56-B3			CK_3 D-56-A1	CK_{11} D-56-A5						b052 D-55-B6	SET b052 D-55-B6	b051 D-55-B6			b152 D-55-D6	1 → b163 D-5-B4	b151 D-55-D6						
					CK_4 D-56-A2	CK_{12} D-56-A6		CK_{2-9} D-56-B1										SET b152 D-55-D6							
		COMP CK_{17} D-56-B7	FFB D-56-B5		CK_5 D-56-A2	CK_{13} D-56-A6	SEQ BK D-56-C3		TRAP D-5-C3		1 → b2's 0-7 D-55-B5	b062 D-55-B7	SET b062 D-55-B7	b061 D-55-B7	1 → b1's 0-7 D-55-B5	1 → b2's 10-17 D-55-D5	b162 D-55-D7	SET b142 D-55-D6	b161 D-55-D7	1 → b1's 10-17 D-55-D5	TRAP BUFFER D-7-B5				
					CK_6 D-56-A3	CK_{14} D-56-A7												SET b162 D-55-D7							
					CK_7 D-56-A3	CK_{15} D-56-A7						b072 D-55-B8	SET b072 D-55-B8	b071 D-55-B8			b172 D-55-D8	SET b172 D-55-D8	b171 D-55-D8						
					CK_8 D-56-A4	CK_{16} D-56-A8																			
					CK_9 D-56-A4	CK_{17} D-56-A8																			
D																									

	1	2	3	4	5	6	7	8

DRWG. #. WAS D-ID-45-20 SH. 15 OF 16 A-321 12-21-64 JR

NAME DATE REVISIONS

DRAWN J. Haggerty DATE 9-15-64
ENG. M. Chard DATE 11/21/64
PROJ. ENG. DATE
MFG. DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION
FOR
ASST NO. CODE UML DRWG NO. D-ID-45-20-15 REV LTR A
SHEET OF

D-ID-45-20

1	2	3	4	5	6	7	8

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
A	4128	4214	4126	4214	4128	4128	4214	1103R	1103R	4113	4214	4128	1111	4128	4214	4113	1103R	1103R	4214	4128	4102				
	0 → b1¹s 0-7 D-55-B1	b001 D-55-B2	SET b002 1 D-55-B2	b002 D-55-B2	RESET SYNC D-55-B2	HOLD BREAK D-55-A2	b003 D-55-A2	SET b004 1 D-55-A2 SEQ 0 D-55-A2 SET b014 1 D-55-A2	SET b034 1 D-55-A3 SEQ 2 D-55-A3 SET b034 1 D-55-A3	SET b004 1 D-55-A1 SET b024 1 D-55-A3 SET b014 1 D-55-A2	b004 D-55-A2 b014 D-55-A2	0 → EVEN B4¹s D-55-A2	NO BREAK 0-3 D-55-A5	SET b004-b034 1 D-55-A1	b044 D-55-A5 b054 D-55-A6	SET b044 1 D-55-A5 SET b064 1 D-55-A7 SET b054 D-55-A6	SET b074 1 D-55-A7 SEQ 6 D-55-A7 SET b074 1 D-55-A7	SET b054 1 D-55-A6 SEQ 4 D-55-A6 SET b054 D-55-A6	b043 D-55-A6 b053 D-55-A6	HOLD BREAK D-55-A5	A3 D-7-A3 A2 D-7-A2 A1 D-7-A1 A2 D-7-A2 A3 D-7-A3 A4 D-7-A3				
RIA		b021 D-55-B3 b031 D-55-B4	SET b022 1 D-55-B3 SET b032 1 D-55-B4	b022 D-55-B3 b032 D-55-B4	1 → b2¹s 0-7 D-55-B2	SYNC D-55-A2	b023 D-55-A3 b033 D-55-A4	SET b024 1 D-55-A2 SEQ 1 D-55-A2 SET b024 1 D-55-A3	SET b034 1 D-55-A4 SEQ 3 D-55-A4 0 b033 D-55-A4	SET b034 1 D-55-A4 SET b044 1 D-55-A5	b024 D-55-A3 b034 D-55-A4	0 → ODD B4¹s D-55-A2	NO BREAK 4-7 D-55-B5	HOLD BREAK D-55-A5	b064 D-55-A7 b074 D-55-A8	SET b074 1 D-55-A8 NO BREAK 0-7 D-55-B5	SET b073 0 D-55-A8 SEQ 7 D-55-A8 b073 D-55-A8	SET b064 1 D-55-A6 SEQ 5 D-55-A6 SET b064 1 D-55-A7	b063 D-55-A7 b073 D-55-A8	SYNC D-55-A5	A4 D-7-A3					RIA
B	4128	4214	4126	4214	4128	4128	4214	1103R	1103R	4113	4214	4128	1111	4128	4214	4113	1103R	1103R	4214	4128					
	0 → b1¹s 10-17 D-55-D1	b101 D-55-D2	SET b102 1 D-55-D2	b102 D-55-D2	RESET SYNC D-55-D1	HOLD BREAK D-55-C1	b103 D-55-C2	SET b114 1 D-55-C2 SEQ 10 D-55-C2 SET b114 1 D-55-C2	SET b134 1 D-55-C3 SEQ 12 D-55-C3 SET b124 1 D-55-C3	SET b104 1 D-55-C1 SET b124 1 D-55-C3 SET b114 1 D-55-C2	b104 D-55-C2 b114 D-55-C2	0 → EVEN b4¹s D-55-C1	NO BREAK 0-13 D-55-C5	HOLD BREAK D-55-C1	b144 D-55-C6 b154 D-55-C6	SET b141 1 D-55-C5 SET b164 1 D-55-C7 SET b154 1 D-55-C6	SET b174 1 D-55-C7 SEQ 16 D-55-C7 SET b174 1 D-55-C7	SET b154 1 D-55-C6 SEQ 14 D-55-C6 SET b154 1 D-55-C6	b143 D-55-C6 b153 D-55-C6	HOLD BREAK D-55-C5						
RIB		b111 D-55-D2 b121 D-55-D3 b131 D-55-D4	SET b112 1 D-55-D3 SET b122 1 D-55-D3 SET b132 1 D-55-D4	b112 D-55-D2 b122 D-55-D3 b132 D-55-D4	1 → b2¹s 10-17 D-55-D1	SYNC D-55-C1	b113 D-55-C2 b123 D-55-C3 b133 D-55-C4	SET b124 1 D-55-C2 SEQ 11 D-55-C2 SET b124 1 D-55-C3	0 SET b133 D-55-C4 SEQ 13 D-55-C4 0 SET b143 D-55-C5	SET b134 1 D-55-C4 NO BREAK 0-3 D-55-C5	b114 D-55-C2 b124 D-55-C3 b134 D-55-C4	0 → ODD b4¹s D-55-C1	TRAP BUFFER D-7-C4	HOLD BREAK D-55-C5	b164 D-55-C7 b174 D-55-C8	SET b174 1 D-55-C8 0 b173 D-55-C8	0 SET b173 D-55-C8 SEQ 17 D-55-C8 0 SET b173 D-55-C8	SET b164 1 D-55-C6 SEQ 15 D-55-C6 SET b164 1 D-55-C6	b163 D-55-C7 b173 D-55-C8	SYNC D-55-C5						RIB
C	4410	4604	4202	4410	4225	4225	4111	4603	1111	1111	4128	4214	4126	4214	4128	4128	4214	4126	4214	4128	1105				
	SET 1 FFA D-56-C6	CK2-9 D-56-B1 SEQ BK D-56-B3 COMP CK17 D-56-B7	FFA D-56-B5 FFB D-56-B5	CLEAR CK2-9 D-56-C1	CK2 D-56-A1 CK3 D-56-A1 CK4 D-56-A2 CK5 D-56-A2 CK6 D-56-A3 CK7 D-56-A3 CK8 D-56-A4 CK9 D-56-A4	CK10 D-56-A5 CK11 D-56-A5 CK12 D-56-A6 CK13 D-56-A6 CK14 D-56-A7 CK15 D-56-A7 CK16 D-56-A8 CK17 D-56-A8	SEQ BK D-56-C3 SEQ BK D-56-C3	1 MINUTE SEQ BK D-56-C3 CK2-9 D-56-B1	SBS BK D-5-C5 TRAP D-5-C3	SBS BK D-5-C5	RESET SYNC D-55-B5 1 → b2¹s 0-7 D-55-B5	b042 D-55-B6 b052 D-55-B6 b062 D-55-B7 b072 D-55-B8	SET b042 1 D-55-B6 SET b052 1 D-55-B6 SET b062 1 D-55-B7 SET b072 1 D-55-B8	b041 D-55-B6 b051 D-55-B6 b061 D-55-B7 b071 D-55-B8	0 → b1¹s 0-7 D-55-B5 1 → b1¹s 0-7 D-55-B5	RESET SYNC D-55-D5 1 → b2¹s 10-17 D-55-D5	b142 D-55-D6 b152 D-55-D6 b162 D-55-D7 b172 D-55-D8	SET b142 1 D-55-D6 1 → b163 1 D-5-B4 SET b152 1 D-55-D6 SET b142 1 D-55-D6 SET b162 1 D-55-D7 SET b172 1 D-55-D8	b141 D-55-D6 b151 D-55-D6 b161 D-55-D7 b171 D-55-D8	0 → b1¹s 10-17 D-55-D5 1 → b1¹s 10-17 D-55-D5	0 → b4¹s D-7-B5 TRAP BUFFER D-7-B5					RIC
D																									

1	2	3	4	5	6	7	8

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

TITLE: UTILIZATION MODULE LOCATION

CODE: UML DRG NO: D-ID-45-20

SHEET 15 OF 16

D-ID-45-20 REV LTR

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
4301	4301	4603	4603	4603	4106	4106	4603	4603	4603	4603	1105	1105	1105	1111	1111	1111	1111	1111	1111	1105				
COMP CK 17 D-55-B6	SBS RESTORE D-7-D7	/1 → B1'S0-7 D-7-C6	/1 → B2'S0-7 D-7-B6	HOLDBREAK D-7-C8		CLR B4'S0-7 D-7-A7	CLR B2'S10-17 D-7-B8	CLR B3'S0-7 D-7-A8	DEBREAK D-7-D7	/0 → EVEN B4'S D-7-D6	/0 → ODD B4'S D-7-B5	TRAP BUFFER -D-7-B4	TRAP BUFFER D-7-B5	SBS BREAK REQUEST D-7-D4	SBS BREAK REQUEST D-7-D4	BE 12 D-7-C3	BE 13 D-7-C3	BE 14 D-7-C3	BE 15 D-7-B3	TRAP BUFFER D-7-C4				
RID					CLR B1'S10-17 D-7-C7	CLR B4'S10-17 D-7-A7					TRAP BUFFER D-7-D4	NO BREAK 0-3 D-55-B5	NO BREAK 0-13 D-55-C5							TRAP BUFFER D-7-D5				
		/1 → B1'S10-17 D-7-C6	/1 → B2'S10-17 D-7-B6	RESET SYNC D-7-D8	TP4-4 D-56-C4	CLR B2'S0-7 D-7-B7	CLR B1'S0-7 D-7-C8	CLR B3'S10-17 D-7-B8	CLR B4'S0-7 D-7-A8	/0 → ODD B4'S D-7-D6		NO BREAK 0-7 D-55-B5								TRAP BUFFER D-7-C4				
						CLR B3'S10-17 D-7-B7					/0 → ODD B4'S D-7-D4	DEBREAK DELAY D-5-D4		TRAP BUFFER D-7-D5						TRAP BUFFER D-7-D5				
		/0 → B1'S10-17 D-7-B6	/0 → B1'S0-7 D-7-B6	SYNC D-7-C8	CLR B1'S0-7 D-7-C7	CLR B3'S0-7 D-7-A7	CLR B1'S10-17 D-7-C8	CLR B2'S0-7 D-7-B8	CLR B4'S10-17 D-7-A8	/0 → ODD B4'S /0 → EVEN B4'S D-7-D5	SBS BK REQUEST D-7-D4	NO BREAK 0-7 D-55-D5	SBS RESTORE D-7-D6							TRAP BUFFER D-7-D5				
					HOLD BREAK D-7-C7	CLR B2'S10-17 D-7-B7																		

CHANGE	DATE	ENG

REVISIONS

DRAWN		DATE
CHECKED		DATE 11/1/74
ENG		DATE
PROJ ENG		DATE
PROD		DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE UTILIZATION MODULE LOCATION

FOR

ASSY NO	CODE	DRWG NO	REV LTR
	UML	D-ID-45-20	

SHEET 15 OF 16

D-ID-45-20-16 REV LTR A

1	2	3	4	5	6	7	8	9	10	11
4301	4301	4603	4603	4603	4106	4106	4603	4603	4603	4603
COMP CK$_{17}$ D-55-B6	SBS RESTORE D-7-D7	1 → B1'S$_{0-7}$ D-7-C6 1 → B1'S$_{10-17}$ D-7-C6 0 → B1'S$_{10-17}$ D-7-B6	1 → B2'S$_{0-7}$ D-7-B6 1 → B2'S$_{10-17}$ D-7-B6 0 → B1'S$_{0-7}$ D-7-B6	HOLDBREAK D-7-C8 RESET SYNC D-7-D8 SYNC D-7-C8	CLR B1'S$_{10-17}$ D-7-C7 TP4-4 D-56-C4 CLR B1'S$_{0-7}$ D-7-C7 HOLD BREAK D-7-C7	CLR B4'S$_{0-7}$ D-7-A7 CLR B4'S$_{10-17}$ D-7-A7 CLR B2'S$_{0-7}$ D-7-B7 CLR B3'S$_{10-17}$ D-7-B7 CLR B3'S$_{0-7}$ D-7-A7 CLR B2'S$_{10-17}$ D-7-B7	CLR B2'S$_{10-17}$ D-7-B8 CLR B1'S$_{0-7}$ D-7-C8 CLR B1'S$_{10-17}$ D-7-C3	CLR B3'S$_{0-7}$ D-7-A8 CLR B3'S$_{10-17}$ D-7-B8 CLR B2'S$_{0-7}$ D-7-B8	DEBREAK D-7-D7 CLR B4'S$_{0-7}$ D-7-A8 CLR B4'S$_{10-17}$ D-7-A8	0 → EVEN B4'S D-7-D6 0 → ODD B4'S D-7-D6 0 → ODD B4'S 0 → EVEN B4'S D-7-D5

12	13	14	15	16	17	18	19	20	21	22	23	24	25
1105	1105	1105	1111	1111	1111	1111	1111	1111	1105				
0 → ODD B4'S D-7-B5 TRAP BUFFER D-7-D4 0 → ODD B4'S D-7-D4 SBS BK REQUEST D-7-D4	TRAP BUFFER D-7-B4 NO BREAK 0-3 D-55-B5 NO BREAK 0-7 D-55-B5 DEBREAK DELAY D-5-D4 NO BREAK$_{0-7}$ D-55-D5	TRAP BUFFER D-7-B5 NO BREAK 0-13 D-55-C5 SBS RESTORE D-7-D6	SBS BREAK REQUEST D-7-D4 TRAP BUFFER D-7-D5	SBS BRFAK REQUEST D-7-D4	BE 12 D-7-C3	BE 13 D-7-C3	BE 14 D-7-C3	BE 15 D-7-B3	TRAP BUFFER D-7-C4 TRAP BUFFER D-7-D5 TRAP BUFFER D-7-C4 TRAP BUFFER D-7-D5 TRAP BUFFER D-7-D5				

RID

CHANGE	DATE	ENG
DRWG. # WAS D-ID-45-20 SH. 16 OF 16 A-321	12-21-...	

REVISIONS

DRAWN [signature] DATE [illegible]
CHECKED [signature] DATE [illegible]
ENG DATE
PROJ ENG DATE
PROD DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

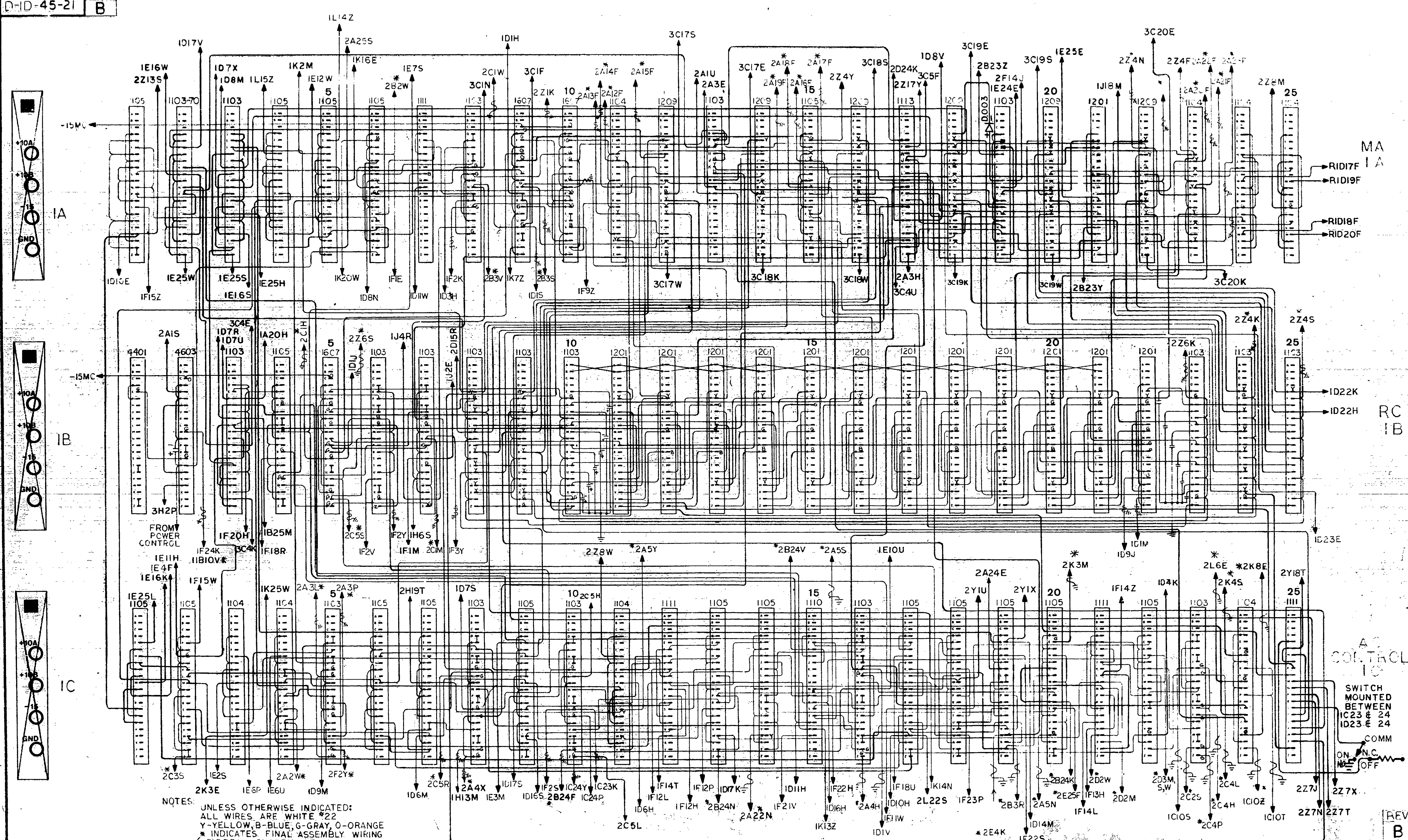
ASSY NO — CODE UML — SHEET 1 OF 1

TITLE UTILIZATION MODULE LOCATION

FOR

DRWG NO D-ID-45-20-16 REV LTR A

D-ID-45-21 REV B



NOTES: UNLESS OTHERWISE INDICATED:
ALL WIRES ARE WHITE #22
Y-YELLOW, B-BLUE, G-GRAY, O-ORANGE
* INDICATES FINAL ASSEMBLY WIRING
(*B) BREAK SYSTEM WIRING
CAPACITORS ARE 3.9MFD + TO GND.

THIS DWG. TAKEN FROM D-20016 REV-F

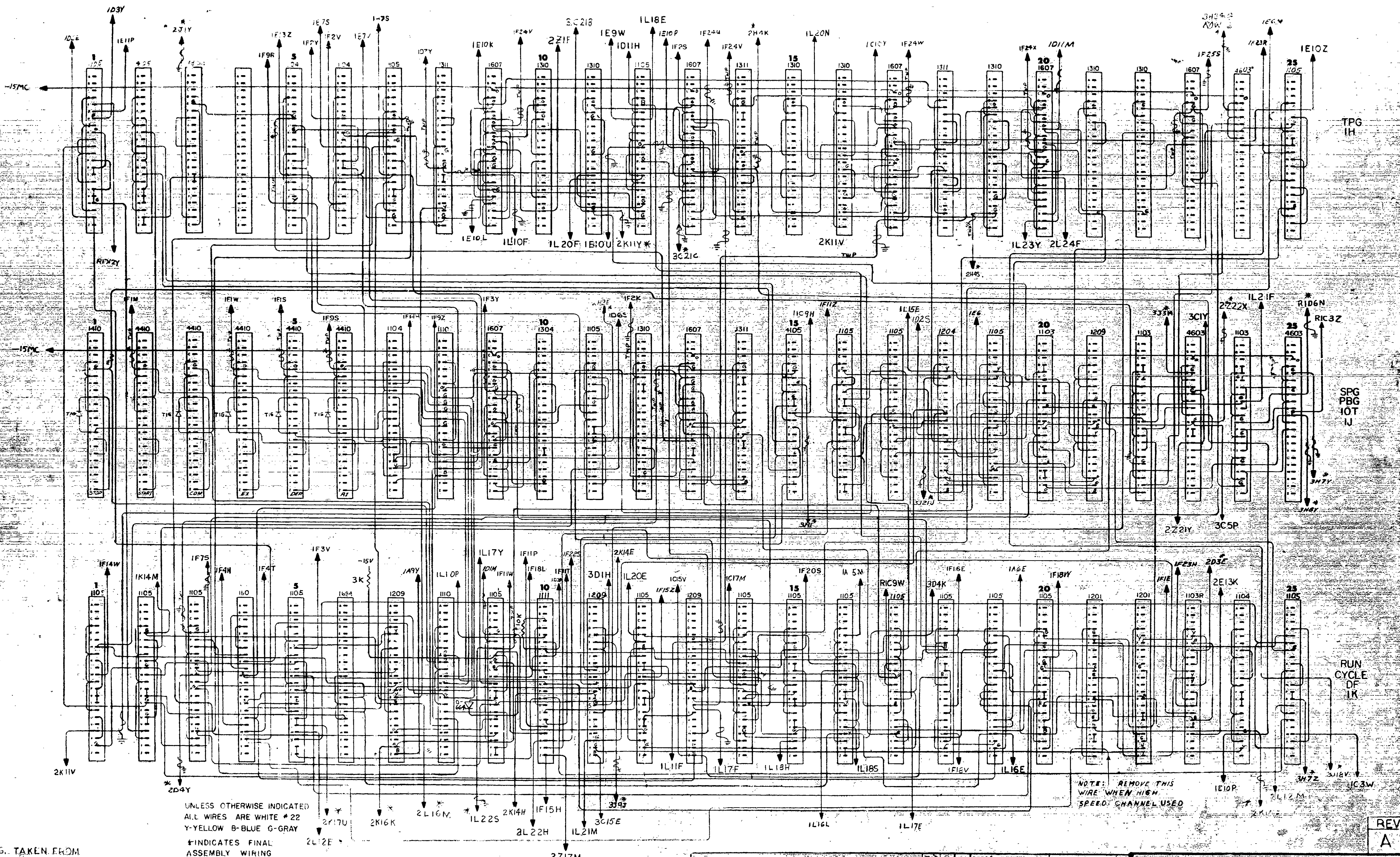
WIRING LAYOUT TYPES 1901 AND 1903

CODE	
WD	

PDP-ID-45
IA-MA FF, IB-RC FF, IC-AC CONTROL

digital EQUIPMENT CORPORATION D-ID-45-21 REV B

D-ID-45-22 REV A



UNLESS OTHERWISE INDICATED ALL WIRES ARE WHITE #22
Y-YELLOW B-BLUE G-GRAY

‡ INDICATES FINAL ASSEMBLY WIRING

(*B) BREAK SYSTEM WIRING

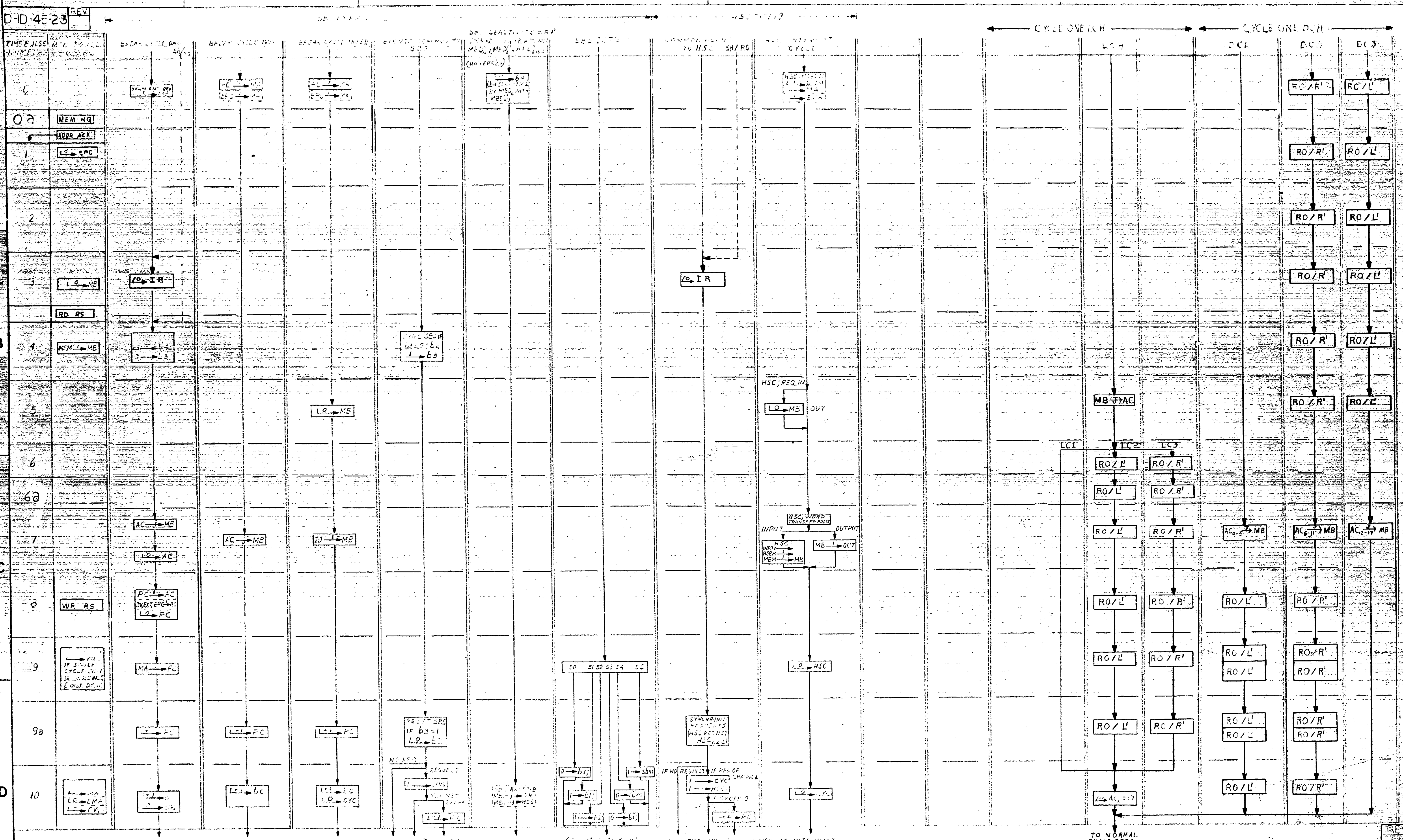
THIS DWG. TAKEN FROM D-20020, REV-M

A-321 12-18-64	CH NO / APP	CHANGE	EXPER / PRODUCTION / OTHER	DRAWN 10-31-64 / CHECKED 11/2/64 / ENGINEER 11/2/64

PDP-10
TIME PULSES, IJ-PBG, SPG IOT ... RUN, CYCLE, DF, BREAK

digital EQUIPMENT CORPORATION

D-ID-45-22 REV A



THIS DWG TAKEN FROM D-20024 REV A-1

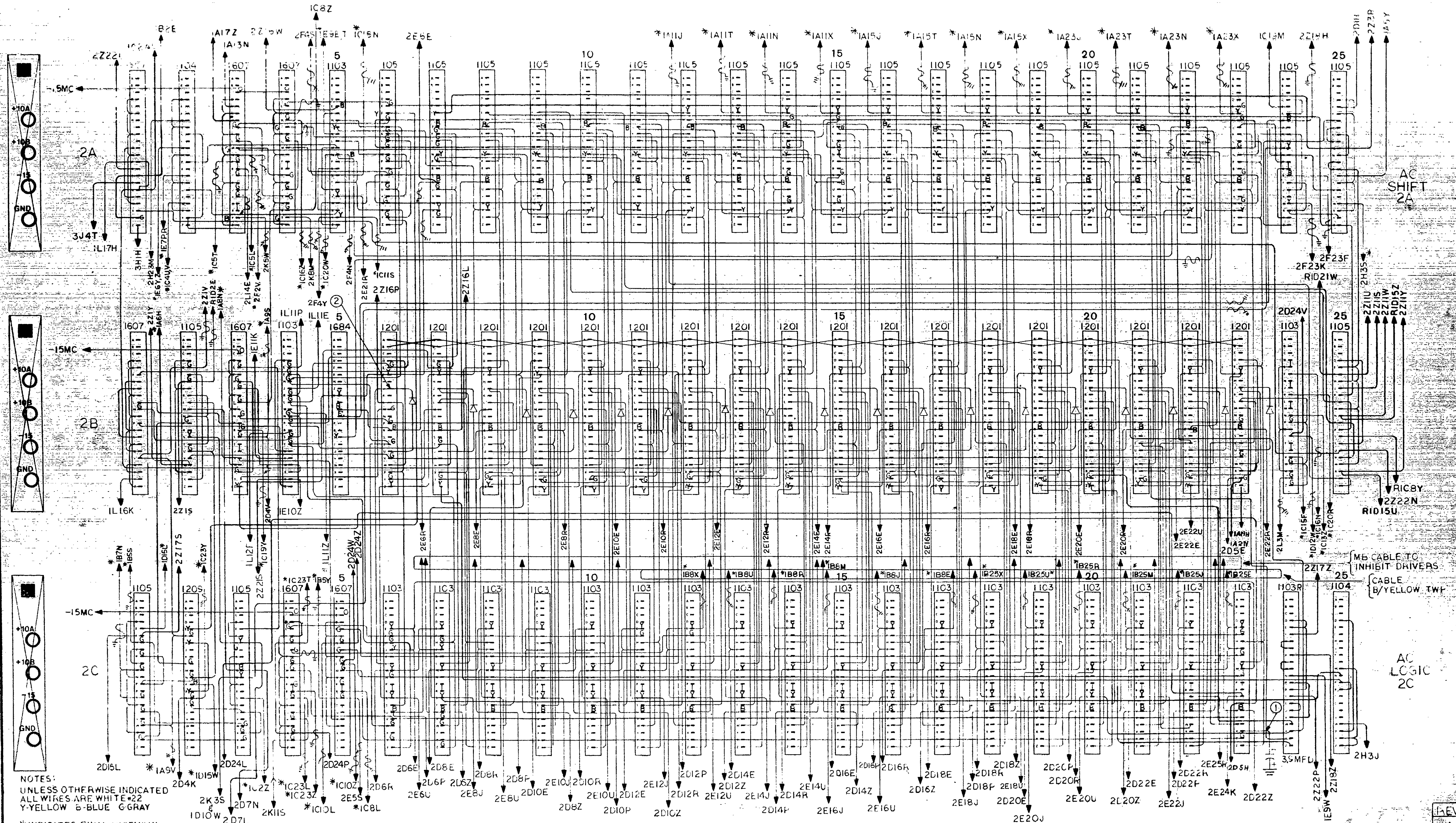
CODE FD

digital EQUIPMENT CORPORATION

D-ID-45-23

SPECIAL CYCLES & LCH & DCH CYCLES PDP-ID-45

D-45-24 A



NOTES:
UNLESS OTHERWISE INDICATED ALL WIRES ARE WHITE #22
Y-YELLOW B-BLUE G-GRAY

*INDICATES FINAL ASSEMBLY WIRING

① SOCKETS 2C6-2C23 HAVE 3.9 μf CAPACITOR TO GND ON PIN X.

② SOCKETS 2B6-2B23 HAVE D-001 DIODE FROM PIN J TO PIN U.

THIS DWG. TAKEN FROM D-20019 REV-E

WIRING LAYOUT
TYPES 1901 AND 1903

CODE WD

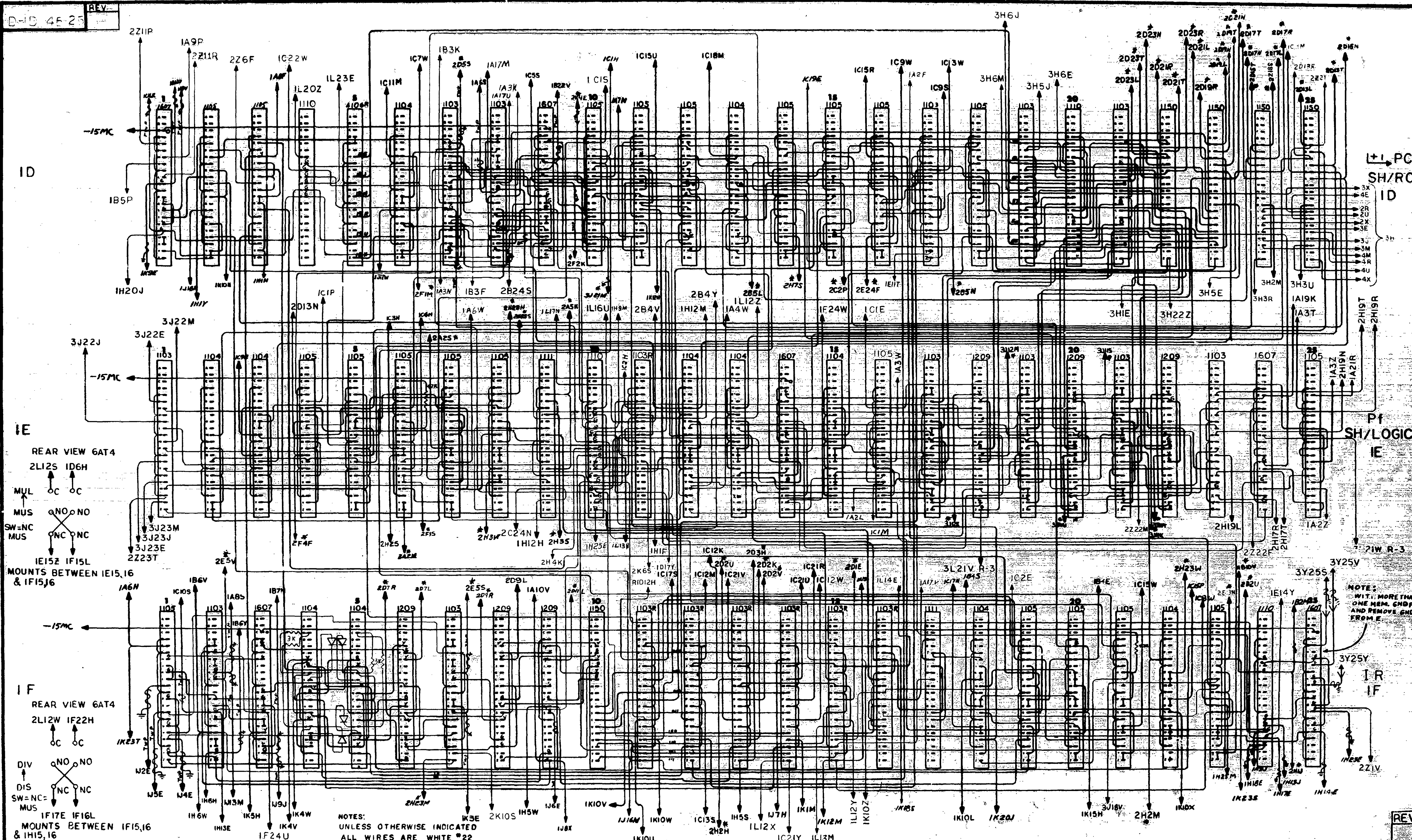
REV A

PDP 1D
2A AC SHIFT, 2B AC FF, 2C AC LOGIC

digital EQUIPMENT CORPORATION

D-45-24

D-ID-45-25



NOTE:
ALL DIODES ARE 664

NOTES:
UNLESS OTHERWISE INDICATED
ALL WIRES ARE WHITE #22
Y-YELLOW B-BLUE G-GRAY
* INDICATES FINAL ASSEMBLY WIRING

(* B) BREAK SYSTEM WIRING

CODE	
WD	

PDP-10-45

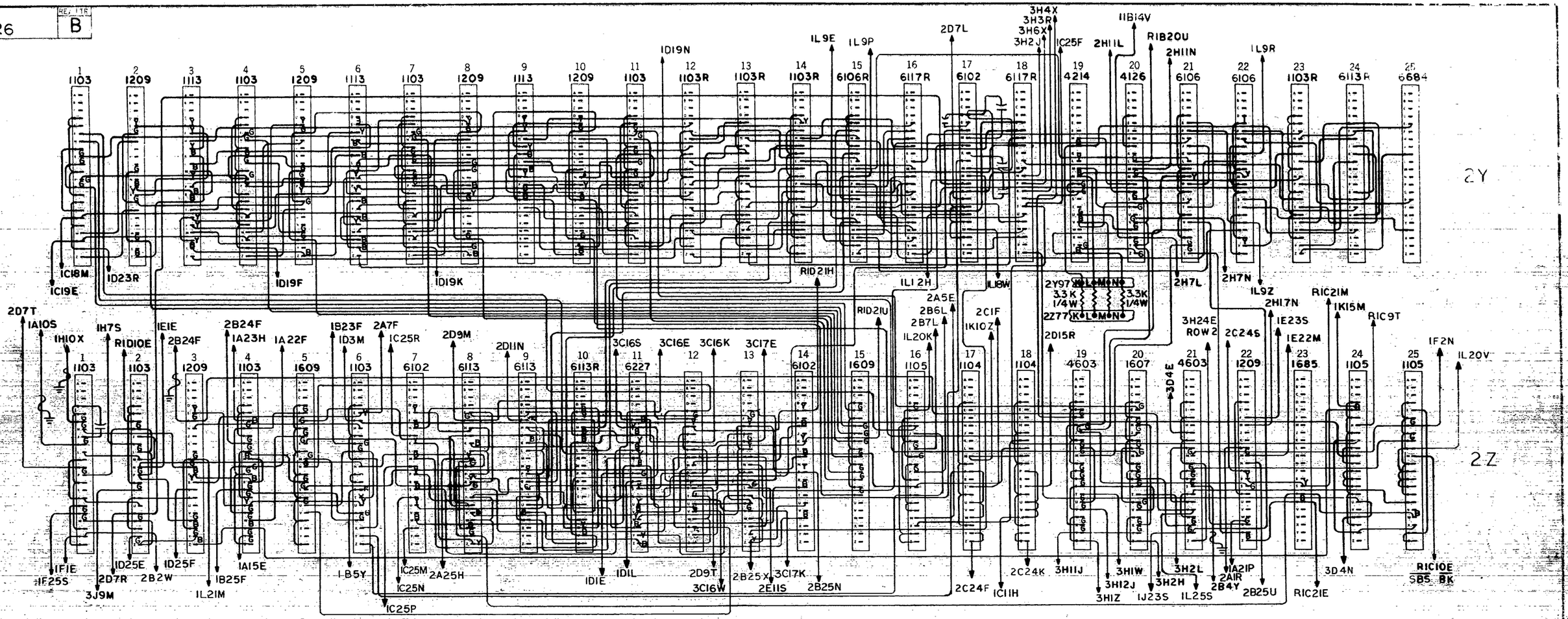
ID-I+1, PC, SH/RO IE-Pf + SH/LOGIC, IF-IR

digital

D-ID-45-25

REV

D-ID-45-26 REV. LTR B



NOTE:
UNLESS OTHERWISE INDICATED
CAPACITORS ARE .01MFD

WIRING LAYOUT
TYPES

REVISIONS	CHANGE	DATE	ENG.
	A-321 B-360	12-15-64	

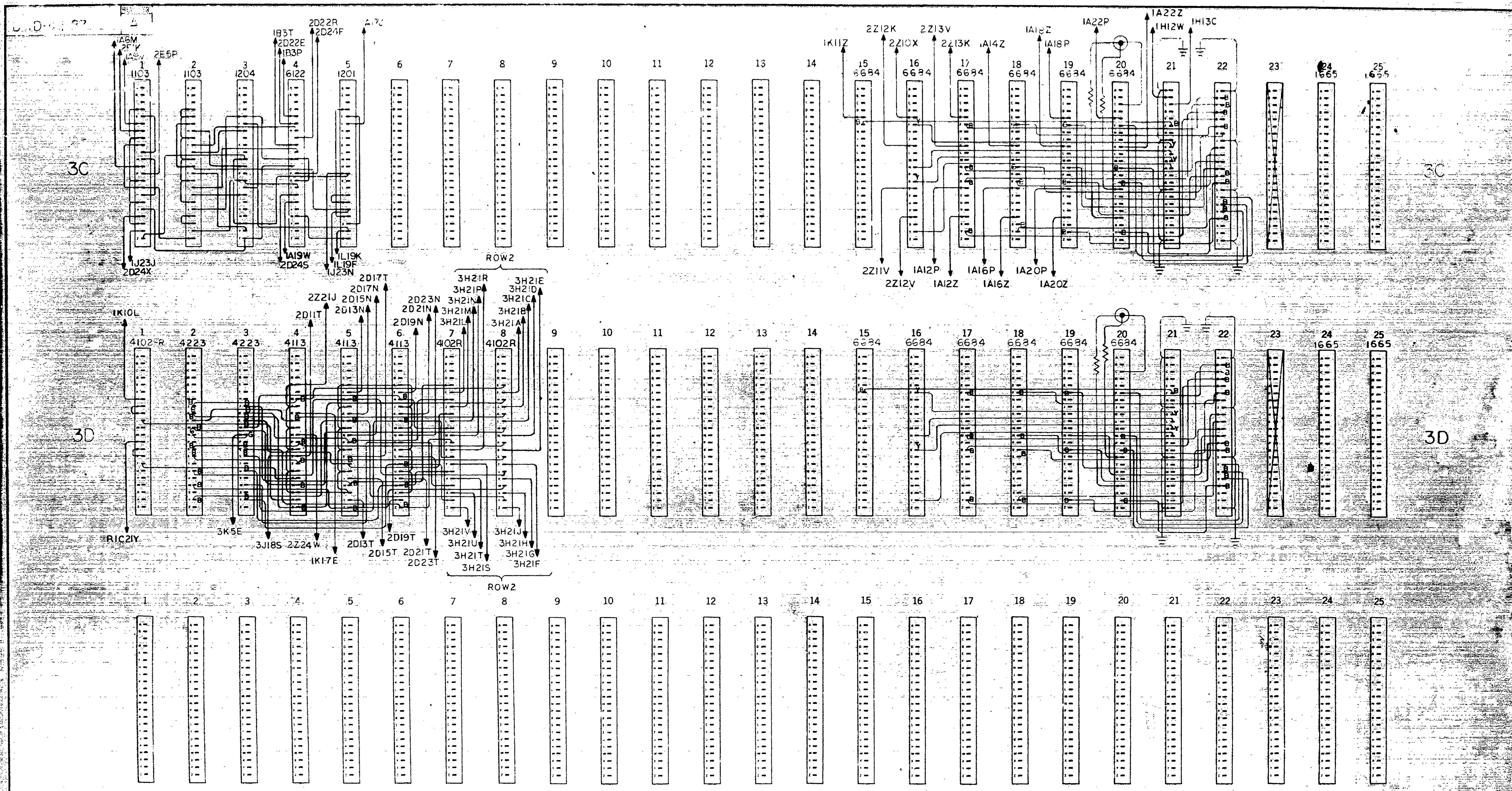
		DATE
DRAWN		11-13-63
CHECKED		10/22/64
ENG		11/2/64
PROJ ENG		11/2/64
PROD		11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE: MEMORY EXTENSION TYPE 15A
RENAMING & PROTECTION

FOR PDP-ID-45

ASSY NO MA- -ID-45-1 CODE WD
DRWG NO D-ID-45-26 REV LTR B
SCALE SHEET OF



NOTE:
1. MODULES 21 & 22 IN RACKS 3C & 3D ARE USED AS METHODE PLUGS.

A-321	CHANGE	12-2-64	EC
REVISIONS		DATE	ENG

DRAWN [signature] DATE 11/12/64
CHECKED [signature] DATE 12/11/64
ENG. [signature] DATE 11/2/64

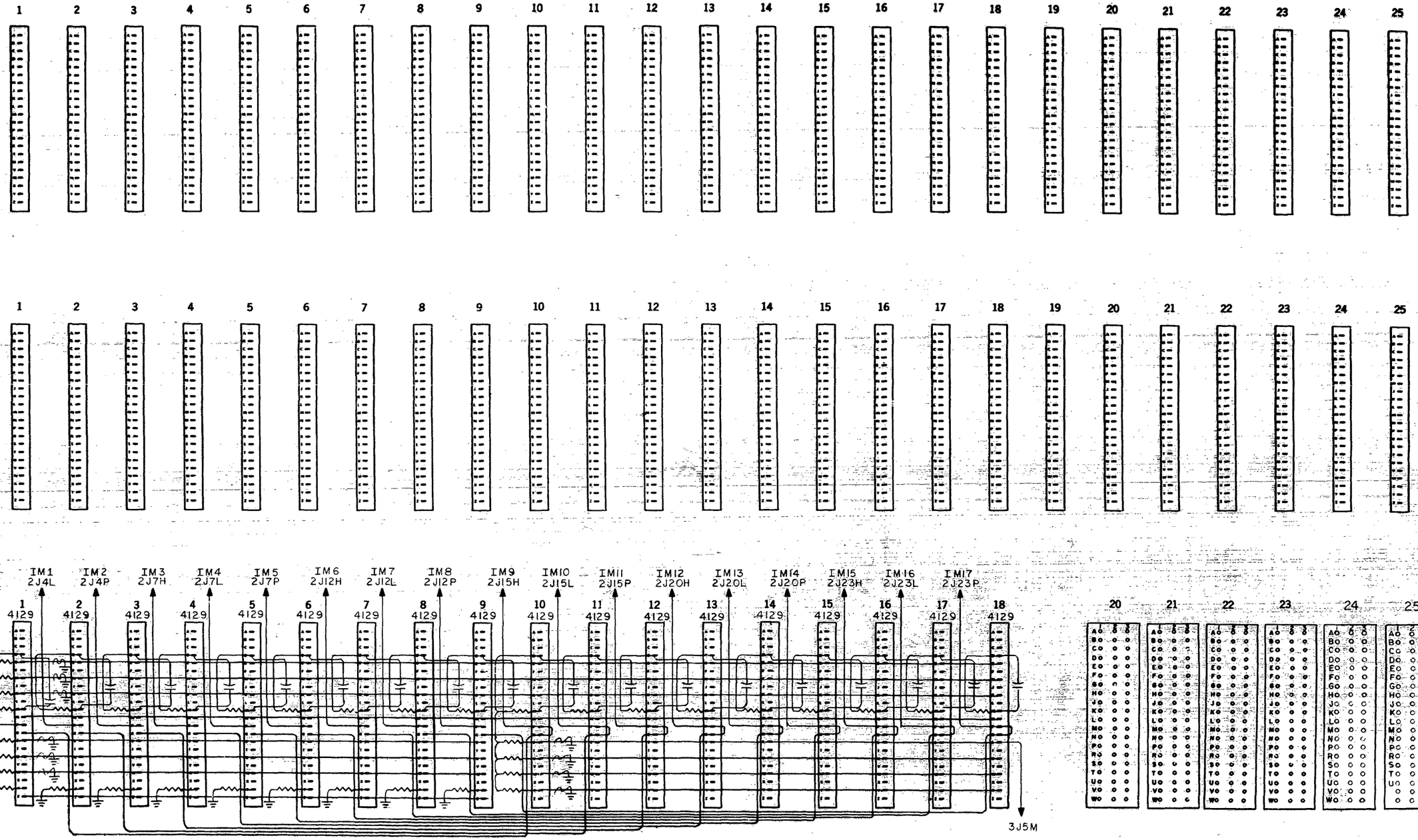
digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

TITLE RACKS 3C & 3D
FOR PDP-1D-45
ASSY NO MA-1D-45-1
DRWG NO D-1D-45-27
REV LTR A

WIRING LAYOUT TYPES

D-ID-45-2E

REV. LTR.



WIRING LAYOUT
TYPES

NOTE:
UNLESS OTHERWISE INDICATED
RESISTORS ARE 100 OHM
CAPACITORS ARE 680 MMFD

REVISIONS	CHANGE	DATE	ENG

DRAWN	DATE 11-8-63	
CHECKED	DATE 10/17/64	
ENG	DATE 11/2/64	
PROJ ENG	DATE 11/2/64	
PROD	DATE 11/2/64	

digital
EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: IN-OUT MIXER OPTION

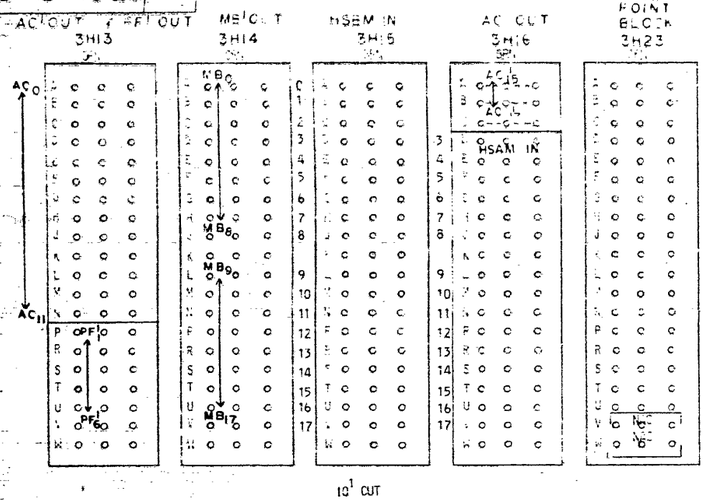
FOR:

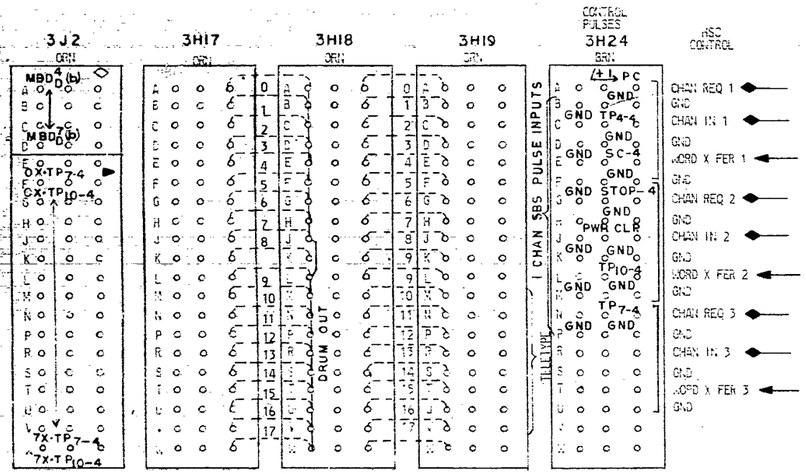
ASSY NO: MA- -ID-45-1 | CODE: WD

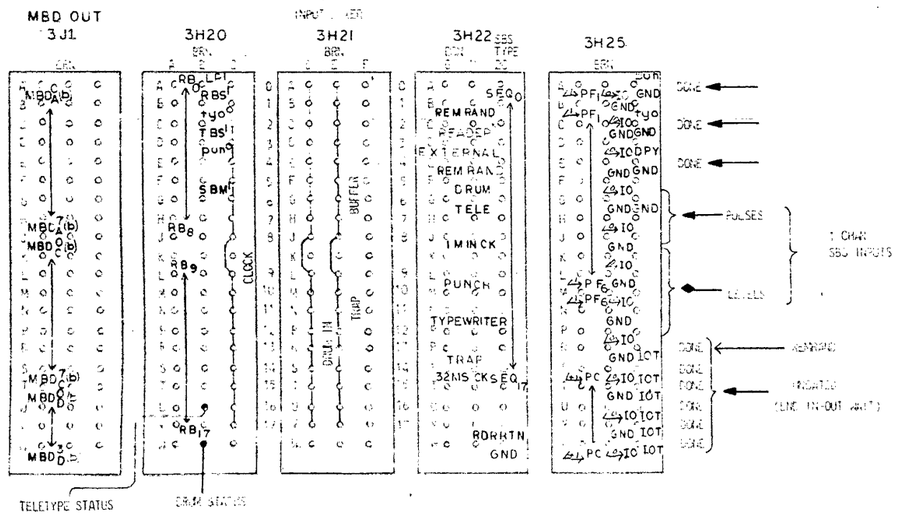
DRWG NO: D-ID-45-2- | REV. LTR:

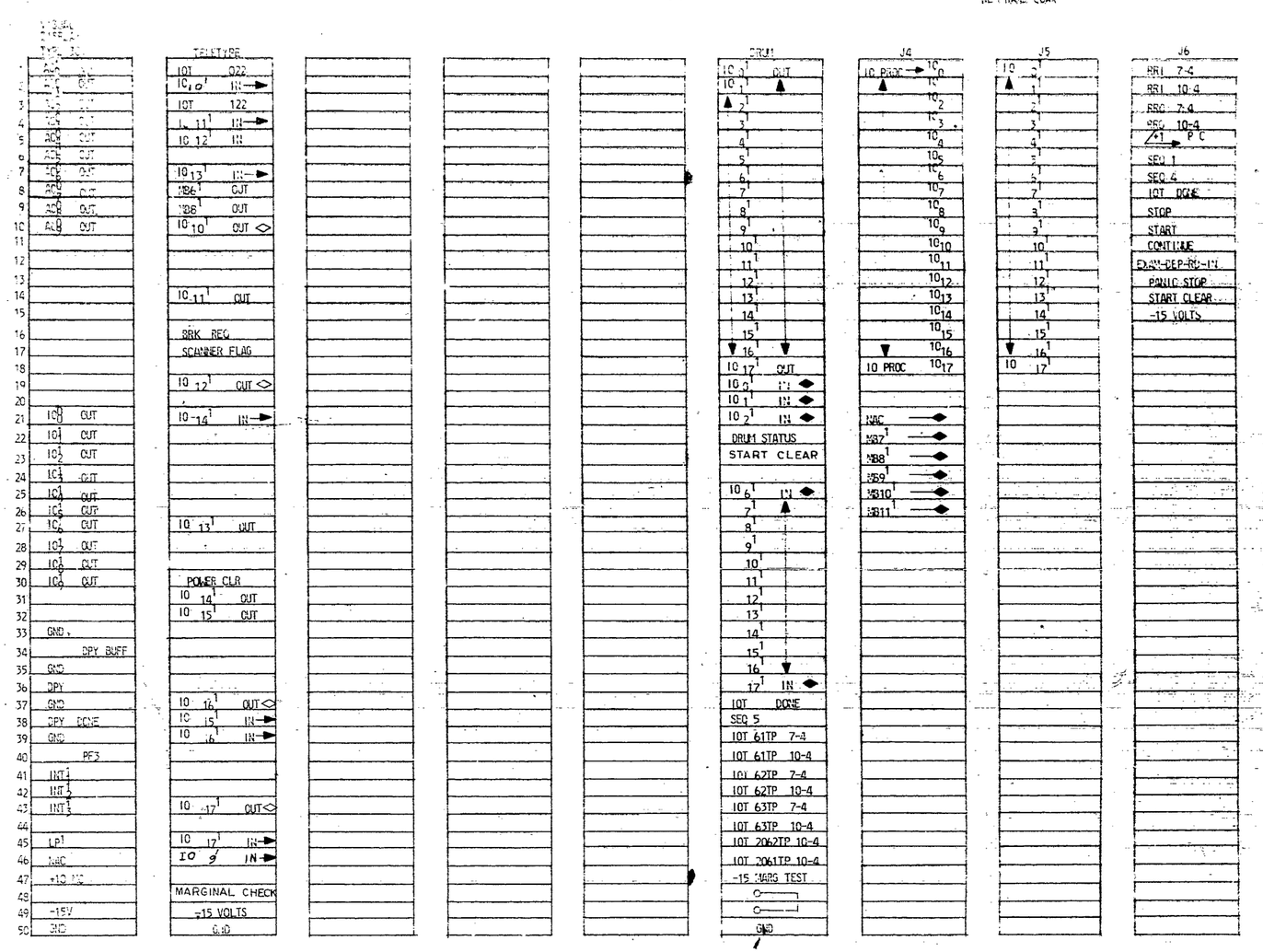
SCALE: | SHEET: OF:

D-ID-45-29

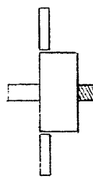








IO PROCESSOR CABLE	
ITEM	AMP CATALOG NO.
FEMALE BLOCK	201158-1
BUSHINGS	329051
SOCKETS	
FERRULES	328664
RET. SPRINGS	2-43332-1
PINS	329014



PDP-1 COAX. CONNECTION	
ITEM	AMP CATALOG NO.
MALE BLOCK	201159-1
BUSHINGS	329051
SOCKETS	329932
FERRULES	329029
RET. SPRINGS	2-43332-1
PINS	329013
TOOL	45639

CHANGE	DATE	ENG
REVISIONS		

DRAWN		DATE 3-17-63
CHECKED		DATE
ENG		DATE
PROJ. ENG		DATE
PROD		DATE

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

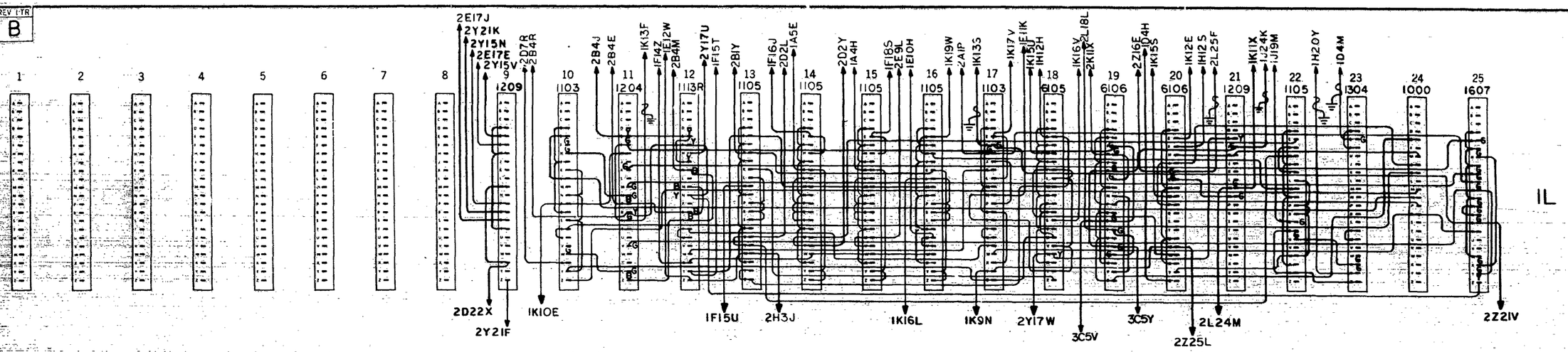
TITLE: TAPER PIN PANELS & IN-OUT PLUG FOR OPTIONAL EQUIPMENT

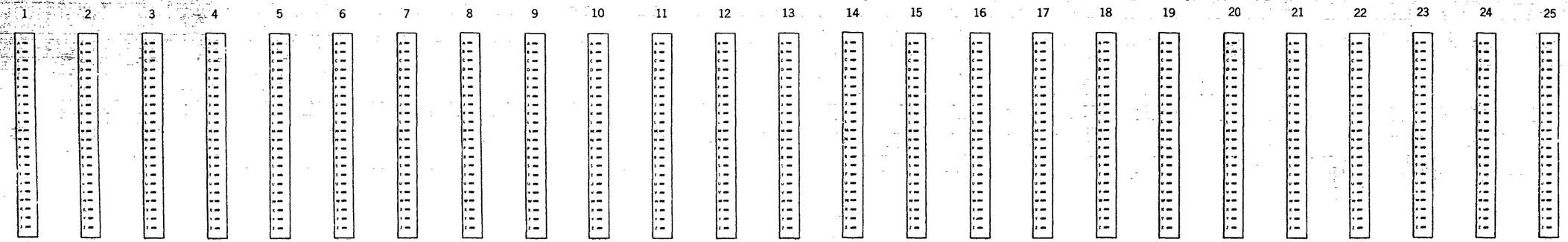
FOR

ASSY NO	CODE	DRWG NO	REV LTR
MA- -ID-45-1	WD	D-ID-45-29	

SHEET OF

D-ID-45-30 | REV LTR B





WIRING LAYOUT
TYPES

REVISIONS	CHANGE	DATE	ENG.
	A-321	12/18/64	
	B-360	12-26-65	

DRAWN		DATE 10-18-63
CHECKED		DATE 10/27/64
ENG		DATE 11/2/64
PROJ ENG		DATE 11/2/64
MGR		DATE 11/2/64

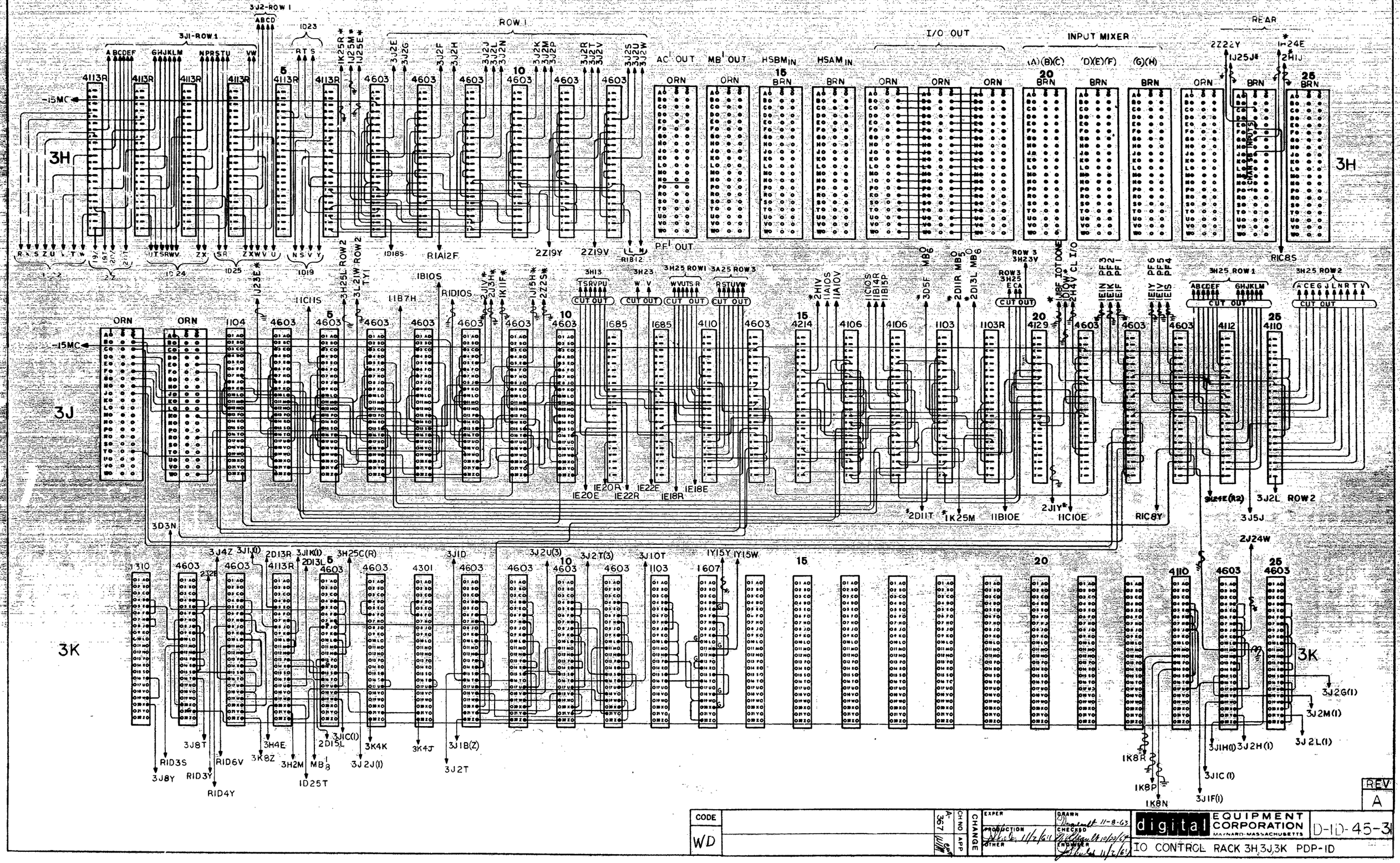
digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

ASSY NO MA- -ID-45-1 | CODE WD | SCALE | SHEET | OF

TITLE RACK IL
LCH & DCH CONTROL
FOR

DRWG NO D-ID-45-30 | REV LTR B

D-ID 45-3I | REV A



CODE		CH NO	APP
WD		A-367	

CHANGE | EXPER | DRAWN | PRODUCTION | CHECKED | OTHER | ENGINEER

digital EQUIPMENT CORPORATION
MAYNARD·MASSACHUSETTS

D-ID-45-3I

IO CONTROL RACK 3H,3J,3K PDP-ID

REV A

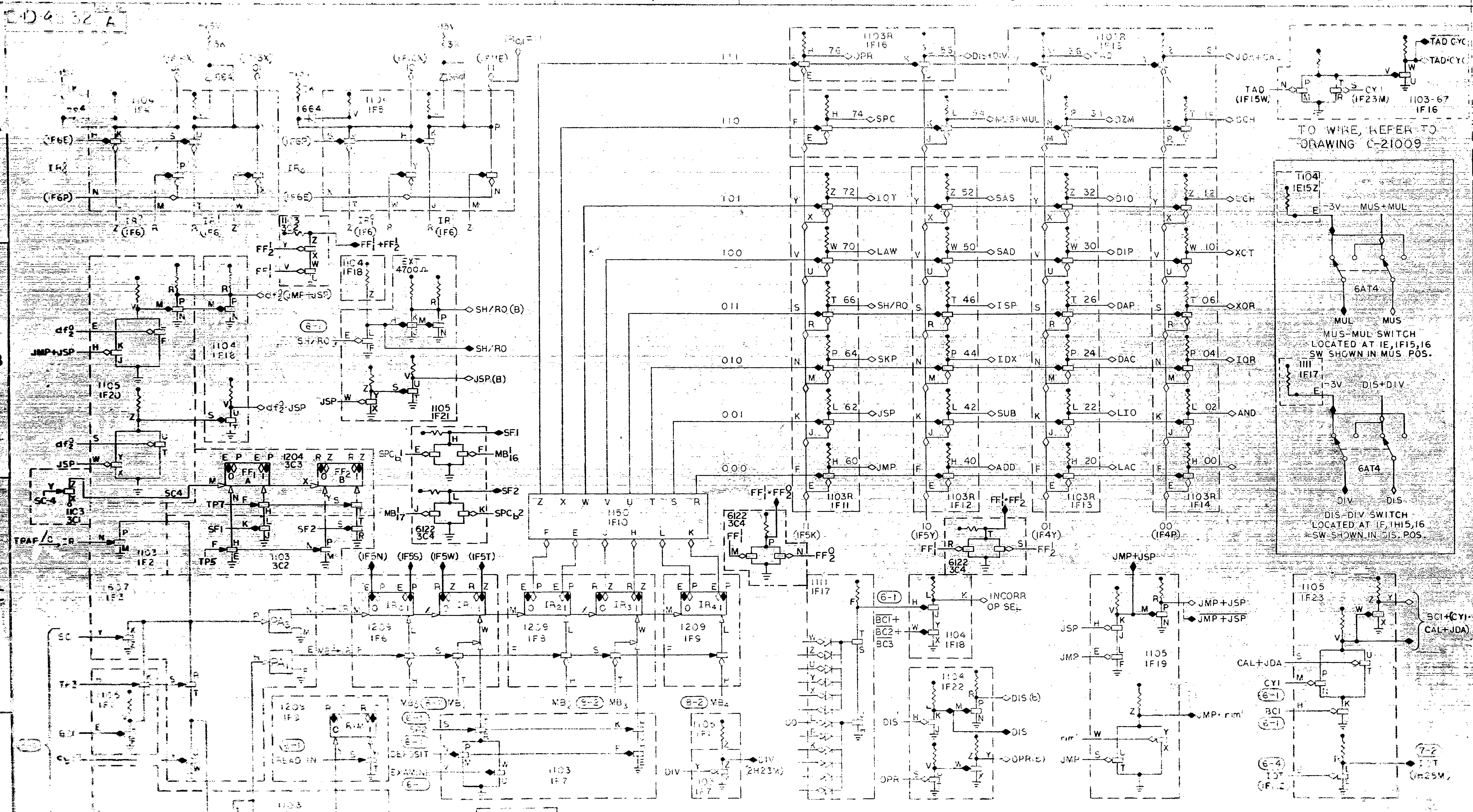
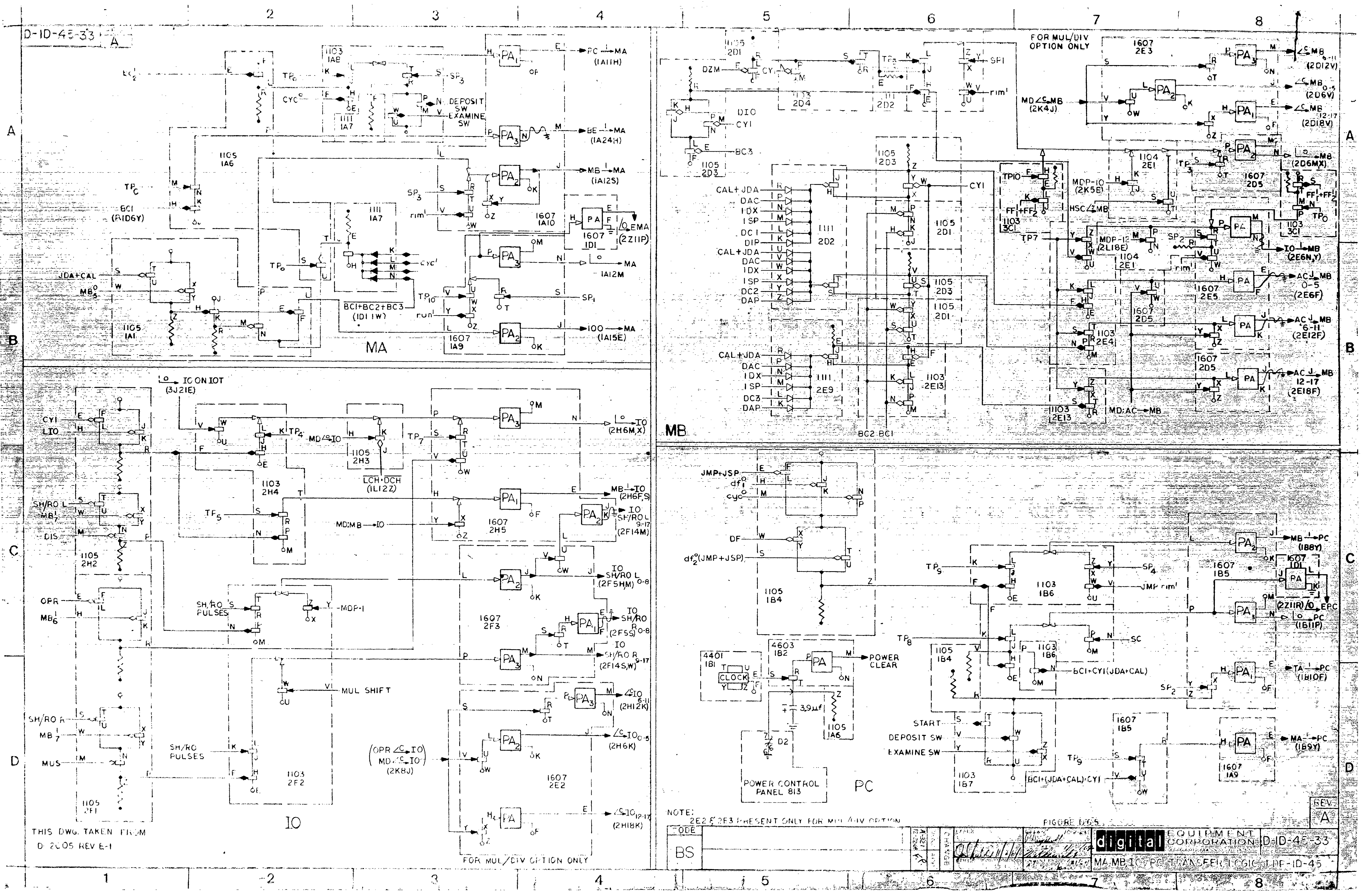


FIGURE D6-2

TITLE	INSTRUCTION REGISTER & DECODERS
	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS
CODE	DS
NUMBER	D-ID-45-32


D-ID-45-33
MA
MB
IO
PC
FOR MUL/DIV OPTION ONLY
DEPOSIT SW
EXAMINE SW
POWER CLEAR
POWER CONTROL PANEL 813
MUL SHIFT
START
THIS DWG. TAKEN FROM D-2C05 REV E-1
NOTE:
2E2 & 2E3 PRESENT ONLY FOR MUL/DIV OPTION
FIGURE D6.5
digital EQUIPMENT CORPORATION
MA MB IO PC TRANSFER LOGIC PDP-ID-45
REV A

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

J2

COLOR	PIN	PIN	NAME	COLOR	PIN	PIN	NAME
GRY TW	3K7E	1	IOT 022 →			26	
GRY TW	3L23M (3)	2	TO IO MIXER 10 [1]	WHT	3H19R (3)	27	FROM IO 13 [1]
GRY TW	3K6E	3	IOT 122 →			28	
GRY TW	3L23N (3)	4	TO IO MIXER 11 [1]			29	
GRY TW	3L23P (3)	5	TO IO MIXER 12 [1]	GRY TW	3H24T ROW 2	30	FROM POWER CLEAR
		6		WHT	3H19S (3)	31	FROM IO 14 [1]
GRY TW	3L23R (3)	7	TO IO MIXER 13 [1]	WHT	3H19T (3)	32	FROM IO 15 [1]
WHT	3K4W	8	FROM MB6 [1]			33	
WHT	3K4T	9	FROM MB8 [1]			34	
WHT	3H19M (3)	10	FROM IO 10 [1]			35	
		11				36	
		12		WHT	3H19U (3)	37	FROM IO 16 [1]
		13		GRY TW	3L23T (3)	38	TO IO MIXER 15 [1]
WHT	3H19N (3)	14	FROM IO 11 [1]	GRY TW	3L23U (3)	39	TO IO MIXER 16 [1]
		15				40	
GRY TW	3H22G ROW 3	16	BREAK REQUEST			41	
WHT	3H20U ROW 2	17	SCANNER FLAG			42	
		18		WHT	3H19V (3)	43	FROM IO 17 [1]
WHT	3H19P (3)	19	FROM IO 12 [1]			44	
		20		GRY TW	3L23V (3)	45	TO IO MIXER 17 [1]
GRY TW	3L23S (3)	21	TO IO MIXER 14 [1]	GRY TW	3L23L (3)	46	TO IO MIXER 9 [1]
		22				47	+ 10 MC
		23				48	
		24		RED		49	FROM -15
		25		BLACK		50	GROUND

DRAWN P.J.Priest 1-22-64

CHECKED [signature] 10/7/64

ENG [signature] 11/2/64

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

50 PIN AMPHENOL

TITLE

INTERFACE BETWEEN

630-3 AND PDP-1D-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-35

REV. LTR.

SHEET 1 OF 1

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

3L20 ROW 1

COLOR	PIN	PIN	NAME	REMARKS
WHT	3L1F	A	IM 0 LEVEL IN	
↑	3L2F	B	IM 1 LEVEL IN	
	3L3F	C	IM 2 LEVEL IN	
	3L4F	D	IM 3 LEVEL IN	
	3L5F	E	IM 4 LEVEL IN	
	3L6F	F	IM 5 LEVEL IN	
	3L7F	G	IM 6 LEVEL IN	
	3L8F	H	IM 7 LEVEL IN	
	3L9F	J	IM 8 LEVEL IN	
		K		
	3L10F	L	IM 9 LEVEL IN	
	3L11F	M	IM 10 LEVEL IN	
	3L12F	N	IM 11 LEVEL IN	
	3L13F	P	IM 12 LEVEL IN	
	3L14F	R	IM 13 LEVEL IN	
	3L15F	S	IM 14 LEVEL IN	
	3L16F	T	IM 15 LEVEL IN	
↓	3L17F	U	IM 16 LEVEL IN	
WHT	3L18F	V	IM 17 LEVEL IN	
GRY/BLK	3L18E	W	READ IN PULSE	TWP

DRAWN E. MCHUGH 11/8/63

CHECKED M. Roffenell 10/7/64

ENG J. Skalko 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

18 #100-A-3582411-9

TITLE

IM 0-17 IN

PDP-1D-45

DWG NO A-1D-45-36

REV. LTR.

SHEET 1 OF 12

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

2L20 ROW 2

COLOR	PIN	PIN	NAME	REMARKS
WHT	3L1J	A	IM 0 LEVEL IN	
	3L2J	B	IM 1 LEVEL IN	
	3L3J	C	IM 2 LEVEL IN	
	3L4J	D	IM 3 LEVEL IN	
	3L5J	E	IM 4 LEVEL IN	
	3L6J	F	IM 5 LEVEL IN	
	3L7J	G	IM 6 LEVEL IN	
	3L8J	H	IM 7 LEVEL IN	
	3L9J	J	IM 8 LEVEL IN	
		K		
	3L10J	L	IM 9 LEVEL IN	
	3L11J	M	IM 10 LEVEL IN	
	3L12J	N	IM 11 LEVEL IN	
	3L13J	P	IM 12 LEVEL IN	
	3L14J	R	IM 13 LEVEL IN	
	3L15J	S	IM 14 LEVEL IN	
	3L16J	T	IM 15 LEVEL IN	
	3L17J	U	IM 16 LEVEL IN	
WHT	3L18J	V	IM 17 LEVEL IN	
GRY/BLK	3L18H	W	READ IN PULSE	TWP

DRAWN E. MCHUGH 11/8/63

CHECKED M. Blank 10/7/64

ENG

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

18 #100-A-3582411-9

TITLE

IM 0-17 IN

PDP-15-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-36

REV. LTR.

SHEET 3 OF 12

CODE C-L

JACK	X	PLUG		LOCATION, LENGTH, ROUTE
FEMALE	X	MALE		3L20 ROW 3

COLOR	PIN	PIN	NAME	REMARKS
WHT	3L1L	A	IM 0 LEVEL IN	
↑	3L2L	B	IM 1 LEVEL IN	
	3L3L	C	IM 2 LEVEL IN	
	3L4L	D	IM 3 LEVEL IN	
	3L5L	E	IM 4 LEVEL IN	
	3L6L	F	IM 5 LEVEL IN	
	3L7L	G	IM 6 LEVEL IN	
	3L8L	H	IM 7 LEVEL IN	
	3L9L	J	IM 8 LEVEL IN	
		K		
	3L10L	L	IM 9 LEVEL IN	
	3L11L	M	IM 10 LEVEL IN	
	3L12L	N	IM 11 LEVEL IN	
	3L13L	P	IM 12 LEVEL IN	
	3L14L	R	IM 13 LEVEL IN	
	3L15L	S	IM 14 LEVEL IN	
	3L16L	T	IM 15 LEVEL IN	
↓	3L17L	U	IM 16 LEVEL IN	
WHT	3L18L	V	IM 17 LEVEL IN	
GRY/BLK	3L18K	W	READ IN PULSES	TWP

DRAWN E. MCHUGH 11/8/63

CHECKED [signature] 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

18 #100-A-3582411-9

TITLE IM 0-17 IN

PDP-1D-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-36

REV. LTR.

SHEET 3 OF 12

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

3L21 ROW 1

COLOR	PIN	PIN	NAME	REMARKS
GRY/BLK	3L1M	A	IM 0 PULSE IN	REM-RAND PROCESSOR TWP
	3L2M	B	IM 1 PULSE IN	
	3L3M	C	IM 2 PULSE IN	
	3L4M	D	IM 3 PULSE IN	
	3L5M	E	IM 4 PULSE IN	
	3L6M	F	IM 5 PULSE IN	
	3L7M	G	IM 6 PULSE IN	
	3L8M	H	IM 7 PULSE IN	
	3L9M	J	IM 8 PULSE IN	
		K		
	3L10M	L	IM 9 PULSE IN	
	3L11M	M	IM 10 PULSE IN	
	3L12M	N	IM 11 PULSE IN	
	3L13M	P	IM 12 PULSE IN	
	3L14M	R	IM 13 PULSE IN	
	3L15M	S	IM 14 PULSE IN	
	3L16M	T	IM 15 PULSE IN	
	3L17M	U	IM 16 PULSE IN	
GRY/BLK	3L18M	V	IM 17 PULSE IN	
WHT	3L18N	W	READ IN LEVEL	REM-RAND PROCESSOR TWP

DRAWN E. MCHUGH 11/8/63

CHECKED R. Kenneth 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

18 #100-A-3582411-9

TITLE

IM 0-17 IN

PDP-1D-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-36

REV. LTR.

SHEET 4 OF 12

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

3L21 ROW 2

COLOR	PIN	PIN	NAME	REMARKS
		A		
		B		
		C		
		D		
		E		
		F		
		G		
		H		
		J		
		K		
WHT	3L10T	L	IM 9 LEVEL IN	
	3L11T	M	IM 10 LEVEL IN	
	3L12T	N	IM 11 LEVEL IN	
	3L13T	P	IM 12 LEVEL IN	
	3L14T	R	IM 13 LEVEL IN	
	3L15T	S	IM 14 LEVEL IN	
	3L16T	T	IM 15 LEVEL IN	
	3L17T	U	IM 16 LEVEL IN	
WHT	3L18T	V	IM 17 LEVEL IN	
GRY/BLK	3L18S	W	READ IN PULSE	TWP

DRAWN E. MCHUGH 11/12/63

CHECKED D. Hault 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

18 #100-A-3582411-9

TITLE

IM 0-17 IN

PDP-1D-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-36

REV. LTR.

SHEET 5 OF 12

CODE C.L.

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

3L21 ROW 3

COLOR	PIN	PIN	NAME	REMARKS
		A		
		B		
		C		
		D		
		E		
		F		
		G		
		H		
		J		
		K		
WHT	3L10V	L	IM 9 LEVEL IN	
	3L11V	M	IM 10 LEVEL IN	
	3L12V	N	IM 11 LEVEL IN	
	3L13V	P	IM 12 LEVEL IN	
	3L14V	R	IM 13 LEVEL IN	
	3L15V	S	IM 14 LEVEL IN	
	3L16V	T	IM 15 LEVEL IN	
	3L17V	U	IM 16 LEVEL IN	
WHT	3L18V	V	IM 17 LEVEL IN	
GRY/BLK	3L18U	W	READ IN PULSE	TWP

DRAWN E. MCHUGH 11/12/63

CHECKED R. Rheault 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

18 #100-A-3582411-9

TITLE

IM 0-17 IN

PDP-1D-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-36

REV. LTR.

SHEET OF 12

CODE C L

JACK [X]	PLUG [ ]	LOCATION, LENGTH, ROUTE
FEMALE [X]	MALE [ ]	3L22 ROW 1

COLOR	PIN	PIN	NAME	REMARKS
		A		
		B		
		C		
		D		
		E		
		F		
		G		
		H		
		J		
		K		
WHT	3L10X	L	IM 9 LEVEL IN	
↑	3L11X	M	IM 10 LEVEL IN	
	3L12X	N	IM 11 LEVEL IN	
	3L13X	P	IM 12 LEVEL IN	
	3L14X	R	IM 13 LEVEL IN	
	3L15X	S	IM 14 LEVEL IN	
	3L16X	T	IM 15 LEVEL IN	
↓	3L17X	U	IM 16 LEVEL IN	
WHT	3L18X	V	IM 17 LEVEL IN	
GRY/BLK	3L18W	W	READ IN PULSE	TWP

DRAWN E. MCHUGH 11/12/63

CHECKED M. Rheault 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

18 #100-A-3582411-9

TITLE

IM 0-17 IN

PDP-1D-45

DWG NO A-1D-45-36

REV. LTR.

SHEET 9 OF 12

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

3I 22 ROW 2

COLOR	PIN	PIN	NAME	REMARKS
		A		
		B		
		C		
		D		
		E		
		F		
		G		
		H		
		J		
		K		
WHT	3L10Z	L	IM 9 LEVEL IN	
↑	3L11Z	M	IM 10 LEVEL IN	
	3L12Z	N	IM 11 LEVEL IN	
	3L13Z	P	IM 12 LEVEL IN	
	3L14Z	R	IM 13 LEVEL IN	
	3L15Z	S	IM 14 LEVEL IN	
	3L16Z	T	IM 15 LEVEL IN	
↓	3L17Z	U	IM 16 LEVEL IN	
WHT	3L18Z	V	IM 17 LEVEL IN	
GRY/BLK	3L18Y	W	READ IN PULSE	TWP

DRAWN E. MCHUGH 11/12/63

CHECKED [signature] 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

18 #100-A-3582411-9

TITLE

IM 0-17 IN

PDP-1D-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-36

REV. LTR.

SHEET 8 OF 12

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

3L22 ROW 3

COLOR	PIN	PIN	NAME	REMARKS
		A		
		B		
		C		
		D		
		E		
		F		
		G		
		H		
		J		
		K		
WHT	3L1T	L	IM 9 LEVEL IN	
	3L2T	M	IM 10 LEVEL IN	
	3L3T	N	IM 11 LEVEL IN	
	3L4T	P	IM 12 LEVEL IN	
	3L5T	R	IM 13 LEVEL IN	
	3L6T	S	IM 14 LEVEL IN	
	3L7T	T	IM 15 LEVEL IN	
	3L8T	U	IM 16 LEVEL IN	
WHT	3L9T	V	IM 17 LEVEL IN	
GRY/BLK	3L9S	W	READ IN PULSE	TWP

DRAWN E. MCHUGH 11/12/63

CHECKED N. Glauber 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

18 #100-A-3582411-9

TITLE

IM 0-17 IN

PDP-1D-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-36

REV. LTR.

SHEET 9 OF 12

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

3L23 ROW 1

COLOR	PIN	PIN	NAME	REMARKS
		A		
		B		
		C		
		D		
		E		
		F		
		G		
		H		
		J		
		K		
WHT	3L1V	L	IM 9 LEVEL IN	
↑	3L2V	M	IM 10 LEVEL IN	
│	3L3V	N	IM 11 LEVEL IN	
│	3L4V	P	IM 12 LEVEL IN	
│	3L5V	R	IM 13 LEVEL IN	
│	3L6V	S	IM 14 LEVEL IN	
│	3L7V	T	IM 15 LEVEL IN	
↓	3L8V	U	IM 16 LEVEL IN	
WHT	3L9V	V	IM 17 LEVEL IN	
GRY/BLK	3L9U	W	READ IN PULSE	

DRAWN E. MCHUGH 11/12/63

CHECKED [signature] 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

18 #100-A-3582411-9

TITLE

IM 0-17 IN

PDP-1D-45

DWG NO A-1D-45-36

REV. LTR.

SHEET 10 OF 12

CODE CL

JACK [X]	PLUG [ ]	LOCATION, LENGTH, ROUTE
FEMALE [X]	MALE [ ]	3_23 ROW 2

COLOR	PIN	PIN	NAME	REMARKS
		A		
		B		
		C		
		D		
		E		
		F		
		G		
		H		
		J		
		K		
WHT	3L1X	L	IM 9 LEVEL IN	
↑	3L2X	M	IM 10 LEVEL IN	
	3L3X	N	IM 11 LEVEL IN	
	3L4X	P	IM 12 LEVEL IN	
	3L5X	R	IM 13 LEVEL IN	
	3L6X	S	IM 14 LEVEL IN	
	3L7X	T	IM 15 LEVEL IN	
↓	3L8X	U	IM 16 LEVEL IN	
WHT	3L9X	V	IM 17 LEVEL IN	
GRY/BLK	3L9W	W	READ IN PULSE	TWP

DRAWN E. MCHUGH 11/12/63

CHECKED R. Bleasdell 11/17/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

18 #100-A-3582411-9

TITLE

IM 0-17 IN

PDP-1D-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-36

REV. LTR.

SHEET 11 OF 12

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

3L23 ROW 3

COLOR	PIN	PIN	NAME	REMARKS
		A		
		B		
		C		
		D		
		E		
		F		
		G		
		H		
		J		
		K		
GRY/BLK	3L1Y	L	IM 9 PULSE IN	TELETYPE TWP
	3L2Y	M	IM 10 PULSE IN	
	3L3Y	N	IM 11 PULSE IN	
	3L4Y	P	IM 12 PULSE IN	
	3L5Y	R	IM 13 PULSE IN	
	3L6Y	S	IM 14 PULSE IN	
	3L7Y	T	IM 15 PULSE IN	
	3L8Y	U	IM 16 PULSE IN	
GRY/BLK	3L9Y	V	IM 17 PULSE IN	TELETYPE TWP
WHT	3L9Z	W	READ IN LEVEL	

DRAWN E. Massarelli 10/7/64

CHECKED R. Rault 10/7/64

ENG

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

18 #100-A-3582411-9

TITLE

IM 0-17 IN
PDP-1D-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-36

REV. LTR.

SHEET 12 OF 12

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION LENGTH ROUTE

3F-3L

COLOR	PIN	PIN	NAME	COLOR	PIN	PIN	NAME
WHITE	3H13A1	1	AC0	WHITE	3H17F2	26	IO5
▲	▲ B1	2	AC1	▲	▲ G2	27	IO6
	C1	3	AC2		H2	28	IO7
	D1	4	AC3	▼	▼ J2	29	IO8
	E1	5	AC4	WHITE	3H17L2	30	IO9
	F1	6	AC5			31	
	G1	7	AC6	RED		32	
	H1	8	AC7	BLACK	3J7K	33	GND
	▼ J1	9	AC8	GRAY	3J7J	34	Dpy Buff
	3H13L1	10	AC9	BLACK	3J7F	35	GND
		11		GRAY	3J7E	36	Dpy XX07
		12		BLACK	3H25F3	37	GND
		13		GRAY	3H25E3	38	Dpy Done
		14		BLACK	GND	39	GND
		15		GRAY	3H25E1	40	LP - PF3
		16				41	Int 1
		17				42	Int 2
		18				43	Int 3
		19				44	
		20		WHITE	3H20A2	45	LP Status
	3H17A2	21	IO0	YEL	3J15Z	46	DCP (1)
	▲ B2	22	IO1	RED	+10 MC	47	+10 MC
	C2	23	IO2			48	
▼	▼ D2	24	IO3	RED	-15	49	-15
WHITE	3H17E2	25	IO4	BLACK	GND	50	GND

DRAWN R.S.Priest 1-28-64

CHECKED [signature] 2/2/64

ENG [signature] 2/2/64

digital EQUIPMENT CORPORATION

50 PIN AMPHENOL

TITLE

DISPLAY 30A

PDP-1D

DWG. NO. A-D-45-37

REV LTR

SHEET OF

JACK ☐ PLUG ☒

FEMALE ☒ MALE ☐

LOCATION, LENGTH, ROUTE

R1C22

COLOR	PIN	PIN	NAME	REMARKS
WHT/BLK	3H20D (R3)	A	CK 2	
WHT/BRN	E	B	3	
WHT/RED	F	C	4	
WHT/ORN	G	D	5	
WHT/YEL	H	E	6	
WHT/GRN	J	F	7	
WHT/BLU	L	H	8	
WHT/VIO	M	J	9	
WHT/GRY	N	K	10	
WHT	P	L	11	
WHT/BLK	R	M	12	
WHT/BRN	S	N	13	
WHT/RED	T	P	14	
WHT/ORN	U	R	15	
WHT/YEL	V	S	16	
WHT/GRN	3H20W (R3)	T	CK 17	

DRAWN P.J.Priest 1-22-64

CHECKED R. Russell 10/7/64

ENG D. Shier 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

22 PIN AMP

TITLE

CLOCK → IOM

DWG NO A-ID-45-38

REV. LTR.

SHEET 1 OF 2

CODE CL

JACK ☐ PLUG ☒

FEMALE ☐ MALE ☒

LOCATION, LENGTH, ROUTE

R1C22

COLOR	PIN	PIN	NAME	REMARKS
WHT/BLK	R1C5E	A	CK 2	
WHT/BRN	H	B	3	
WHT/RED	K	C	4	
WHT/ORN	M	D	5	
WHT/YEL	P	E	6	
WHT/GRN	S	F	7	
WHT/BLU	U	H	8	
WHT/VIO	R1C5W	J	9	
WHT/GRY	R1C6E	K	10	
WHT	H	L	11	
WHT/BLK	K	M	12	
WHT/BRN	M	N	13	
WHT/RED	P	P	14	
WHT/ORN	S	R	15	
WHT/YEL	U	S	16	
WHT/GRN	R1C6W	T	CK 17	

DRAWN P.J.Priest 1-22-64

CHECKED M Reault 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

22 PIN AMP

TITLE

CLOCK → IOM

DWG NO A-ID-45-38

REV. LTR.

SHEET 2 OF 2

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

COLOR	PIN	PIN	NAME	COLOR	PIN	PIN	NAME
YEL	3H18A ROW 1	1	IO_0 OUT ◆	BLU	3H21H ROW 1	26	IO_7 INPUT MIX ◆
	3H18B	2	IO_1		3H21J	27	IO_8
	3H18C	3	IO_2		3H21L	28	IO_9
	3H18D	4	IO_3		3H21M	29	IO_{10}
	3H18E	5	IO_4		3H21N	30	IO_{11}
	3H18F	6	IO_5		3H21P	31	IO_{12}
	3H18G	7	IO_6		3H21R	32	IO_{13}
	3H18H	8	IO_7		3H21S	33	IO_{14}
	3H18J	9	IO_8		3H21T	34	IO_{15}
	3H18L	10	IO_9		3H21U	35	IO_{16}
	3H18M	11	IO_{10}	BLU	3H21V ROW 1	36	IO_{17} INPUT MIX ◆
	3H18N	12	IO_{11}	BLK/GRY	3H25R ROW 3	37	IOT DONE
	3H18P	13	IO_{12}		3H22F ROW 3	38	SEQ. BRK.
	3H18R	14	IO_{13}		3K8E	39	0061TP7-4
	3H18S	15	IO_{14}		3K9E	40	0061TP10-4
	3H18T	16	IO_{15}		3K8J	41	0062TP7-4
	3H18U	17	IO_{16}		3K9J	42	0062TP10-4
YEL	3H18V	18	IO_{17} OUT ◆		3K8M	43	0063TP7-4
BLU	3H21A	19	IO_0 INPUT MIX ◆		3K9M	44	0063TP10-4
	3H21B	20	IO_1 INPUT MIX ◆		3K11J	45	2062TP 7-4
	3H21C ROW 1	21	IO_2 INPUT MIX ◆	BLK/GRY	3K11E	46	2061TP 7-4
BLU	3H20V ROW 2	22	DRM STATUS	RED	R2B5	47	MAR. TEST
		23		BLK/WHT	CONTACT CLOSURE	48	○—┐
		24		BLK/WHT	813 P.S.	49	○—┘
BLU	3H21G ROW 1	25	IO_6 INPUT MIX ◆	BLK	GND	50	GND

DRAWN P.J.Priest 1-22-64

CHECKED R. Regault 11/2/64

ENG [signature] 11/2/64

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

50 PIN AMPHENOL

TITLE

PDP-1 TO 23 DRUM

3F PLUG 5

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-39

REV. LTR.

SHEET 1 OF 1

CODE CL

JACK ☐ PLUG ☒ FEMALE ☒ MALE ☐

LOCATION, LENGTH, ROUTE

R1C23

COLOR	PIN	PIN	NAME	REMARKS
WHT/BLK	2Z25M	A	$\overline{\text{SBS}}$-$\overline{\text{BK}}$	
WHT/BRN	2Y20L	B		
WHT/RED	2Z14J	C	EPC_2	
WHT/ORN	2Z14F	D	EPC_2	
WHT/YEL	2Z14L	E	EPC_3	
WHT/GRN	3D1P	F	$0XX15\ JMP1^1$	
WHT/BLU	2Z22Z	H	RM (1)	
WHT/VIO	1K17L	J		
WHT/GRY	1F18K	K	INCORR. OP. SEL.	
WHT	1F11Z	L	IOT 72	
WHT/BLK	2Z24H	M		
WHT/BRN	2Z22R	N	RM (1)	

DRAWN P.J.Priest 1-22-64

CHECKED R. Rogers 10/7/64

ENG J. Shields 11/2/64

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

22 PIN AMP

TITLE

$\overline{\text{SBS}}$ $\overline{\text{BK}}$

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-40

REV. LTR.

SHEET 1 OF 2

CODE CL

JACK ☐ PLUG ☒

FEMALE ☐ MALE ☒

LOCATION, LENGTH, ROUTE

R1C23

COLOR	PIN	PIN	NAME	REMARKS
WHT/BLK	R1C10E	A	$\overline{\text{SBS}}$	
WHT/BRN	R1B19U	B	L → 0 163	
WHT/RED	R1D21[illegible]	C	EPC2 (1)	
WHT/ORN	R1D21M	D	EPC2 (0)	
WHT/YEL	R1D21E	E	EPC3 (0)	
WHT/GRN	R1C21Z	F	TRAP BUFFER	
WHT/BLU	R1C21W	H	RM 1	
WHT/VIO	R1C9W	J	HLT	
WHT/GRY	R1C9U	K	INCORRECT OP CODE	
WHT	R1C9V	L	IOT	
		M		
WHT/BRN	R1C21M	N	RMO	

DRAWN P.J.Priest 1-22-64

CHECKED M Kleault 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

22 PIN AMP

TITLE

$\overline{\text{SBS}}$ $\overline{\text{BK}}$

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-40

REV. LTR.

SHEET 2 OF 2

CODE CL

JACK ☐	PLUG ☒	LOCATION, LENGTH, ROUTE
FEMALE ☐	MALE ☒	11 FT WITH PLUG

COLOR	PIN	PIN	NAME	COLOR	PIN	PIN	NAME
W/BLK (X)	R1A12F	1	MBD^0B	W/GRY (G)	GND	26	GND
W/BRN (Z)	R1A12J	2	MBD^1B	WHT (W)	R1A3Y	27	Seq 3
W/RED (R)	R1A12L	3	MBD^2B	W/BLK (X)	GND	28	GND
W/ORN (O)	R1A12N	4	MBD^3B	W/BRN (Z)	R1C13F	29	Seq 4
W/YEL (Y)	R1B12F	5	MBD^4B	W/RED (R)	GND	30	GND
W/GRN (N)	R1B12J	6	MBD^5B	W/ORN (O)	R1C13N	31	Seq 5
W/BLU (B)	R1B12L	7	MBD^6B	W/YEL (Y)	GND	32	GND
W/VIO (V)	R1B12N	8	MBD^7B	W/GRN (N)	R1C13V	33	Seq 6
W/GRY (G)	R1A1F	9	MBD^0C				
WHT (W)	R1A1L	10	MBD^1C	W/BLK (X)	GND	34	GND
W/BLK (X)	R1A1J	11	MBD^2C	W/BRN (Z)	R1C13Y	35	Seq 7
W/BRN (Z)	R1A1N	12	MBD^3C	W/RED (R)	GND	36	GND
W/RED (R)	R1C15F	13	MBD^4C	W/ORN (O)	R1B3F	37	Seq 10
W/ORN (O)	R1C15L	14	MBD^5C	W/YEL (Y)	GND	38	GND
W/YEL (Y)	R1C15J	15	MBD^6C	W/GRN (N)	R1B3N	39	Seq 11
W/GRN (N)	R1C15N	16	MBD^7C	W/BLU (B)	GND	40	GND
W/BLU (B)	R1D11W	17	MBD^1A	W/VIO (V)	R1B3V	41	Seq 12
				W/GRY (G)	GND	42	GND
W/BLK (X)	R1D11Z	18	MBD^5A	WHT (W)	R1B3Y	43	Seq 13
W/BRN (Z)	R1D3Z	19	MBD^0D	W/BLK (X)	GND	44	GND
W/RED (R)	R1D3W	20	MBD^1D	W/BRN (Z)	R1C18F	45	Seq 14
W/ORN (O)	R1A3F	21	Seq 0	W/RED (R)	GND	46	GND
W/YEL (Y)	GND	22	GND	W/ORN (O)	R1C18N	47	Seq 15
W/GRN (N)	R1A3N	23	Seq 1	W/YEL (Y)	GND	48	GND
W/BLU (B)	GND	24	GND	W/GRN (N)	R1C18V	49	Seq 16
W/VIO (V)	R1A3V	25	Seq 2	W/BLU (B)	GND	50	GND

DRAWN P.J.Priest 1-28-64

CHECKED M. Rheault 10/7/64

ENG J. Shuler 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

50 PIN CANNON

TITLE

TYPE 20 SBS

3H26 INTO SBS LOGIC

PDP-1D

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-41

REV. LTR.

SHEET 1 OF 2

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

3H26

COLOR	PIN	PIN	NAME
W/BLK (X)	3H5H	1	MBD B 0
W/BRN (Z)	3H5L	2	MBD B 1
W/RED (R)	3H6H	3	MBD B 2
W/ORN (O)	3H6L	4	MBD B 3
W/YEL (Y)	3H6P	5	MBD B 4
W/GRN (N)	3H6T	6	MBD B 5
W/BLU (B)	3H6W	7	MBD B 6
W/VIO (V)	3H6Z	8	MBD B 7
W/GRY (G)	3H2P	9	MBD C 0
WHT (W)	3H2T	10	MBD C 1
W/BLK (X)	3H2W	11	MBD C 2
W/BRN (Z)	3H2Z	12	MBD C 3
W/RED (R)	3H3H	13	MBD C 4
W/ORN (O)	3H3L	14	MBD C 5
W/YEL (Y)	3H3P	15	MBD C 6
W/GRN (N)	3H3T	16	MBD C 7
W/BLU (B)	3H1L	17	MBD A 1
W/BLK (X)	3H1Z	18	MBD A 5
W/BRN (Z)	3H3W	19	MBD D 0
W/RED (R)	3H3Z	20	MBD D 1
W/ORN (O)	3H23A2-R	21	SEQ. 0
W/YEL (Y)	GND	22	GND
W/GRN (N)	3H23B2-R	23	SEQ. 1
W/BLU (B)	GND	24	GND
W/VIO (V)	3H23C2-R	25	SEQ. 2

COLOR	PIN	PIN	NAME
W/GRY (G)	GND	26	GND
WHT (W)	3H23D2-R	27	SEQ. 3
W/BLK (X)	GND	28	GND
W/BRN (Z)	3H23E2-R	29	SEQ. 4
W/RED (R)	GND	30	GND
W/ORN (O)	3H23F2-R	31	SEQ. 5
W/YEL (Y)	GND	32	GND
W/GRN (N)	3H23G2-R	33	SEQ. 6
W/BLK (X)	GND	34	GND
W/BRN (Z)	3H23H2-R	35	SEQ. 7
W/RED (R)	GND	36	GND
W/ORN (O)	3H23J2-R	37	SEQ. 10
W/YEL (Y)	GND	38	GND
W/GRN (N)	3H23K2-R	39	SEQ. 11
W/BLU (B)	GND	40	GND
W/VIO (V)	3H23L2-R	41	SEQ. 12
W/GRY (G)	GND	42	GND
WHT (W)	3H23M2-R	43	SEQ. 13
W/BLK (X)	GND	44	GND
W/BRN (Z)	3H23N2-R	45	SEQ. 14
W/RED (R)	GND	46	GND
W/ORN (O)	3H23P2-R	47	SEQ. 15
W/YEL (Y)	GND	48	GND
W/GRN (N)	3H23R2-R	49	SEQ. 16
W/BLU (B)	GND	50	GND

DRAWN 10/7/64
Elaine Massarelli

CHECKED M. Picault 10/7/64

ENG

digital
EQUIPMENT
CORPORATION
MAYNARD MASSACHUSETTS

50 PIN CANNON

TITLE

20 SBS

PDP-1D

APP'V

ECO. NO.
REV. LTR.

DWG NO
A-1D-45-41

REV. LTR.

SHEET 2 OF 2

CODE
CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

1D29

COLOR	PIN	PIN	NAME
W/BLK (X)	GND	1	GND
W/BRN (Z)	1D8Y	2	TP_2
W/RED (R)	GND	3	GND
W/ORN (O)	1J23J	4	SC-4
W/YEL (Y)	GND	5	GND
W/GRN (N)	1J24V	6	TP 10-4
W/BLU (B)	GND	7	GND
W/VIO (V)	1J25J	8	TP 4-4
W/GRY (G)	GND	9	GND
WHT (W)	3K2M	10	iot 50
W/BLK (X)	3K2N	11	GND
W/BRN (Z)	3K3E	12	iot 51
W/RED (R)	3K3F	13	GND
W/ORN (O)	3K3J	14	iot 52
W/YEL (Y)	3K3K	15	GND
W/GRN (N)	3K3M	16	iot 53
W/BLU (B)	3K3N	17	GND
W/BLK (X)	1A6H	18	BC 1
W/BRN (Z)	1A24M	19	BE 12
W/RED (R)	1A24W	20	BE 13
W/ORN (O)	1A25M	21	BE 14
W/YEL (Y)	1A25W	22	BE 15
W/GRN (N)	1C17M	23	DF
W/BLU (B)	1F11H	24	JMP
W/VIO (V)	1K11E	25	SBM[1] —◇

COLOR	PIN	PIN	NAME
W/GRY (G)	1H1E	26	BREAK REQ.
WHT (W)	2A9F	27	EPC 3
W/BLK (X)	2A10F	28	EPC 4
W/BRN (Z)	2A11F	29	EPC 5
W/RED (R)	1D25R	30	MBD 0 d
W/ORN (O)	1D24R	31	MBD 0 c
W/YEL (Y)	1K11P	32	SBM[1]
W/GRN (N)		33	
W/BLK (X)	GND	34	GND
W/BRN (Z)	2B2H	35	SBS Rest.
W/RED (R)	GND	36	GND
W/ORN (O)	3J8M	37	CBS
W/YEL (Y)	3J8N	38	GND
W/GRN (N)		39	
W/BLU (B)		40	
W/VIO (V)		41	
W/GRY (G)		42	
WHT (W)		43	
W/BLK (X)		44	
W/BRN (Z)		45	
W/RED (R)		46	
W/ORN (O)		47	
W/YEL (Y)		48	
W/GRN (N)		49	
W/BLU (B)		50	

DRAWN P.J.Priest 1-28-64

CHECKED [signature] 10/7/64

ENG [signature] 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

50 PIN CANNON

TITLE

SBS 20

PDP-1D

DWG NO A-ID-45-42

REV. LTR.

SHEET 1 OF 2

CODE CL

JACK ☐ PLUG [X]

FEMALE ☐ MALE [X]

LOCATION, LENGTH, ROUTE

TO REACH 1D LEFT

COLOR	PIN	PIN	NAME
W/BLK (X)	GND	1	GND
W/BRN (Z)	R1D12E	2	TP2
W/RED (R)	GND	3	GND
W/ORN (O)	R1D7F	4	SC-4
W/YEL (Y)	GND	5	GND
W/GRN (N)	R1D5V	6	TP 10-4
W/BLU (B)	GND	7	GND
W/VIO (V)	R1D5S	8	TP 4-4
W/GRY (G)	GND	9	GND
WHT (W)	R1D3S	10	DSC
W/BLK (X)	GND	11	GND
W/BRN (Z)	R1D3Y	12	ASC
W/RED (R)	GND	13	GND
W/ORN (O)	R1D4Y	14	ISB
W/YEL (Y)	GND	15	GND
W/GRN (N)	R1D6V	16	CAC
W/BLU (B)	GND	17	GND
W/BLK (X)	R1D6Y	18	BC1
W/BRN (Z)	R1D17T	19	BE 12
W/RED (R)	R1D18T	20	BE 13
W/ORN (O)	R1D19T	21	BE 14
W/YEL (Y)	R1D20T	22	BE 15
W/GRN (N)	R1D12M	23	DF
W/BLU (B)	R1D12H	24	JMP
W/VIO (V)	R1D12W	25	SBM 1

COLOR	PIN	PIN	NAME
W/GRY (G)	R1D12Y	26	BREAK REQ.
WHT (W)	R1D15Y	27	MBD C 0
W/BLK (X)	R1D15Z	28	EPC 4
W/BRN (Z)	[illegible]	29	
W/RED (R)	R1D15V	30	MBD 1
W/ORN (O)	[illegible]	31	[illegible]
W/YEL (Y)	R1D15X	32	SBM 1
W/GRN (N)		33	
W/BLK (X)	GND	34	GND
W/BRN (Z)	R1D2E	35	SBS REST
W/RED (R)	R1D2F	36	GND
W/ORN (O)	R1D8Y	37	CBS
W/YEL (Y)	GND	38	GND
W/GRN (N)	R1D10E	39	DBRK
W/BLU (B)		40	
W/VIO (V)		41	
W/GRY (G)		42	
WHT (W)		43	
W/BLK (X)		44	
W/BRN (Z)		45	
W/RED (R)		46	
W/ORN (O)		47	
W/YEL (Y)		48	
W/GRN (N)		49	
W/BLU (B)		50	

DRAWN Elaine Massarelli 1/28/64

CHECKED [signature] 10/7/69

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

50 PIN CANNON

TITLE

SBS20

1D29 INTO SBS LOGIC
PDP-1D

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-42

REV. LTR.

SHEET 2 OF 2

CODE CL

JACK [X]	PLUG [ ]	LOCATION, LENGTH, ROUTE
FEMALE [X]	MALE [ ]	

COLOR	PIN	PIN	NAME		REMARKS	
BLK+GRY	3L21A	01	IO PROCESSOR	IO_0	TWP	ROW 1
	B	02		IO_1		
	C	03		IO_2		
	D	04		IO_3		
	E	05		IO_4		
	F	06		IO_5		
	G	07		IO_6		
	H	08		IO_7		
	J	09		IO_8		
	L	10		IO_9		
	M	11		IO_{10}		
	N	12		IO_{11}		
	P	13		IO_{12}		
	R	14		IO_{13}		
	S	15		IO_{14}		
	T	16		IO_{15}		
	U	17		IO_{16}		
	V	18		IO_{17}		
		19				
		20				
BLU	2D13T	22	MB^1_7			
	2D15N	23	MB^1_8			
	2D15T	24	MB^1_9			
	2D17N	25	MB^1_{10}			
	2D17T	26	MB^1_{11}			

DRAWN P.J.Priest 1-22-64

CHECKED [illegible] 10/7/64

ENG [illegible] 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

26 PIN AMP COAX

TITLE

3E PLUG J4

IO/PROCESSOR

DWG NO A-1D-45-43

CODE CL

SHEET 1 OF 3

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

COLOR	PIN	PIN	NAME	REMARKS
YEL	3H17A	01	IO 0	ROW 3
	B	02	IO 1	
	C	03	IO 2	
	D	04	IO 3	
	E	05	IO 4	
	F	06	IO 5	
	G	07	IO 6	
	H	08	IO 7	
	J	09	IO 8	
	L	10	IO 9	
	M	11	IO 10	
	N	12	IO 11	
	P	13	IO 12	
	R	14	IO 13	
	S	15	IO 14	
	T	16	IO 15	
	U	17	IO 16	
	V	18	IO 17	
		19		
		20		
		21		
		22		
		23		
		24		
		25		
		26		

DRAWN P.J.Priest 1-22-64

CHECKED R.A.Brault 1/24/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

26 PIN AMP COAX

TITLE

3E PLUG J5

IO/PROCESSOR

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-43

CODE CL

SHEET 2 OF 3

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

COLOR	PIN	PIN	NAME	REMARKS
GRY	3K25E	01	720037 TP7 RRI	TWP
	3K25J	02	720037 TP10 RRI	TWP
	3K25M	03	720017 TP7 RRO	TWP
	3K24E	04	720017 TP10 RRO	TWP
	3H25R	05	+1 → PC	ROW 1 TWP
	3H22B (3)	06	SEQ. NO. 1 BK	TWP
	3H22E (3)	07	SEQ. NO. 1 BK	TWP
	3H25R	08	IOT DONE	ROW 1 TWP
	3H24G (2)	09	STOP	-3V PULSE TWP
	1K8L	10	START	-3V PULSE TWP
	1K8M	11	CONTINUE	-3V PULSE TWP
	3K23F	12	EXAM.-DEP.-READ IN	TWP
		13	PANIC STOP	TWP (TO BUTTON ON CONSOLE)
GRY	3H24E (2)	14	START CLEAR	-3V PULSE TWP
RED	3J25C	15	-15V	100Ω 5% 2W TO -15V
		16		(ST. OFF)
		17		
		18		
		19		
		20		
		21		
		22		
		23		
		24		
		25		
		26		

DRAWN
P.J.Priest 1-22-64

CHECKED
M. Powell 10/7/64

ENG

digital
EQUIPMENT
CORPORATION
MAYNARD, MASSACHUSETTS

26 PIN AMP COAX

TITLE

3E PLUG J6

IO/PROCESSOR

APP'V

ECO. NO. REV. LTR.

DWG NO
A-ID-45-43

CODE
CL

SHEET 13 OF 32

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

2J26

COLOR	PIN	PIN	NAME	COLOR	PIN	PIN	NAME
BLK	GND	1		WHT	2F4V	26	AC 0 17
WHT	2A3V	2	MDP-9	BLK	GND	27	GND
BLK	GND	3		WHT	2H3H	28	(AC 0 → MB 10)
WHT	2A3Y	4	SCR 1 0	BLK	GND	29	GND
BLK	GND	5		WHT	2H8V	30	(MD 10 MB 1)
WHT	2A4Y	6	MD C → AC	BLK	2H6Z	31	IO 1
BLK	GND	7	GND	WHT	2H22Z	32	10 1 17
WHT	1D10M	8	GOOD DIV	BLK	2E24F	33	AC=+0 or-0
BLK	GND	9	GND	WHT	2E25T	34	AC=-1 or-0
WHT	2C4Y	10	(MDP-13)	BLK	GND	35	GND
BLK	2D7L	11	MB 0 0	WHT	2H22R	36	10 0 17
WHT	2D7N	12	MB 1 0	BLK	GND	37	GND
BLK	GND	13	GND	WHT	2H25F	38	10/+0
WHT	2B24Y	14	MDP-2	BLK	GND	39	GND
BLK	GND	15	GND	WHT	2E1M	40	MDP-12
WHT	2E1H	16	(MDP-10)	BLK	2B5L	41	(AC 0)
BLK	GND	17	GND	WHT	2B5N	42	AC 1 0
WHT	2E2V	18	MD C → 10			43	
BLK	GND	19	GND			44	
WHT	2E3V	20	MD C → MB			45	
BLK	GND	21	GND			46	
WHT	2F2Y	22	(MDP-1)			47	
BLK	GND	23	GND			48	
WHT	2F2V	24	(MUL SH)			49	
		25				50	

DRAWN P.J.Priest 1-15-64

CHECKED [signature] 10/7/64

ENG [signature] 11/2/64

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

50 PIN AMPHENOL

TITLE

MUL & DIV

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-44

REV. LTR.

SHEET 1 OF 2

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

1H26

COLOR	PIN	PIN	NAME	COLOR	PIN	PIN	NAME
BLK	GND	1		WHT	1K5W	26	SINGLE STEP SW
WHT	1C20E	2	MUL CY1 TP 10			27	
BLK	GND	3				28	
WHT	1C24H	4	MDP-7			29	
BLK	GND	5				30	
WHT	1C24M	6	MDP-3			31	
BLK	GND	7				32	
WHT	1C24W	8	MD CARRY			33	
BLK	GND	9				34	
WHT	1H11X	10	TP_2			35	
		11				36	
		12				37	
BLK	GND	13				38	
WHT	1K5V	14	CY1			39	
BLK	GND	15				40	
WHT	1K7Y	16	MD 0 RUN			41	
BLK	GND	17				42	
WHT	1K7S	18	MD RESTART			43	
BLK	GND	19				44	
WHT	1K9H	20	TP_9			45	
		21				46	
		22				47	
		23				48	
		24				49	
BLK	1K25S	25	SINGLE INST. SW			50	

DRAWN
Elaine Massarelli 1/15/64

CHECKED
M. Kleindl 1/7/64

ENG

digital
EQUIPMENT
CORPORATION
MAYNARD, MASSACHUSETTS

50 PIN AMPHENOL

TITLE

MULTIPLY & DIVIDE

APP'V

ECO. NO.
REV. LTR.

DWG NO
A-ID-45-44

REV. LTR.

SHEET 2 OF 2

CODE
CL

JACK [X] PLUG [ ]

FEMALE [ ] MALE [X]

LOCATION, LENGTH, ROUTE

1A26

COLOR	PIN	PIN	NAME	REMARKS
W/BLK (X)		A		
W/BRN (Z)		B		
W/RED (R)		C		
W/ORN (O)		D		
W/YEL (Y)		E		
W/GRN (N)		F		
W/BLU (B)	1A12J	H	MA 6	
W/VIO (V)	1A12U	J	MA 7	
W/GRY (G)	1A14J	K	MA 8	
WHT (W)		L		
W/BLK (X)	1A14U	M	MA 9	
W/BRN (Z)	1A16J	N	MA 10	
W/RED (R)	1A16U	P	MA 11	
W/ORN (O)	1A18J	R	MA 12	
W/YEL (Y)	1A18U	S	MA 13	
W/GRN (N)	1A20J	T	MA 14	
W/BLU (B)	1A20U	U	MA 15	
W/VIO (V)	1A22J	V	MA 16	
W/GRY (G)	1A22U	W	MA 17	
WHT (W)		X		
		Y		
		Z		

DRAWN P.J.Priest 1-30-64

CHECKED [illegible] 10/2/69

ENG [illegible] 11/2/69

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

APP'V

ECO. NO.
REV. LTR.

22 PIN AMPHENOL

TITLE

MA, EMA INDICATOR

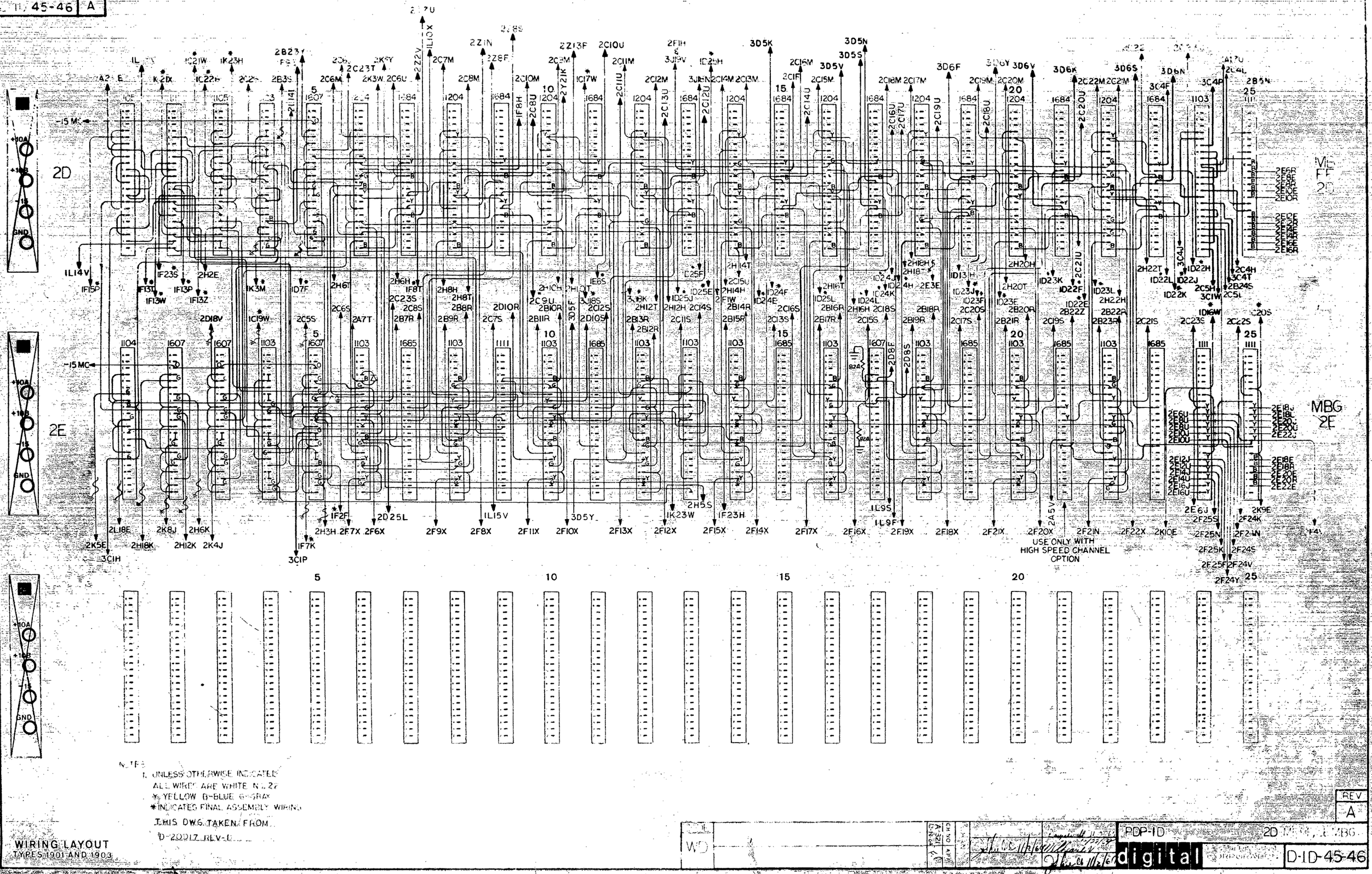
PDP-1D

DWG NO A-1D-45-45

REV. LTR.

SHEET OF

CODE CL



NOTES:
1. UNLESS OTHERWISE INDICATED ALL WIRES ARE WHITE N.26
2. Y=YELLOW B=BLUE G=GRAY
3. *INDICATES FINAL ASSEMBLY WIRING

THIS DWG. TAKEN FROM D-2001Z REV-C

WIRING LAYOUT
TYPES 1901 AND 1903

REV
A

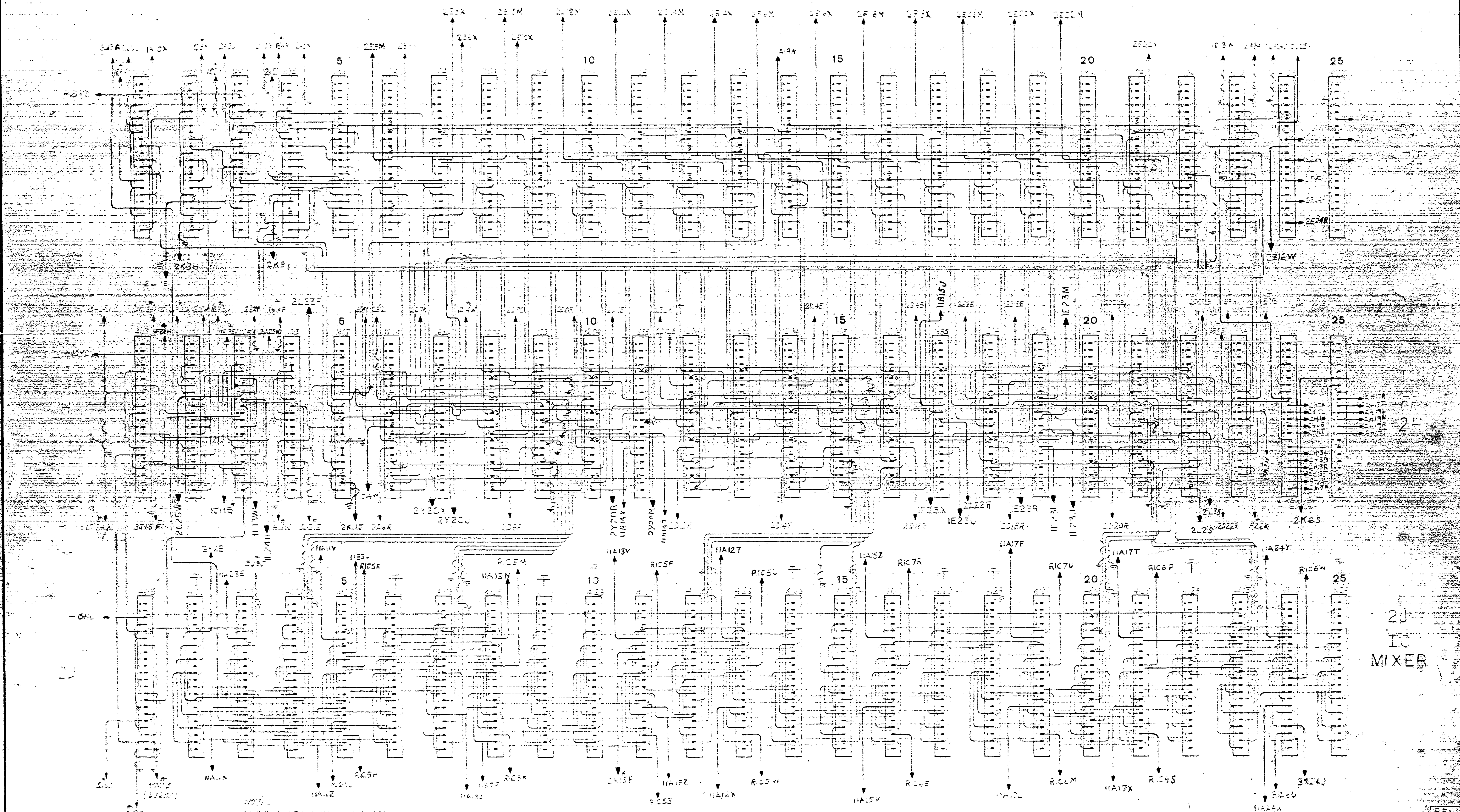
WO

PDP-1D 2D MBG, 2E MBG

digital

D-1D-45-46

D-1D-45-47



NOTES:
UNLESS OTHERWISE INDICATED ALL WIRES ARE [illegible]
[illegible]
* INDICATES [illegible] WIRE
[illegible]
[illegible] CHECKOUT

THIS DWG TAKEN FROM
D-[illegible] REV-[illegible]

WIRING LAYOUT
TYPES 1901 AND 1903

CODE	
WD	

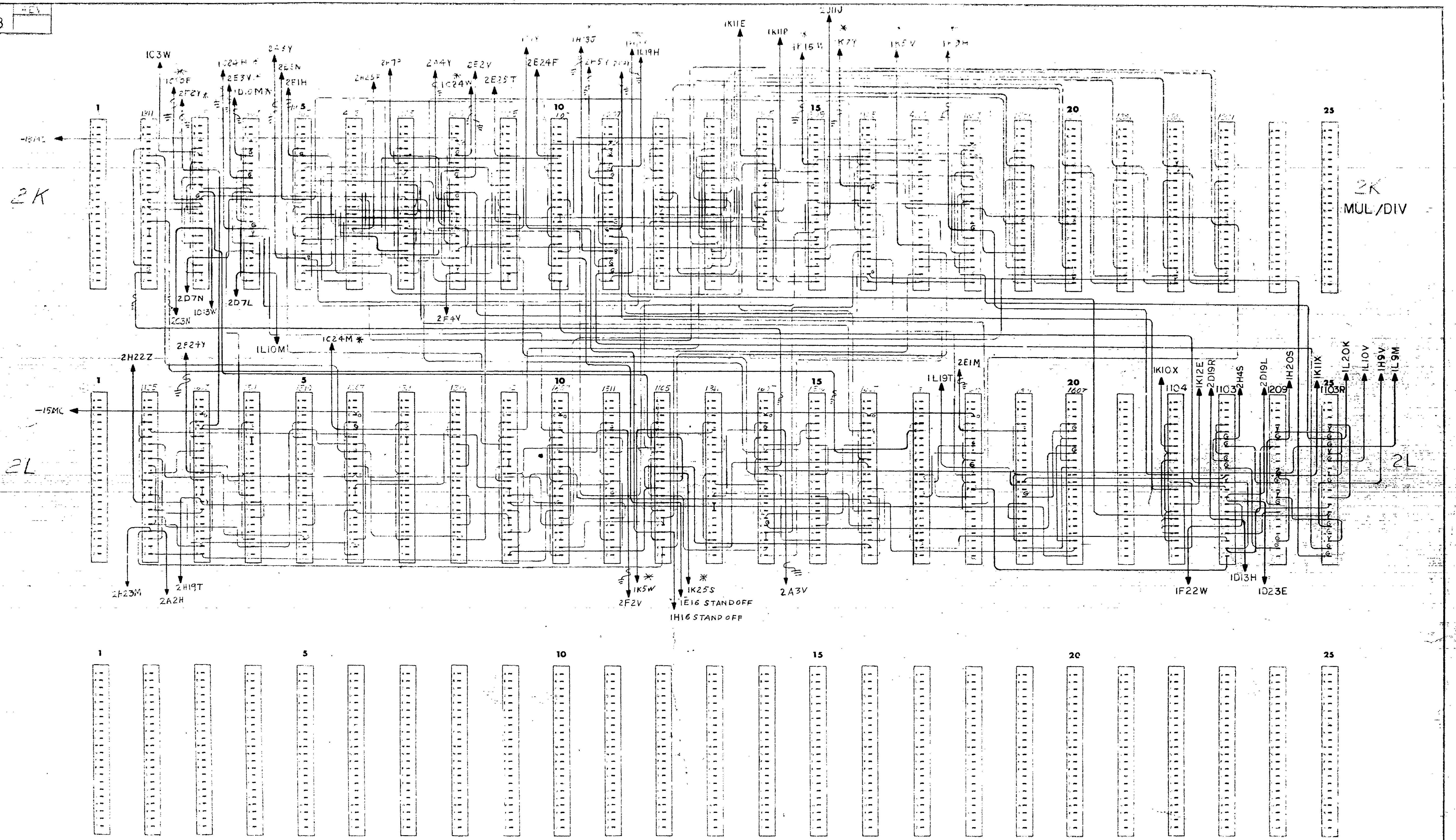
digital

PDP-1D

D-1D-45-47

REV

D-ID-45-48



NOTE:
USE 1914 MOUNTING PANELS

THIS DWG. TAKEN FROM
D-21004 REV-F-H

CODE	
WD	

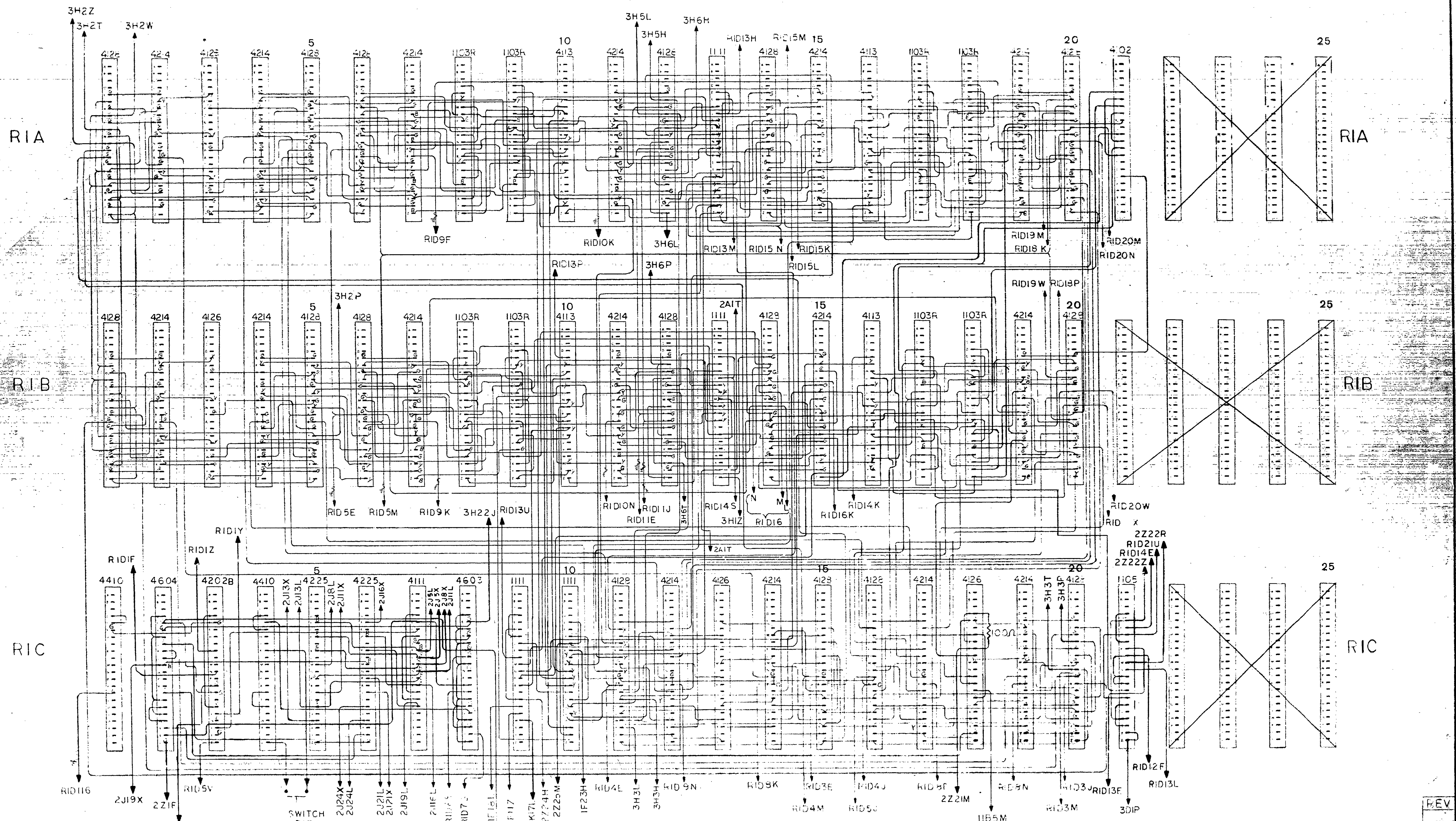
digital EQUIPMENT CORPORATION

D-ID-45-48

HIGH SPEED MUL-DIV
TYPE 10 RACK 2K,2L

PDP-10

D-ID-45-49 REV



NOTE:
USE 1916 MOUNTING PANELS
THIS DWG. TAKEN FROM
D-IE-1416-5-A REV. A

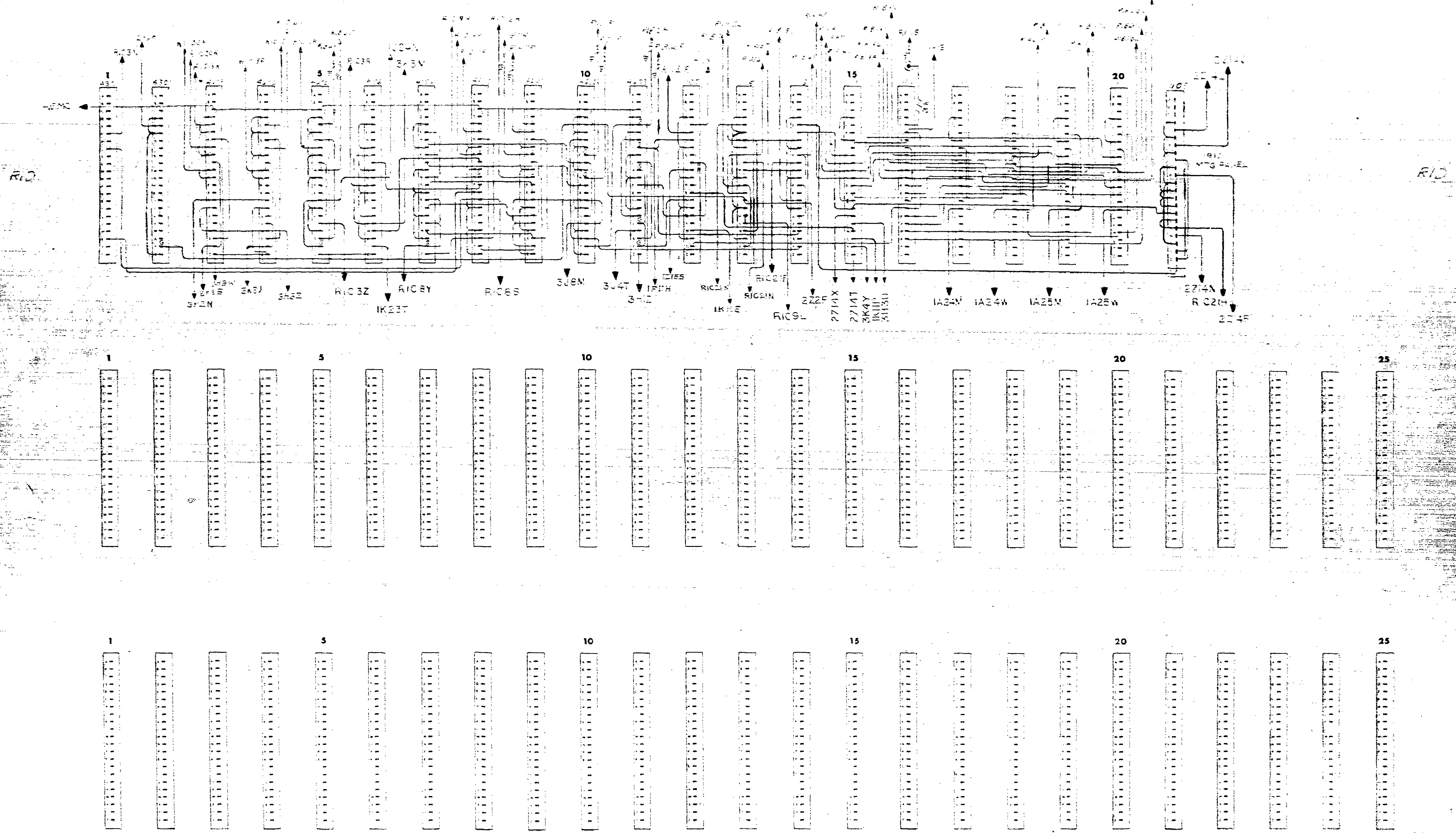
CODE WD

BREAK SYSTEM PRIORITY CHAIN

digital EQUIPMENT CORPORATION

D-ID-45-49

D-ID-45-50



NOTE
USE 1916 MOUNTING PANEL

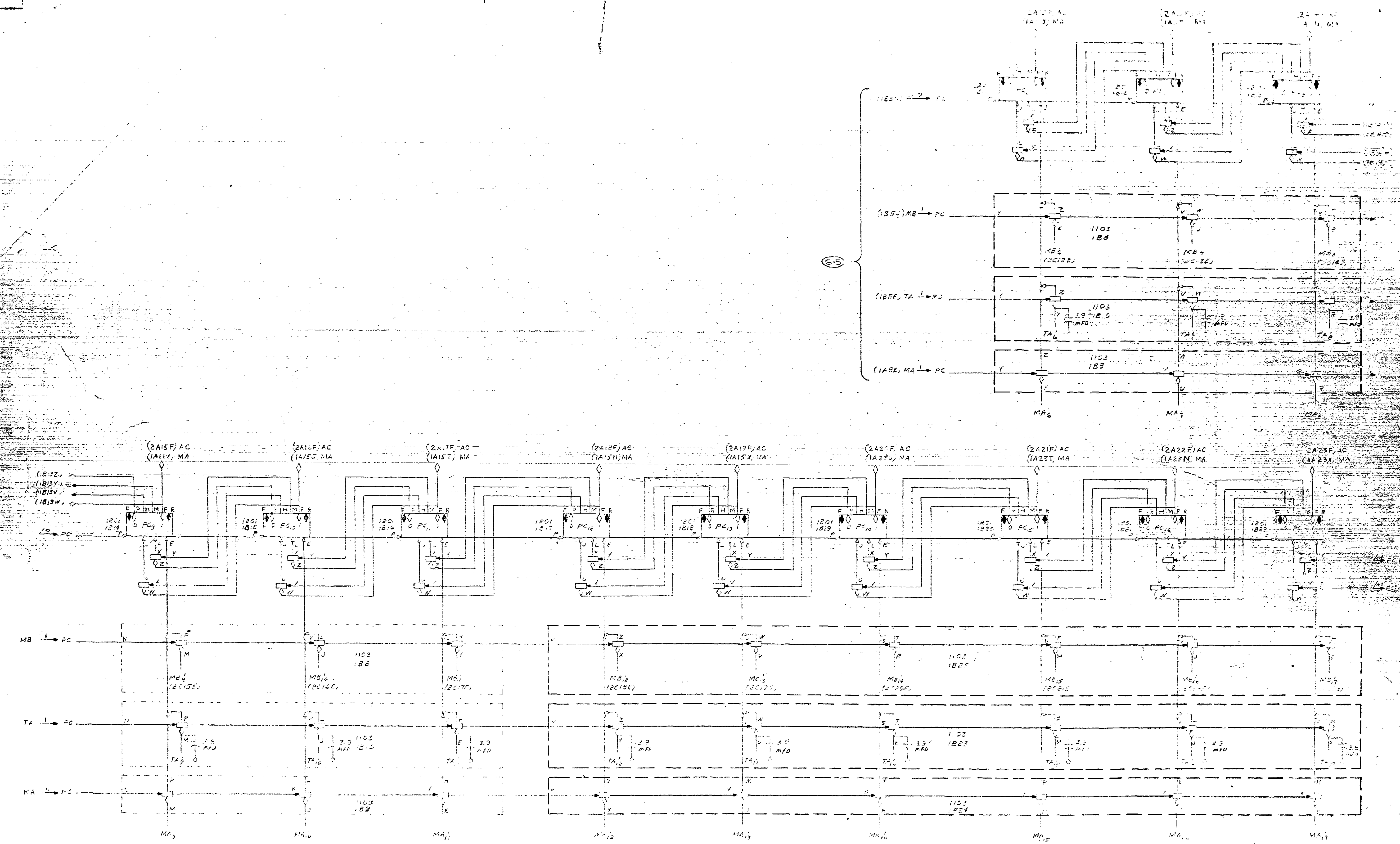
THIS DWG. TAKEN FROM
D-21406-D REV -0

digital EQUIPMENT CORPORATION

D-ID-45-50

BREAK SYSTEM CONTROL TYPE 20

D-ID-45-51 REV



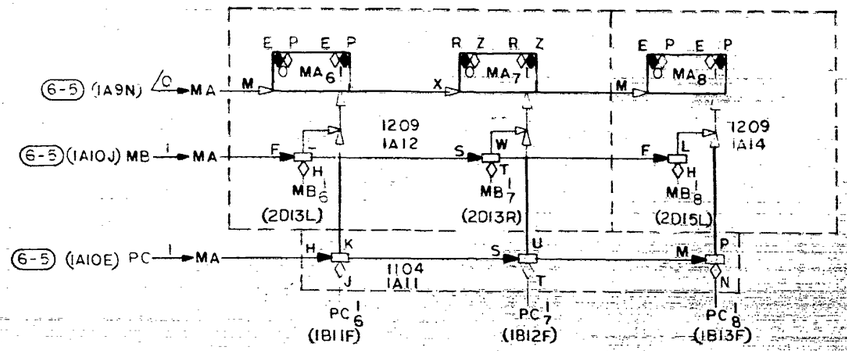
THIS DWG. TAKEN FROM
D-20009 REV-3

CODE	
BS	

PROGRAM COUNTER-1 D-45

digital

D-ID-45-51



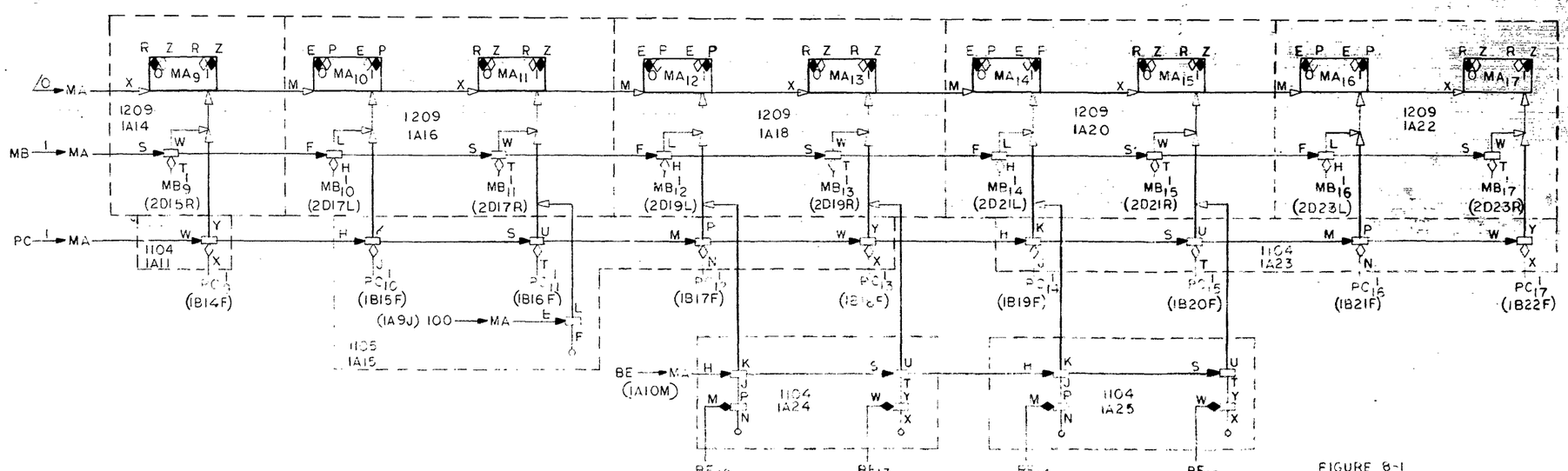
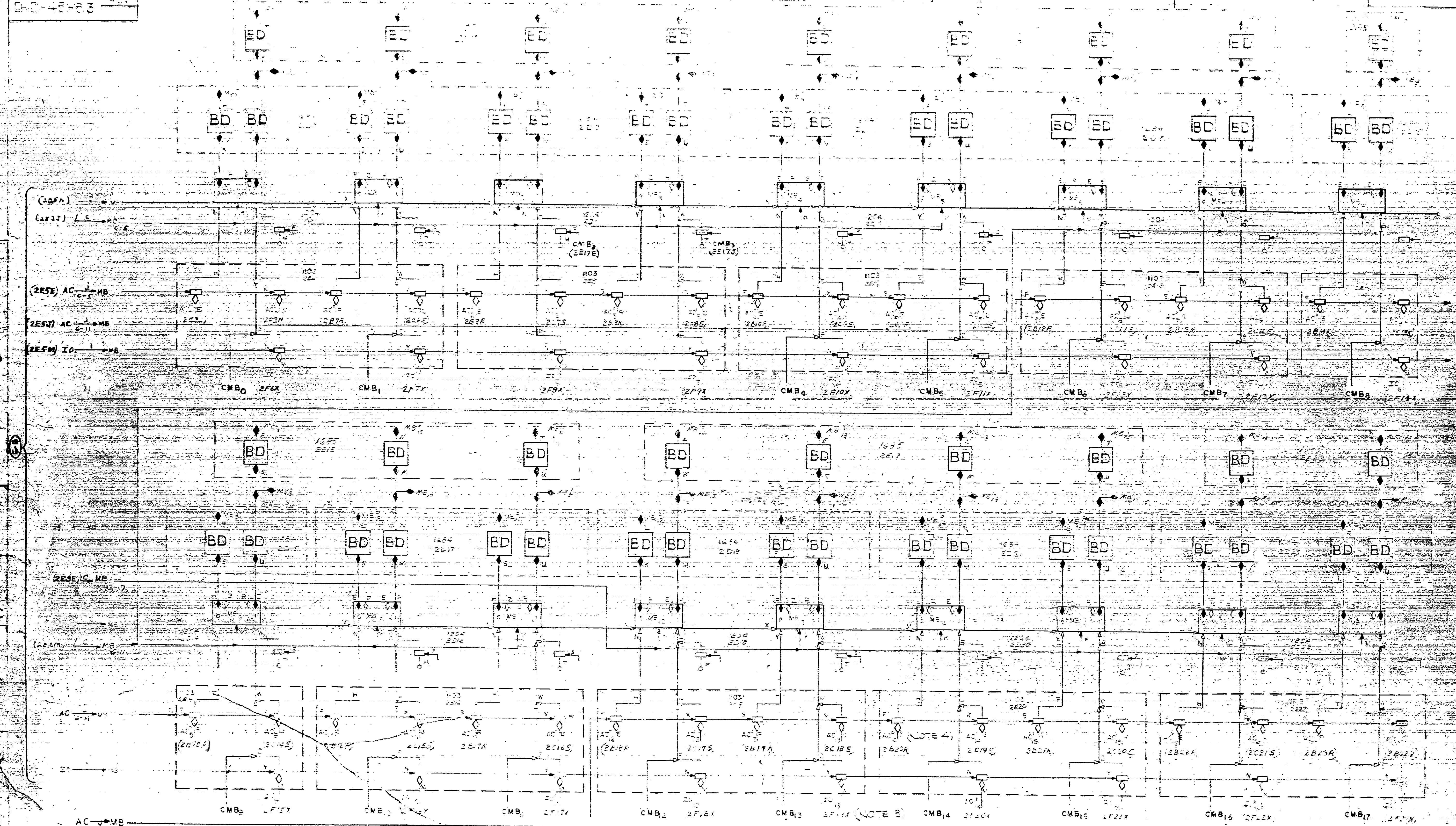


FIGURE 8-1

NOTE:
1A24/1A25 PRESENT ONLY IF SBS TYPE 20 CONNECTED

THIS DWG. TAKEN FROM
D-20023 REV-

DRAWN	DATE	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE	MEMORY ADDRESS REGISTER
			FOR	
			CODE	DRWG NO
			BS	D-ID-45-52
			SHEET	REV LTR



NOTES:

1. MBM INPUTS FOR TYPE 15 ONLY
   IF NEITHER TYPE 15 NOR TYPE 19, MBM INPUTS REPLACED BY SENSE AMP OUTPUTS FROM SINGLE MEMORY MODULE
   IF TYPE 19 BUT NO TYPE 15, MBM INPUTS REPLACED BY MBE...
2. TYPE 1657 PLUG-IN UNITS FOR HSC OPTION
3. ALL IN-OUT INPUTS FROM (E3)
4. ALL AC INPUTS FROM (E1)

THIS DWG TAKEN FROM D-10090-B REV-B-2

FIGURE DA-2

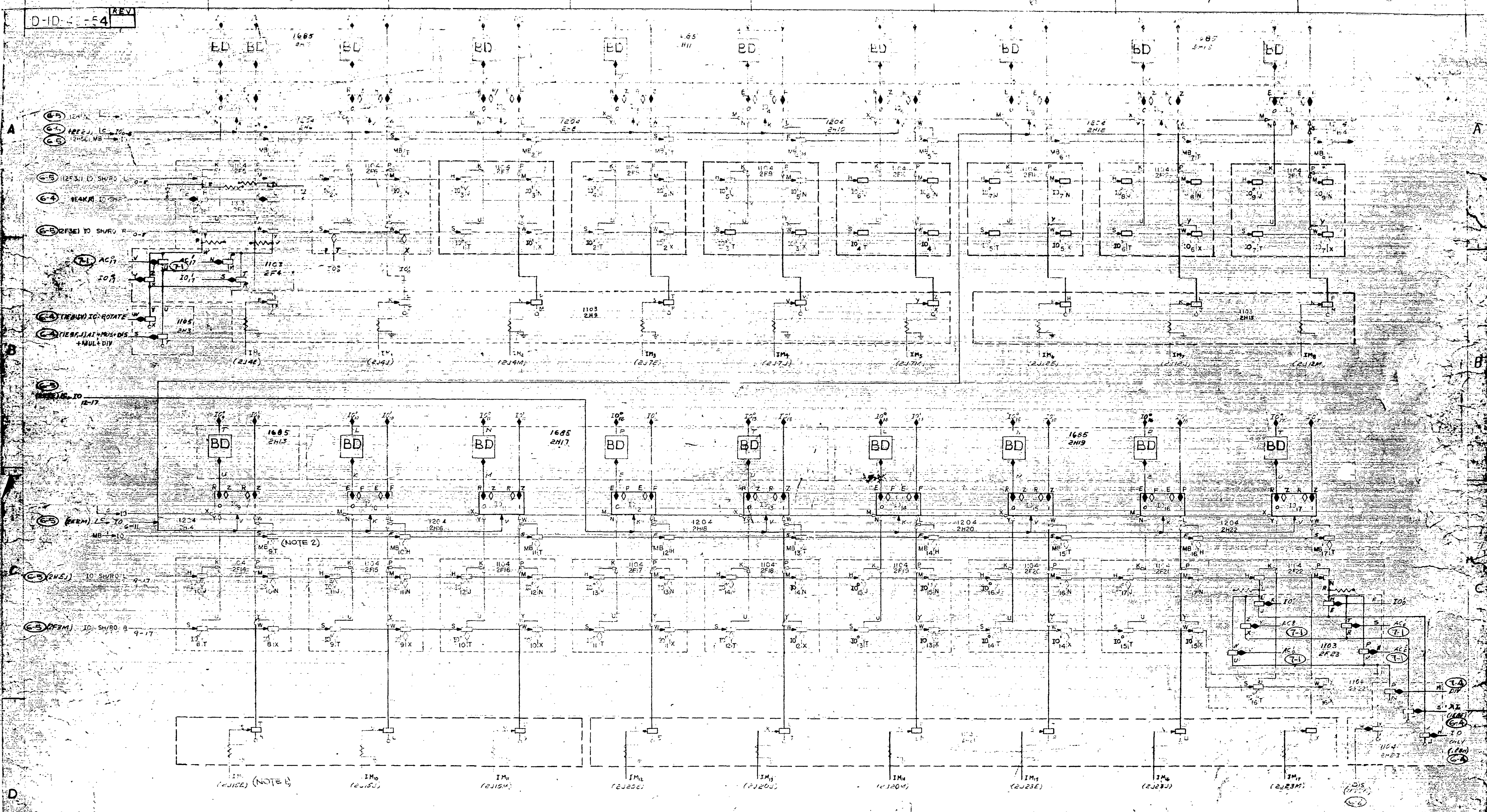
CODE	
B3	

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

D-ID-45-55

MEMORY BUFFER REGISTER

PDP-ID-45



NOTE:
1. ALL INPUT MIXER (IM) INPUTS ARE FROM (9-2)
2. ALL MEM BUFFER (MB) INPUTS ARE FROM (8-2)

THIS DWG. TAKEN FROM
D-20011-6 REV. B

CODE	
WD	

digital EQUIPMENT CORPORATION, MAYNARD MASSACHUSETTS

D-ID-45-54

IO REGISTER PDP-ID-45

D-ID-45-55 REV A

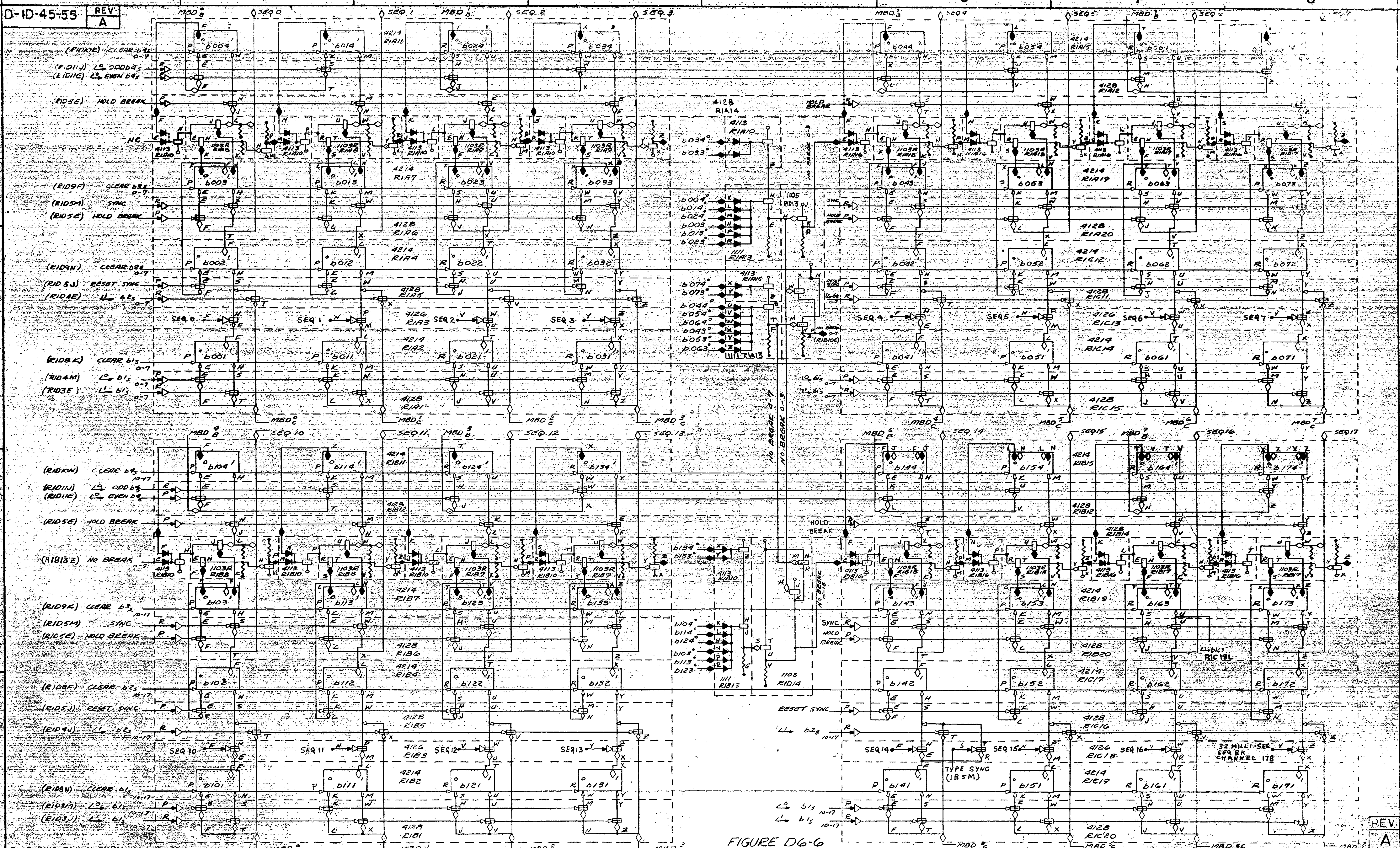


FIGURE D6-6

THIS DWG TAKEN FROM D-21404 REV D-2

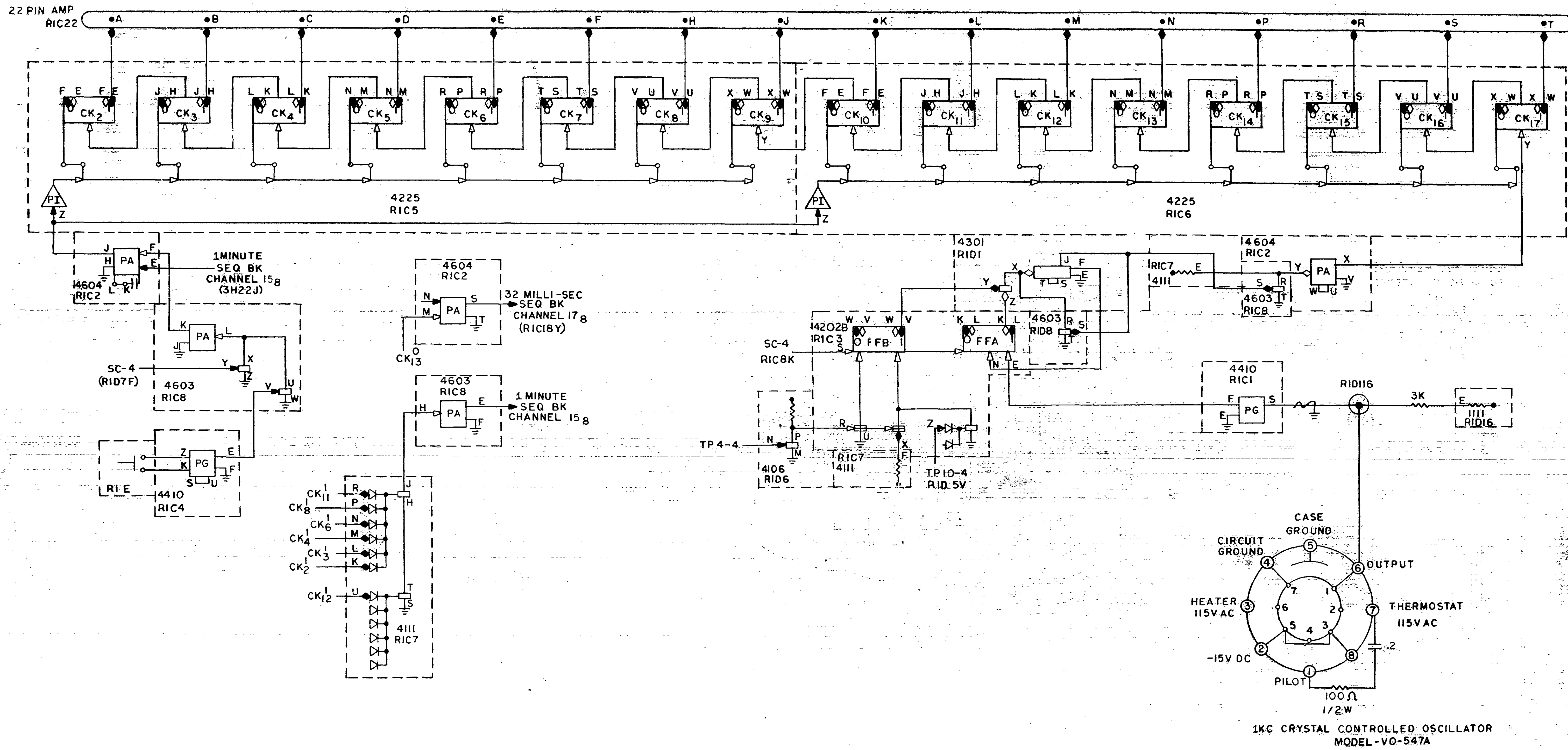
CODE	
BS	

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

D-ID-45-55 REV A

SEQUENCE BREAK SYSTEM TYPE ... PRIORITY CHAIN PDP-1D-45

D-ID-45-56



1KC CRYSTAL CONTROLLED OSCILLATOR
MODEL-VO-547A

NOTE:
THERMOSTAT REPLACED BY S.C.R. CIRCUIT.

NOTE:
1. IOT rck READ CLOCK 720032
2. BITS ARE NUMBERED BY THEIR RELATION TO THE IO REGISTER INPUT.

DRAWN	DATE 12-2-63
CHECKED	DATE 1/30/64
ENG	DATE 1/31/64
PROJ ENG	DATE 1/31/64
PROD	DATE 2/2/64

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

TITLE: CLOCK

FOR

ASSY NO MA-

CODE BS

DRWG NO D-ID-45-56

SHEET OF

THIS DWG. TAKEN FROM D-21003 REV E-2

CODE	CHANGE	DRAWN	CHECKED	ENGINEER	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	D-ID-45-57
BS					AUTOMATIC MUL/DIV PDP-ID	

REV

JACK [X] PLUG [ ]

FEMALE [ ] MALE [X]

LOCATION, LENGTH, ROUTE

1B27

COLOR	PIN	PIN	NAME	REMARKS
W/BLK (X)	2Z1J	A	EXTEND - SW	
W/BRN (Z)		B		
W/RED (R)	2Y17E	C	ETA_2	
W/ORN (O)	2Y17H	D	ETA_3	
W/YEL (Y)	2Y17K	E	ETA_4	
W/GRN (N)	2Y17M	F	ETA_5	
W/BLU (B)	1B10X	H	TA6	
W/VIO (V)	1B10U	J	TA7	
W/GRY (G)	1B10R	K	TA8	
WHT (W)		L		
W/BLK (X)	1B10M	M	TA9	
W/BRN (Z)	1B10J	N	TA10	
W/RED (R)	1B10E	P	TA11	
W/ORN (O)	1B23X	R	TA12	
W/YEL (Y)	1B23U	S	TA13	
W/GRN (N)	1B23R	T	TA14	
W/BLU (B)	1B23M	U	TA15	
W/VIO (V)	1B23J	V	TA16	
W/GRY (G)	1B23E	W	TA17	
WHT (W)		X		
		Y		
		Z		

DRAWN E. MCHUGH 11/12/63

CHECKED [signature] 10/7/64

ENG [signature] 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

22 PIN AMPHENOL

TITLE

TA LINES

PDP-1D-45

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-58

REV. LTR.

SHEET 1 OF 1

CODE CL

JACK [X] PLUG [ ]

FEMALE [ ] MALE [X]

LOCATION, LENGTH, ROUTE

1B26

COLOR	PIN	PIN	NAME	REMARKS
W/BLK (X)		A		
W/BRN (Z)		B		
W/RED (R)	2Z11T	C	EPC_2	
W/ORN (O)	2Z11V	D	EPC_3	
W/YEL (Y)	2Z11X	E	EPC_4	
W/GRN (N)	2Z11Z	F	EPC_5	
W/BLU (B)	1B11S	H	PC6	
W/VIO (V)	1B12S	J	PC7	
W/GRY (G)	1B13S	K	PC8	
WHT (W)		L		
W/BLK (X)	1B14S	M	PC9	
W/BRN (Z)	1B15S	N	PC10	
W/RED (R)	1B16S	P	PC11	
W/ORN (O)	1B17S	R	PC12	
W/YEL (Y)	1B18S	S	PC13	
W/GRN (N)	1B19S	T	PC14	
W/BLU (B)		U	PC15	
W/VIO (V)	1B21S	V	PC16	
W/GRY (G)	1B22S	W	PC17	
WHT (W)		X		
		Y		
		Z		

DRAWN E. Massarelli 10/7/64

CHECKED [signature] 10/7/64

ENG [signature] 11/2/64

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

22 PIN AMPHENOL

TITLE

PC INDICATORS
PDP-1D-45

APP'V

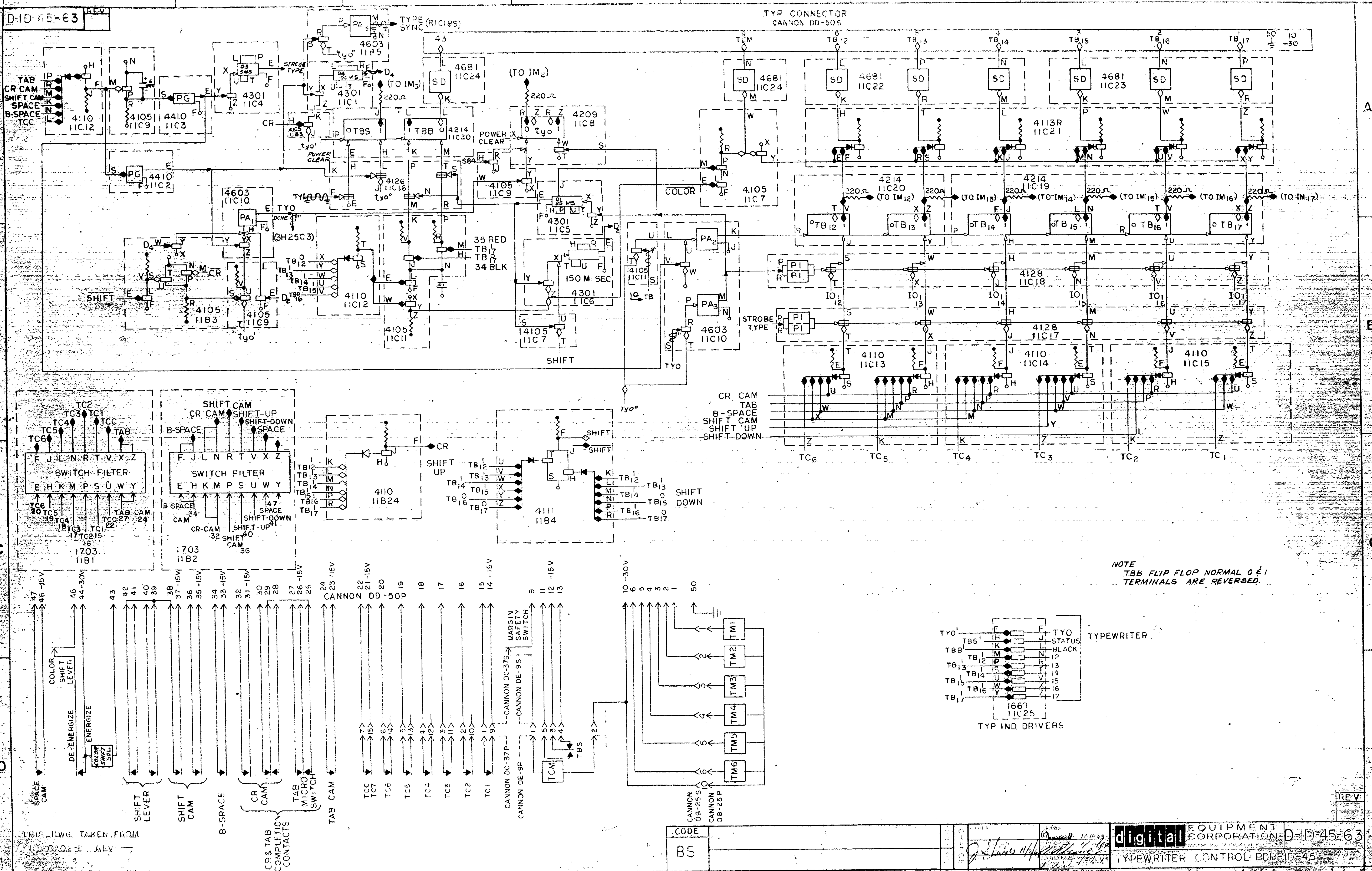
ECO. NO.
REV. LTR.

DWG NO A-1D-45-59

REV. LTR.

SHEET 1 OF 1

CODE CL


D-ID-45-63
REV
TYP CONNECTOR
CANNON DD-50S
TYPE SYNC
SWITCH FILTER
1703
11B1
11B2
CANNON DD-50P
CR CAM
TAB
B-SPACE
SHIFT CAM
SHIFT UP
SHIFT DOWN
SPACE CAM
SHIFT LEVER
SHIFT CAM
B-SPACE
CR CAM
TAB MICRO SWITCH
TAB CAM
CR & TAB COMPLETION CONTACTS
MARGIN SAFETY SWITCH
CANNON DC-37S
CANNON DE-9S
CANNON DC-37P
CANNON DE-9P
CANNON DB-25S
CANNON DB-25P
COLOR SHIFT LEVER
DE-ENERGIZE
ENERGIZE
POWER CLEAR
STROBE TYPE
150 M SEC
35 RED
34 BLK
NOTE
TBB FLIP FLOP NORMAL 0 & 1 TERMINALS ARE REVERSED.
TYPEWRITER
STATUS
BLACK
1669
11C25
TYP IND. DRIVERS
THIS DWG. TAKEN FROM
CODE
BS
digital EQUIPMENT CORPORATION
D-ID-45-63
TYPEWRITER CONTROL PDP-1D-45

JACK [X] PLUG [ ]

FEMALE [ ] MALE [X]

LOCATION, LENGTH, ROUTE

1K26

COLOR	PIN	PIN	NAME	REMARKS
W/BLK (X)	1K7U	A	RUN	
W/BRN (Z)	1K7J	B	CYCLE	
W/RED (R)	1K13U	C	DF 1	
W/ORN (O)		D		
W/YEL (Y)	1K21S	E	BC-1	
W/GRN (N)	1K22S	F	BC-2	
W/BLU (B)	2C2J	H	OV 1	
W/VIO (V)	1F9U	J	RIM	
W/GRY (G)	1K11J	K	SBM	
WHT (W)		L		
W/BLK (X)		M	EXT	
W/BRN (Z)	1J18U	N	IOH	
W/RED (R)	1J21J	P	IOC	
W/ORN (O)	1J18J	R	IOS	
W/YEL (Y)		S		
W/GRN (N)		T		
W/BLU (B)		U		
W/VIO (V)		V		
W/GRY (G)		W		
WHT (W)		X		
		Y		
		Z		

REV. LTR.	ECO. NO.	DATE	ENG.

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

22 PIN AMPHENOL

TITLE

MISC. INDICATORS

PDP-1-45

DRAWN 10/7/64
E. Massarelli

CHECKED M. Hyatt 10/7/64

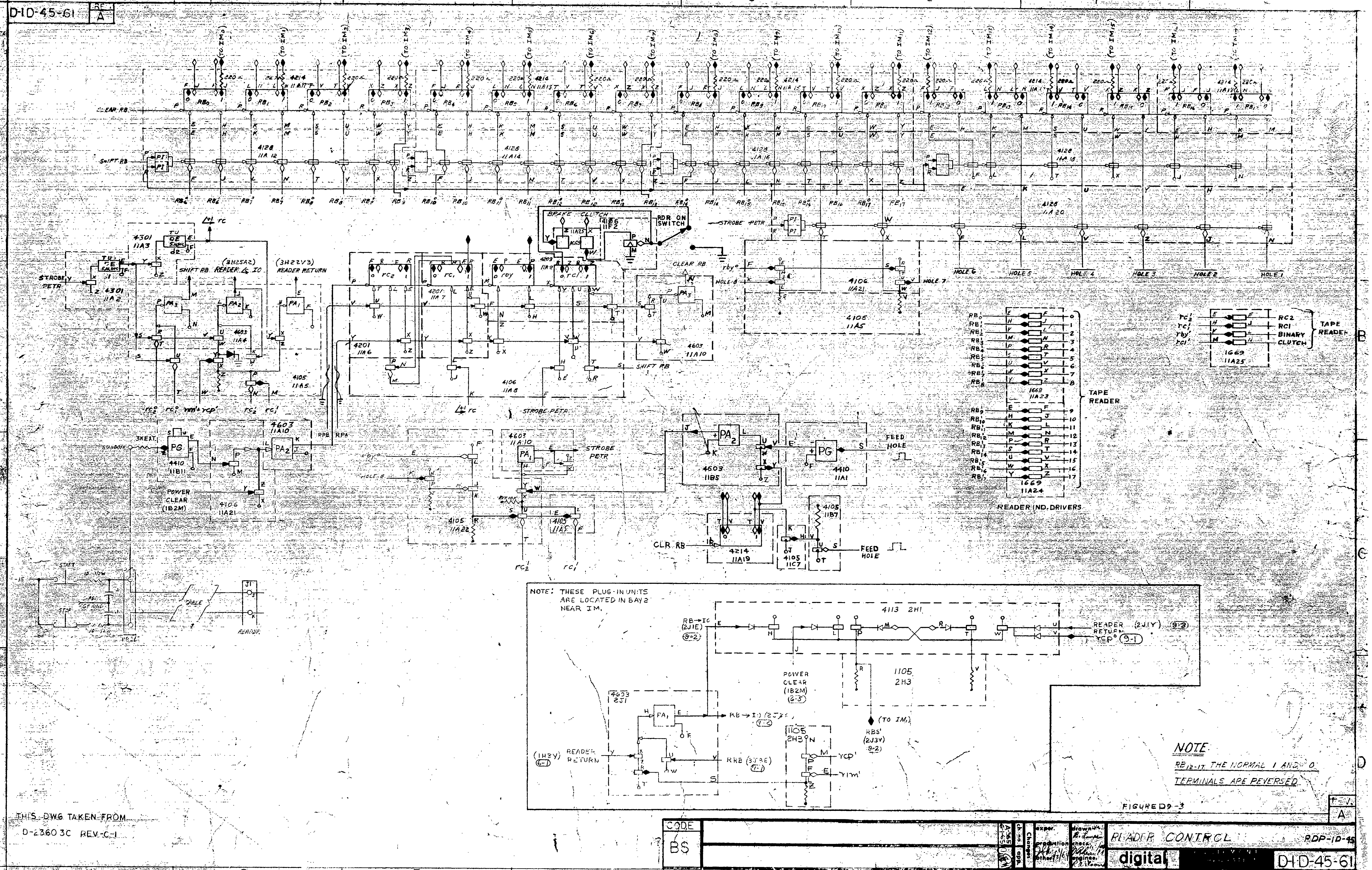
ENG. [signature] 11/2/64

PROD. [signature] 11/2/64

CODE	DRWG. NO.	REV.
CL	A-1D-45-60	

SHEET 1 OF 1

DIST.



D-1D-45-61
REV A
CLEAR RB
SHIFT RB
STROBE PETR
BRAKE CLUTCH
RDR ON SWITCH
HOLE 8
HOLE 7
HOLE 6
HOLE 5
HOLE 4
HOLE 3
HOLE 2
HOLE 1
SHIFT RB READER & IO
READER RETURN
POWER CLEAR (1B2M)
FEED HOLE
CLR RB
TAPE READER
RC2
RC1
BINARY
CLUTCH
READER IND. DRIVERS
NOTE: THESE PLUG-IN UNITS ARE LOCATED IN BAY 2 NEAR IM.
READER RETURN
NOTE
RB_{12-17} THE NORMAL 1 AND 0 TERMINALS ARE REVERSED
FIGURE D9-3
THIS DWG TAKEN FROM D-23603C REV C-1
CODE BS
READER CONTROL
RDP-1D-45
digital
D-1D-45-61

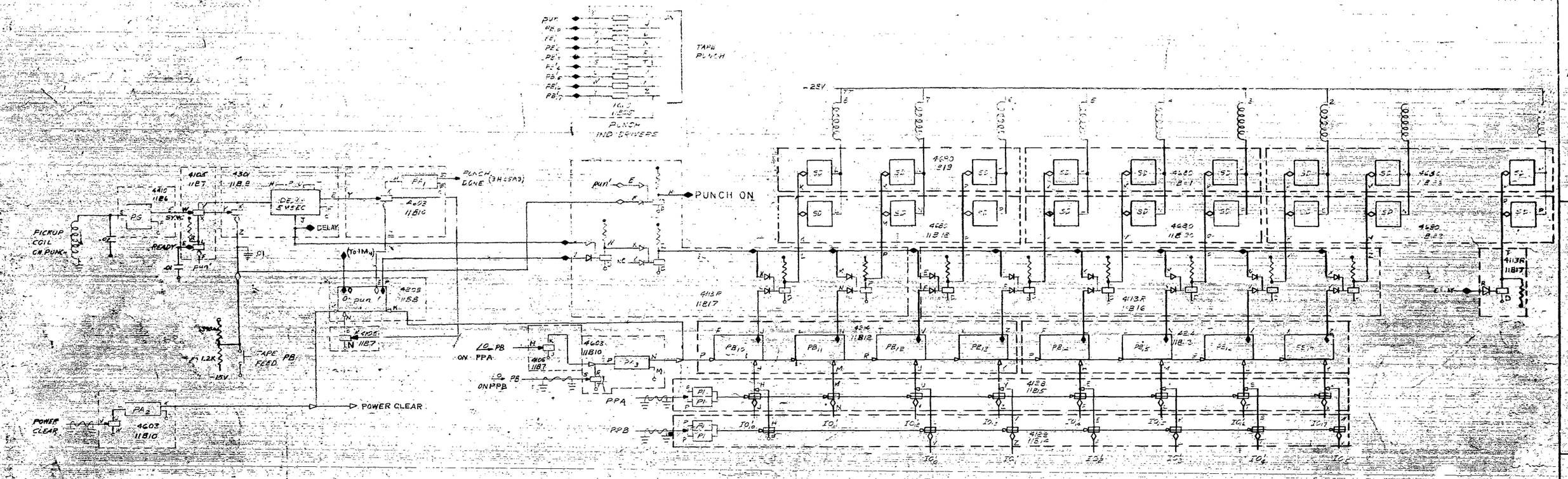


FIGURE D7-4

THIS DWG TAKEN FROM
D-20301 REV C

CODE
BS

CHANGE

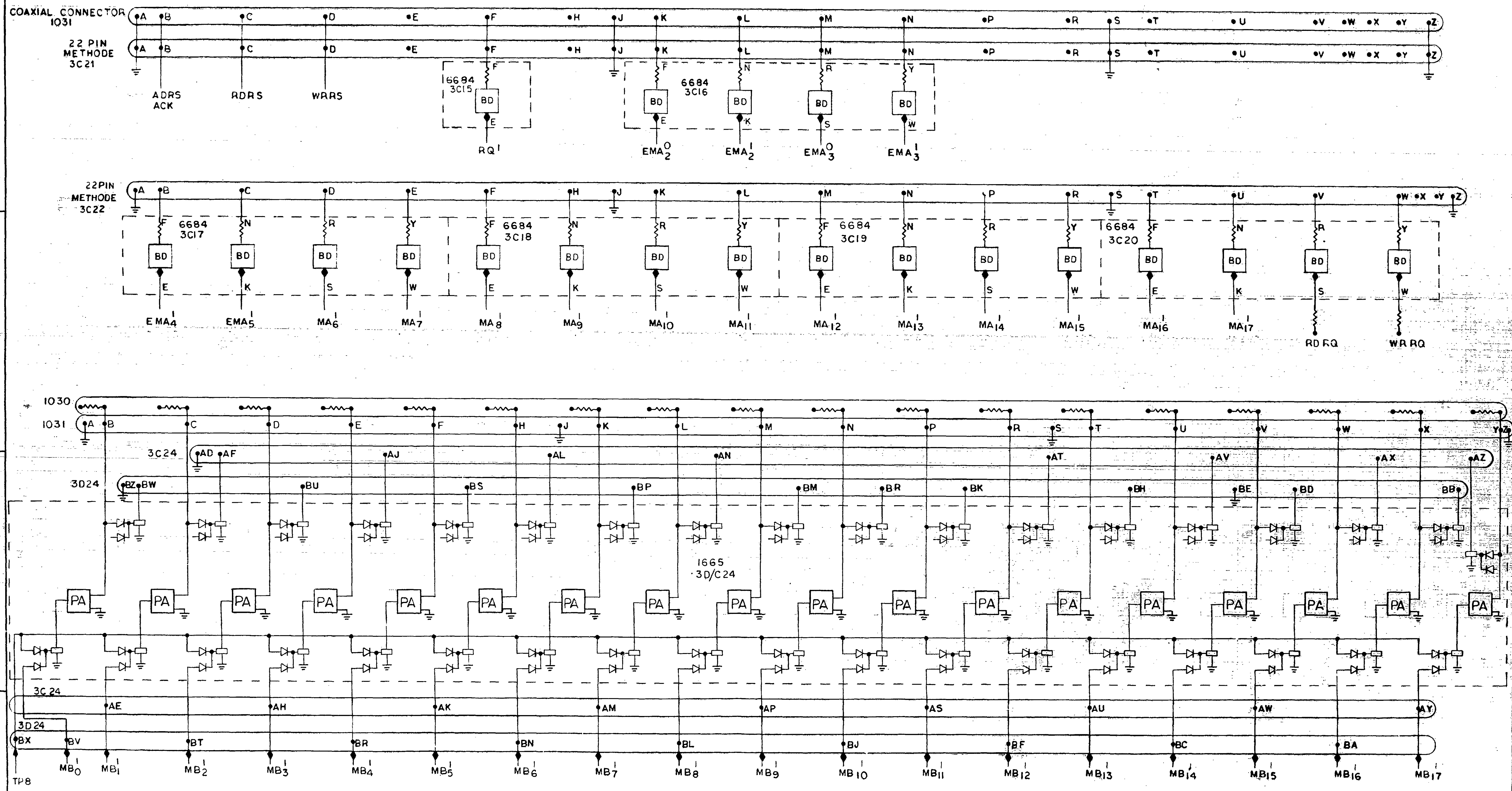
digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

D-ID-45-62

PUNCH CONTROL

PDP-ID-45

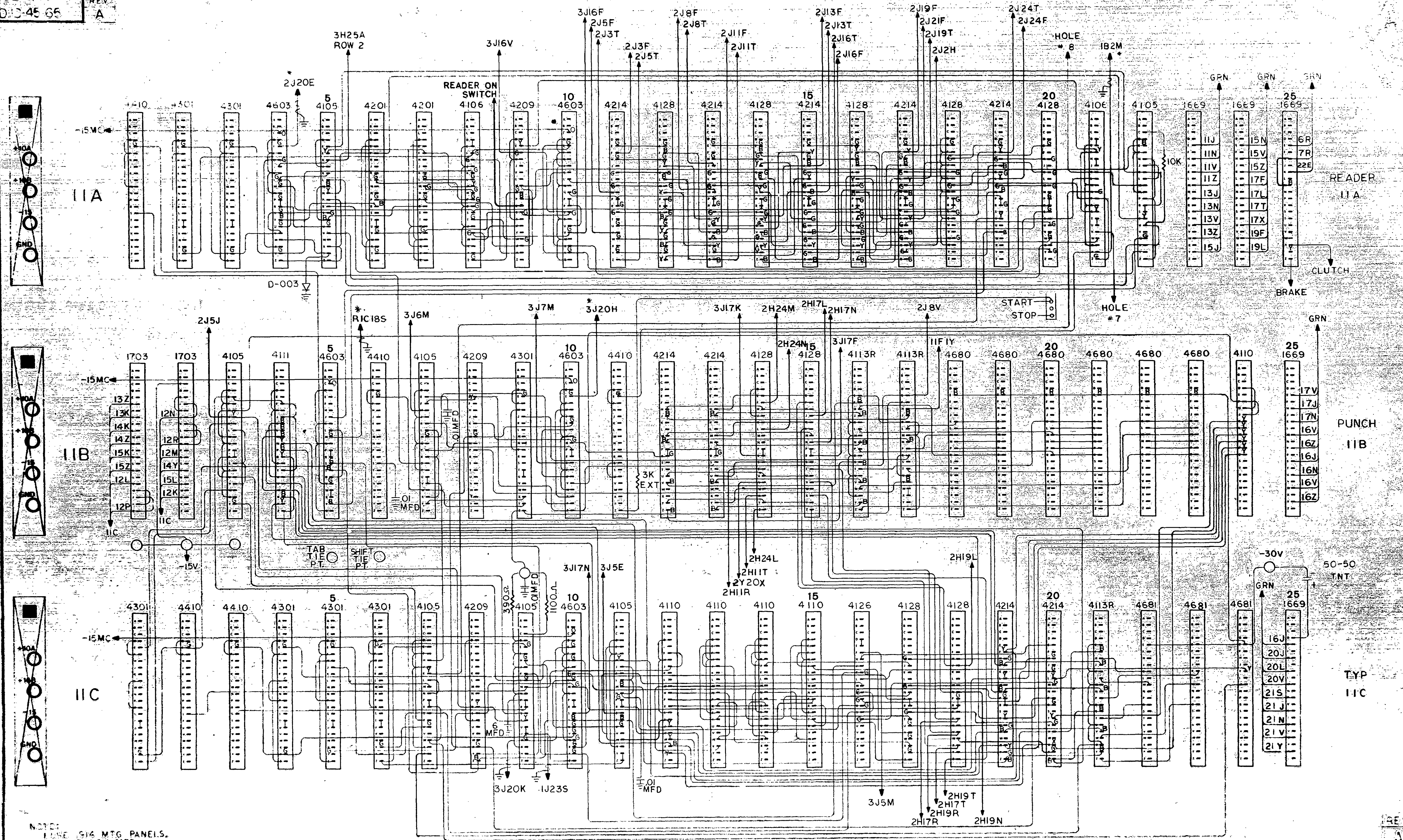
D-ID-45-64



DRAWN B.LUMPKIN	DATE 1-15-64	digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS	TITLE MEMORY BUS INTERFACE
CHECKED	DATE 1/31/64		FOR
ENG R. Wilson	DATE 1/31/64		
PROJ. ENG	DATE 1/31/64	ASSY. NO MA-ID-0-1 CODE BS	DRWG NO D-ID-45-64 REV LTR
PROD	DATE 11/2/65	SHEET OF	

CHANGE | DATE | ENG — REVISIONS

D-IC-45-65 REV A



NOTES:
1. USE 914 MTG PANELS.
2. SEE PUNCH MOD

THIS DWG. TAKEN FROM
D-20303 REV.

CODE	
WD	

A-365 6-1-65

READER PUNCH TELETYPE TYPE CONTROL

digital

D-IC-45-65 REV A

CONNECTION MEDIA	POL	PIN	PIN	NAME
D-003	+	1A1W	GND	MB_5^0 (b)
D-003	+	1A7L		CYC^1
D-003	+	1A8F		CYC^0
D-003	+	1A12H		MB_6
D-003	+	1A12T		MB_7
D-003	+	1A14H		MB_8
D-003	+	1A14T		MB_9
D-003	+	1A16H		MB_{10}
D-003	+	1A16T		MB_{11}
D-003	+	1A18H		MB_{12}
D-003	+	1A18T		MB_{13}
D-003	+	1A20H		MB_{14}
D-003	+	1A20T		MB_{15}
D-003	+	1A22H		MB_{16}
D-003	+	1A22T		MB_{17}
D-003	+	1A7M		IO_{17}^1
D-003	+	1C9E		MB_7^1 (b)
D-003	+	1C20W		AC_{17}
D-003	+	1C22H		CY1 →
D-003	+	1D7E		MB 1 → SH.RO.
D-003	+	1D7J		MB 1 → SH.RO.
D-003	+	1D7M		MB 1 → SH.RO.
D-003	+	1D7R		MB 1 → SH.RO.
D-003	+	1D7U		MB 1 → SH.RO.
D-003	+	1D7X		MB 1 → SH.RO.

DRAWN P.J.Priest 1-8-64

CHECKED [signature] 10/7/64

ENG [signature] 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

EXTERNAL COMPONENTS LIST

TITLE DIODES FOR PDP-1D

APP'V [initials]

ECO. NO. 360 REV. LTR. 4-26-65

DWG NO A-1D-45-66

REV. LTR. A

SHEET 1 OF 4

CODE CL

CONNECTION MEDIA	POL	PIN	PIN	NAME
D-003	+	1D8M	GND	MB 1 SH.RO.
D-003	+	1D8U		MB 1 SH.RO.
D-003	+	1D8X		MB 1 SH.RO.
D-003	+	1F6H		MB_0^1
D-003	+	1F6T		MB_1^1
D-003	+	1F8H		MB_2^1
D-003	+	1F8T		MB_3^1
D-003	+	1F9H		MB_4^1
D-003	+	1H8X		$r0n^1$
D-003	+	1K7E		CYC^1
D-003	+	1K14E		MB_5^1
D-003	+	2A6F		OV_1^1
D-003	+	2A7F		EXD^1
D-003	+	2A8F		EPC_2^1
D-003	+	2A9F		EPC_3^1
D-003	+	2A10F		EPC_4^1
D-003	+	2A11F		EPC_5^1
D-003	+	2C6U		MBO^0
D-003	+	2C7U		$MB1^0$
D-003	+	2C8U		$MB2^0$
D-003	+	2C9U		$MB3^0$
D-003	+	2C10U		$MB4^0$
D-003	+	2C11U		$MB5^0$
D-003	+	2C12U		$MB6^0$
D-003	+	2C13U		$MB7^0$

DRAWN P.J.Priest 1-8-64

CHECKED [signature] 1/17/64

ENG

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

EXTERNAL COMPONENTS LIST

TITLE

DIODES FOR PDP-[illegible]

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-66

REV. LTR. A

SHEET 2 OF 4

CODE CL

CONNECTION MEDIA	POL	PIN	PIN	NAME
D-003	+	2C14U	GND	MB^{0}_{8}
D-003	+	2C15U		MB^{0}_{9}
D-003	+	2C16U		MB^{0}_{10}
D-003	+	2C17U		MB^{0}_{11}
D-003	+	2C18U		MB^{0}_{12}
D-003	+	2C19U		MB^{0}_{13}
D-003	+	2C20U		MB^{0}_{14}
D-003	+	2C21U		MB^{0}_{15}
D-003	+	2C22U		MB^{0}_{16}
D-003	+	2C23U		MB^{0}_{17}
D-003	+	2E6E		ACO^{0}
D-003	+	2F4N		AC_{17}
D-003	+	2F5N		IO
D-003	+	2F5J		IO
D-003	+	2F21J		IO^{0}_{17}
D-003	+	2H2E		^{0} IO
D-003	+	2K3S		AC^{0}_{0}
D-003	+	2K3W		MBO^{1}
D-003	+	2K4Y		MBO^{0}
D-003	+	2K6S		$IO^{1}17$
D-003	+	2K7E		$IO^{0}0$
D-003	+	2K17R		ACO^{0}
D-003	+	2L2S		$IO^{1}17$
D-003	+	3C5E		MB^{0}
D-003	+	3C5J		MB^{1}

DRAWN P.J.Priest 1-8-64

CHECKED R. Rhoads 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

EXTERNAL COMPONENTS LIST

TITLE

DIODES FOR PDP-1D

DWG NO A-1D-45-66

REV LTR. A

SHEET 3 OF 4

CODE CL

CONNECTION MEDIA	POL	PIN	PIN	NAME
D-003	+		GND	MB 2
D-003	+			MB 3
D-003	+			MB 4
D-003	+			MB 5
D-003	+			MB 6
D-003	+			MB 7
D-003	+			MB 8
D-003	+			MB 9
D-003	+			MB 10
D-003	+			MB 11
D-003	+			MB 12
D-003	+			MB 13
D-003	+			MB 14
D-003	+			MB 15
D-003	+			MB 16
				MB 17
D-003	+	3H8Z		iot.ioc 1
D-003	+	3J18K		MB 15
D-003	+	3J18N		MB 06
D-003	+	3J18S		MB 05
D-003	+	3J19V		MB 06
D-003	+	1A19M		IO10 1

DRAWN P.J.Priest 1-8-64

CHECKED M. Rokoff 10/7/64

ENG

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

EXTERNAL COMPONENTS LIST

TITLE

DIODES FOR PDP-1D

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-66

REV. LTR. A

SHEET 4 OF 4

CODE CL

CONNECTION MEDIA	POL	PIN	PIN	NAME
100 OHMS		1A8V	GND	TP9
82		1A9S	↓	SP1
82		1A10S		SP3
82		1A15E		100 MA
82		1A22S		MR → MA
150		1A22Y		0 → MA
82		1A23W		PC 1 → MA
82		1A25S		RD MA
82		1B5Y		SP2
82		1B6Y		SP4
100		1B7F		TP8
82		1B22V		+1 → PC
82		1B22Y		-1 → PC
330		1B22P		10 → PC
82		1B23F		TA → PC
82		1B24F		MA 1 → PC
82		1B25F		MR 1 → PC
82		1C5K		SH/RO
100		1C8Y		TP4
120		1C16V		TP9A
82		1C20E		MUL CYL. TP10
82		1C24H		MDR-7
82		1C24M		MDR-3
82		1C24W		MD CARRY
100		1D8S	↓	TP1

DRAWN W. Massarelli 12/20/63

CHECKED N. Rheault 11/7/64

ENG. J. S. Miller 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

EXTERNAL COMPONENTS LIST

TITLE PDP-1D TERMINATIONS

DWG NO A-ID-45-67

REV. LTR.

SHEET 1 OF 6

CODE CL

CONNECTION MEDIA	POL	PIN	PIN	NAME
82 OHMS		1D3Y	GND	[illegible]
82		1D10M	↓	MD [1→] PC
82		1E21Y	↓	0→ FLAG
82		1E22S	↓	1→ FLAG
120		1F1V	↓	START
120		1F1S	↓	DEPOSIT
82		1F9E	↓	MB→ IR
82		1F9M	↓	IO→ IR
120		1F9S	↓	READ IN
82		1H13V	↓	STROBE
150		1J15M	↓	SC-4
100		1J22S	↓	SC
120		1J24S	↓	TP 9A
82		1K7S	↓	MD RESTART
150		1K8V	↓	STOP
120		1K8M	↓	CONTINUE
120		1K8N	↓	EXAMINE
150		1K11X	↓	SC0→4
[illegible]		[illegible]	↓	[illegible]
[illegible]		[illegible]	↓	[illegible]
[illegible]		[illegible]	↓	[illegible]
[illegible]		[illegible]	↓	[illegible]
[illegible]		[illegible]	↓	[illegible]
82		2A3V	↓	MDP-9
82		2A4Y	↓	MD /C AC

DRAWN Elaine Massarelli 12/20/63

CHECKED R. Rheault 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

EXTERNAL COMPONENTS LIST

TITLE PDP-1D [illegible] TERMINATIONS

APP'V

REV. LTR. | ECO. NO.

DWG NO A-ID-45-67

REV. LTR.

SHEET 2 OF 6

CODE CL

CONNECTION MEDIA	POL	PIN	PIN	NAME
150		2A14W		AC SW/BO A
150		2A14W		AC SW/BO B
82		2A23E		BO → AC
150		2A23V		AC SW/BO A
150		2A23W		AC SW/BO B
220		2B23P		LO → AC
100		2B23V		LO → AC
100		2B24P		TP6
120		2B24S		TP2
82		2B24V		MDP-2
100		2C1S		SC
150		2C2P		TP10
120		2C3W		TP9
82		2C4V		MDP-13
100		2C23P		MB → AC (6-17)
82		2C23K		PAD
82		2C23N		CARRY
220		2C23V		MB → AC
150		2C23Y		TW → AC
120		2D4V		TP5
100		2D5S		TP3
82		2D5V		MD (AC → MB
150		2D5Y		TP4
			GND	

DRAWN
E. Masserelli 12/20/63

CHECKED
R. Rhoads 1/7/64

ENG

digital
EQUIPMENT
CORPORATION
MAYNARD, MASSACHUSETTS

EXTERNAL COMPONENTS LIST

TITLE
PDP-1T- TERMINATIONS

APP'V

ECO. NO.
REV. LTR.

DWG NO
A-1D-45-67

REV. LTR.

SHEET 3 OF 6

CODE
C L

CONNECTION MEDIA	POL	PIN	PIN	NAME
150 OHMS		2D22X	GND	↳MB
82		2E1U	↑	MDP-10
82		2E2V		MD ↳ TO
82		2E3V		MD ↳ MB
120		2E10V		AC0-5 MB0-5
220		2E22E		AC6-17 MB6-17
82		2E22Y		TO ↳ MB
82		2E2S		SU/RO
82		2E2V	↓	MUL SP

DRAWN F. Massarelli 12/23/63

CHECKED R. Rheault 10/7/64

ENG

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

EXTERNAL COMPONENTS LIST

TITLE

PDP-1D- TERMINATIONS

APP'V.

ECO. NO. REV. LTR.

DWG NO A-1D-45-67

REV. LTR.

SHEET 4 OF 6

CODE C L

CONNECTION MEDIA	POL	PIN	PIN	NAME
82		2F2Y	GND	MDP-L
150		2F13U		IO SW/RO L
150		2F13W		IO SW/RO R
150		2F22U		IO SW/RO L
150		2F22W		IO SW/RO R
82		2H3H		MD ↔ IO
150		2H4S		TP_5
100		2H5S		TP_7
82		2H5Y		MD/MB → IO
82		2H22F		MB→IO
82		2K3H		MDP-1
82		2K5F		MDP-10
220		2K8Y		AC_{17}^{0} A
82		2K9M		MDP-4
82		2K9W		MDP-9
82		2K11V		TP_3
120		2K11Y		TP_2
82		2K15F		TP_{10}
82		2K15X		0 → SCR
120		2K18S		TP_9
150		2K18Y		TP_{10}
82		2K20Y		MDP-5
82		2L4R		DIV. CYL. TP_{10}
82		2L16S		MDP-6
82		3C1W		1 → 1

DRAWN E. Mascarelli 12/23/63

CHECKED N. [illegible] 10/7/64

ENG

APP'V

ECO. NO. REV. LTR.

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

EXTERNAL COMPONENTS LIST

TITLE PDP-1D TERMINATIONS

DWG NO A-ID-45-67

REV. LTR.

SHEET 5 OF 6

CODE CL

CONNECTION MEDIA	POL	PIN	PIN	NAME
100		11A6V	GND	RPB
100		11A6V	↓	RPA
100		11B7-H		lo→ PB PPB
100		11B10S		lo→ PB PPB
100		11C10S		TYO
100		11C11S		lo→ TB
100		11C16F		TY-i

DRAWN P.J.Priest 1-8-64

CHECKED N. Rheault 10/7/64

ENG

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

EXTERNAL COMPONENTS LIST

TITLE PDP-1D TERMINATIONS

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-67

REV. LTR.

SHEET 6 OF 6

CODE CL

JACK [X] PLUG [ ]

FEMALE [ ] MALE [X]

LOCATION, LENGTH, ROUTE

1F26

COLOR	PIN	PIN	NAME	REMARKS
W/BLK (X)	1F6J	A	IR0	
W/BRN (Z)	1F6U	B	IR1	
W/RED (R)	1F8J	C	IR2	
W/ORN (O)	1F8U	D	IR3	
W/YEL (Y)	1F9J	E	IR4	
W/GRN (N)		F		
W/BLU (B)		H		
W/VIO (V)		J		
W/GRY (G)		K		
WHT (W)		L		
W/BLK (X)		M		
W/BRN (Z)		N		
W/RED (R)		P		
W/ORN (O)		R		
W/YEL (Y)		S		
W/GRN (N)		T		
W/BLU (B)		U		
W/VIO (V)		V		
W/GRY (G)		W		
WHT (W)		X		
		Y		
		Z		

DRAWN P.J.Priest 1-8-64

CHECKED [signature] 10/2/64

ENG [signature] 11/2/64

digital EQUIPMENT CORPORATION
MAYNARD MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

22 PIN AMPHENOL

TITLE

IR INDICATORS

DWG NO A-ID-45-68

REV. LTR.

SHEET 1 OF 1

CODE CL

JACK [x] PLUG [ ]

FEMALE [ ] MALE [x]

LOCATION, LENGTH, ROUTE

1E26

COLOR	PIN	PIN	NAME	REMARKS
W/BLK (X)	1E22J	A	PF 1	
W/BRN (Z)	1E22U	B	PF 2	
W/RED (R)	1E20J	C	PF 3	
W/ORN (O)	1E20U	D	PF 4	
W/YEL (Y)	1E18J	E	PF 5	
W/GRN (N)	1E18U	F	PF 6	
W/BLU (B)		H		
W/VIO (V)		J		
W/GRY (G)		K		
WHT (W)		L		
W/BLK (X)	1D5F	M	SS1	
W/BRN (Z)	1D5K	N	SS2	
W/RED (R)	1D5N	P	SS3	
W/ORN (O)	1D5S	R	SS4	
W/YEL (Y)	1D5V	S	SS5	
W/GRN (N)	1D5Y	T	SS6	
W/BLU (B)	1K25S	U	SING INST.	
W/VIO (V)	1K5W	V	SS6 SINGLE STEP	
W/GRY (G)		W		
WHT (W)		X		
		Y		
		Z		

DRAWN P.J.Priest 1-8-64

CHECKED N. Rhpault 10/7/64

ENG J. Shelan 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

22 PIN AMPHENOL

TITLE

PF INDICATORS
SENSE SW's
SINGLE INST.
SINGLE STEP

DWG NO A-1D-4569

REV. LTR.

SHEET 1 OF 1

CODE CL

JACK [X] PLUG [ ]

FEMALE [ ] MALE [X]

LOCATION, LENGTH, ROUTE

1J26

COLOR	PIN	PIN	NAME	REMARKS
W/BLK (X)	1H2M	A	START $\overline{SBM}$ SW	
W/BRN (Z)	1H2S	B	START SBM SW	
W/RED (R)	1J1R	C	STOP	
W/ORN (O)	1J3R	D	CONTINUE	
W/YEL (Y)	1J4R	E	EXAMINE	
W/GRN (N)	1J5R	F	DEPOSIT	
W/BLU (B)	1J6R	H	READ IN	
W/VIO (V)		J		
W/GRY (G)		K		
WHT (W)		L		
W/BLK (X)		M		
W/BRN (Z)		N		
W/RED (R)		P		
W/ORN (O)		R		
W/YEL (Y)		S		
W/GRN (N)		T		
W/BLU (B)		U		
W/VIO (V)		V		
W/GRY (G)		W		
WHT (W)		X		
		Y		
		Z		

DRAWN P.J.Priest 1-8-64

CHECKED [signature] 10/7/64

ENG [signature] 11/2/64

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

22 PIN AMPHENOL

TITLE

CONTROL SW's

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-70

REV. LTR.

SHEET 1 OF 1

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

3' LONG, 11A29

COLOR	PIN	PIN	NAME	COLOR	PIN	PIN	NAME
W/BLK (X)	11A20N	1	HOLE 1	W/GRY (G)		26	
W/BRN (Z)	11A20J	2	HOLE 2	WHT (W)		27	
W/RED (R)	11A20Z	3	HOLE 3	W/BLK (X)		28	
W/ORN (O)	11A20V	4	HOLE 4	W/BRN (Z)		29	
W/YEL (Y)	11A20L	5	HOLE 5	W/RED (R)		30	
W/GRN (N)	11A20F	6	HOLE 6	W/ORN (O)		31	
W/BLU (B)	11A21V	7	HOLE 7	W/YEL (Y)		32	
W/VIO (V)	11A21K	8	HOLE 8	W/GRN (N)		33	
W/GRY (G)	11A1S	9	FEED HOLE				
WHT (W)	11A25	10	CLUTCH	W/BLK (X)		34	
W/BLK (X)	11A25Z	11	BRAKE	W/BRN (Z)		35	
W/BRN (Z)	GND	12	GND	W/RED (R)		36	
W/RED (R)	11B25A	13	+10A	W/ORN (O)		37	
W/ORN (O)	11B25B	14	+10B	W/YEL (Y)		38	
W/YEL (Y)	ST. STDOFF	15	START (MTR)	W/GRN (N)		39	
W/GRN (N)	STP. STDOFF	16	STOP (MTR)	W/BLU (B)		40	
W/BLU (B)	SP.	17	SP.	W/VIO (V)		41	
				W/GRY (G)		42	
W/BLK (X)		18		WHT (W)		43	
W/BRN (Z)		19		W/BLK (X)		44	
W/RED (R)		20		W/BRN (Z)		45	
W/ORN (O)		21		W/RED (R)		46	
W/YEL (Y)		22		W/ORN (O)		47	
W/GRN (N)		23		W/YEL (Y)		48	
W/BLU (B)		24		W/GRN (N)		49	
W/VIO (V)		25		W/BLU (B)		50	

DRAWN P.J.Priest 1-31-64

CHECKED M. Arcault 10/7/69

ENG J. Shea 11/3/69

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

50 PIN CANNON

TITLE

READER INTO READER LOGIC

SOCKET WIRING

APP'V

ECO. NO. REV. LTR.

DWG NO A-ID-45-71

REV. LTR.

SHEET 1 OF 1

CODE CL

JACK ☐ PLUG ☒

FEMALE ☐ MALE ☒

LOCATION, LENGTH, ROUTE

APPROX. 5 FT.

COLOR	PIN	PIN	NAME
W/BLK (X)	1D22R	1	MBDA 0
W/BRN (Z)	1D22S	2	MBDA 1
W/RED (R)	1D22T	3	MBDA 2
W/ORN (O)	1D22U	4	MBDA 3
W/YEL (Y)	1D22V	5	MBDA 4
W/GRN (N)	1D22W	6	MBDA 5
W/BLU (B)	1D22X	7	MBDA 6
W/VIO (V)	1D22Z	8	MBDA 7
W/GRY (G)		9	
WHT (W)	1D23R	10	MBDB 0
W/BLK (X)	1D23S	11	MBDB 1
W/BRN (Z)	1D23T	12	MBDB 2
W/RED (R)	1D23U	13	MBDB 3
W/ORN (O)	1D23V	14	MBDB 4
W/YEL (Y)	1D23W	15	MBDB 5
W/GRN (N)	1D23X	16	MBDB 6
W/BLU (B)	1D23Z	17	MBDB 7
W/BLK (X)	1D24R	18	MBDC 0
W/BRN (Z)	1D24S	19	MBDC 1
W/RED (R)	1D24T	20	MBDC 2
W/ORN (O)	1D24U	21	MBDC 3
W/YEL (Y)	1D24V	22	MBDC 4
W/GRN (N)	1D24W	23	MBDC 5
W/BLU (B)	1D24X	24	MBDC 6
W/VIO (V)	1D24Z	25	MBDC 7

COLOR	PIN	PIN	NAME
W/GRY (G)	1D25R	26	MBDD 0
WHT (W)	1D25S	27	MBDD 1
W/BLK (X)	1D25T	28	MBDD 2
W/BRN (Z)	1D25U	29	MBDD 3
W/RED (R)	1D25V	30	MBDD 4
W/ORN (O)	1D25W	31	MBDD 5
W/YEL (Y)	1D25X	32	MBDD 6
W/GRN (N)	1D25Z	33	MBDD 7
W/BLK (X)		34	
W/BRN (Z)		35	
W/RED (R)		36	
W/ORN (O)		37	
W/YEL (Y)		38	
W/GRN (N)		39	
W/BLU (B)		40	
W/VIO (V)		41	
W/GRY (G)		42	
WHT (W)		43	
W/BLK (X)		44	
W/BRN (Z)		45	
W/RED (R)		46	
W/ORN (O)		47	
W/YEL (Y)		48	
W/GRN (N)		49	
W/BLU (B)		50	

DRAWN P.J.Priest 1-31-64

CHECKED 10/7/64

ENG 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

50 PIN CANNON

TITLE

MBD IOT

(4113 INVERTERS)
PLUG INTO 3H29
PDP-1D

DWG NO A-1D-45-72

REV. LTR.

SHEET 1 OF 1

CODE CL

JACK [X] PLUG [ ]

FEMALE [X] MALE [ ]

LOCATION, LENGTH, ROUTE

IOT → MBD

3H29

COLOR	PIN	PIN	NAME
W/ BLK (X)	3H1E	1	MBD A 0
W/ BRN (Z)	3H1J	2	MBD A 1
W/ RED (R)	3H1M	3	MBD A 2
W/ ORN (O)	3H1R	4	MBD A 3
W/ YEL (Y)	3H1U	5	MBD A 4
W/ GRN (N)	3H1X	6	MBD A 5
W/ BLU (B)	3H2E	7	MBD A 6
W/ VIO (V)	3H2J	8	MBD A 7
W/ GRY (G)		9	
WHT (W)	3H5E	10	MBD B 0
W/ BLK (X)	3H5J	11	MBD B 1
W/ BRN (Z)	3H6E	12	MBD B 2
W/ RED (R)	3H6J	13	MBD B 3
W/ ORN (O)	3H6M	14	MBD B 4
W/ YEL (Y)	3H6R	15	MBD B 5
W/ GRN (N)	3H6U	16	MBD B 6
W/ BLU (B)	3H6X	17	MBD B 7
W/ BLK (X)	3H2M	18	MBD C 0
W/ BRN (Z)	3H2R	19	MBD C 1
W/ RED (R)	3H2U	20	MBD C 2
W/ ORN (O)	3H2X	21	MBD C 3
W/ YEL (Y)	3H3E	22	MBD C 4
W/ GRN (N)	3H3J	23	MBD C 5
W/ BLU (B)	3H3M	24	MBD C 6
W/ VIO (V)	3H3R	25	MBD C 7

COLOR	PIN	PIN	NAME
W/ GRY (G)	3H3U	26	MBD D 6
WHT (W)	3H3X	27	MBD D 7
W/ BLK (X)	3H4E	28	MBD D 2
W/ BRN (Z)	3H4J	29	MBD D 3
W/ RED (R)	3H4M	30	MBD D 4
W/ ORN (O)	3H4R	31	MBD D 5
W/ YEL (Y)	3H4U	32	MBD D 6
W/ GRN (N)	3H4X	33	MBD D 7
W/ BLK (X)		34	
W/ BRN (Z)		35	
W/ RED (R)		36	
W/ ORN (O)		37	
W/ YEL (Y)		38	
W/ GRN (N)		39	
W/ BLU (B)		40	
W/ VIO (V)		41	
W/ GRY (G)		42	
WHT (W)		43	
W/ BLK (X)		44	
W/ BRN (Z)		45	
W/ RED (R)		46	
W/ ORN (O)		47	
W/ YEL (Y)		48	
W/ GRN (N)		49	
W/ BLU (B)		50	

DRAWN Elaine Massarelli 1/28/64

CHECKED [illegible] 10/7/64

ENG [illegible] 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

50 PIN CANNON

TITLE

4113 INVERTERS

PDP-1D

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-4573

REV. LTR.

SHEET 1 OF 1

CODE CL

JACK	[ ]	PLUG	[X]	LOCATION, LENGTH, ROUTE
FEMALE	[X]	MALE	[ ]	11C29 3' Lg.

COLOR	PIN	PIN	NAME	COLOR	PIN	PIN	NAME
W/BLK (X)	11C23P	1	TB 1	W/GRY (G)	-15 Stdof	26	Tab SW
W/BRN (Z)	11C23N	2	TB 2	WHT (W)	11B1W	27	Tab SW
W/RED (R)	11C23L	3	TB 3	W/BLK (X)		28	
W/ORN (O)	11C22N	4	TB 4	W/BRN (Z)	Tab Tie Pt.	29	Tab SW
W/YEL (Y)	11C22P	5	TB 5	W/RED (R)	NC	30	CR Cam
W/GRN (N)	11C22L	6	TB 6	W/ORN (O)	-15 Stdof	31	CR Cam
W/BLU (B)	NC	7		W/YEL (Y)	11B2M	32	CR Cam
W/VIO (V)	NC	8		W/GRN (N)	-15 Stdof	33	BK SP
W/GRY (G)	11C24N	9	TC M				
WHT (W)	-30 Stof	10	-30	W/BLK (X)	11B2H	34	BK SP
W/BLK (X)		11		W/BRN (Z)	-15 Stdof	35	SH Cam
W/BRN (Z)	-15 Stdof	12	TB S	W/RED (R)	11B2P	36	SH Cam
W/RED (R)		13		W/ORN (O)	-15 Stdof	37	SH Cam
W/ORN (O)	-15 Stdof	14	TC Com	W/YEL (Y)	Shift Tie Pt.	38	SH Cam
W/YEL (Y)	11B1S	15	TC 1	W/GRN (N)	Shift Tie Pt.	39	SH Level
W/GRN (N)	11B1P	16	TC 2	W/BLU (B)	11B2S	40	SH UP Level
W/BLU (B)	11B1M	17	TC 3	W/VIO (V)	11B2U	41	SH DN Level
				W/GRY (G)	Shift Tie Pt.	42	SH Level
W/BLK (X)	11B1K	18	TC 4	WHT (W)	11C24L	43	Color TBE
W/BRN (Z)	11B1H	19	TC 5	W/BLK (X)	-30 Stof	44	-30
W/RED (R)	11B1E	20	TC 6	W/BRN (Z)	NC	45	Color
W/ORN (O)	-15 Stdof	21	TC 7	W/RED (R)	-15 Stdof	46	3P-Can
W/YEL (Y)	11B1U	22	TC C	W/ORN (O)	11B2W	47	Space
W/GRN (N)	-15 Stdof	23	Tab Cam	W/YEL (Y)		48	
W/BLU (B)	11B1Y	24	Tab Cam	W/GRN (N)		49	
W/VIO (V)	Tab Tie Pt.	25	CR Cam	W/BLU (B)	GND	50	GND

DRAWN P.J.Priest 1-28-64

CHECKED W. Rheault 10/7/64

ENG. G. Shirk 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

50 PIN CANNON

TITLE
TYPEWRITER INTO TYPEWRITER LOGIC

SOCKET WIRING DD-50-S

PDP-1D

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-74

REV. LTR.

SHEET 1 OF 1

CODE CL

CONNECTION MEDIA	POL	PIN	PIN	NAME
			TERMINAL STRIP	
3.3K 1/4 W.		3J15J	3J45	READER NAC
"		3J15N	"	PUNCH NAC
"		3J15V	3J45	TYPEWRITER NAC
"			TERMINAL STRIP	

DRAWN Elaine Massarelli 1/28/64

CHECKED N. Blenault 10/7/64

ENG [illegible] 11/2/64

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

EXTERNAL COMPONENTS LIST

TITLE PDP-1D TERMINATORS FOR NAC & MEMORY LITES PDP-1D

APP'V

ECO. NO. REV. LTR.

DWG NO A-1D-45-75

REV. LTR.

SHEET 1 OF 1

CODE CL

COLOR	NAME	PIN	PIN	REMARKS
WHT/BLK	READER NAC	TAPE RDR. C	3J45J	THRU 3.3K ¼ W.
WHT/BRN	PUNCH NAC	PUNCH R	3J45N	"
WHT/RED	TYPEWRITER NAC	TYPEWRITER N	3J45V	"
WHT/VIO	DEFER 2	PUNCH U	1K13J	
WHT/GRY	OVERFLOW 2	PUNCH W	2C2U	
WHT				

DRAWN P.J.Priest 1-28-64

CHECKED M. Rheault 10/7/64

ENG Shula 11/2/64

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

GENERAL WIRING SHEET

TITLE

NAC AND MEMORY LITES

PDP-1D

DWG NO A-1D-4576

REV. LTR.

SHEET 1 OF 1

CODE CL

APP'V

ECO. NO. REV. LTR.

JACK [x] PLUG [ ]

FEMALE [ ] MALE [x]

LOCATION, LENGTH, ROUTE

11B29

COLOR	PIN	PIN	NAME	REMARKS
W/BLK (X)	-30V STDOFF	A	-30V	
W/BRN (Z)	11B6S	B	PICKUP PULSE	
W/RED (R)	SP	C	SP	
W/ORN (O)	GND	D	GND	
W/YEL (Y)	11B19L	E	HOLE 8'	
W/GRN (N)	11B22P	F	FEED/HOLE	
W/BLU (B)	11B22N	H	HOLE 1	
W/VIO (V)	11B22L	J	HOLE 2	
W/GRY (G)	11B20P	K	HOLE 3	
WHT (W)	11B20N	L	HOLE 4	
W/BLK (X)	11B20L	M	HOLE 5	
W/BRN (Z)	11B19N	N	HOLE 7	
W/RED (R)	11B19P	P	HOLE 6	
W/ORN (O)	GND	R	GND	
W/YEL (Y)		S		
W/GRN (N)	11F2Z	T	START PUNCH	
W/BLU (B)	-15V	U	-15V	
W/VIO (V)		V		
W/GRY (G)		W		
WHT (W)		X		
		Y		
		Z		

DRAWN P.J.Priest 1-31-64

CHECKED [signature] 1/7/64

ENG [signature] 11/2/64

digital EQUIPMENT CORPORATION MAYNARD MASSACHUSETTS

APP'V

ECO. NO. REV. LTR.

22 PIN AMPHENOL

TITLE

SOCKET WIRING

(PUNCH INTO PUNCH LOGIC)

DWG NO A-ID-45-77

REV. LTR.

SHEET 1 OF 1

CODE CL

EXPLANATORY NOTES FOR CYCLE FLOW DIAGRAMS

(D-1D-0-2, D-1D-0-3)

These drawings show a chronological flow of PDP-1 from state to state. Time runs from top to bottom of the drawings with a non-linear scale. The true time scale is indicated at the right edge of the cycle zero drawing. All events (changes in the state of the machine) which may be initiated by a particular time pulse, are enclosed by horizontal lines which include that time pulse number at the left of the drawings. Because of the built-in delay of the flip-flops, the state does not change until 0.1 μsec after the start of the initiating pulse. If more than one event is conditioned for a given time pulse, these events occur simultaneously, even though one event may be drawn above another.

Each instruction the machine performs starts with a cycle-zero. This is the memory cycle which brings the instruction from that memory address contained in the Program Counter. Certain instructions (jmp,jsp,opr,shift, skip,law,iot & spc) are completed in this memory cycle. Shift may overlap the next cycle-zero (or break cycle one) but this is of no interest to the programmer unless he is operating the machine "single step".

All two cycle instructions proceed from cycle-zero to cycle-one unless a deferred (indirect) address is called for. In the later case, one or more defer cycles occur between cycle-zero & cycle-one. The one cycle instructions, jmp & jsp may also include defer cycles.

The instruction Execute (xct) is changed in the early part of its cycle-one to cycle-zero of the instruction to be executed. Thus Execute may take two or three cycles depending upon the instruction executed. Both the Execute instruction and the instruction executed may include defer cycles.

At the completion of each instruction, a sequence break may occur. This break consists of break cycle one, two & three.

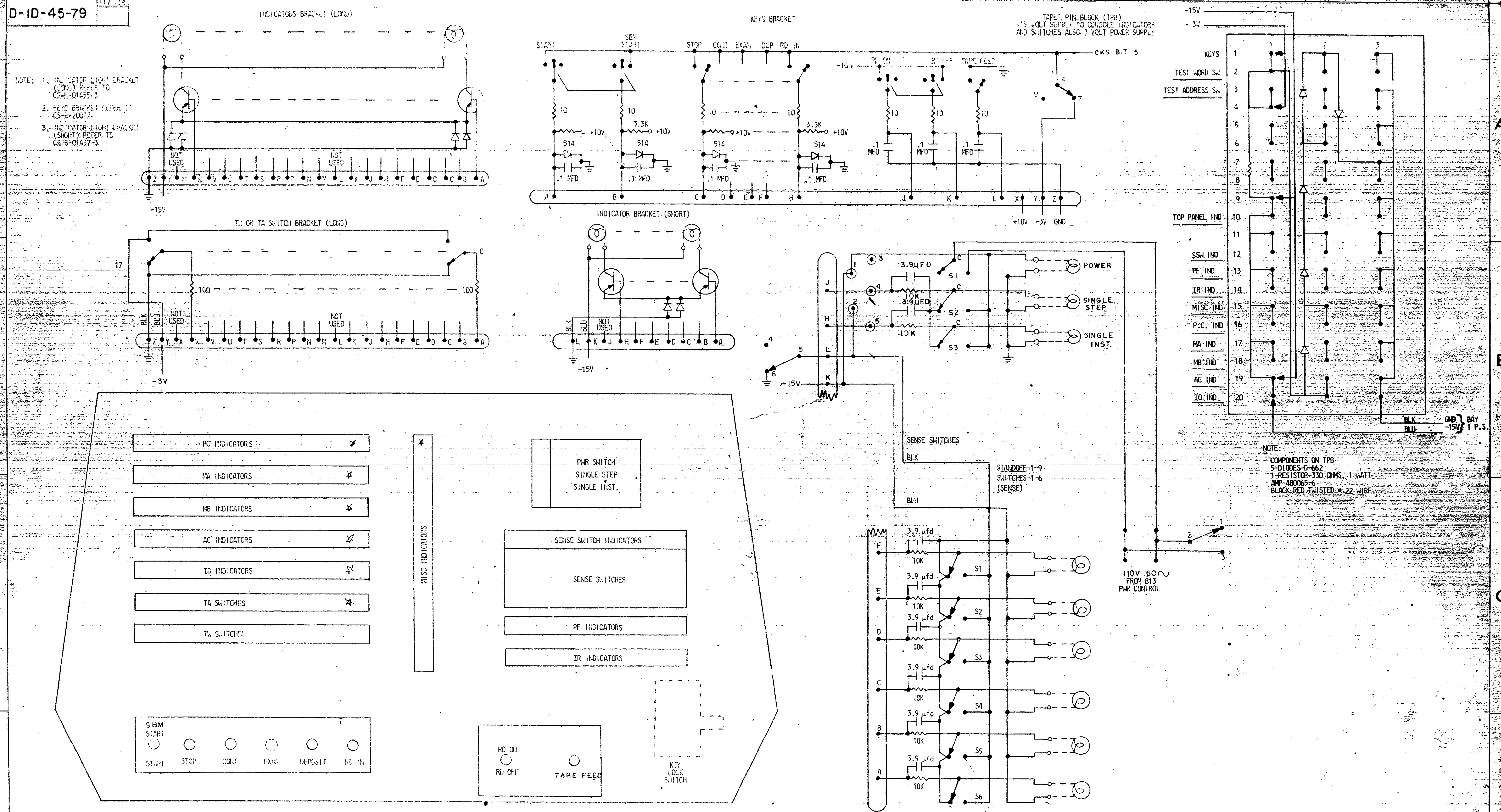
ABBREVIATIONS:

AC	Accumulator
BC	Break cycle counter
BREAK CODER	A network whose output is four times the number of the sequence which has priority.
carry	The second step of a two step add
cyc	cycle ff
df 1	a ff which indicates a defer cycle is or <u>is to be</u> performed
df 2	a ff which indicates a second defer cycle is to be performed
dis shift	a special shift left at Ac & IO $AC_0 \rightarrow AC$ $AC \xrightarrow{C} IO_{17}$ (see notation)
ff	flip-flop
IO	In Out Register
ioh	a ff indicating an in out halt is in progress
IR	Instruction Register (5 bits)
MA	Memory Address Register
MB	Memory Buffer Register
Mi	Memory inhibit ff
Mr	Memory read ff
Mus Shift	Shift right of AC & IO. $AC_0 \rightarrow AC$ $\curvearrowright_0 \rightarrow AC$ IO_{17} dropped
mw	Memory write ff
pad	The first step of a two step add (xor of MB & AC)
PC	Program Counter
run	a ff which connects time pulse 10 to TP zero
SBS	Sequence Break System
Sh/Ro	Perform a shift or rotate step

NOTATION:

0 → AC	clear AC
C → AC	complement the AC
+1 → AC	Add one (count) to the AC
PC —1→ MA	put the one of PC in MA
MB —0→ AC	put the zeros of MB in AC'
AC —∪→ MB	AC jam to MB ie put ones & zeros
MB —1 (6-17)→ AC	put the ones of MB bits 6 thru 17 to AC bits 6 - 17
AC1	bit number 1 of the AC

D-ID-45-79



INDICATORS BRACKET (LONG)
NOTE: 1. INDICATOR LIGHT BRACKET (LONG) REFER TO CS-B-01455-3
2. KEYS BRACKET REFER TO CS-B-20077
3. INDICATOR LIGHT BRACKET (SHORT) REFER TO CS-B-01457-3
NOT USED
-15V
TG OR TA SWITCH BRACKET (LONG)
-3V
KEYS BRACKET
START
SBM START
STOP
CONT
EXAM
DEP
RD IN
CKS BIT 5
+10V
3.3K
514
.1 MFD
RD ON
RD OFF
TAPE FEED
TAPER PIN BLOCK (TPB) 15 VOLT SUPPLY TO CONSOLE INDICATORS AND SWITCHES ALSO 3 VOLT POWER SUPPLY
+10V -3V GND
INDICATOR BRACKET (SHORT)
3.9 µFD
10K
POWER
SINGLE STEP
SINGLE INST.
-15V
KEYS
TEST WORD SW
TEST ADDRESS SW
TOP PANEL IND
SSW IND
PF IND
IR IND
MISC IND
P.C. IND
MA IND
MB IND
AC IND
IO IND
BLK
BLU
GND
-15V
BAY 1 P.S.
NOTE: COMPONENTS ON TPB
5-D10DES-D-662
1-RESISTOR-330 OHMS, 1 WATT
AMP 480065-6
BLACK RED TWISTED # 22 WIRE
SENSE SWITCHES
STANDOFF-1-9
SWITCHES-1-6
(SENSE)
110V 60~ FROM 813 PWR CONTROL
PC INDICATORS
MA INDICATORS
MB INDICATORS
AC INDICATORS
IO INDICATORS
TA SWITCHES
TW SWITCHES
MISC INDICATORS
PWR SWITCH
SINGLE STEP
SINGLE INST.
SENSE SWITCH INDICATORS
SENSE SWITCHES
PF INDICATORS
IR INDICATORS
SBM START
START
STOP
CONT
EXAM
DEPOSIT
RD IN
RD ON
RD OFF
TAPE FEED
KEY LOCK SWITCH

NOTE:
1. STARS INDICATE LONG BARS.
2. TAKEN FROM DWG D-8410

CHANGE	DATE	ENG

REVISIONS

DRAWN	[signature]	DATE 9-29-65
CHECKED	[signature]	DATE 10/17/65
ENG	[signature]	DATE 1/7/67
PROJ ENG	[signature]	DATE
PROD	[signature]	DATE

digital EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS

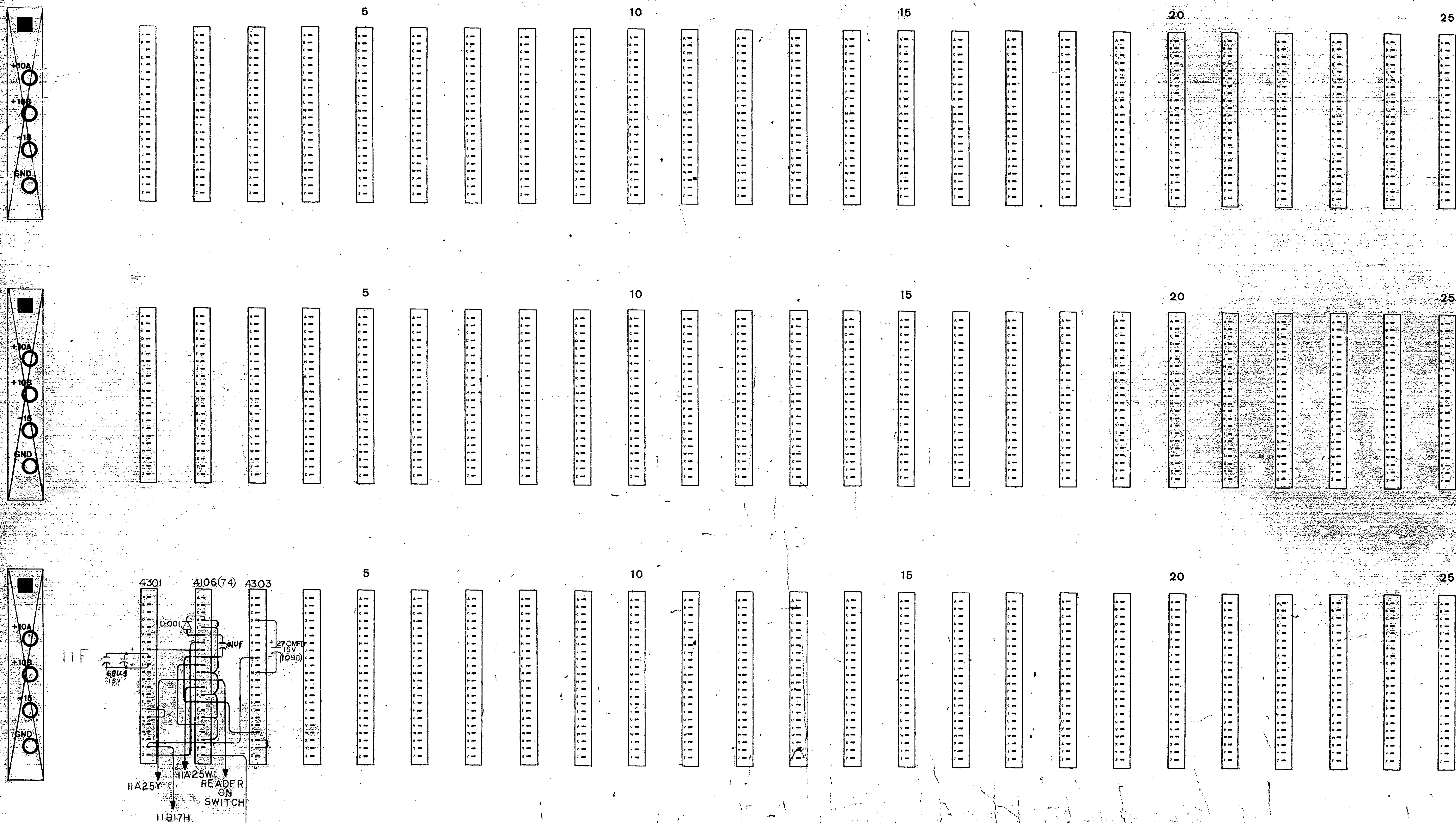
TITLE: OPERATOR CONTROL PANEL

FOR PDP-ID-45

ASSY NO | CODE BS | DRWG NO D-ID-45-79 | REV LTR

SHEET OF

D-ID-45-81 REV A



USE 1914 MTG PANEL

START PUNCH
22 PIN AMP SOCKET
PIN T
11B29

DWG TAKEN FROM DWG. NO. D-20314

WIRING LAYOUT
TYPES 1901 AND 1903

CODE		ECN NO.	CHANGE	DRAWN / CHECKED / ENG / PROD / OTHER		
WD		A-365 6-2-65			RACK 11F	SCR DRIVER 823
					digital EQUIPMENT CORPORATION	D-ID-45-81

REV A

JACK ☐ PLUG ☐ FEMALE ☐ MALE ☐	LOCATION, LENGTH, ROUTE

COLOR	PIN	PIN	NAME	REMARKS
W/BLK (X)	1Y13E	3H19A	IO_0^1	
W/BRN (Z)	1Y13F	3H19B	IO_1^1	
W/RED (R)	1Y13K	3H19C	IO_2^1	
W/ORN (O)	1Y13N	3H19D	IO_3^1	
W/YEL (Y)	1Y13S	3H19E	IO_4^1	
W/GRN (N)	1Y13V	3H19F	IO_5^1	
W/BLU (B)	1Y13Y	3H19G	IO_6^1	
W/VIO (V)	1Y14F	3H19H	IO_7^1	
W/GRY (G)	1Y14K	3H19J	IO_8^1	
WHT (W)	1Y14N	3H19L	IO_9^1	
W/BLK (X)	1Y14S	3H19M	IO_{10}^1	
W/BRN (Z)	1Y14V	3H19N	IO_{11}^1	
W/RED (R)	1Y14Y	3H19P	IO_{12}^1	
W/ORN (O)	1Y19F	3H19R	IO_{13}^1	
W/YEL (Y)	1Y19K	3H19S	IO_{14}^1	
W/GRN (N)	1Y19N	3H19T	IO_{15}^1	
W/BLU (B)	1Y19S	3H19U	IO_{16}^1	
W/VIO (V)	1Y18V	3H19V	IO_{17}^1	
W/GRY (G)	1Y8Z	3J1A	MBD_A^0	
WHT (W)	GROUND	GROUND		

DRAWN
Maureen Mariano 7/21/65

CHECKED
Jim McHugh 7-23-65

ENG
W Maldonado C.W.N.

digital
EQUIPMENT
CORPORATION
MAYNARD, MASSACHUSETTS

GENERAL RIBBON CABLE LIST

TITLE
SPECIAL MICRO PROGRAMMED IOT
& IOT COMMAND

APP'V	ECO. NO. REV. LTR.	DWG NO	REV. LTR.
C.W.N.	ORIG-367	A-1D-45-84	
		SHEET 1 OF 3	CODE CL

JACK ☐ PLUG ☐

FEMALE ☐ MALE ☐

LOCATION, LENGTH, ROUTE

COLOR	PIN	PIN	NAME	REMARKS
W/BLK (X)	1Y10F	3H21A3	IM_0^1	
W/BRN (Z)	1Y10J	3H21B3	IM_1^1	
W/RED (R)	1Y10L	3H21C3	IM_2^1	
W/ORN (O)	1Y10N	3H21D3	IM_3^1	
W/YEL (Y)	1Y10R	3H21E3	IM_4^1	
W/GRN (N)	1Y10T	3H21F3	IM_5^1	
W/BLU (B)	1Y10V	3H21G3	IM_6^1	
W/VIO (V)	1Y10X	3H21H3	IM_7^1	
W/GRY (G)	1Y10Z	3H21J3	IM_8^1	
WHT (W)	1Y17F	3H21L3	IM_9^1	
W/BLK (X)	1Y17J	3H21M3	IM_{10}^1	
W/BRN (Z)	1Y17L	3H21N3	IM_{11}^1	
W/RED (R)	1Y17N	3H21P3	IM_{12}^1	
W/ORN (O)	1Y17R	3H21R3	IM_{13}^1	
W/YEL (Y)	1Y17T	3H21S3	IM_{14}^1	
W/GRN (N)	1Y17V	3H21T3	IM_{15}^1	
W/BLU (B)	1Y17X	3H21U3	IM_{16}^1	
W/VIO (V)	1Y17Z	3H21V3	IM_{17}^1	
W/GRY (G)	GROUND	GROUND		
WHT (W)	1Y8Y	3J2W	7XTP(10-4)	

DRAWN
Maureen Mariano 7/21/65

CHECKED
Jim McHugh 7-23-65

ENG

digital
EQUIPMENT
CORPORATION
MAYNARD, MASSACHUSETTS

GENERAL RIBBON CABLE LIST

TITLE
SPECIAL MICRO PROGRAMMED
IOT & IOT COMMAND

APP'V

ECO. NO. ORI6-367
REV. LTR.

DWG NO
A-1D-45-84

REV. LTR.

SHEET 2 OF 3

CODE
CL

COLOR	NAME	PIN	PIN	REMARKS
WHT	MB 0 7	2D13R	1Y7W	
WHT	MB 0 8	2D15L	1Y7T	
WHT	MB 0 9	2D15R	1Y9E	
WHT	MB 1 9	2D15T	1Y9F	
WHT	MB 0 10	2Y1U	1Y9H	
WHT	MB 1 10	1D24J	1Y9J	
WHT	MB 0 11	1A3F	1Y9K	
WHT	MB 1 11	1D24L	1Y9L	
GRY/TWP	STROBE 10	2J2H	1Y8J	IOT 2015
GRY/TWP	SET AC 17	2B23E	1Y20H	
GRY/TWP	SET AC 16	2B22E	1Y20P	
GRY/TWP	SET AC 15	2B21E	1Y20W	
GRY/TWP	SET AC 14	2B20E	1Y21H	
GRY/TWP	SET AC 13	2B19E	1Y21P	
GRY/TWP	/0 -AC →	2B3P	1Y15Z	IOT X015(7-4)
GRY/TWP	STROBE AC	3K13J	1Y20F	IOT X015(10-4)
WHT	MBD 0 C	3K12F	3J1J	
WHT	MBD 5 A	3K12K	3J1F	
WHT	MBD 2 D	3K12R	3J1V	
GRY/TWP	1XTP(7-4)	3K13Y	3J2G	
GRY/TWP	1XTP(10-4)	3K13V	3J2H	

REV. LTR.	ECO. NO.	DATE	ENG.
ORIG.	367	7-22-65	

digital EQUIPMENT CORPORATION
MAYNARD, MASSACHUSETTS

DRAWN M. Mariano 7/21/65

CHECKED Jm McHugh 7-23-65

ENG.

PROD.

GENERAL WIRING SHEET

TITLE
SPECIAL MICRO PROGRAMED
IOT & IOT COMMAND

CODE	DRWG. NO.	REV.
CL	A-1D-45-84	

SHEET 3 OF 3

DIST.