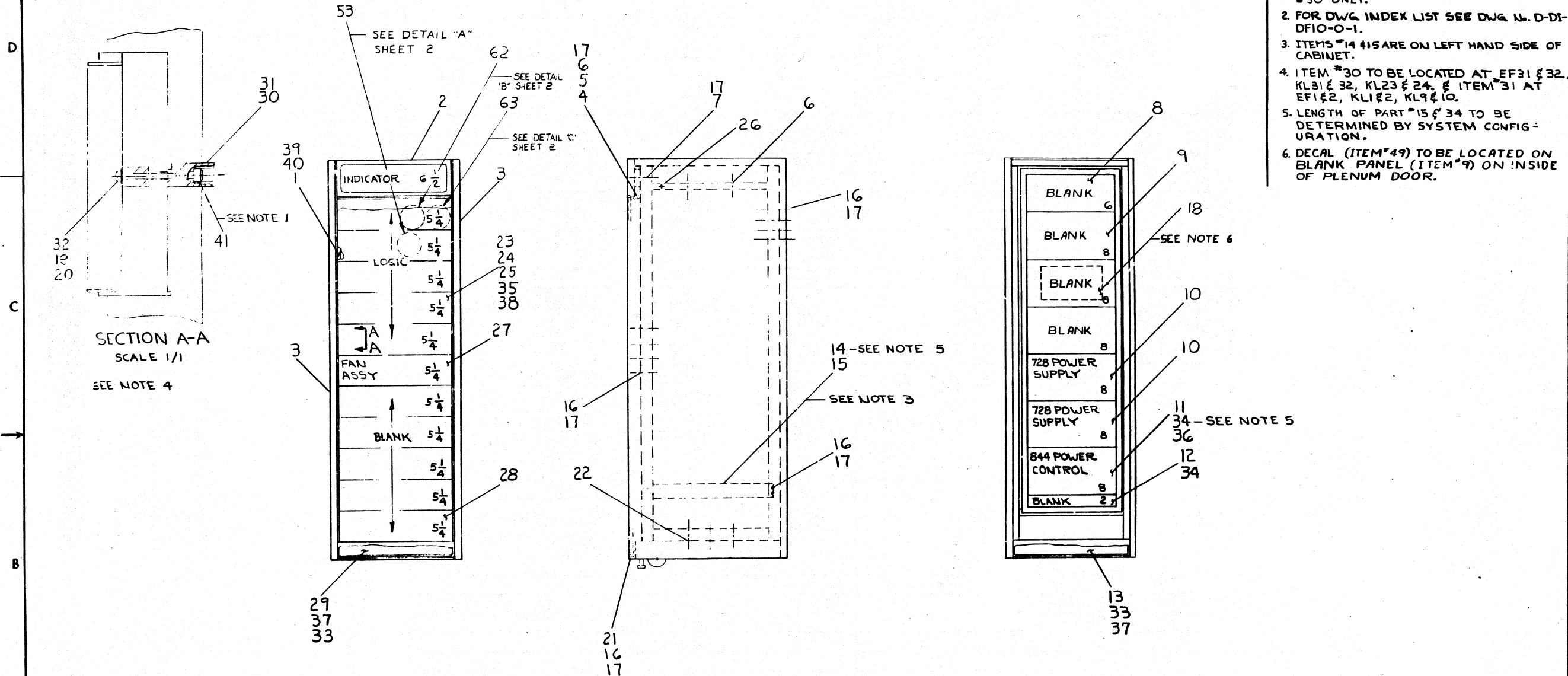




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LEGEND	
NUMBER	VARIATION
DFIO-A	60 HZ
DFIO-B	50 HZ

- NOTE:**
- ITEM #41 USED WITH ITEM #31 ONLY. ITEMS #32, 51 & 52 USED WITH ITEM #30 ONLY.
  - FOR DWG. INDEX LIST SEE DWG. NO. D-DI-DFIO-0-1.
  - ITEMS #14 #15 ARE ON LEFT HAND SIDE OF CABINET.
  - ITEM #30 TO BE LOCATED AT EF31 & 32. KL31 & 32, KL23 & 24. & ITEM #31 AT EF1 & 2, KL1 & 2, KL9 & 10.
  - LENGTH OF PART #15 & 34 TO BE DETERMINED BY SYSTEM CONFIGURATION.
  - DECAL (ITEM #49) TO BE LOCATED ON BLANK PANEL (ITEM #9) ON INSIDE OF PLENUM DOOR.



REV	CHANGE NO	REV
1	ECO #3123	A
2	CHG'D VIEW AT DETAIL A, ADDED NOTE #5	B
3	ECO #3205	B
4	ADDED ITEM #49, NOTE #6	B
5	ECO #3301	B
6	CHG'D NOTE #4 & ADDED ITEM #50 TO DETAIL A	B
7	ECO #3371	C
8	CHG P.L.	C
9	ECO #3531	D
10	ADDED ITEM #51, #52	D
11	ECO #3531	D
12	ECO #3531	D
13	ECO #3531	D
14	ECO #3531	D
15	ECO #3531	D
16	ECO #3531	D
17	ECO #3531	D
18	ECO #3531	D
19	ECO #3531	D
20	ECO #3531	D
21	ECO #3531	D
22	ECO #3531	D
23	ECO #3531	D
24	ECO #3531	D
25	ECO #3531	D
26	ECO #3531	D
27	ECO #3531	D
28	ECO #3531	D
29	ECO #3531	D
30	ECO #3531	D
31	ECO #3531	D
32	ECO #3531	D
33	ECO #3531	D
34	ECO #3531	D
35	ECO #3531	D
36	ECO #3531	D
37	ECO #3531	D
38	ECO #3531	D
39	ECO #3531	D
40	ECO #3531	D
41	ECO #3531	D
42	ECO #3531	D
43	ECO #3531	D
44	ECO #3531	D
45	ECO #3531	D
46	ECO #3531	D
47	ECO #3531	D
48	ECO #3531	D
49	ECO #3531	D
50	ECO #3531	D
51	ECO #3531	D
52	ECO #3531	D
53	ECO #3531	D

FIRST USED ON OPTION MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
DFIO				
UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES DECIMALS FRACTIONS ANGLES FINISH SURFACE QUALITY REMOVE BURRS AND SHARP EDGES				
MATERIAL				
NEXT HIGHER ASSY				
POWER				
EQUIPMENT CORPORATION				
TITLE DATA CHANNEL DFIO				
DUA DFIO-0-0				
REV L.				



DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			QUANTITY		REVISIONS		
PARTS LIST			DF10-0	DF10-A	CHANGE NO.	DATE	ENG.
ITEM NO.	DWG NO.	DESCRIPTION					
28	B-5100	PANEL, BLANK (7402016)	5	5			
29	D-AD-7005361-2-0	DOOR FRONT (ASSY)	1	1			
30	C-MD-7408446-2-0	BLOCK, RET, UNIVERSAL, REWORK	3	3			
31	C-MD-7408446-1-0	BLOCK, RET, UNIVERSAL, REWORK	3	3			
32	9006029-1	SCR PHL HD PAN #6-32 x 1 1/2 SST	3	3			
33	9006633	WASH, INT TOOTH #6	4	4			
34		CORD, 25' #1202980 OR 9' #1201265	1	1			
35	D-IA-7005459-12-0	CABLE W012-W250	1	1			
36	C-AD-7005427-0-0	CABLE TWIST LOCK 25'	1	1			
37	90-06020-1	SCR PHL HD PAN #6-32 x 1/2 SST	4	4			
38	90-06507	POP RIVET 1/8D #AD44ABS USMC	20	20			
39		CLAMP NYLON #CPC1953-16B (1" DIA)	A/R	A/R			
40		CLAMP NYLON #CPC1953-6B (3/8" DIA)	A/R	A/R			
41	9007799	SCR PHL FILL, HD 8-32 x 1-1/2 LG	3	3			
MADE BY A. HUHTALA	DATE 7/31/67	TITLE DATA CHANNEL DF10	DRWG. NO. A-PL- DF10-0-0		REV. LTR.		
CHECKED H. Stow	DATE 8-30-67	FOR DF10-0 (60 HZ) DF10-A (50 HZ)	ASSY NO D-UA-DF10-0-0		SHEET 3 OF 5		
ENG D. Plumb	DATE 9/1/67				L		

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			QUANTITY		REVISIONS		
PARTS LIST			DF10-0	DF10-A	CHANGE NO.	DATE	ENG.
ITEM NO.	DWG NO.	DESCRIPTION					
1	E-IA-7406273-0-0	CAB, FRAME (REWORK)	1	1			
2	D-AD-7005535-0-0	PANEL INDICATOR ASSY	1	1			
3	E-IA-7405092-0-0	END PANEL ASSY	2	2			
4	A-MD-7405860-0-0	SPACER	1	1			
5	B-MD-7405861-0-0	BRACKET (DOOR PIVOT)	1	1			
6	90-06350	SCR, SOC HD CAP #10-32 x 1" SST	6	6			
7	90-06083-1	SCR, PHL PAN #10-32 x 2 1/2 SST	2	2			
8	B-5111	PANEL, BLANK #7402035	1	1			
9	B-5111	PANEL, BLANK #7402036	3	3			
10	D-MA-728A-0-1	POWER SUPPLY #728A	2				
10	D-MA-728-0-1	POWER SUPPLY #728	2				
11	D-UA-844-0-0	POWER CONTROL #844	1	1			
12	B-5111	PANEL, BLANK #7402033	1	1			
13	D-AD-7005358-2-0	DOOR, FULL ASSY	1	1			
MADE BY A. HUHTALA	DATE 7/31/67	TITLE DATA CHANNEL DF10	DRWG. NO. A-PL- DF10-0-0		REV. LTR.		
CHECKED H. Stow	DATE 8-30-67	FOR DF10-0 (60 HZ) DF10-A (50 HZ)	ASSY NO D-UA-DF10-0-0		SHEET 1 OF 5		
ENG D. Plumb	DATE 9/1/67				L		

DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS			QUANTITY		REVISIONS		
PARTS LIST			DF10-0	DF10-A	CHANGE NO.	DATE	ENG.
ITEM NO.	DWG NO.	DESCRIPTION					
14	D-AD-7005467-0-0	BRACKET, POWER CONN (ASSY)	1	1			
15	C-UA-BC10B-0-0	MC, CABLE/REMOTE CONT.	1	1			
16	90-06073-3	SCR PHL HD TRUSS #10-32 x 1/2 SST	106	106			
17	90-06635	WASH, EXT TOOTH #10 SST	110	110			
18	B-DC-7406500-0-0	DECAL - DF10	1	1			
19	9006659	WASH, FLAT #6	3	3			
20	9007801	WASH, SPLIT LOCK #6	3	3			
21	D-MD-7405862-0-0	TRIM STRIP BOTTOM	1	1			
22	90-06346	SCR, SOC HD CAP #10-32 x 1/2	4	4			
23	D-AD-7005561-0-0	WIRED ASSEMBLY	1	1			
24	C-MD-5302486-0-0	PLATE, RIGHT END (5302486)	5	5			
25	C-IA-5402526-0-0	PANEL MARGINAL CHECK	5	5			
26	90-07073	CLAMP, CAB-L-TITE #2CI-150 DAKOTA	A/R	A/R			
27	E-AD-7005474-0-0	HOUSING PAN ASSY	1	1			
MADE BY A. HUHTALA	DATE 7/31/67	TITLE DATA CHANNEL DF10	DRWG. NO. A-PL- DF10-0-0		REV. LTR.		
CHECKED H. Stow	DATE 8-30-67	FOR DF10-0 (60 HZ) DF10-A (50 HZ)	ASSY NO D-UA-DF10-0-0		SHEET 2 OF 5		
ENG D. Plumb	DATE 9/1/67				L		



**DIGITAL EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS

**PARTS LIST**

ITEM NO.	DWG. NO.	DESCRIPTION	QUANTITY		REVISIONS			
			DF10-0	DF10-A	CHANGE NO.	DATE	ENG.	
42	90-86054	WAGON INT. MICRO #0	2					
43		SWITCH ASS'Y MICRO #12-1182	1					
44		SWITCH #2003 SPRT MICRO #12-3037	1					
45	90-7206003-0-0	SWCH SWITCH MICRO #12-3037	1					
46		SPACER #8 02 078 02 1-2747AC	1					
47	90-86095-1	BUK PIN #1218-0-32 X 1-172-897	2					
48	90-7206004-0-0	SCREW #8-32 X 1-172-897	1					
49	90-7206003-0-0	SCREW #8-32 X 1-172-897	1					
50	90-86700	W251-718-0-185 X 1-172-897-897	2					
51	90-86095-1	W251-718-0-185 X 1-172-897-897	3					
52	90-86095-1	W251-718-0-185 X 1-172-897-897	3					
53	C-AD-7005899-0-0	MAINT. SWITCH ASS'Y #1	1	1				
54	D-IA-7005459-11-0	CABLE W#12-W250	1	1				
55	D-IA-7005459-6-0	" " "	2	2				
MADE BY	DATE	TITLE	DRWG. NO.		REV. LTR.			
A. HUHTALA	7/31/67	DATA CHANNEL DF10	A-PL-DF10-0-0					
CHECKED	DATE	FOR	ASSY NO.		SHEET 4 OF 5			
	9/12/67	DF10-0 (60 HZ) DF10-A (50 HZ)	D-UA-DF10-0-0		L			
ENG	DATE							
	9/12/67							

**DIGITAL EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS

**PARTS LIST**

ITEM NO.	DWG. NO.	DESCRIPTION	QUANTITY		REVISIONS			
			DF10-0	DF10-A	CHANGE NO.	DATE	ENG.	
56	D-IA-7005459-9-0	CABLE W#12 - W250	1	1				
57	D-IA-7005459-5-0	" " "	2	2				
58	D-IA-7005459-10-0	" " "	1	1				
59	D-IA-7005459-8-0	" " "	1	1				
60	D-IA-7005459-4-0	" " "	1	1				
61	D-IA-7005459-7-0	" " "	1	1				
62	C-AD-7006560-0-0	MAINT. SWITCH ASS'Y #2	1	1				
63	C-AD-7006561-0-0	MAINT. SWITCH ASS'Y #3	1	1				
REF	C-AD-7006140-0-0	CABLE SET DF10	-	-				
MADE BY	DATE	TITLE	DRWG. NO.		REV. LTR.			
G. Pava	1/9/69	DATA CHANNEL DF10	A-PL-DF10-0-0					
CHECKED	DATE	FOR	ASSY NO.		SHEET 5 OF 5			
		DF10-0 (60 HZ) DF10-A (50 HZ)	D-UA-DF10-0-0		L			
ENG	DATE							







PARTS LIST		DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				REVISIONS	
PART NO.	DRWG. NO.	NO. REQD.	DESCRIPTION ITEM — STOCK SIZE — CAT. NO. — MFG.	DEC. STOCK NO.	CHANGE NO.	DATE	ENG.
		3	DIODE NETWORK	R001	A-16	3-28-67	TC
		9	DC CARRY CHAIN	R181	B-33	5-20-68	TC
		27	FLIP FLOP (QUAD)	S202	C-DF10-00006	11/12/68	TC
		3	PULSE AMPLIFIER	R513			
		5	INTE. GRATING ONE SHOT	R303			
		22	PULSE BUS TRANSCIEVER	W102			
		1	DELAY LINE	W301			
		3	DIODE GATE	B137			
		11	DIODE GATE	B135			
		11	TAPPED DELAY LINE	B311			
		12	PULSE AMPLIFIER	B611			
		14	INVERTER	B165			
		23	DIODE GATE	B133			
		15	FLIP FLOP	B214			
		5	DUAL R S FLIP FLOP	B212			
		2	DIODE GATE	B134			
MADE BY FUHTALA		DATE 8/2/67	TITLE MODULE LIST		SIZE CODE	NUMBER	REV.
FOR		DATE 10-9-67	DF10		A PL	DF10-0-3	C
DATE 1/15/68					ASSY. NO.		
					D-MU-DF10-0-3		
					SHEET	1	OF 2

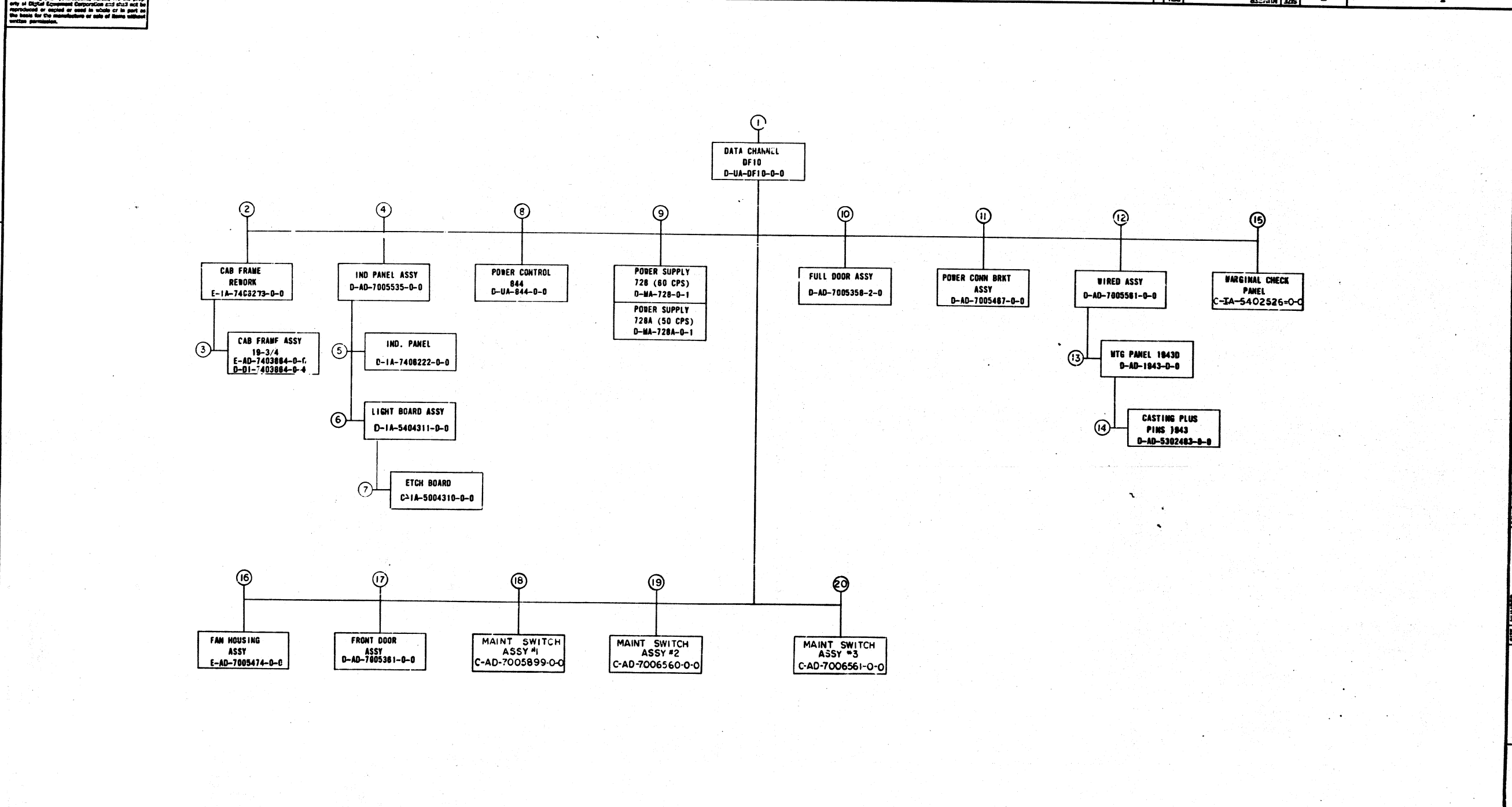
PARTS LIST		DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS				REVISIONS	
PART NO.	DRWG. NO.	NO. REQD.	DESCRIPTION ITEM — STOCK SIZE — CAT. NO. — MFG.	DEC. STOCK NO.	CHANGE NO.	DATE	ENG.
		22	DIODE GATE	B163			
		18	3-BIT PARITY CIRCUIT	B130			
		11	BUS DRIVER	B683			
		3	DIODE GATE DRIVER	B685			
		14	2 MA. LEVEL TERMINATOR	G704			
		1	PULSE AMPLIFIER	S603			
		1	BLANK MODULE	W990			
		1	SCHMITT TRIGGER	W501			
		6	CABLE TERMINATOR	G700			
MADE BY FUHTALA		DATE 8/2/67	TITLE MODULE LIST		SIZE CODE	NUMBER	REV.
FOR		DATE 11-8-67	DF10		A PL	DF10-0-3	SC
DATE 1/15/68					ASSY. NO.		
					D-MU-DF10-0-3		
					SHEET	2	OF 2





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1-0-0110-10  
SECTION 205

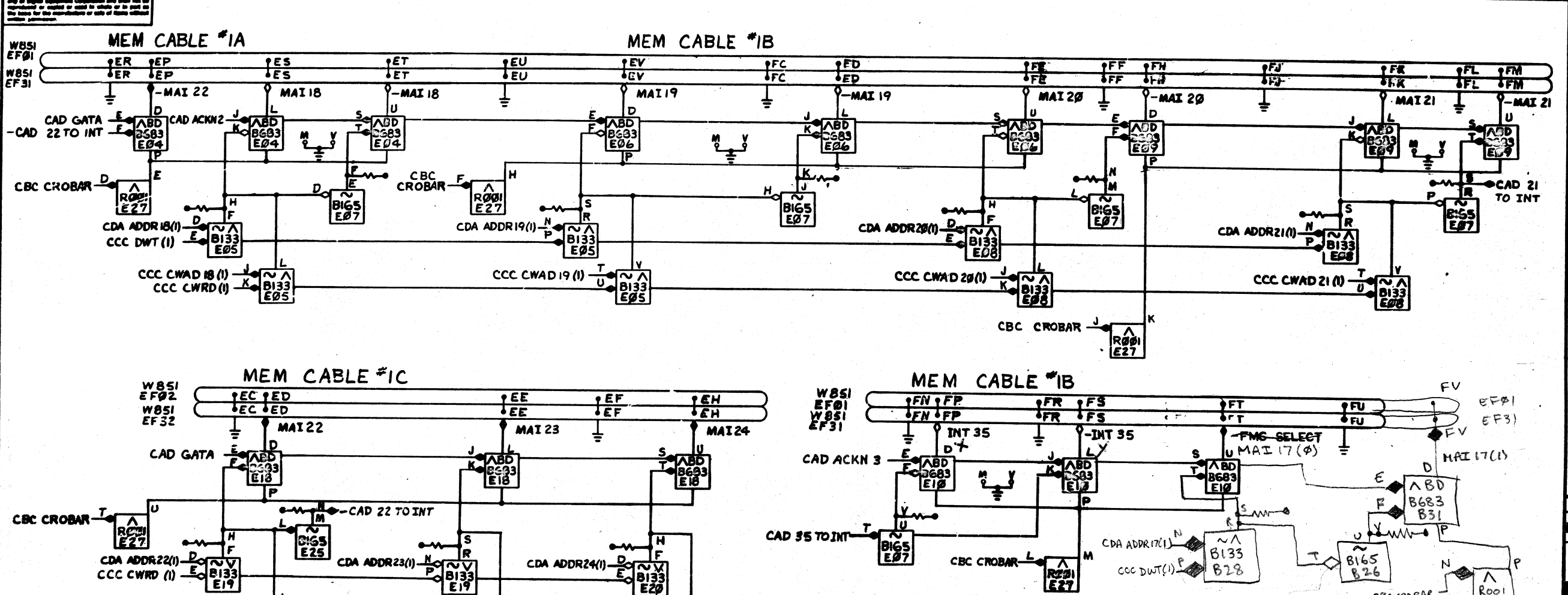


REV.	DATE	BY	CHKD.	DESCRIPTION
1	11-7-67			
2	11-8-67			
3	11-16-67			
4	11-16-67			
5	11-16-67			
6	11-16-67			
7	11-16-67			
8	11-16-67			

ASSEMBLY DWG NO. D-UA-DF10-0-0

FIRST USED ON OPTION/ MODEL	QTY.	DESCRIPTION	PART NO.	ITEM NO.
DF10				
PARTS LIST				
EQUIPMENT CORPORATION				
DRAWING INDEX LIST				
DF10				
DUA DF10-0-1				





NOTE: GROUND PINS F01V, F31V, AND E04F IF DF10 IS CONNECTED TO 161 OR 163-C MEMORY, THIS ASSERTS -FMC SELECT ON MEM CABLE #1B AND MAI 22 ON MEM CABLE #1A.

REVISIONS

REV	DATE	DESCRIPTION
1	10-17-67	INITIAL DESIGN
2	11-1-67	DESIGN CHANGES

DESIGNED BY: A. JOHNSON  
 CHECKED BY: D. JOHNSON  
 DRAWN BY: A. JOHNSON

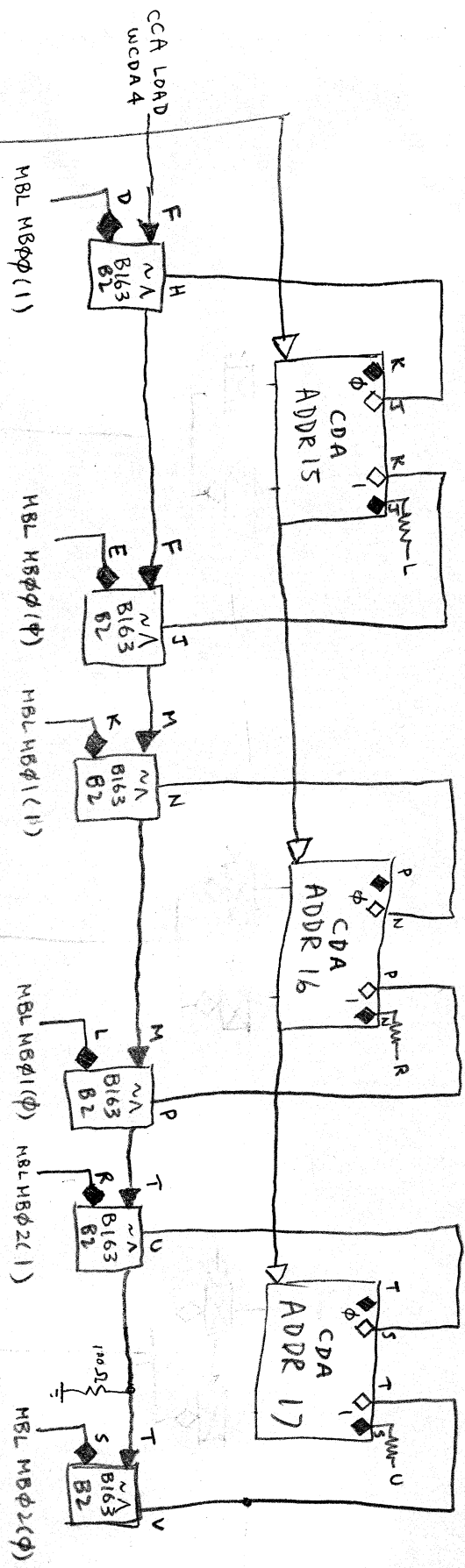
QTY.	DESCRIPTION	PART NO.	REV.
1	ADDRESS DRIVERS CAD		

EQUIPMENT CORPORATION

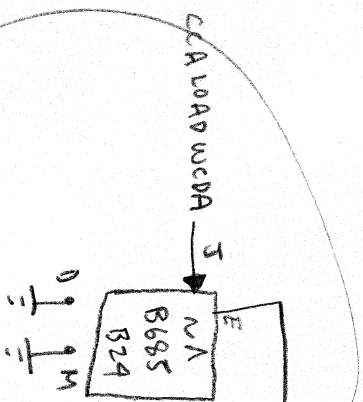
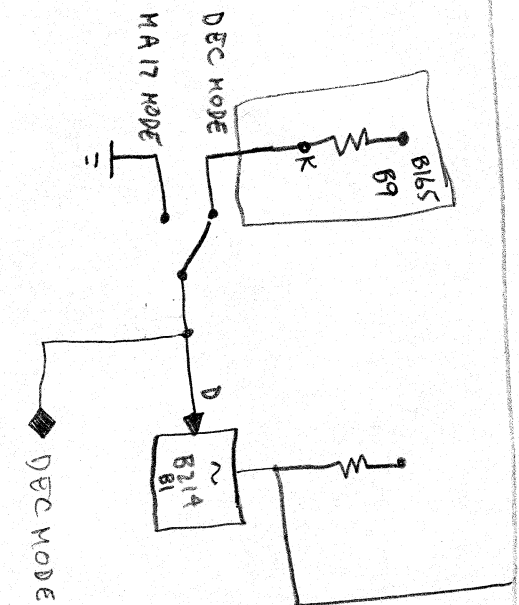




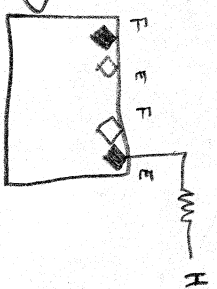
B214 B1



delete ground on Fφ1V - F31V Bus

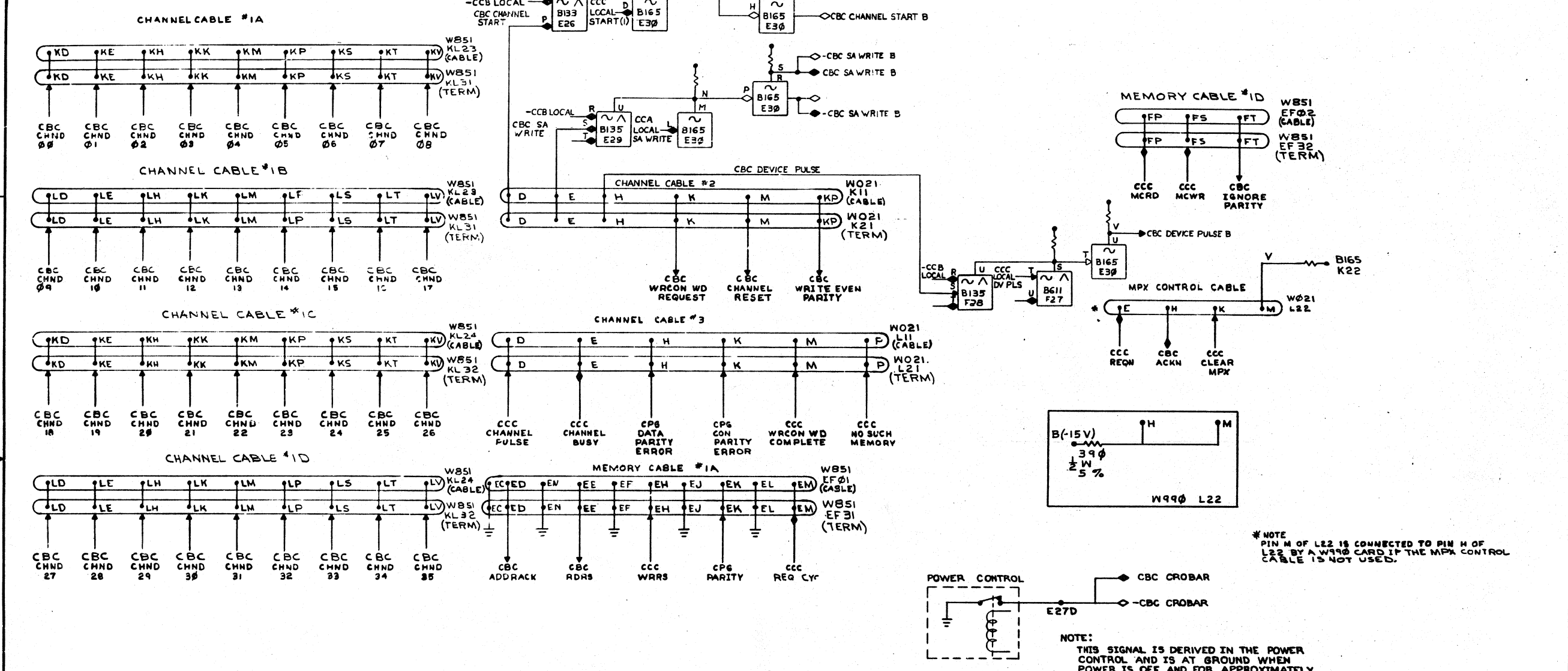


← MAIN  
→ DEC

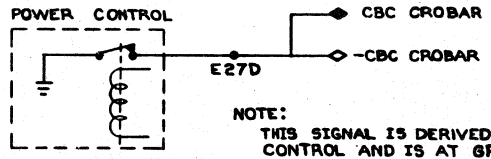
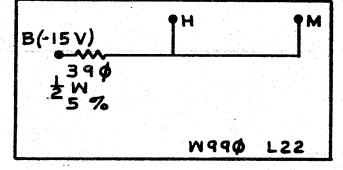




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\* NOTE  
PIN M OF L22 IS CONNECTED TO PIN H OF L22 BY A W990 CARD IF THE MPX CONTROL CABLE IS NOT USED.



NOTE:  
THIS SIGNAL IS DERIVED IN THE POWER CONTROL AND IS AT GROUND WHEN POWER IS OFF AND FOR APPROXIMATELY FOUR SECS AFTER POWER ON.

REV.	DATE	BY	CHKD.
1	11/15/68	A. JOHNSON	
2	11/15/68		

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
EQUIPMENT CORPORATION MAYFIELD MASSACHUSETTS			
TITLE <b>CHANNEL BUS CONN'S &amp; TERM'S</b>			
D-UA-BF10-0-0		SCALE	REV. A
SHEET 1 OF 1		DATE	



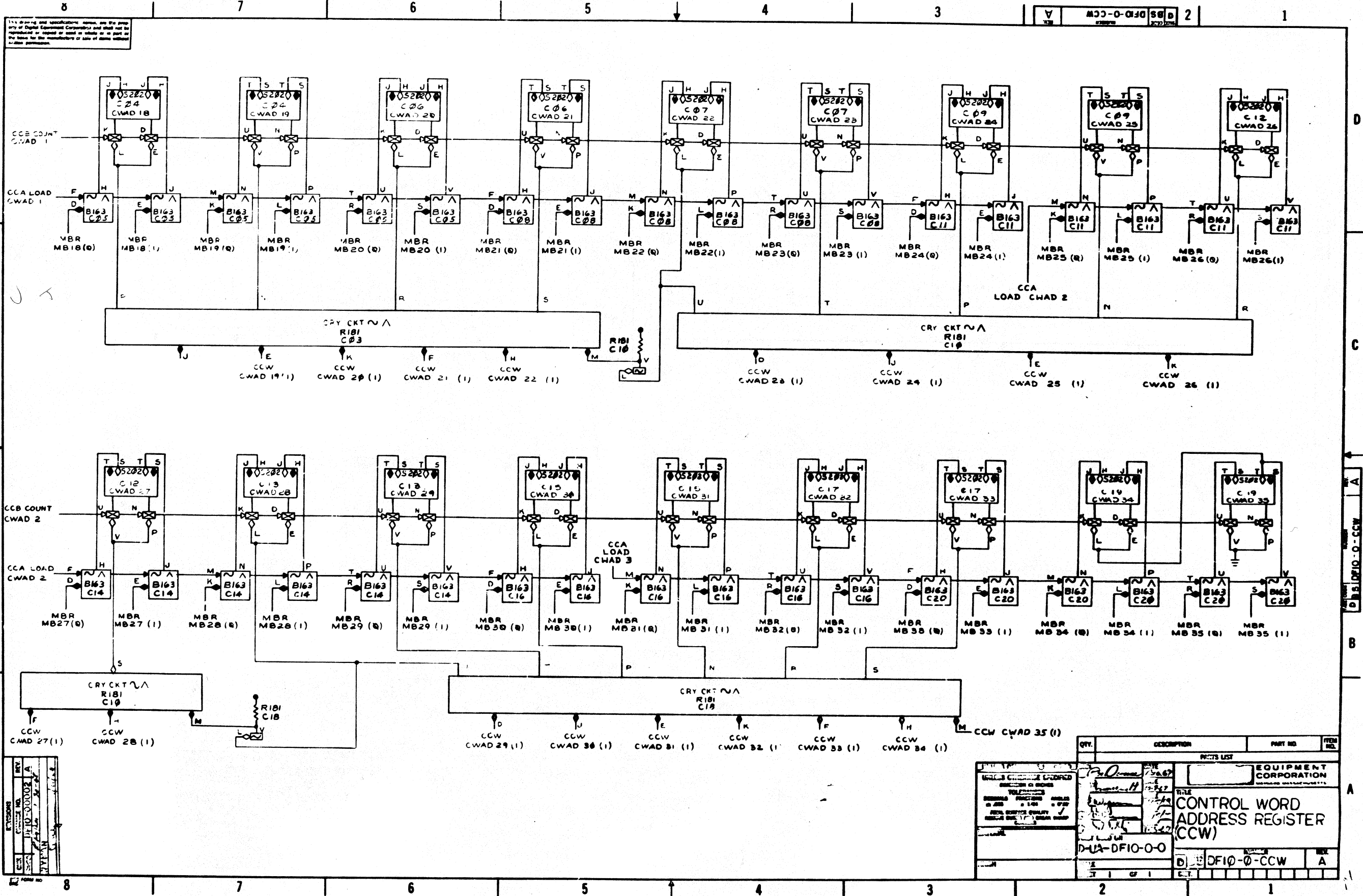












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V 2  
 M33-0-DF10-0-0  
 2

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

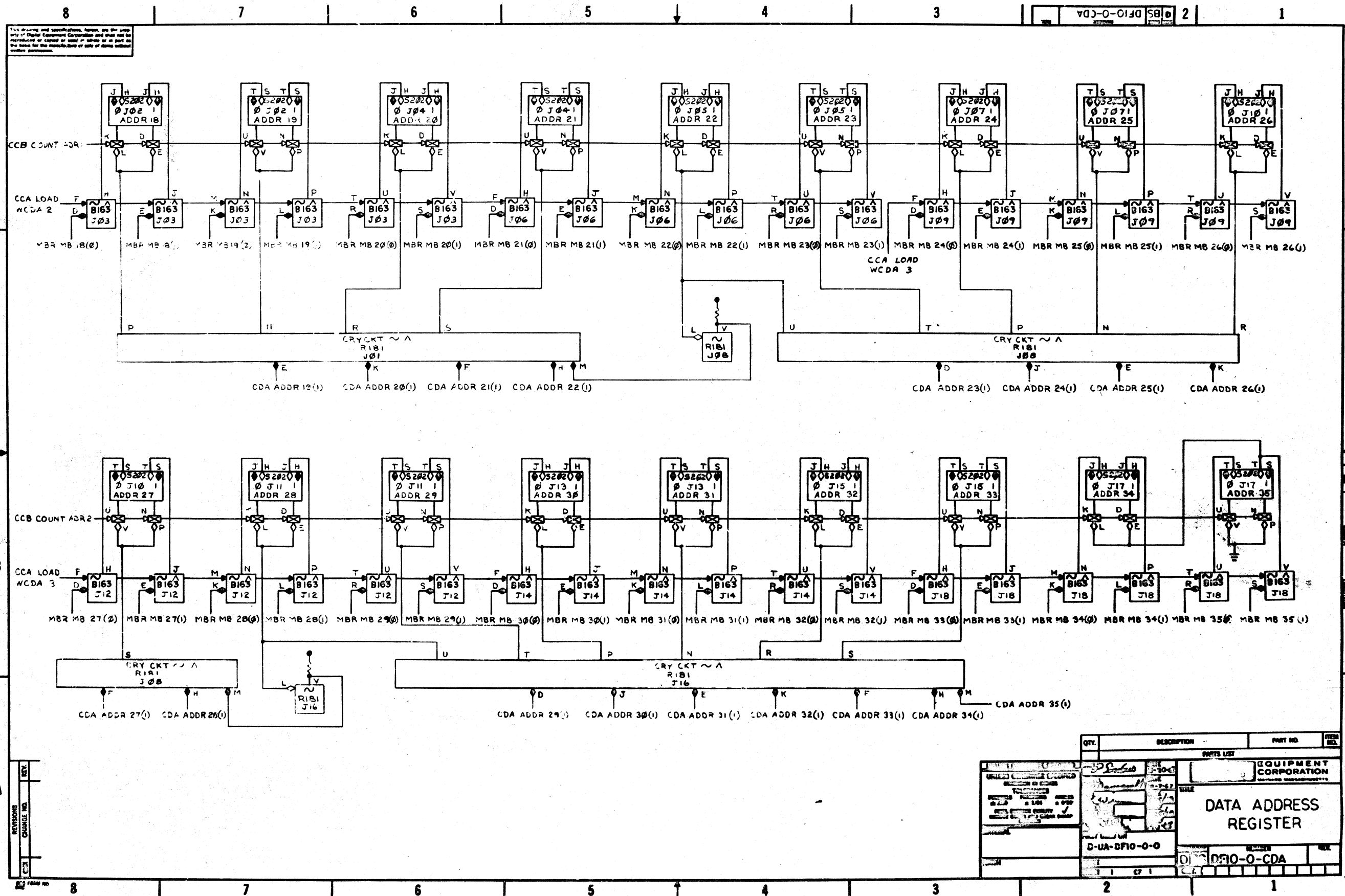
  

REV	DATE	BY	CHK
1	11-10-60	WJG	WJG
2	12-15-60	WJG	WJG
3	1-10-61	WJG	WJG
4	2-10-61	WJG	WJG
5	3-10-61	WJG	WJG
6	4-10-61	WJG	WJG
7	5-10-61	WJG	WJG
8	6-10-61	WJG	WJG

**CONTROL WORD ADDRESS REGISTER (CCW)**

D-1A-DF10-0-0

D-1A-DF10-0-CCW A



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REV.	REVISIONS	CHANGE NO.

QTY.	DESCRIPTION	PART NO.	ITEM NO.

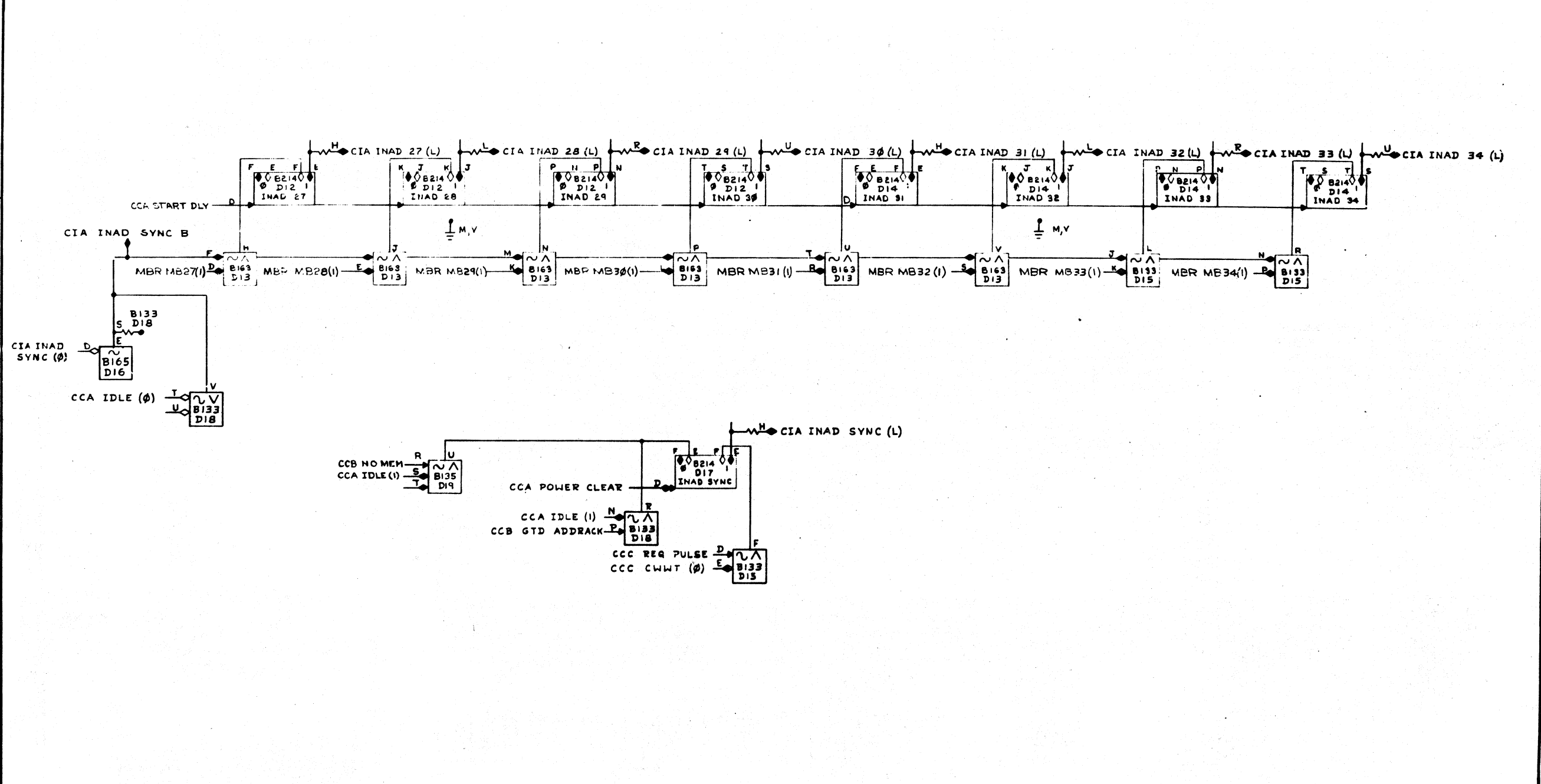
  

UNLESS OTHERWISE SPECIFIED DIMENSIONS IN INCHES TOLERANCES ARE: FRACTIONS DECIMALS ANGLES .001 .005 .010 .010 .010 .010		EQUIPMENT CORPORATION DIGITAL DEPARTMENT	
DATA ADDRESS REGISTER			
D-VA-DF10-0-0		DF10-0-CDA	



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D 65-DFIO-0-CIA

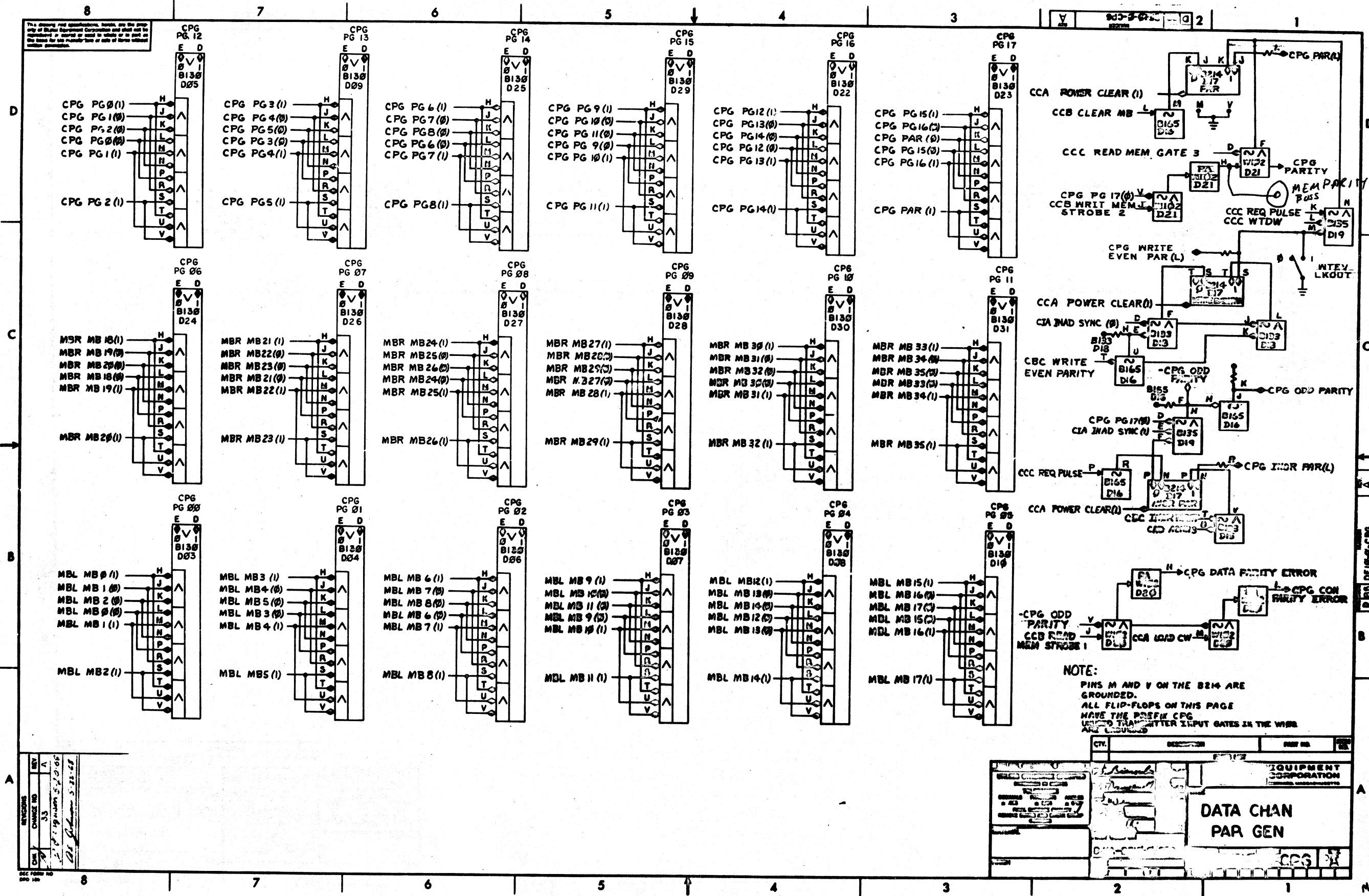


D 65-DFIO-0-CIA

REVISIONS	REV
CHANGE NO.	A
DATE	DFIO-00006
BY	A. JOHNSON

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
EQUIPMENT CORPORATION			
TITLE			
INITIAL ADDRESS REGISTER			
D 65-DFIO-0-CIA			
REV A			

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REV	NO	DATE	BY
1	1	5-21-61	...
2	1	5-21-61	...
3	1	5-21-61	...

REV	DESCRIPTION	DATE	BY
1	...	...	...
2	...	...	...
3	...	...	...

**EQUIPMENT CORPORATION**

**DATA CHAN PAR GEN**

8

7

6

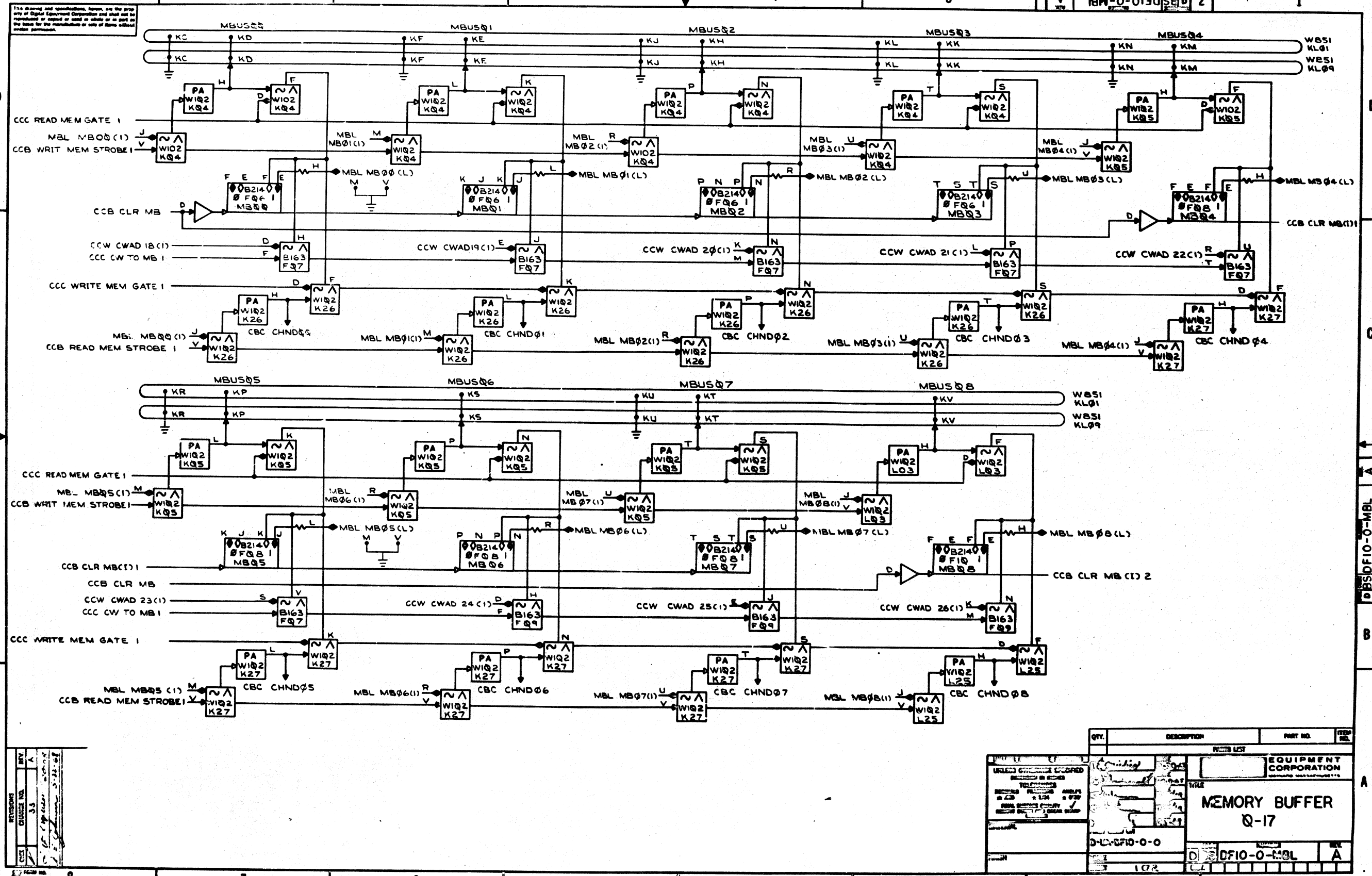
5

4

3

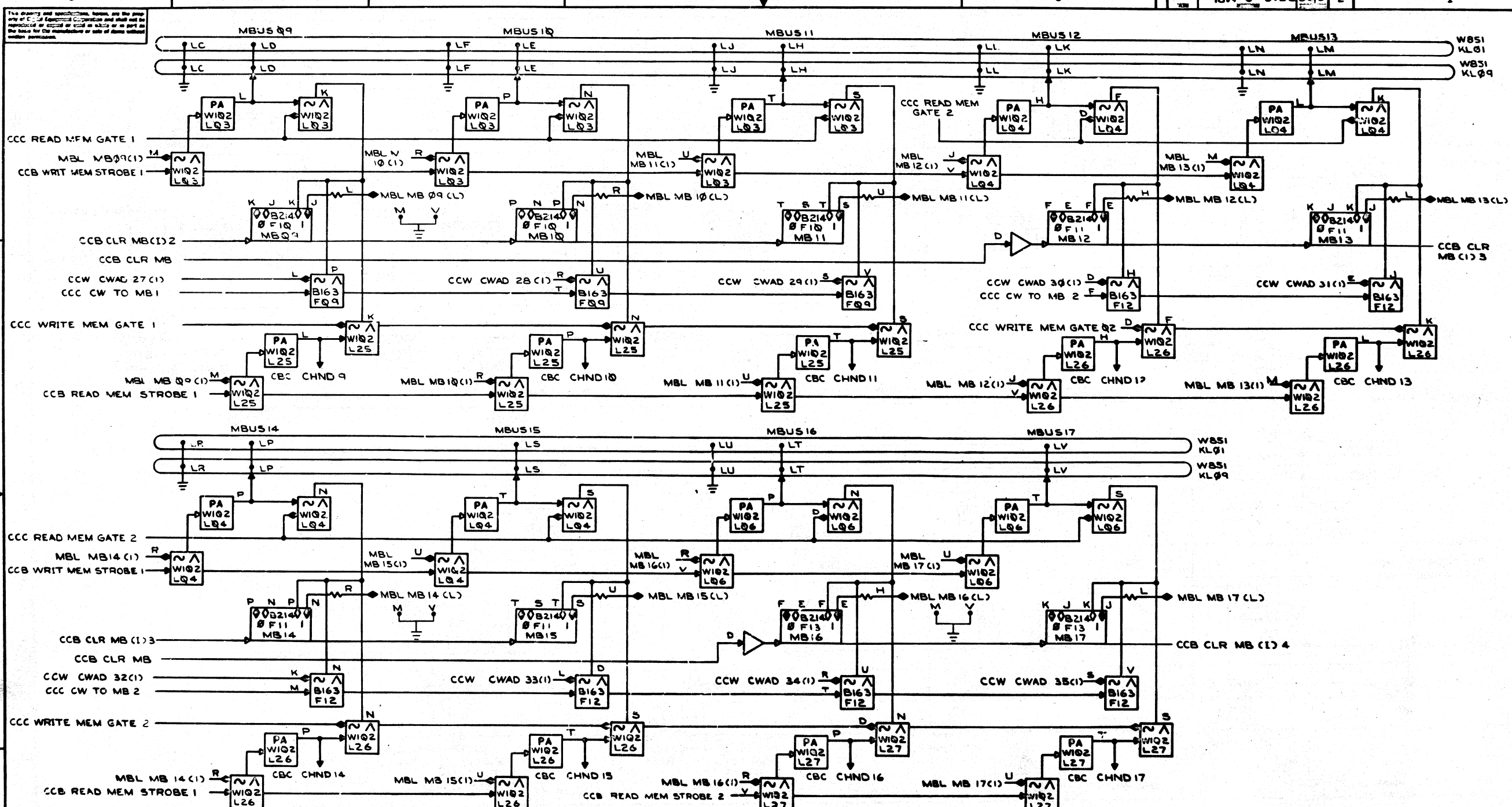
DF10-MBL 2

1



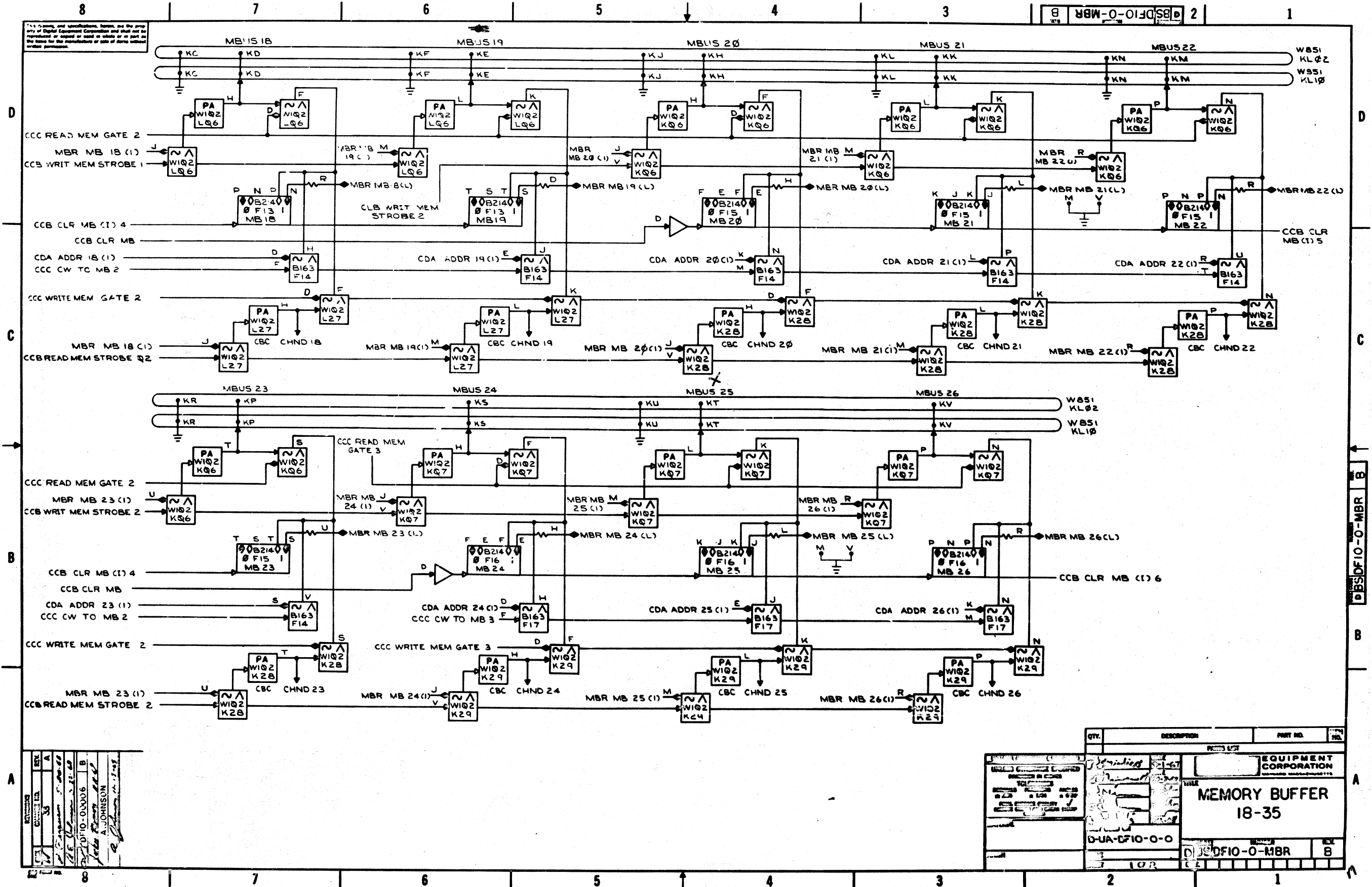
REV	A
DATE	3-21-68
BY	...
CHKD	...
APP'D	...
DESCRIPTION	...

QTY.	DESCRIPTION	PART NO.	REF. NO.
PARTS LIST			
EQUIPMENT CORPORATION			
MEMORY BUFFER Q-17			
DF10-0-MBL			
A			



REV. 1  
DATE: 1-1-68

QTY.	DESCRIPTION	PART NO.	ITEM NO.
1	MEMORY BUFFER	78W-0-1105	1
EQUIPMENT CORPORATION			
MEMORY BUFFER			
Q-17			
D-1A-DF10-0-0			
78W-0-1105			

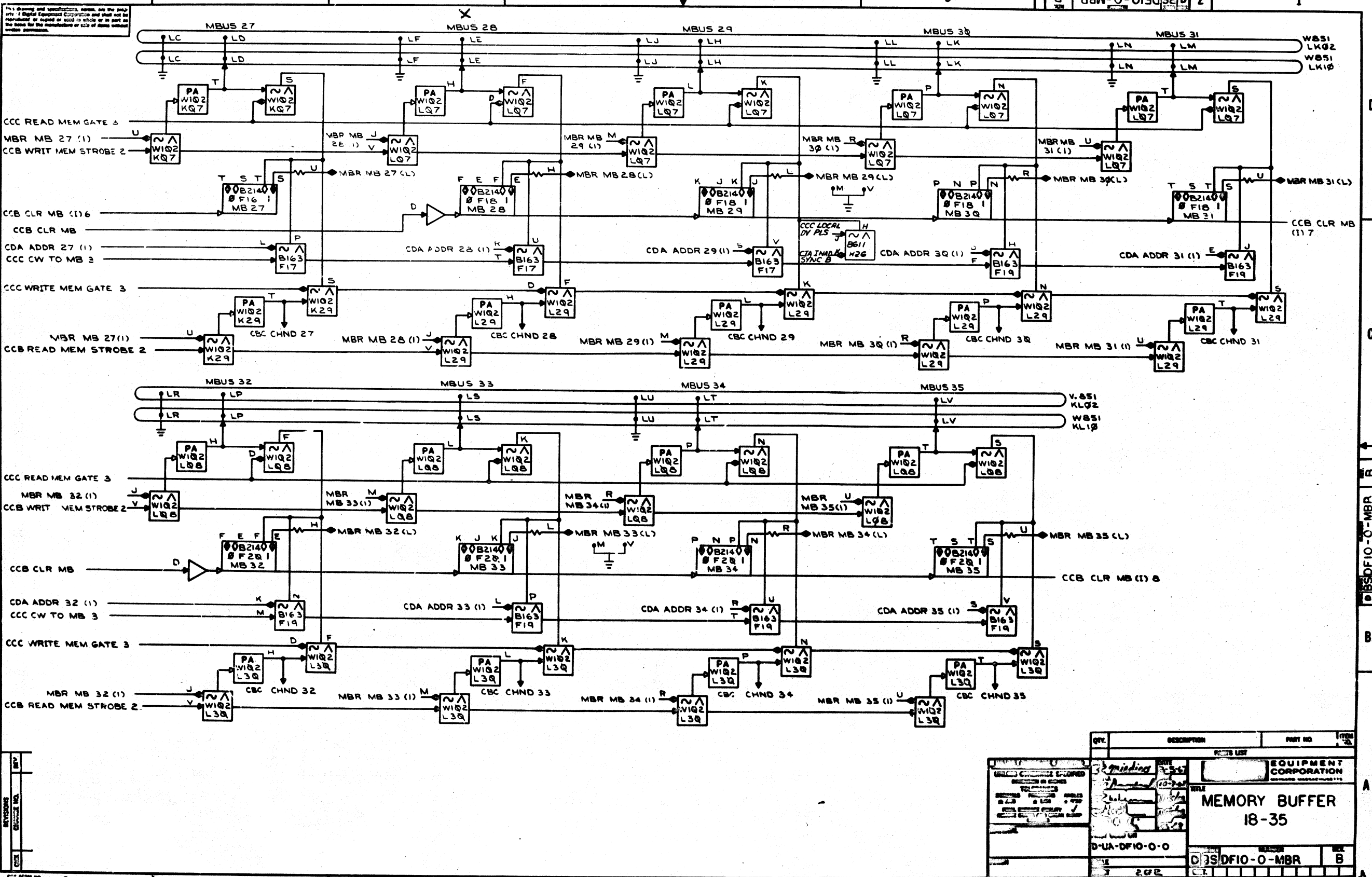


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REV	DATE	BY	CHKD
A	10-10-66	A. JOHNSON	
B	11-10-66	A. JOHNSON	

QTY.	DESCRIPTION	PART NO.	REV.
	MEMORY BUFFER	D-18-35	B
	EQUIPMENT CORPORATION		
	MEMPHIS, TENNESSEE 38116		

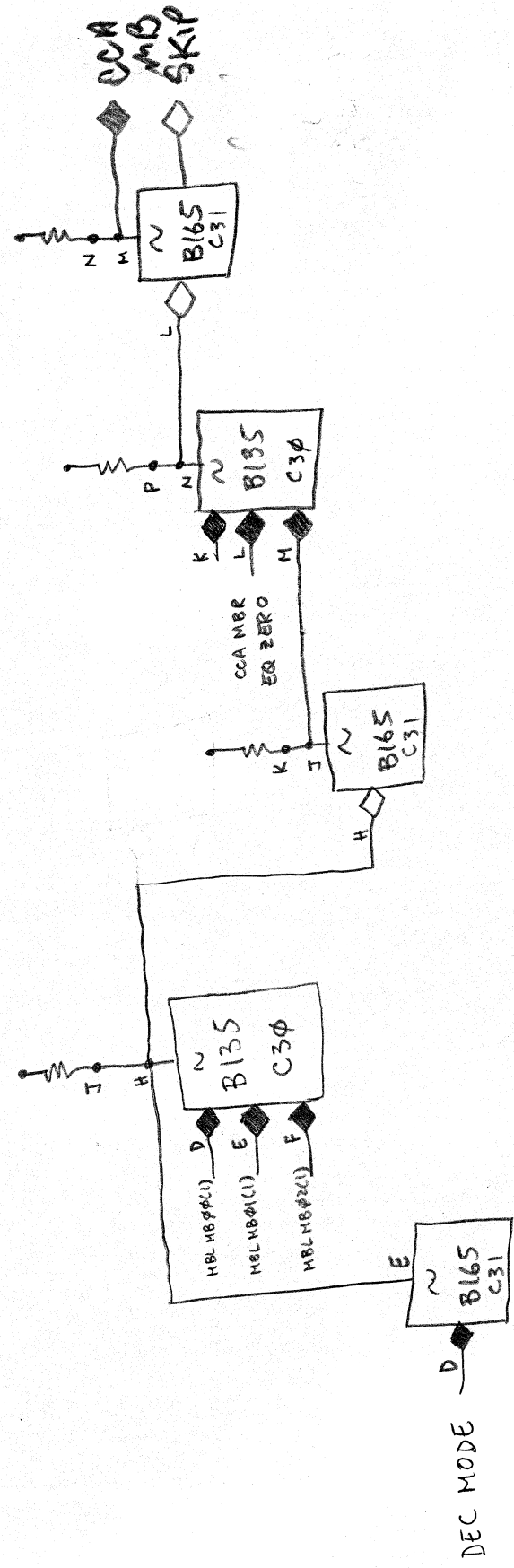




QTY	DESCRIPTION	PART NO	REV
1	MEMORY BUFFER 18-35	03SDFIO-O-MBR	B

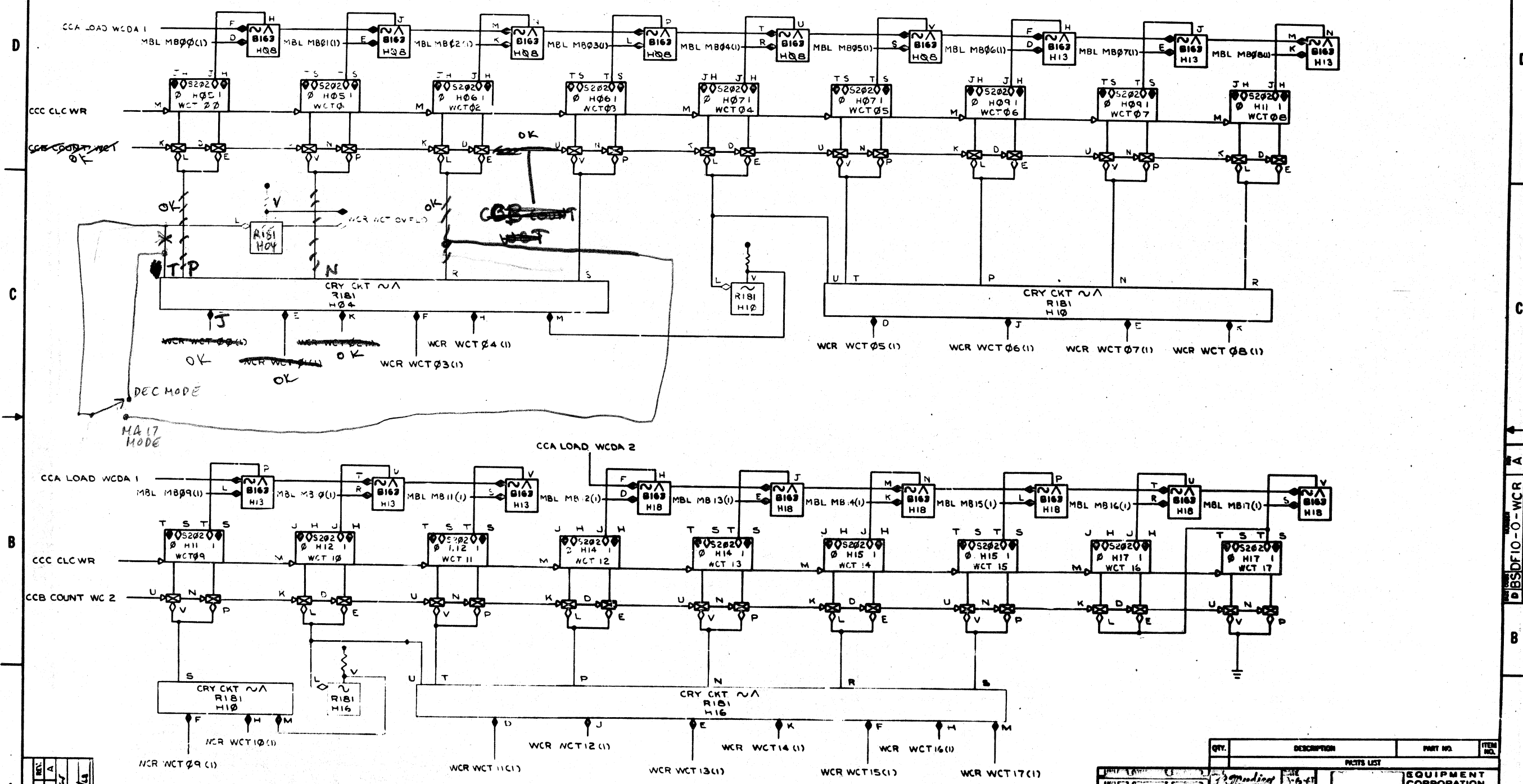
EQUIPMENT CORPORATION  
 03SDFIO-O-MBR  
 B







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REV. A	DATE 1/1/58
CHANGE NO. 1	BY UYRAN
DFIO-00002	1/1/58

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	EQUIPMENT CORPORATION		
	WORD COUNT REGISTER		
	D-UA-DFIO-0-0		
	D B S D F I O - O - W C R		
	A		

D B S D F I O - O - W C R A

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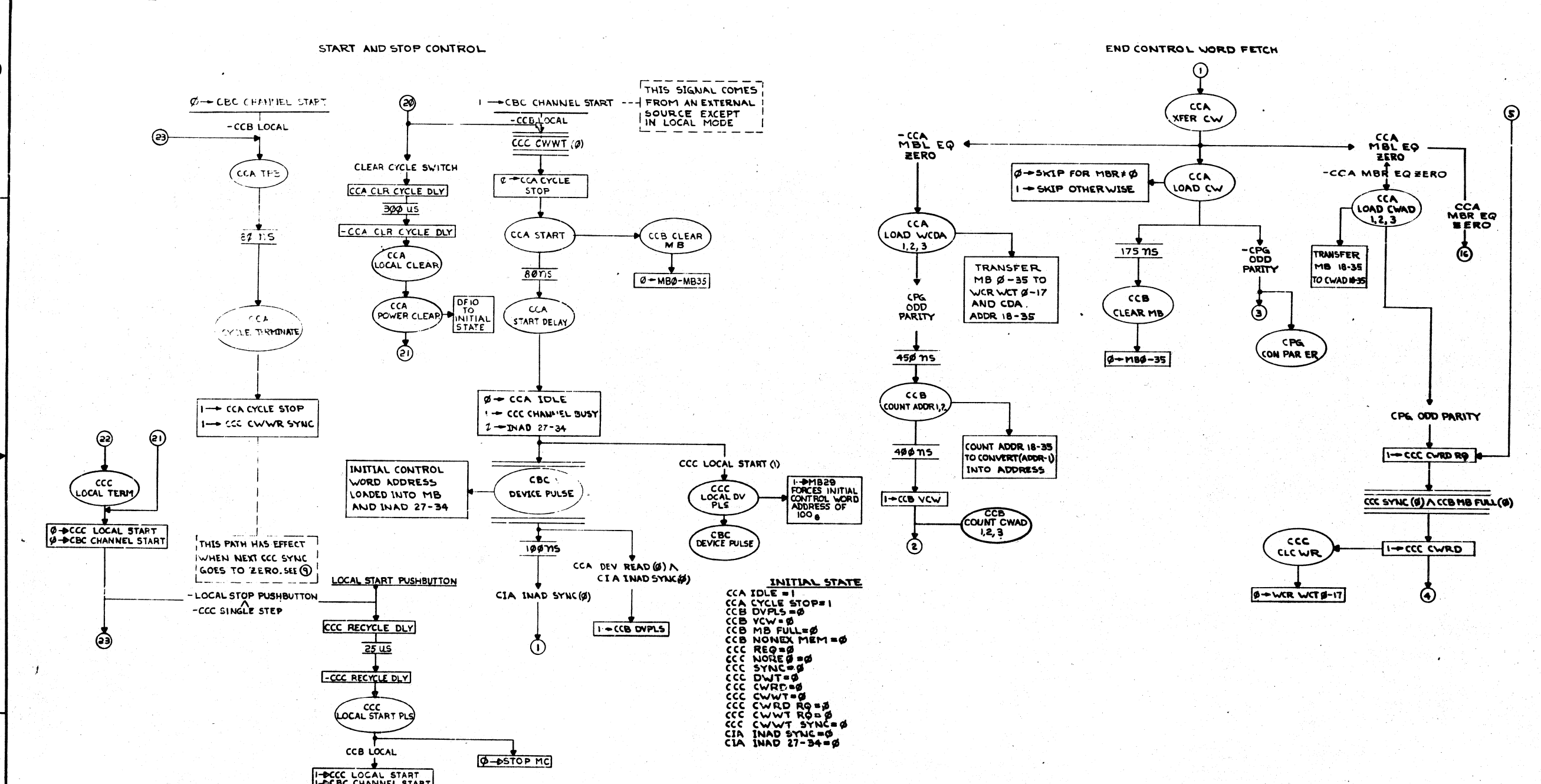
	D	E	F	H	J	K	L	M	N	P	R	S	T	U	V
A10		CBC DEVICE PULSE B	WCR WGT CWLO	CCC WTDW	CCC SYNC (0)	CCC DWT (1)	CCC CWWTREQ (0)	CCC CWWT (1)	CCC CWWT (0)	CCA DEV READ (0)	CCB SET VCW	CCA DEV READ (0)	CCB COUNT CHWD2	CCA MBL EQ (0)	GND
B3	MBL MB 24 (2)	MBL MB 24 (1)	CCA LOAD CHWD1	MBL M 23 (1)	MBL MB 03 (0)	CCA ENDRDDY	MBL MB 02 (1)	MBL MB 02 (0)	MBL MB 01 (1)	MBL MB 01 (0)	MBL MB 00 (1)	MBL MB 00 (0)	CCA LOAD CHWD2	CCB COUNT CHWD1	
C26	CCC MEM START	CCC SYNC (1)	CCA MBR EQ 0					CBC SAWRITE B	CCA LOAD CHWD3	CCA MBR EQ 0					
D22	MBL MB 05 (0)	MBL MB 25 (1)	MBL MB 06 (0)	MBL MB 06 (1)	MBL MB 07 (1)	MBL MB 08 (1)	MBL MB 09 (1)	MBL MB 10 (1)	MBL MB 07 (0)	MBL MB 11 (0)	MBL MB 11 (1)	MBL MB 08 (0)	MBL MB 09 (0)	MBL MB 10 (0)	
C11	MBL MB 12 (1)	MBL MB 13 (0)	MBL MB 12 (0)	MBL MB 13 (1)		MBL MB 17 (1)	MBL MB 16 (1)	MBL MB 14 (1)	MBL MB 15 (1)	MBL MB 14 (0)	MBL MB 15 (0)	MBL MB 16 (0)	MBL MB 17 (0)	MBL MB 18 (0)	
E3	CAD GATA	CCC CW TO MBI	CCC CW TO MR2	CCC CW TO MR3	CAD ACKN 2	CAD ACKN 3	CCC CWWD (0)		CCC DWT (0)	CCC CWWD (1)	CCC CLCHR	CAD ACKN 1	CCB COUNT WC2	CCB COUNT WC1	
J32	CCA XFER CW	CCA CYCLE TERMINATE	CCA POWER CLEAR	CCB DVPLS (1)	CCA CYCLE STOP (0)	CCB VCW (1)	CCC LOCAL DV PLS			CCB MB FULL (1)	CCB DVPLS (0)			CCB MB FULL (0)	
K3	CCA LOAD WCOA1	CCA LOAD WCCA2	CCA LOAD WCCA3	CCB COUNT ADR1	MBR MB 35 (1)	MBR MB 35 (0)	MBR MB 34 (1)	MBR MB 34 (0)		MBL MB 17 (1)	MBL MB 17 (0)	MBL MB 16 (1)	MBL MB 15 (1)	MBL MB 06 (1)	
K8	CCB COUNT ADR2	MBR MB 21 (1)	MBR MB 24 (1)	MBR MB 26 (1)	MBR MB 22 (1)	MBR MB 23 (0)	MBR MB 33 (1)	MBR MB 33 (0)	MBR MB 32 (1)	MBR MB 25 (0)	MBR MB 25 (1)	MBR MB 25 (1)	MBR MB 29 (1)	MBR MB 2 (1)	
K25	MBL MB 02 (0)	MBL MB 01 (1)	MBL MB 06 (0)	MBL MB 07 (0)	MBL MB 03 (1)	MBL MB 0 (0)	MBL MB 00 (1)	MBL MB 00 (0)	MBL MB 03 (0)	MBL MB 04 (0)	MBL MB 04 (1)	MBL MB 05 (0)	MBL MB 05 (1)	MBL MB 02 (1)	
K30	MBR MB 20 (1)	MBR MB 21 (0)	MBR MB 22 (0)	MBR MB 26 (0)	MBR MB 32 (0)	CCC READ MEM GATE 1	MBR MB 27 (0)	MBR MB 20 (0)	MBR MB 24 (0)	MBL MB 07 (1)	MBR MB 23 (1)	MBR MB 30 (0)	MBR MB 29 (0)	MBR MB 29 (0)	
L5	MBL MB 08 (1)	MBL MB 12 (1)	MBL MB 12 (1)	MBL MB 09 (1)	READ MEM GATE 1	CCC READ MEM GATE 2	CCC READ MEM GATE 3	MBL MB 12 (0)	MBL MB 13 (0)	MBL MB 11 (1)	MBL MB 13 (1)	MBL MB 14 (1)	MBL MB 15 (0)	MBL MB 15 (0)	
L14	CCA SKIP (1)	CIA INAD SYNC (1)	MBR MB 19 (1)	CCC DWT (1)	CCA IDLE (0)	CCA IDLE (1)				CCA DEV READ (1)		CCA DEV READ (0)	CCA DEV READ (0)	MBR MB 30 (1)	GND
L28	MBR MB 19 (0)	MBR MB 31 (1)	MBR MB 31 (0)	MBL MB 09 (0)	CCC WRITE MEM GATE 1	CCC WRITE MEM GATE 2	CCC WRITE MEM GATE 3	MBL MB 08 (0)	MBL MB 11 (0)	MBR MB 8 (0)	MBR MB 18 (1)	MBL MB 0 (0)	MBL MB 14 (0)		

NAME	POINT	COMPONENT	POINT
CBC ACKN	F29J	RES	F30C
CCA LOAD CW	C28T	RES	D29C
CCA START	F21J	RES	F21M
CCB CLEAR MB	B10J	RES	B11M
CCB DEVPLS	B10N	RES	B11C
CCB GTD ADDRACK	B13N	RES	B13C
CCB INT CHN PLS	L20M	RES	L21R
CCB NO MEM	L20U	RES	L21U
CCB READ MEM STROBE 1	B18T	RES	B18V
CCB READ MEM STROBE 1	L25V	RES	L28V
CCB SKIP PULSE	B13D	RES	B15C
CCB WRIT MEM STROBE 1	K05V	RES	L06C
CCB WRIT MEM STROBE 2	L08V	RES	L09R
CCA START DLY	D12D	RES	D12M
CCC REQ PULSE	B12F	RES	B14C
CCC START CW WRITE	J23E	RES	J24C
CCB READ MEM STROBE 2	L27V	RES	L31U
CCC END MC	J24L	RES	J28C
F21N	B16T	RES	C17C
CCC TP 2	B21L	RES	B21M
CCA TP 3	B06L	RES	B07P
CCB GTD ADDRACK DLY	F25J	RES	F26M
K16D	K17L	RES	K18M
RES	C23S	RES	C23P
RES	C22S	RES	C22P
CCC CONTROL WORD FETCH	L12U	RES	L12M
CBC CROBAR	E27F	RES	E27C
CBC CROBAR	E27J	RES	E28C
RES	B29P	RES	B29S
RES	B29P	RES	B29S
RES	A29P	RES	A29S
RES	B28U	RES	C28C

REV	DATE	BY	CHK
1	DF10-00006	A	
A JOHNSON			

QTY.	DESCRIPTION	PART NO.	ITEM NO.
PARTS LIST			
EQUIPMENT CORPORATION			
SIGNAL TERMINATIONS			
D-UA-DF10-0-0			
D BSDF10-0-TERM A			
1 OF 1			

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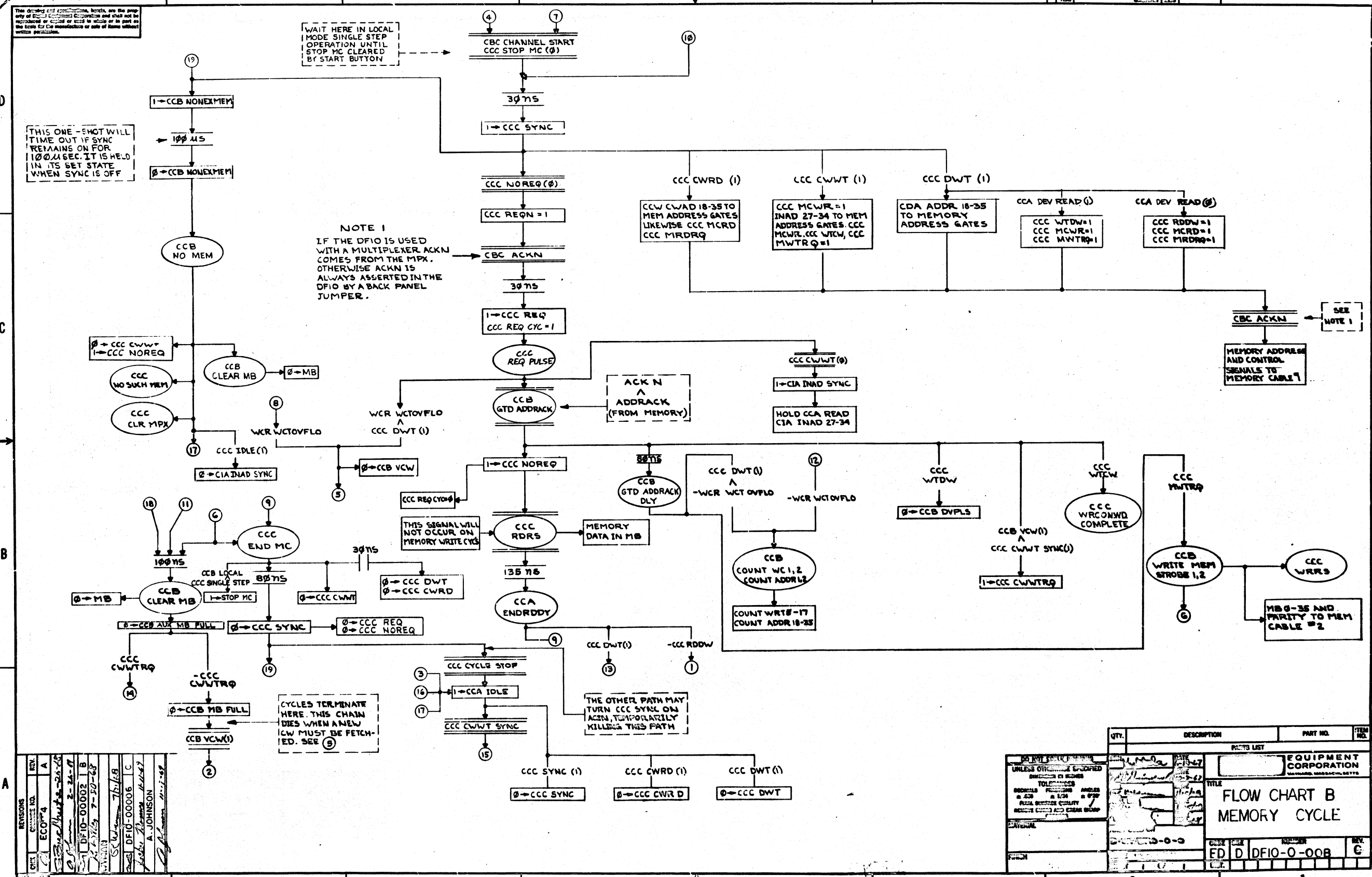


REV.	CHG. NO.	DATE	BY	CHKD.
A	ECO 4	2-24-64		
B		2-24-64		
C		2-24-64		

DFIO-0-0006  
A. JOHNSON

QTY.	DESCRIPTION	PART NO.	ITEM NO.
	DO NOT SCALE DIMENSIONS UNLESS OTHERWISE SPECIFIED		
	TOLERANCES		
	DECIMALS FRACTIONS ANGLES		
	± .005 ± .125 ± .030		
	FINISH		
	REMOVE BURRS AND BREAK SHARP		
	DATE: 2-24-64		
	DRAWN BY: [Signature]		
	CHECKED BY: [Signature]		
	APPROVED BY: [Signature]		
	TITLE: FLOW CHART A		
	SCALE: 1 OF 1		
	REV. C		





WAIT HERE IN LOCAL MODE SINGLE STEP OPERATION UNTIL STOP MC CLEARED BY START BUTTON

THIS ONE - FMOG WILL TIME OUT IF SYNC REMAINS ON FOR 100 μSEC. IT IS HELD IN ITS SET STATE WHEN SYNC IS OFF

NOTE 1  
IF THE DFIO IS USED WITH A MULTIPLEXER ACKN COMES FROM THE MPX. OTHERWISE ACKN IS ALWAYS ASSERTED IN THE DFIO BY A BACK PANEL JUMPER.

ACK N  
^  
ADDRACK  
(FROM MEMORY)

CYCLES TERMINATE HERE. THIS CHAIN DIES WHEN A NEW CW MUST BE FETCHED. SEE (B)

THE OTHER PATH MAY TURN CCC SYNC ON AGAIN, TEMPORARILY KILLING THIS PATH

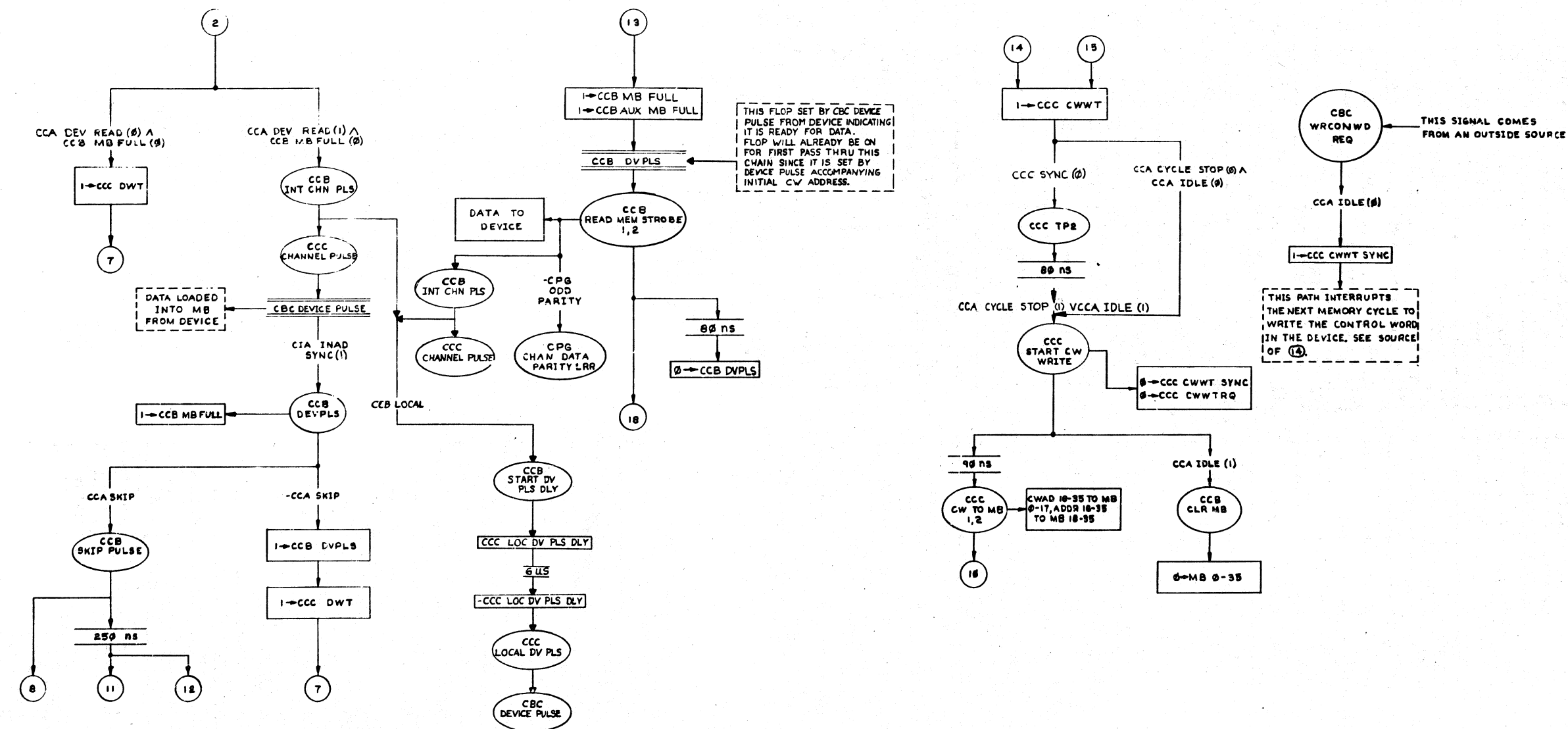
REV.	DESCRIPTION	DATE
1	ECO#4	2-24-67
2	DFIO-00002	7-10-68
3	DFIO-00006	7-10-68
4	DFIO-00006	7-10-68

QTY.	DESCRIPTION	PART NO.	ITEM NO.
EQUIPMENT CORPORATION			
TITLE			
FLOW CHART B			
MEMORY CYCLE			
ED	D	DFIO-0-008	E

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DEVICE INTERFACE CONTROL

CONTROL WORD WRITE



THIS FLOP SET BY CBC DEVICE PULSE FROM DEVICE INDICATING IT IS READY FOR DATA. FLOP WILL ALREADY BE ON FOR FIRST PASS THRU THIS CHAIN SINCE IT IS SET BY DEVICE PULSE ACCOMPANYING INITIAL CW ADDRESS.

THIS PATH INTERRUPTS THE NEXT MEMORY CYCLE TO WRITE THE CONTROL WORD IN THE DEVICE. SEE SOURCE OF (14).

REV. A	ECO 4
DATE	3-26-68
BY	A. JOHNSON
CHKD	
APP'D	
DATE	11-11-69

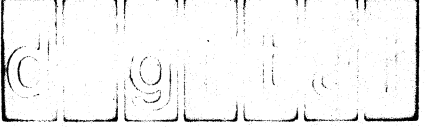
QTY.	DESCRIPTION	PART NO.	ITEM NO.
EQUIPMENT CORPORATION WATERTOWN, MASSACHUSETTS			
FLOW CHART C			
D-VA-DFIO-0-0		NUMBER	REV. B
D FD-DFIO-0-00C		1 OF 1	





DRWG NO	REV LTR
K-WL-DFIO-0-2	B

REVISIONS			
REV LTR	ECO NO	DATE	ENG
A	16	3-28-68	(Signature)
B	DFIO-00006	11/11/69	(Signature)

DRAWN <i>J F Lemig</i>	DATE 9-11-67	 <b>EQUIPMENT CORPORATION</b> MAYNARD, MASSACHUSETTS	TITLE <b>DATA CHANNEL DFIO</b>		
CHECKED <i>P. Wagoner</i>	DATE 1-12-68		FOR TAPE #      FILE #		
ENG <i>R. Williams</i>	DATE 1/15/68		SIZE K	CODE WL	REV LTR ●
PROJ ENG <i>R. Williams</i>	DATE 1/15/68		ASSY NO		DFIO-0-2
PROD <i>S. Williams</i>	DATE 1-16-68	SCALE	SHEET	OF	

57



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<b>DIGITAL EQUIPMENT CORPORATION</b>		DATE 2/16/68	
HAYWARD, MASSACHUSETTS			
<b>ENGINEERING SPECIFICATION</b>			
CHANNEL MANUFACTURING TEST PLAN OUTLINE (OFFLINE)			
REVISIONS			
REV	DESCRIPTION	CHG NO	DATE
—	ORIGINATED	6	2/21/68
		A. Wyman	
APPD BY		DATE	APPD BY
ENG Robert Wyman	APPD	SIZE CODE	NUMBER
		A SP	DF10-0-7
DEC FORM NO. DRA 108			REV
			6
			SHEET 1 OF 6

<b>ENGINEERING SPECIFICATION</b>		CONTINUATION SHEET	
CHANNEL MANUFACTURING TEST PLAN OUTLINE (OFFLINE)			
<p>Verify the CCB GTD ADDRESS delay. (CCB GTD ADDRESS to CCB GTD ADDRESS DLY 85 ± 6 ns.) Verify the CCC SYNC turn-off delay (CCC END MC to CCC SYNC off 85 ± 6 ns).</p> <p>Verify the operation of each bit in the control word address register by turning the control word switches 18 - 35 on one at a time. Do not have more than two nor less than one switch on at any one time.</p> <p>Turn on the parity bit and bit 35 of the control word switches. Turn off the Ignore Memory Parity Switch. The channel should now terminate upon fetching the first control word and send the Control Word Parity Error pulse. The tester should then generate RECYCLE and reinitiate the operation. Repeat this test with parity bit off, 35, 34 on; 35 off, 34, 33 on; etc. through bits 18, 19 on, all others off. Verify the time from CBC DEVICE PULSE to CCA XFER CW (100 ± 20 ns). Verify the time from CCA DTP3 to CCA CYCLE TERMINATE (66 ± 3 ns).</p> <p>Verify that each termination in 4 above causes the contents of CWAD and ADDR to be transmitted to memory. (ADDR, the data address, should be 0.)</p> <p>Verify the time from CCC TP2 to CCC START CW WRITE (85 ± 6 ns) and CCC START CW WRITE to CCC CW TO MB1 (95 ± 6 ns).</p>			
B.	Verify that the control word register loads and counts properly.		
1.	Set the following tester conditions:		
	Control Word	1	000001 000001
	Memory Data	0	000000 000001
	Channel Data		000000 000001
	Terminate Clock	0	
	Memory Cycle Terminate	0	
	Write	0	
	Continue	1	
	Write Control Word	0	
	Even Parity	0	
		SIZE CODE	NUMBER
		A SP	DF10-0-7
		REV	
		6	
		SHEET 3 OF 6	

<b>ENGINEERING SPECIFICATION</b>		CONTINUATION SHEET																																														
CHANNEL MANUFACTURING TEST PLAN OUTLINE (OFFLINE)																																																
<p><u>Setup</u></p> <p>Connect a twisted pair from the Channel to the tester according to the table below:</p> <table border="1"> <tr> <td>Signal</td> <td>Channel</td> <td>Tester</td> </tr> <tr> <td>Ground</td> <td>L12U</td> <td>B21L</td> </tr> <tr> <td></td> <td>L12M</td> <td>B21C</td> </tr> </table> <p>Then check voltages at several points in all mounting panels of the Channel.</p> <p><u>Control Test</u></p> <p>A. Verify that the channel can successfully load control word addresses.</p> <p>1. Set the following tester conditions:</p> <table border="1"> <tr> <td>Control Word</td> <td>0</td> <td>000000 000001</td> </tr> <tr> <td>Memory Data</td> <td>1</td> <td>000000 000000</td> </tr> <tr> <td>Channel Data</td> <td></td> <td>000000 000001</td> </tr> <tr> <td>Terminate Clock</td> <td>0</td> <td></td> </tr> <tr> <td>Memory Cycle Terminate</td> <td>0</td> <td></td> </tr> <tr> <td>Write</td> <td>0</td> <td></td> </tr> <tr> <td>Continue</td> <td>1</td> <td></td> </tr> <tr> <td>Write Control Word</td> <td>0</td> <td></td> </tr> <tr> <td>Even Parity</td> <td>0</td> <td></td> </tr> <tr> <td>Ignore Memory Parity</td> <td>1</td> <td></td> </tr> <tr> <td>Recycle Delay</td> <td>100</td> <td></td> </tr> <tr> <td>Terminate Delay</td> <td>100</td> <td></td> </tr> </table> <p>2. When the start pushbutton on the tester is pushed, the channel should continuously fetch the value set in the control word switches and load it in the control word address register (CWAD). Verify the CCA END RDDY delay time. (CCC RDDS to CCA ENDRDDY 135 ± 6 ns). Verify the CCB CLEAR MB delay. (CCA LOAD CW to CCB CLEAR MB 220 ± 6 ns)</p>				Signal	Channel	Tester	Ground	L12U	B21L		L12M	B21C	Control Word	0	000000 000001	Memory Data	1	000000 000000	Channel Data		000000 000001	Terminate Clock	0		Memory Cycle Terminate	0		Write	0		Continue	1		Write Control Word	0		Even Parity	0		Ignore Memory Parity	1		Recycle Delay	100		Terminate Delay	100	
Signal	Channel	Tester																																														
Ground	L12U	B21L																																														
	L12M	B21C																																														
Control Word	0	000000 000001																																														
Memory Data	1	000000 000000																																														
Channel Data		000000 000001																																														
Terminate Clock	0																																															
Memory Cycle Terminate	0																																															
Write	0																																															
Continue	1																																															
Write Control Word	0																																															
Even Parity	0																																															
Ignore Memory Parity	1																																															
Recycle Delay	100																																															
Terminate Delay	100																																															
		SIZE CODE	NUMBER																																													
		A SP	DF10-0-7																																													
		REV																																														
		6																																														
		SHEET 2 OF 6																																														

<b>ENGINEERING SPECIFICATION</b>		CONTINUATION SHEET																												
CHANNEL MANUFACTURING TEST PLAN OUTLINE (OFFLINE)																														
<p>Ignore Memory Parity 1</p> <p>Recycle Delay 100</p> <p>Terminate Delay 100</p> <p>2. When the Start pushbutton is pushed, the channel should load the contents of the Control Word switches into the Control Word register (WC and ADDR) and count WC up until it overflows. Check each WC bit position one at a time to verify that it is properly loaded. (Be sure WC ≠ 0 when loaded.) Do the same for ADDR. (Be sure ADDR ≠ 0 when loaded.) To speed the testing, set the Terminate Clock switch to 1. Then when the Terminate Delay times out, the channel will be forced idle. Verify the time relationship between CCA LOAD WCDA 1, CCB COUNT ADR 1 and CCB SET YCW. (CCA LOAD WCDA 1 to CCB COUNT ADR 1 500 ± 50 ns. CCA LOAD WCDA 1 to CCB SET YCW 850 ns ± 50 ns.)</p> <p>3. Turn off the Terminate Clock. Set the Word Count portion of the Control Word switches to 777777. Address portion to anything, parity odd, and turn the Ignore Memory Parity switch off. Start the operation and verify that CWAD counts properly.</p> <p><u>Data Test</u></p> <p>A. Verify that data is transferred properly through the channel.</p> <p>1. Set the following tester conditions:</p> <table border="1"> <tr> <td>Control Word</td> <td>1</td> <td>000001 000001</td> </tr> <tr> <td>Memory Data</td> <td>0</td> <td>000000 000001</td> </tr> <tr> <td>Channel Data</td> <td></td> <td>000000 000001</td> </tr> <tr> <td>Terminate Clock</td> <td>0</td> <td></td> </tr> <tr> <td>Memory Cycle Terminate</td> <td>0</td> <td></td> </tr> <tr> <td>Write</td> <td>0</td> <td></td> </tr> <tr> <td>Continue</td> <td>1</td> <td></td> </tr> <tr> <td>Write Control Word</td> <td>0</td> <td></td> </tr> <tr> <td>Even Parity</td> <td>0</td> <td></td> </tr> </table>				Control Word	1	000001 000001	Memory Data	0	000000 000001	Channel Data		000000 000001	Terminate Clock	0		Memory Cycle Terminate	0		Write	0		Continue	1		Write Control Word	0		Even Parity	0	
Control Word	1	000001 000001																												
Memory Data	0	000000 000001																												
Channel Data		000000 000001																												
Terminate Clock	0																													
Memory Cycle Terminate	0																													
Write	0																													
Continue	1																													
Write Control Word	0																													
Even Parity	0																													
		SIZE CODE	NUMBER																											
		A SP	DF10-0-7																											
		REV																												
		6																												
		SHEET 4 OF 6																												

ENGINEERING SPECIFICATION  CONTINUATION SHEET

TITLE CHANNEL MANUFACTURING TEST PLAN OUTLINE (OFFLINE)

- |                      |     |
|----------------------|-----|
| Ignore Memory Parity | 0   |
| Recycle Delay        | 100 |
| Terminate Delay      | 100 |
2. Start the operation, and using the Channel Data switches verify the operation of the data path (including the parity network) for floating ones.  
  
Verify that total cycle time for a data transfer is  $740 \text{ ns} \pm 50 \text{ ns} + 2$  channel cable delays + 2 memory cable delays (1.5 ns per foot of cable).  
  
Turn on Even Parity and verify that even parity is transmitted to memory for floating ones.
  3. Set the Address portion of the Control Word switches to zero (with proper parity) and verify that the skip operation is properly performed, i.e. no data transferred to memory. Verify the delay from CCB SKIP PULSE to CCB SKIP PULSE DLY ( $266 \pm 10 \text{ ns}$ ). Verify that total cycle time is  $600 \pm 50 \text{ ns} + 2$  memory cable delays + 2 channel cable delays (1.5 ns per foot).
  4. Set Write = 1. Using the Memory Data switches verify the operation of the data path (including the parity network) for floating ones. Verify the timing from CCB READ MEM STROBE 1 to CCB DVPLS going off ( $75 \pm 6 \text{ ns}$ ). Verify that total cycle time is  $570 \pm 50 \text{ ns} + 2$  memory cable delays (1.5 ns per foot). (Channel cable delays do not enter into this time.)
  5. Turn on Write Control Word and verify that CWAD and ADDR are transmitted to memory. Set the Word Count portion of the control word to 77777, Address portion anything, parity odd. Verify that no control word write cycle is taken even though Write Control Word is on.

Termination Tests

- A. Verify that termination of the channel by the device causes no malfunction.
  1. Set the following tester conditions:

SIZE	CODE	NUMBER	REV
A	SP	DF10-0-7	

ENGINEERING SPECIFICATION  CONTINUATION SHEET

TITLE CHANNEL MANUFACTURING TEST PLAN OUTLINE (OFFLINE)

- |                        |               |
|------------------------|---------------|
| Control Word           | 1 00001 00001 |
| Memory Data            | 1 00000 00000 |
| Channel Data           | 00000 00001   |
| Terminate Clock        | 1             |
| Memory Cycle Terminate | 0             |
| Write                  | 0             |
| Continue               | 1             |
| Write Control Word     | 0             |
| Even Parity            | 0             |
| Ignore Memory Parity   | 0             |
| Recycle Delay          | 100           |
| Terminate Delay        | 100           |
2. Start the operation, and using the low order nine bits of the Channel Data switches, verify the operation of the INAD register.
  3. Verify that the channel terminates properly after each operation.
  4. Turn on the Memory Cycle Terminate switch and verify that the channel terminates properly.
  5. Turn off Memory Cycle Terminate and Terminate Clock. Set Recycle Delay to 100. Turn on No Memory Switch and start the operation. The normal start-up cycle should now ensue, but the first control word will never be fetched. Instead, the CC3 NONEXMEM single shot should time out generating the NO SUCH MEM pulse on the Channel Bus and terminating the cycle. Verify proper operation.

SIZE	CODE	NUMBER	REV
A	SP	DF10-0-7	

**DIGITAL EQUIPMENT CORPORATION**  
MAYNARD, MASSACHUSETTS

**ENGINEERING SPECIFICATION**

DATE May 14, 1968

TITLE DF 10 RECOMMENDED SPARE PARTS LIST

REVISIONS					
REV	DESCRIPTION	CHG NO	ORIG	DATE	APPD BY
--	ORIGINATOR	33	--	--	--

ENG Fertig      APPD: *R.E. Johnson*      CODE SP      SIZE A      NUMBER DF10-0-8      REV

**ENGINEERING SPECIFICATION**

TITLE DF 10 RECOMMENDED SPARE PARTS LIST

TRANSISTORS			
Type	Part No.	Quantity	REV
DEC SDA-86718-1	15-02105	2	
2894	15-03097	2	
2N3605	15-02151	2	
2N4258	15-05321	6	
DEC 3009B-S	15-03100	2	
2N2904	15-01742	2	
DEC 3639-D	15-02762-02	8	
DEC 2894-38-S	15-03099	2	
DEC 3009A-S	15-01999	2	
DEC 2894-2S	15-03098	2	
DEC 6534	15-03409	2	

DEC FORM NO DRA 108      SIZE A      CODE SP      NUMBER DF10-0-8      REV

SHEET 1 OF 4

SHEET 3 OF 4

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**ENGINEERING SPECIFICATION**

TITLE DF 10 RECOMMENDED SPARE PARTS LIST

MODULES			
Type	Amount	Quantity	REV
B130	2	10	
B133	1 2	10	
B134	1	6	
B135	1	10	
B137	1	6	
B165	2	10	
B165	1	1	
B212	1	1	
B214	1	1	
B311	1	1	
B611	1	1	
B685	1	1	
B685	1	1	
G704	1	1	
R001	1	1	
R303	1	1	
R613	1	1	
S181	1	1	
S603	1	1	
W012	1	1	
W102	2	1	
W250	1	1	
W301	1	1	

DEC FORM NO DRA 108      SIZE A      CODE SP      NUMBER DF10-0-8      REV

SHEET 2 OF 4

**ENGINEERING SPECIFICATION**

TITLE DF 10 RECOMMENDED SPARE PARTS LIST

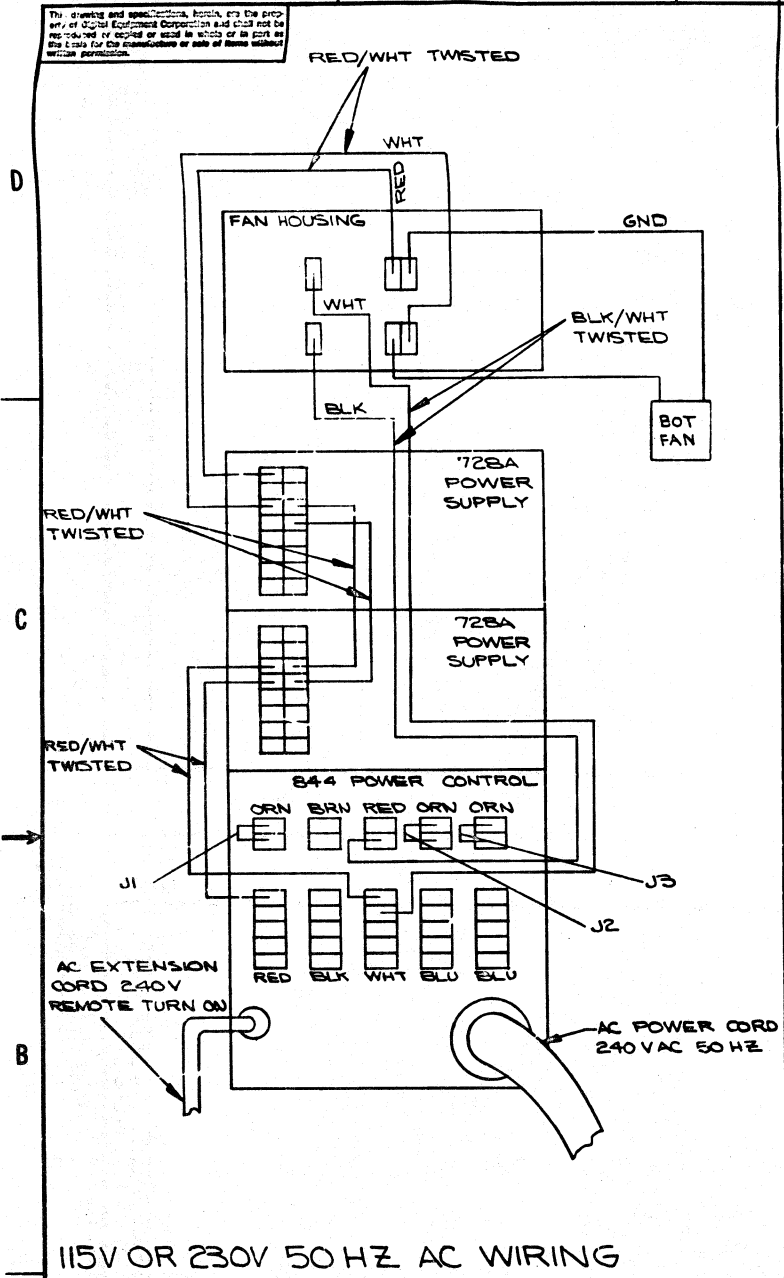
ADDITIONAL			
Description	Part No.	Quantity	REV
D662	11-00113	10	
D664	11-00114	10	
D668	11-02161	6	
INDICATOR LIGHTS	12-555	10	
TRIMPOT	A-13-5395	1	

DEC FORM NO DRA 108      SIZE A      CODE SP      NUMBER DF10-0-8      REV

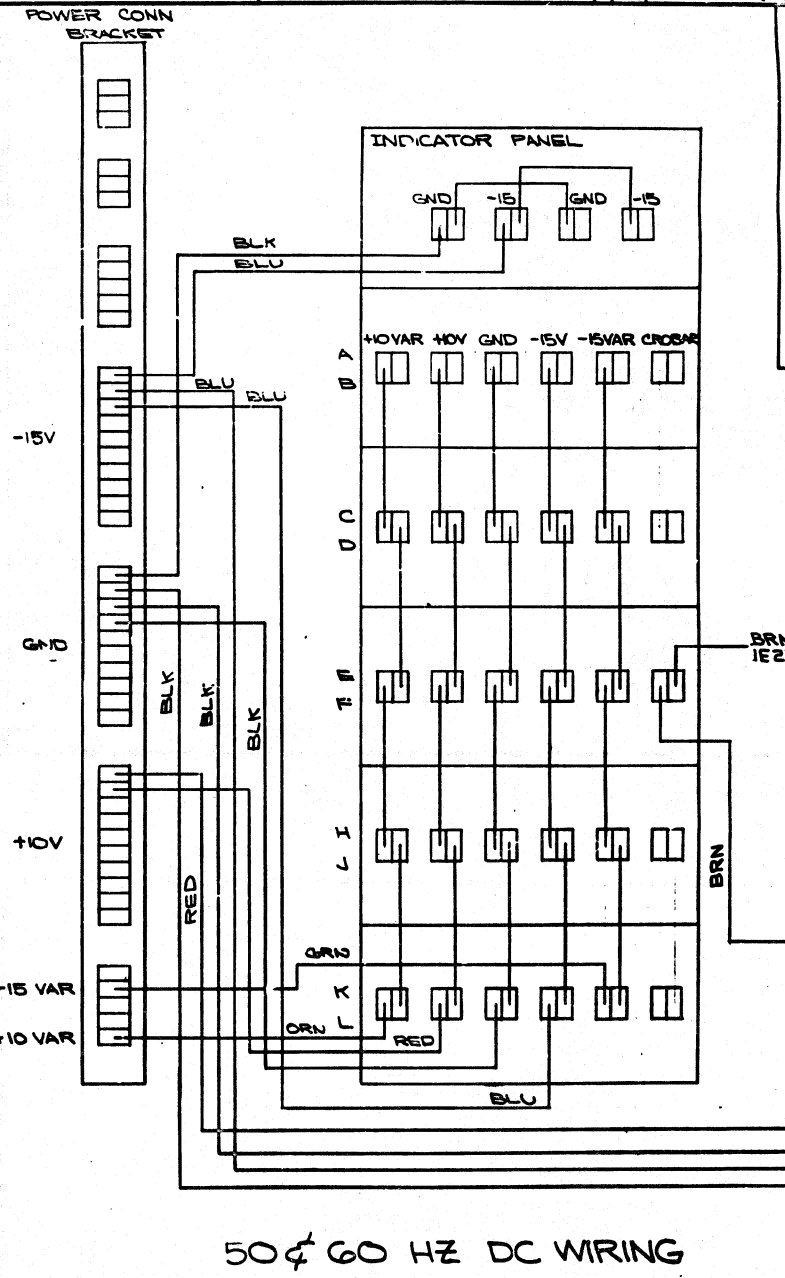
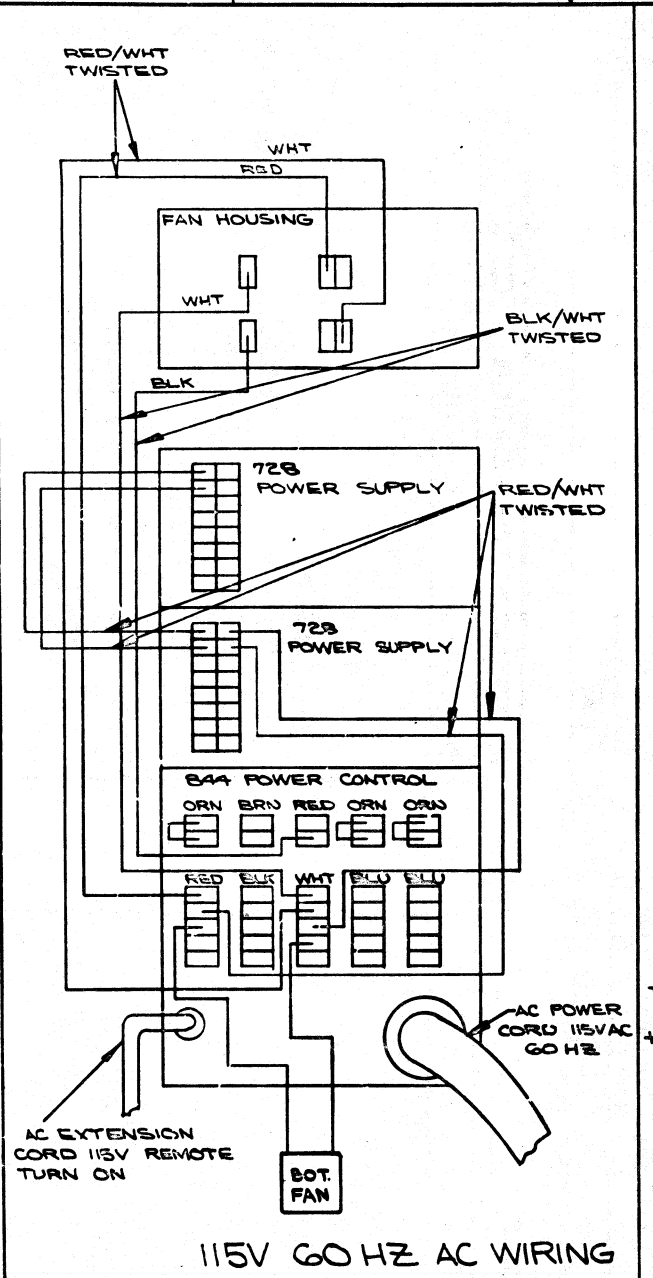
SHEET 4 OF 4

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U-0-0100-2



NOTE:  
REMOVE JUMPERS J1, J2, & J3 FROM 844 P.C.  
FOR 230V 50 HZ OPERATION



72BA JUMPERS				
INPUT VOLTAGE	JUMPER	LINE	FAN	
112.5V 10%	2-4, 3-7	3-4	1-3	
123.5V 10%	1-5, 3-0	3-4	1-3	
195V 10%	1-5		1-3	
220 10%	1-5	3-4	1-3	
235 10%	2-8			

NOTE:  
ALL WIRES TO BE #14 AWG STRD TYP  
UNLESS OTHERWISE SPECIFIED

REV.	CHANGE NO.	DATE	BY	REVISIONS
1	1	10-1-68	LEG	ADDED 2 FANS

QTY.	DESCRIPTION	PART NO.
	WIRING, POWER DC & AC	U-0-0100-2
EQUIPMENT CORPORATION		

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DIGITAL EQUIPMENT CORPORATION MAYNARD, MASSACHUSETTS		DATE 10/7/69			
ENGINEERING SPECIFICATION					
TITLE CHANNEL MANUFACTURING TEST PLAN OUTLINE (ONLINE)					
REVISIONS					
REV	DESCRIPTION	CHG NO	ORIG DATE	APPD BY	DATE

APPD <i>[Signature]</i>	SIZE	CODE	SP	NUMBER	REV
	A			DF10-0-9	

DEC FORM NO  
DRA 107

SHEET 1 OF 3

ENGINEERING SPECIFICATION		CONTINUATION SHEET	
TITLE CHANNEL MANUFACTURING TEST PLAN OUTLINE (ONLINE)			
6.	Display 4000g to verify that zeroes are written in this location.		
7.	Display location 101 to verify that the correct control word is being written into memory. 101g = 001001 004001		
8.	Stop the DF10 by pressing LOCAL STOP. Set MEM CYCLE SINGLE STEP = 1 and press LOCAL START. The DF10 should stop after doing the first memory cycle. When LOCAL START is pressed, a second memory cycle should take place. Continue to single step by pressing LOCAL START button and verify correct operation.		
9.	Clear the DF10 by pressing CLEAR button and enter "ones" in location 4000g. Set DEVICE WRITE = 1 and press LOCAL START. Verify that "8's" are read from memory into the DF10 memory buffer during the data word transfer.  (NOTE: This may be verified visually in the MB lights by increasing the word count of the control word in location 1000g and entering "ones" in the appropriate number of locations starting at location 4000g.)		
10.	Set CLEAR CYCLE = 1 and press LOCAL START. Verify OCA CLR CYCLE DLY (300 us ± 20%). Verify that OCA LOCAL START is cleared when OCA CLR CYCLE DLY times out.		

	SIZE	CODE	SP	NUMBER	REV
	A			DF10-0-9	

DEC FORM NO  
DRA 108

SHEET 3 OF 3

ENGINEERING SPECIFICATION		CONTINUATION SHEET	
TITLE CHANNEL MANUFACTURING TEST PLAN OUTLINE (ONLINE)			
<u>General</u>	This procedure tests the LOCAL mode feature of the DF10. For additional on-line tests, see test procedure for devices using channel bus.		
<u>Set Up</u>	DF10 connected to MA10 or MB10 via memory bus.		
<u>Procedure</u>	<ol style="list-style-type: none"> <li>Set the following DF10 conditions:            LOCAL 1            Device Write β            MEM Cycle Single Step β            Clear Cycle β            At the MA10 console, load a control word into 100g as follows:            LOC 100 = 000000 000000            Press the LOCAL START pushbutton. The DF10 should start, fetch the zero control word, terminate, and then recycle, the operation repeating until the LOCAL STOP pushbutton is pressed. Verify the length of RECYCLE DLY (25 us ± 20%).</li> <li>Display OCA LOCAL START (1) on the scope. Hold down LOCAL STOP pushbutton and press LOCAL START. Verify the channel cycles only once.</li> <li>Load the following location at the MA10 console.            LOC 100 = 0—0 001000            1000 = 777777 003777            1001 = 000000 000000            4000 = 777777 777777</li> <li>When the LOCAL START pushbutton is pressed, the DF10 should fetch this control word, do a one word data transfer (zeros to memory), and then terminate. The operation should repeat until LOCAL STOP is pressed. Verify OCA LOC DV FLS DLY (6 us ± 20%).</li> </ol>		

	SIZE	CODE	SP	NUMBER	REV
	A			DF10-0-9	

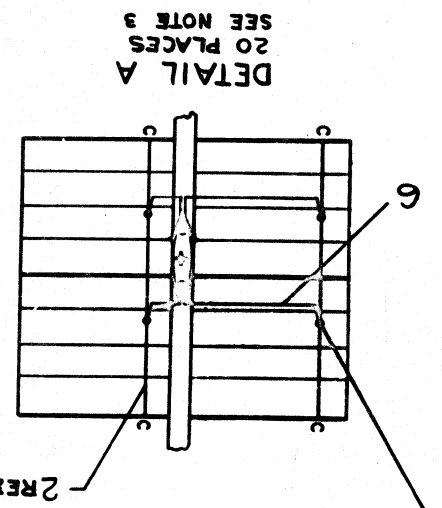
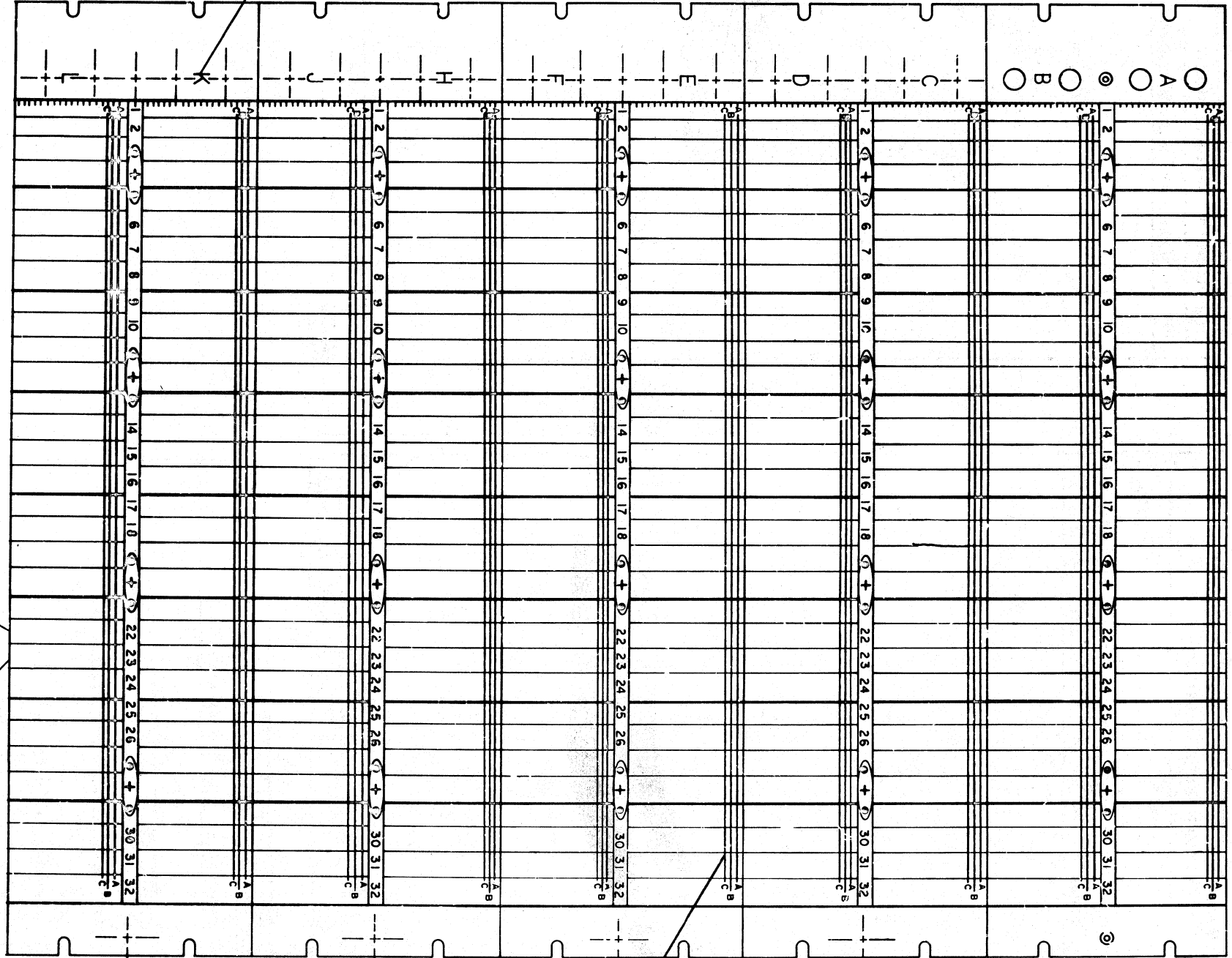
DEC FORM NO  
DRA 108

SHEET 2 OF 3



REV.	DESCRIPTION	DATE
1	ISSUED FOR REV'D	11-14-67
2		11-21-67

REV.	DESCRIPTION	DATE
1	ISSUED FOR REV'D	11-14-67
2		11-21-67



**NOTES:**

- 1 CONNECTIONS ON ITEMS #3 & #6 TO BE SOLDERED AND LOCATED AT MINIMUM PRACTICAL HEIGHT ABOVE BLOCK.
- 2 USE YELLOW WIRE (ITEM #5) FOR MACHINE WRAPPED & BLUE WIRE (ITEM #7) FOR HAND WRAPPED WIRING.
- 3 ALL CONN BLOCKS TO BE GROUNDED TO GND LUGS AS SHOWN.

SEE NOTE 2  
SEE NOTE 1  
SEE DETAIL A

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1 2 3 4 5 6 7 8

1 2 3 4 5 6 7 8

REV. A 0-0-185600-AD 0

WIRING ASSEMBLY (DF10)

EQUIPMENT CORPORATION

AD-009561-0-0-A



