

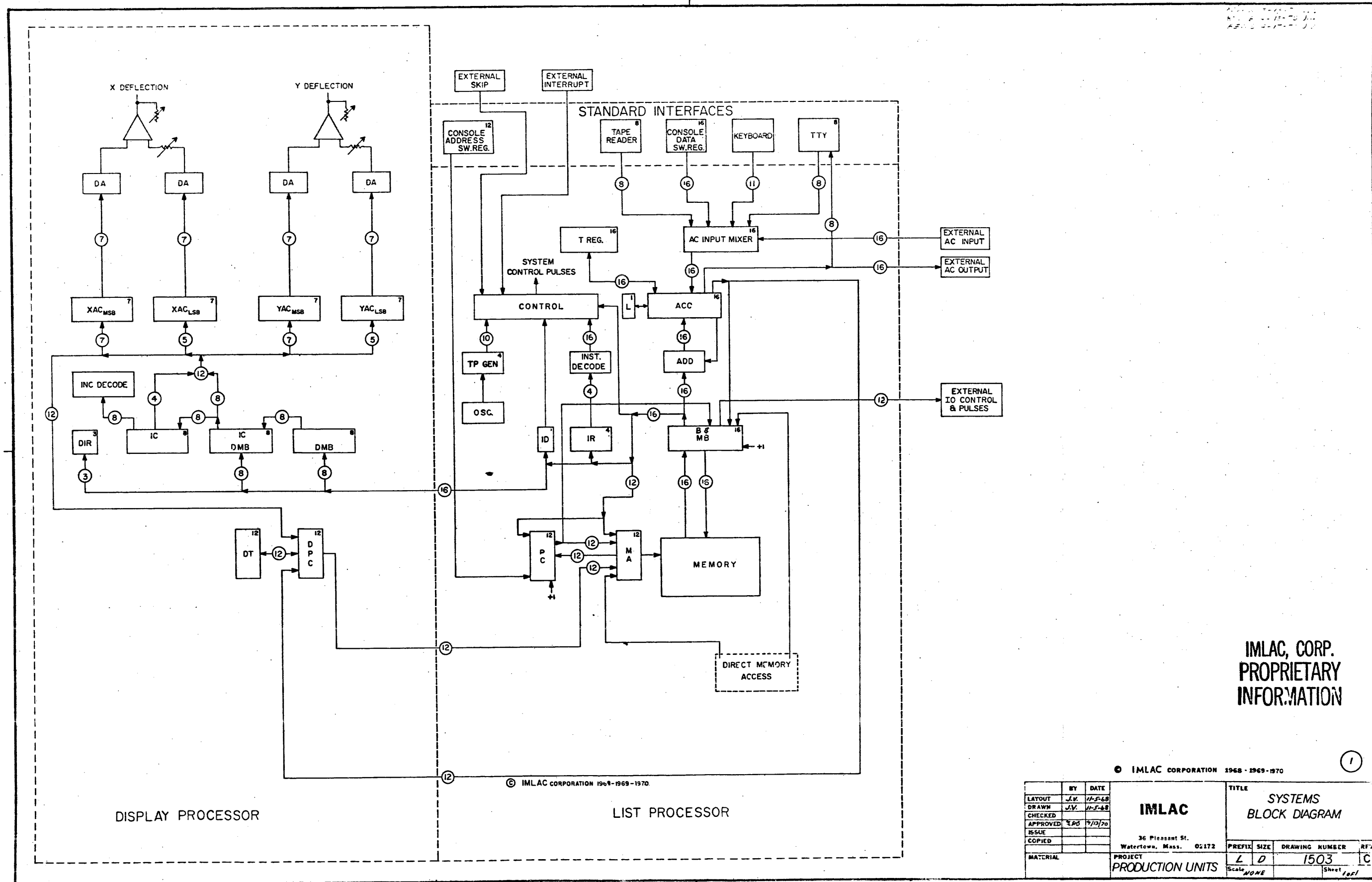
INDEX PDS-1 LOGIC DRAWINGS

<u>SHEET NO.</u>	<u>DRAWING NO.</u>	<u>TITLE</u>
1	1503	Systems Block Diagram
2	2049	Function Location
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5	553	Execute Cycles
6	555	Display & Special Cycles
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8	585	Run Control & Clock Control
9	557	Cycle Control
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11	556	ACC.&T.Reg. Control & Operate Control
12	621	Standard IOT Control
12E	680	Expanded IO Control
13	627	Skip Condition & AC Z Det & MA ATO Index
14	626	Shift & Rotate Control & Instruction Reg.&Decoder
15	642	Memory Control & Supplemental IOT Control
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24	632	Carry Logic & Memory Buffer Register Bits 10-15
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27	676	Memory Isolator & Read Only Memory Replacement
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29	658	Dataram Y Memory Address Selection
30	657	Dataram Inhibit Drivers & Sense Amplifiers
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32	679	Buffers for Cont.Console Lamps & Expanded IO AC Outputs
33	670(SH#1)	PDS-1 Power Supply
34	670(SH#2)	PDS-1 Power Supply
35	620	Display Memory Buffer & Increment Control Register

INDEX PDS-1 LOGIC DRAWINGS (continued)

<u>SHEET NO.</u>	<u>DRAWING NO.</u>	<u>TITLE</u>
36	660	Display Mode Control&Display Instruction Register
37	663	Display Controls
38	624	X Accumulator Most Significant Bits
39	623	X Accumulator Least Significant Bits
40	664	Y Accumulator Most Significant Bits
41	665	Y Accumulator Least Significant Bits
42	643	Display Prog.Counter & DT Register Bits 4-15
43	673	BEAM Centering and DA Converters
44	697	Display, Upper & Lower Chassis
45	698	Display, Video & Deflection
46	699	Display, High Voltage Supply
47	681	Keyboard Layout & Decoding
48	2200	PDS-1 Main Assembly
49	2077	CRT Stand, Final Assembly
50	2060-00	I/O Panel, Standard
50E	2060-01	I/O Panel, Expanded I/O
51	2083	Display Assembly
52	2076	Memory Rack Assembly
53	2205	Power Supply P1 Assembly
54	2206	Power Supply P2 Assembly

REVISED TO
 ADD P. 15, 16, 17, 18
 REV. 10/17/70



DISPLAY PROCESSOR

LIST PROCESSOR

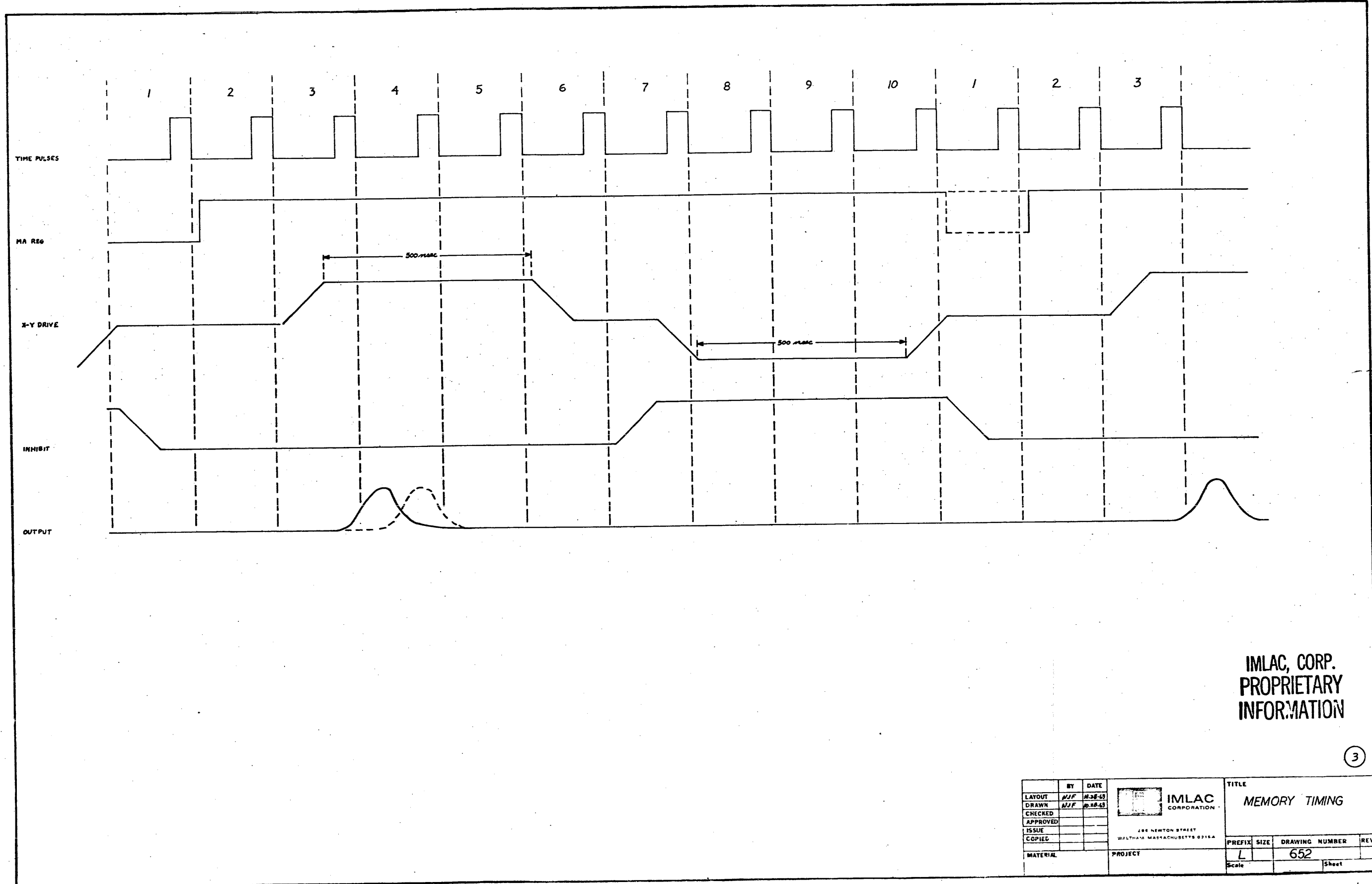
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BY		DATE	TITLE	
LAYOUT	J.V.	11-5-68	SYSTEMS BLOCK DIAGRAM	
DRAWN	J.V.	11-5-68	IMLAC	
CHECKED			36 Pleasant St. Watertown, Mass. 02172	
APPROVED	J.P.D.	7/12/70	PREFIX	SIZE
ISSUE			L	D
COPIED			DRAWING NUMBER	
MATERIAL			1503	
PROJECT			Scale	Sheet
PRODUCTION UNITS			NONE	1 of 1

1



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	COMMON TO ALL FETCH	00 OPR (0)	04 LAW (1)	10 JMP (2)	00 OPERATE BIT 5=0 BIT 6=0	00 IOT BIT 5=0 BIT 6=1	00 SKIP BIT 5=1 BIT 6=0	00 ROTATE BIT 5=1 BIT 6=1	
1	C(PC) → C(MA) C(AC) → C(T) CLR SUB SET ADD								1
2	C(PC)+1 → C(PC) 0 → C(B) 0 → C(MB)								2
3									3
4									4
5	C(MB _{F-12}) → C(MB _{F-12}) C(MB ₀) → C(IA) C(MB ₀) → C(ID)								5
6			0 → C(AC) IF ID SET SUB SET ADD-1 CLR ADD		OPA T1 CLR ADD	IOT P-1			6
7			PAD						7
8				0 → C(PC _{F-12})	OPA T2			MB ₁₆ = SHIFT	8
9								MB ₉ = DISP ON MB ₁₆ = SHIFT	9
10	IF (IA) > 2 SET DEFER IF (IA) > 4 SET EXECUTE OTHERWISE SET FETCH		CARRY	C(MB _{F-12}) → C(PC _{F-12})	OPA T3	IOT P-2	IF SHIP CONDITION C(PC)+1 → C(PC)	MB ₁₆ = SHIFT	10

	COMMON TO ALL DEFER A		10 JMP (2)						
1	C(PC ₀) → C(MA ₀) C(MB _{F-12}) → C(MA _{F-12})								1
2	0 → C(MB) 0 → C(B)								2
3									3
4									4
5									5
6	IF 10 ₀ ≤ C(MA) & 17 ₀ C(MB)+1 → C(MB)								6
7	C(MB) → C(B)								7
8				0 → C(PC ₀₋₁₂)					8
9									9
10	IF IA > 4 SET EXECUTE OTHERWISE SET FETCH			C(MB ₀₋₁₂) → C(PC)					10

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REV. 3-7-69 J.V.
REV. 5-2-69 R.M.
REV. 5-28-69 H.M.
REV. 6-28-69 J.V.
REV. 2-3-70 J.V.
CHECKED AGAINST SEMI COPY 2-4-70 H.C.M.
REV. 4 2-11-70 4 23 70 H.C.M.

LAYOUT	J.V.	2-6-69
DRAWN	J.V.	2-6-69
CHECKED		
APPROVED		
ISSUE		
COPIED		
MATERIAL		

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TITLE FETCH & DEFER CYCLES			
PREFIX	SIZE	DRAWING NUMBER	REV
L	D	554	1A
Scale		Sheet	

	COMMON TO ALL EXECUTE	20 _b DAC	(4) 24 _b XAM	(5) 30 _b ISZ	(6) 34 _b JMS	(7) 40 _b —	(8) 44 _b AND	(9) 50 _b IOR	(10) 54 _b XOR	(11)
1	IF ID C(PC ₀) → C(MA ₀); IF ID C(B ₀) → C(MA ₀) C(B ₀) → C(MA ₀)									
2	0 → C(MB) 3 → C(B)									
3										
4										
5	C(MB) → C(B)	0 → C(MB)	0 → C(MB)		0 → C(MB)					
6		C(AC) → C(MB)	C(AC) → C(MB) 0 → C(AC)	C(MB) + 1 → C(MB) 0 → C(AC) SET ADD-1	C(PC) → C(MB)		0 → C(AC)	0 → C(AC)		
7			PAD	PAD			PAD	PAD	PAD	
8					0 → C(PC ₀ -1)					
9				CARRY	C(MA ₀ -1) → C(PC ₀ -1)					
10	SET FETCH			IF C(AC) = 0 THEN C(PC) + 1 → C(PC) C(T) → C(AC)	C(PC) + 1 → C(PC)		AND	IOR		

		60 _b LAC (12)	64 _b ADD (13)	70 _b SUB (14)	74 _b SAM (15)					
1										
2				SET SUB CLR ADD SET ADD-1						
3										
4										
5										
6		0 → C(AC)								
7		PAD	PAD	PAD	PAD					
8										
9		CARRY	CARRY	CARRY						9 (5)
10					IF AC = 0 C(PC) + 1 → C(PC) C(T) → C(AC)					

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REV 3-7-62 J.V.
REV 6-28-63 J.V.
REV 2-3-70 J.V.
CHECKED AGAINST SDP# COMP 2-4-70 J.V.M.

LAYOUT	BY	DATE
DRAWN		
CHECKED		
APPROVED		
ISSUE		
COPIED		
MATERIAL		

IMLAC CORPORATION
288 NEWTON STREET
WALTHAM MASSACHUSETTS 02154

TITLE			
EXECUTE CYCLES			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	553	
Scale		Sheet	

	COMMON SPECIAL CYCLES	CONSOLE STORE	CONSOLE READ	DISPLAY BREAK	00 D OPR	01 D LXA N	02 D LYA N	03 D EIM	04
1		C(PC) → C(MA)	C(PC) → C(MA)	C(DPC) → C(MA)					1
2	READ INITIATE 0 → C(MB)	C(PC)+1 → C(PC)	C(PC)+1 → C(PC)	MEMORY START					2
3				C(DPC)+1 → C(DPC)					3
4	C(MA) → C(MB) i.e. STROBE	0 → C(AC)							4
5		C(DS) → C(AC) 0 → C(MB)		C(MB) → C(DMB) C(MB ₀₋₃) → C(OIR)					5
6	6D WRITE INITIATE	C(AC) → C(MB)		IF INC SL-B HERE EQUIVALENT TO C(DMB) → C(IC)					6
7									7
8					IF IC ₁₀ = 1 0 → C(DPC) CLR IN DISPLAY IF IC ₆ = 0 IF IC ₀ = 1 SET SCAL PER IC ₁₀₋₅				8
9					IF IC ₁₀ = 1 C(DT) → C(DPC)	C(IC) → C(XAC)	C(IC) → C(YAC)		9
10		CLEAR CONSOLE STORE	CLEAR CONSOLE READ	IF (INC) ≠ (IN DISPLAY) SET DISP BRK				SET INC SL-B SET STATE 0	10

	05 D JMS Q O	06 D JMP Q	07	INC # IC ₀	INC # IC ₁	INTERRUPT
1						0 → C(MA)
2				IF IC ₅ +1 TO XAC IF IC ₆ +1 TO YAC	IF IC ₆ 0 → C(XAC) ₁₀ IF IC ₅ +1 TO XAC ₁₀ IF IC ₇ 0 → C(YAC) ₁₀ IF IC ₆ +1 TO YAC ₁₀	
3				IF IC ₆ # IC ₇ = BEAM ON ALL ELSE = BEAM OFF		
4						
5				IF IC ₆ +1 TO XAC IF IC ₇ +1 TO YAC		0 → C(MB)
6	C(DPC) → C(DT)					C(PC) → C(MB)
7						
8	0 → C(DPC)	0 → DPC		IF IC ₅ +1 TO XAC IF IC ₆ +1 TO YAC	IF IC ₅ 0 → C(DPC)	0 → C(PC)
9						
10	C(IC ₄₋₁₀) → C(DPC)	C(IC ₄₋₁₀) → C(DPC)		IF STATE 0 GO TO STATE 1 IF STATE 1 GO TO STATE 0 & SET DISP BRK SL-B	IF IC ₅ SET DISP BRK & CLR INC IF IC ₅ C(DT) → C(DPC) SL-B	C(PC)+1 → C(PC)

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9 6

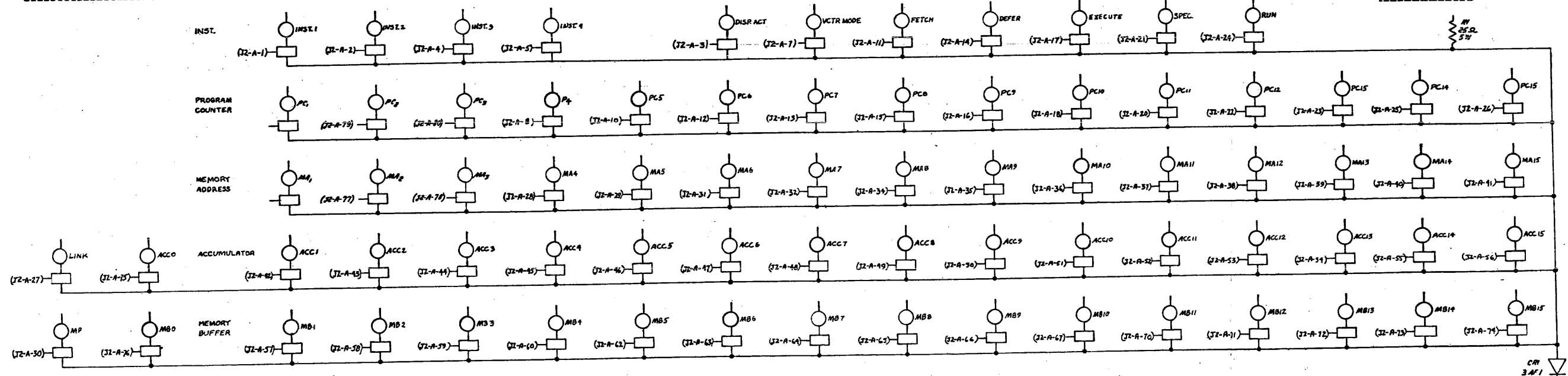
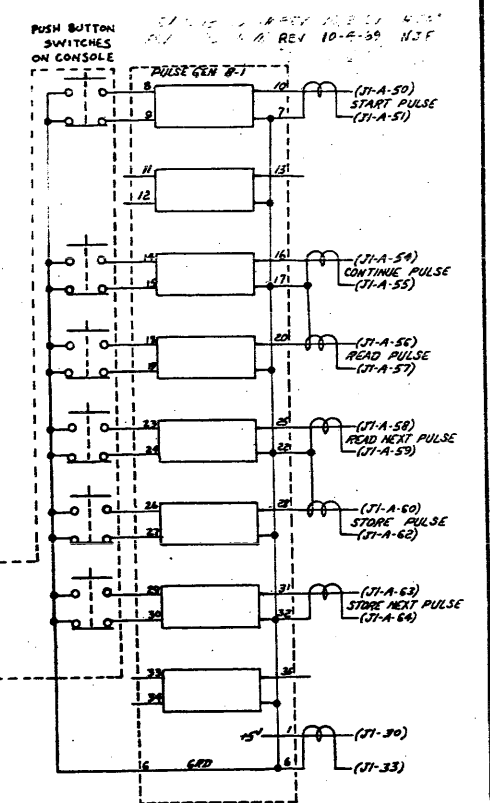
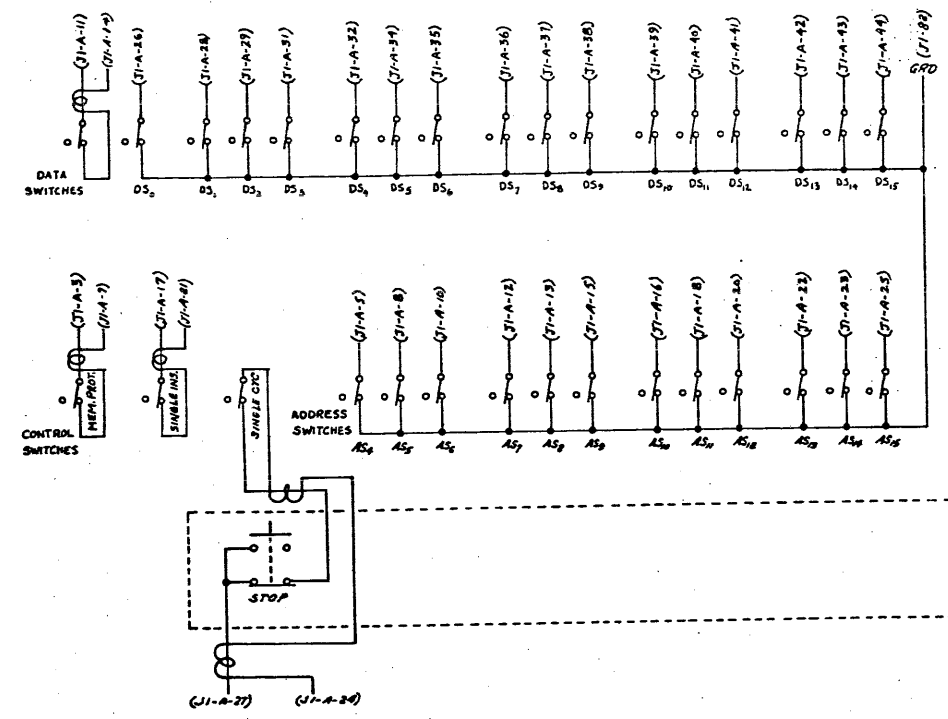
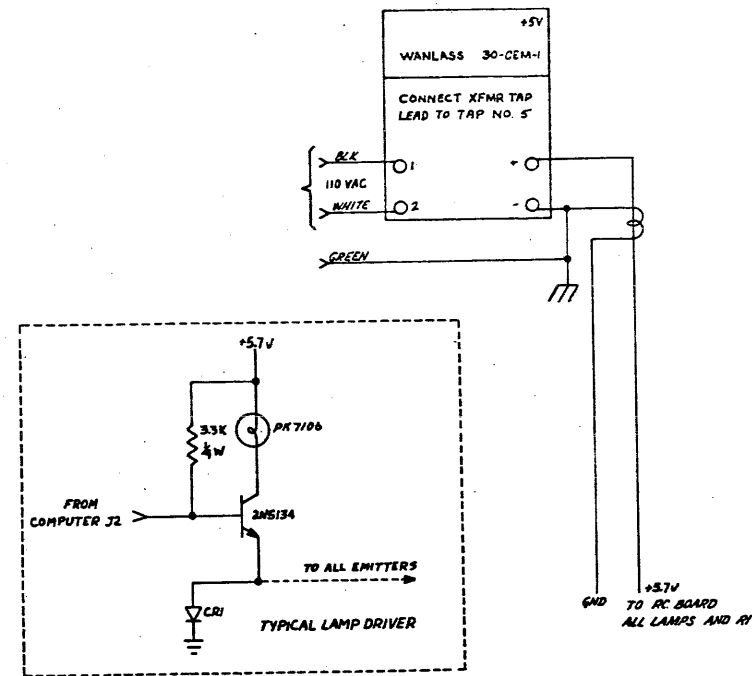
REV. 3-3-70 J.V.
REV. A. 4-13-70 J.V.
REV. B. 4-24/70 ECU/TH KJF

REV. 3-7-69 J.V.
REV. 5-2-69 H.M.
REV. 5-22-69 J.V.
REV. 5-29-69 J.V.
REV. 6-28-69 J.V.
REV. 2-3-70 J.V.
CHECKED AGAINST 5044 COPY 2-4-74 RCM

LAYOUT	BY	DATE
DRAWN		
CHECKED		
APPROVED	JDB	4/13/70
ISSUE		
COPIED		
MATERIAL		



TITLE			
DISPLAY & SPECIAL CYCLES			
PREFIX	SIZE	DRAWING NUMBER	REV
L	D	555	6
PROJECT		Scale	Sheet
PRODUCTION UNITS			



Note: POSITIONS PC 1, PC 2, PC 3, MA 1, MA 2, MA 3 ARE NOT USED ON UNITS WITH 4K MEMORIES, THEY ARE USED FOR MEMORY EXPANSION.

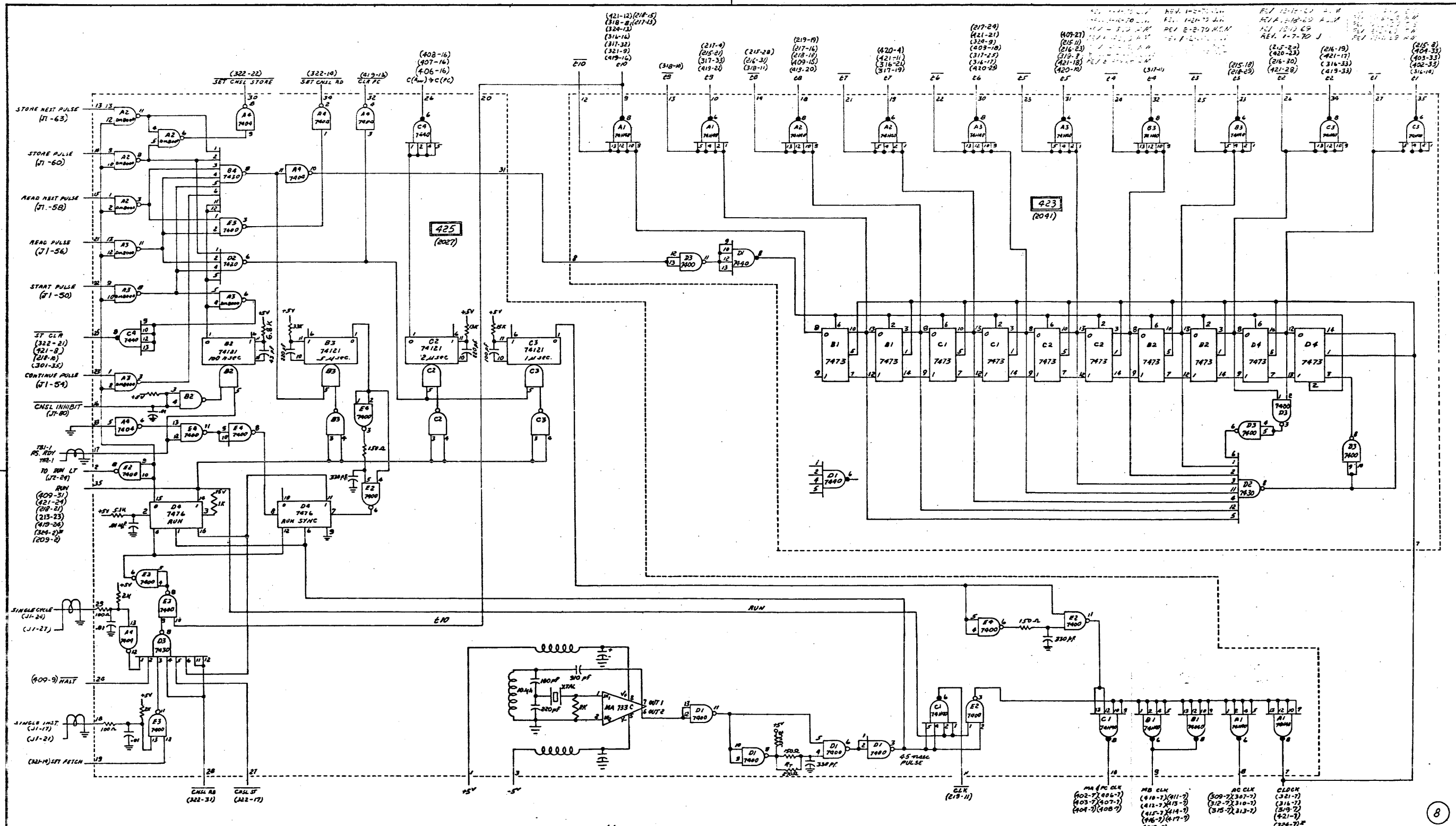
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ECN 118 REV. 6/17/70 WJF
 REV. B. 5-27-70 J.V.
 REV. A. 4-13-70 H.C.M.

	BY	DATE
LAYOUT	MTF	5-26-69
DRAWN	MTF	5-29-69
CHECKED		
APPROVED	WAB	4-13-70
ISSUE		
COPIED		
MATERIAL		

IMLAC CORPORATION
 288 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

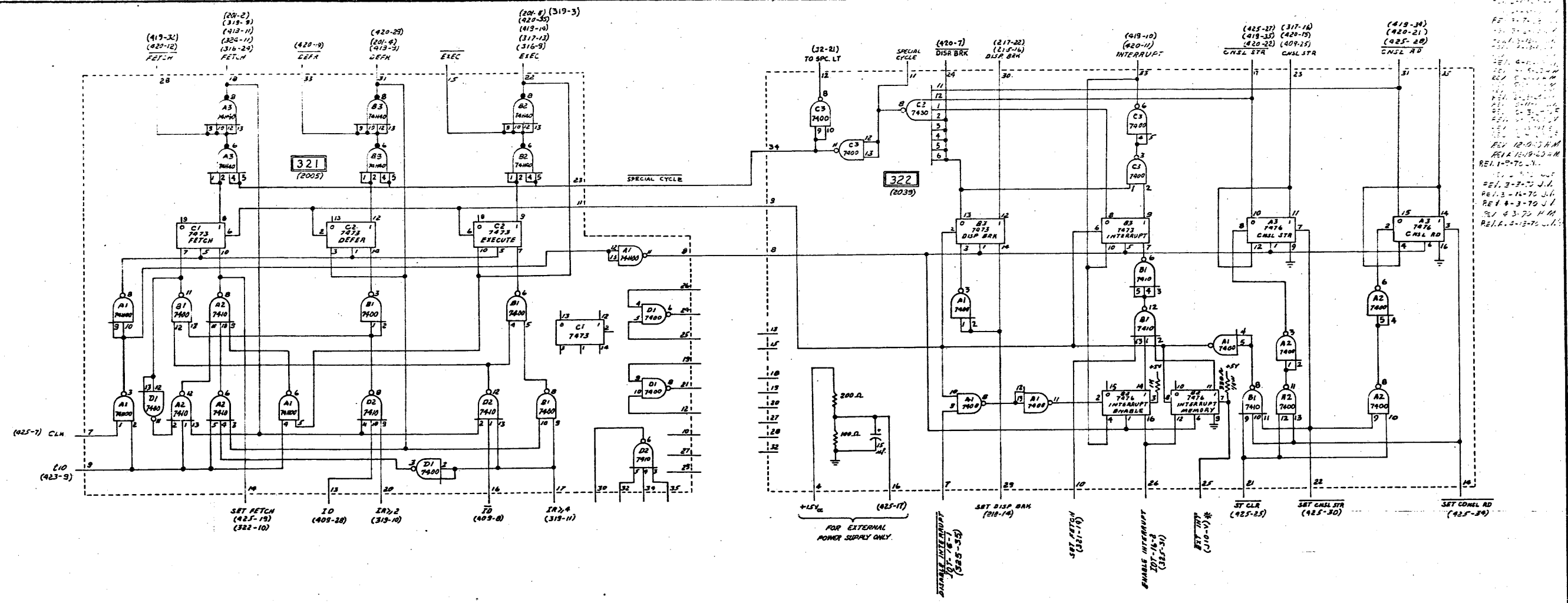
TITLE			
CONTROL PANEL			
PREFIX	SIZE	DRAWING NUMBER	REV
L		639	B
Scale		Sheet	



NOTES:
 * USED WITH EXAMINED TO
 BY ADJUSTED TO GIVE 45^{ns} PULSE
 PULSE NORMALLY 270^{ns}

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BD 423 CHECKED AGAINST SCH # 2028. 10-11-69 J.M.		BY DATE		IMLAC CORPORATION	TITLE
LAYOUT J.V. 3-11-69		L.V. 3-11-69			
DRAWN J.V. 3-11-69		J.V. 3-11-69		300 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	PREFIX
CHECKED		J.V. 4-17-70			PROJECT
APPROVED		J.V. 4-17-70		PRODUCTION UNITS	
ISSUE					Scale
COPIED				Sheet	
MATERIAL					



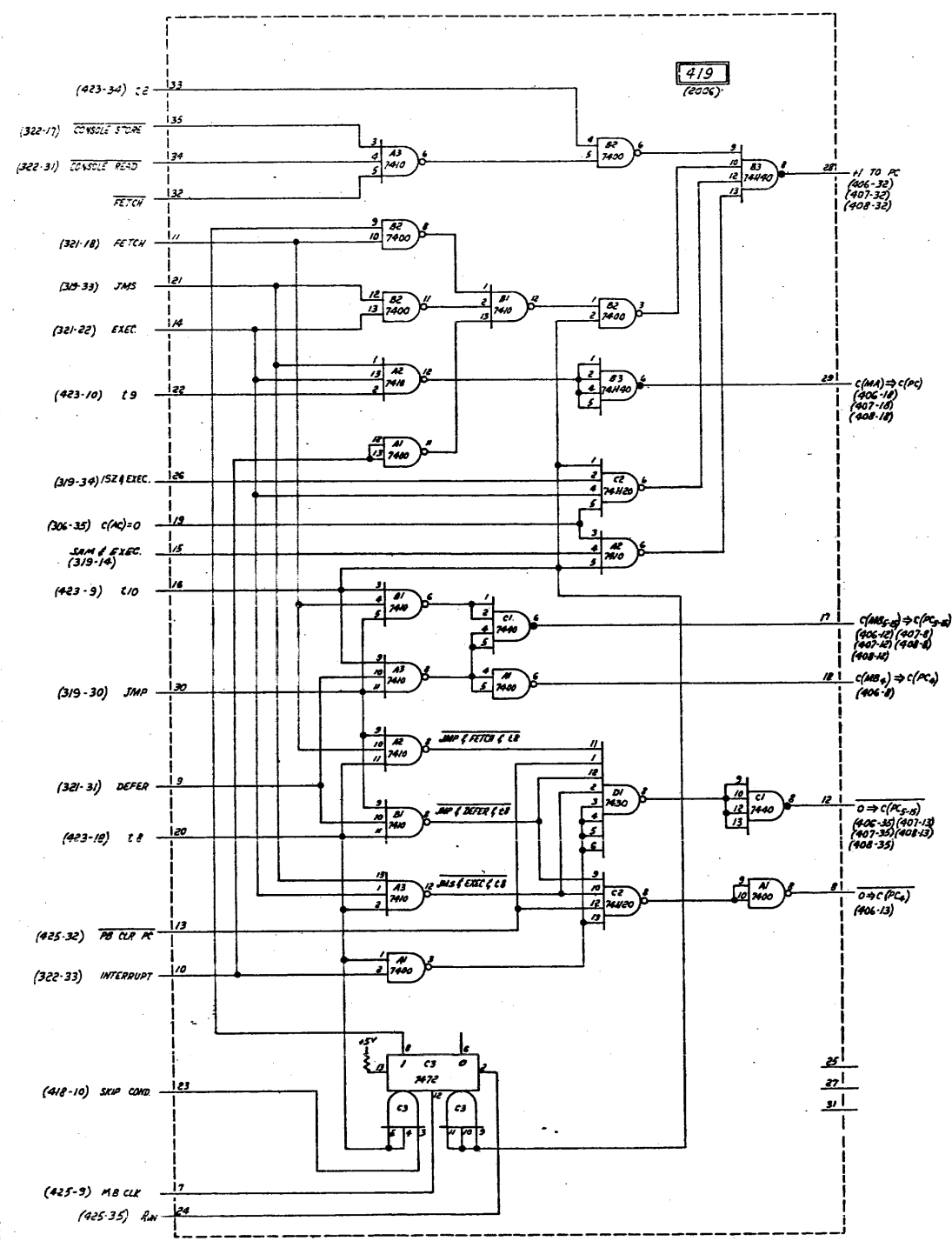
(419-3) (420-12) FECH
 (20-2) (319-9) (412-11) (420-11) (316-20) FECH
 (420-9) DEFER
 (420-25) (201-4) (413-3) DEFER
 EXEC
 (201-8) (319-3) (420-25) (415-10) (317-13) (316-9) EXEC
 (425-17) TO SPC. LT
 SPECIAL CYCLE
 (420-7) (217-22) (217-16) DISR BRK
 (419-10) (420-11) INTERRUPT
 (425-27) (317-16) (419-35) (420-15) (420-22) (409-25) CML STR
 (419-34) (420-21) (425-28) CML RD

NOTES: * USED WITH EXPANDED IO

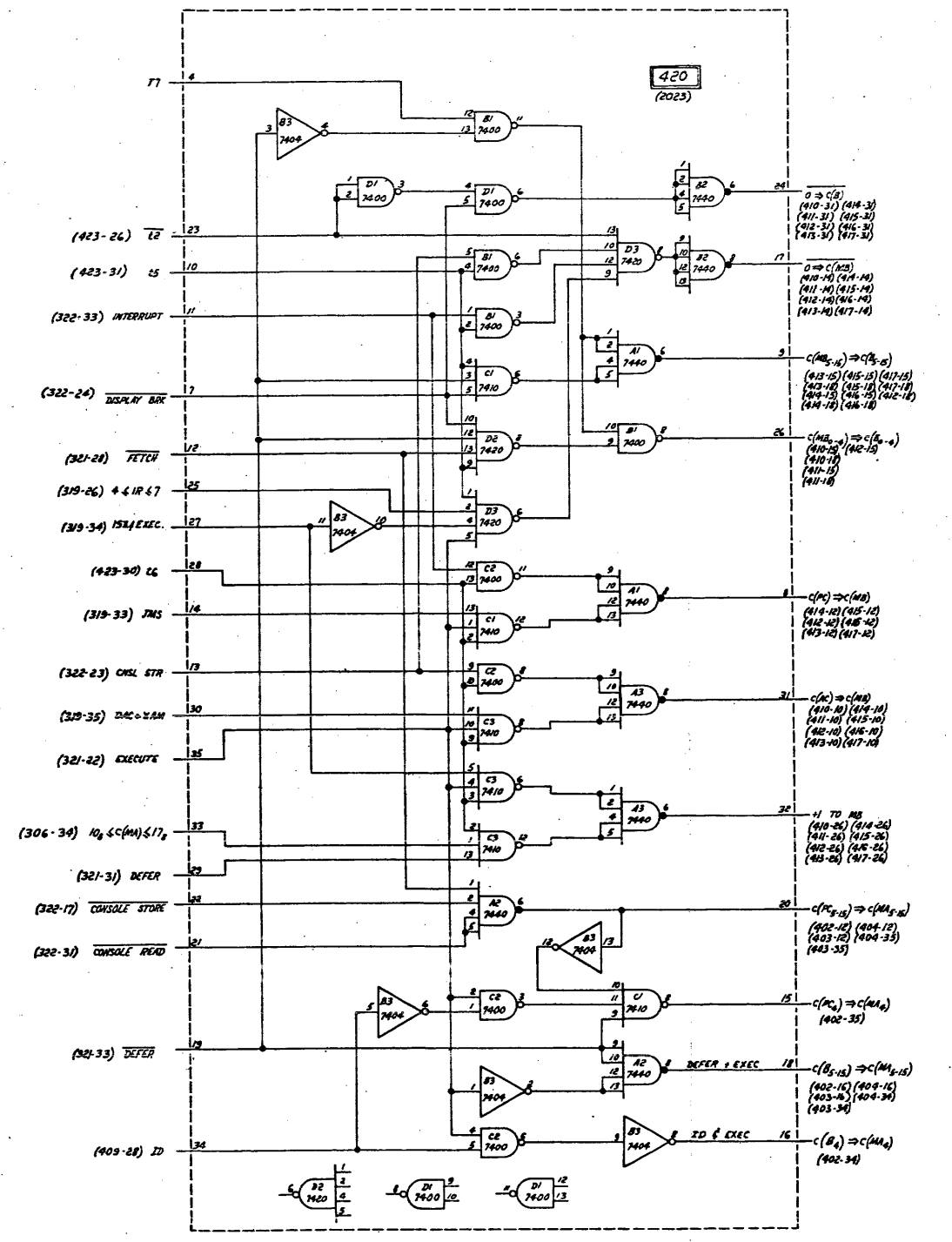
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BO. 321 CHECKED AGAINST SCH. 2005-10/12/69. J.V.		BY DATE LAYOUT J.K. 2-8-69 DRAWN J.W. 2-8-69 CHECKED APPROVED: H.D.B. 4-13-70 ISSUE COPIED MATERIAL	IMLAC 36 Pleasant St. Watertown, Mass. 02172 PROJECT PRODUCTION UNITS	TITLE CYCLE CONTROL PREFIX SIZE DRAWING NUMBER REV. L D 557 A
--	--	--	---	---

REV. 2-2-70 J.V.
 REV. 1-5-70 H.M.
 REV. 2-2-70 J.V.
 REV. 2-24-70 H.M.
 REV. 3-3-70 H.M.
 REV. 3-4-70 H.M.
 REV. 3-5-70 H.M.
 REV. 4-13-70 H.M.
 REV. 2-20-72 H.M.



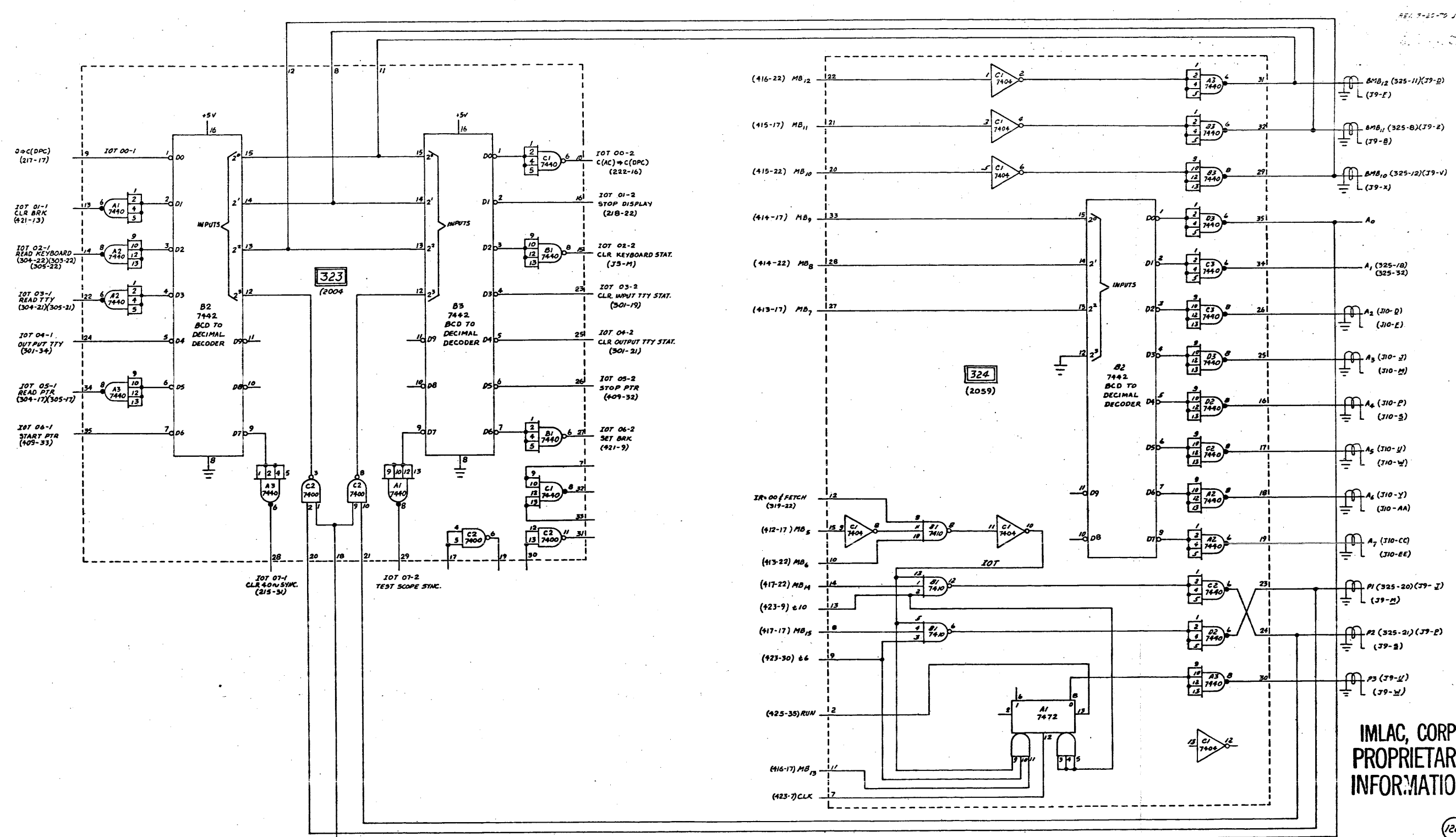
PC CONTROL



B & MB & MA CONTROL

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CHECKED AGAINST SCHEMATICS 2006 & 2023 REV. 1-28-70 J.V. CHECKED BD 420 AGAINST SKEM. 2025 REV A 2-270 H.M.		BY A.C.M.	DATE 1-27-70	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM MASSACHUSETTS 02154	TITLE PC CONTROL & B & MB & MA CONTROL		
DRAWN H.C.M.	1-28-70	CHECKED J.B.G.	4-13-70		PREFIX L D	SIZE 645	REV. D
APPROVED		ISSUE		MATERIAL	PROJECT	Scale	Sheet



IOT FORMAT

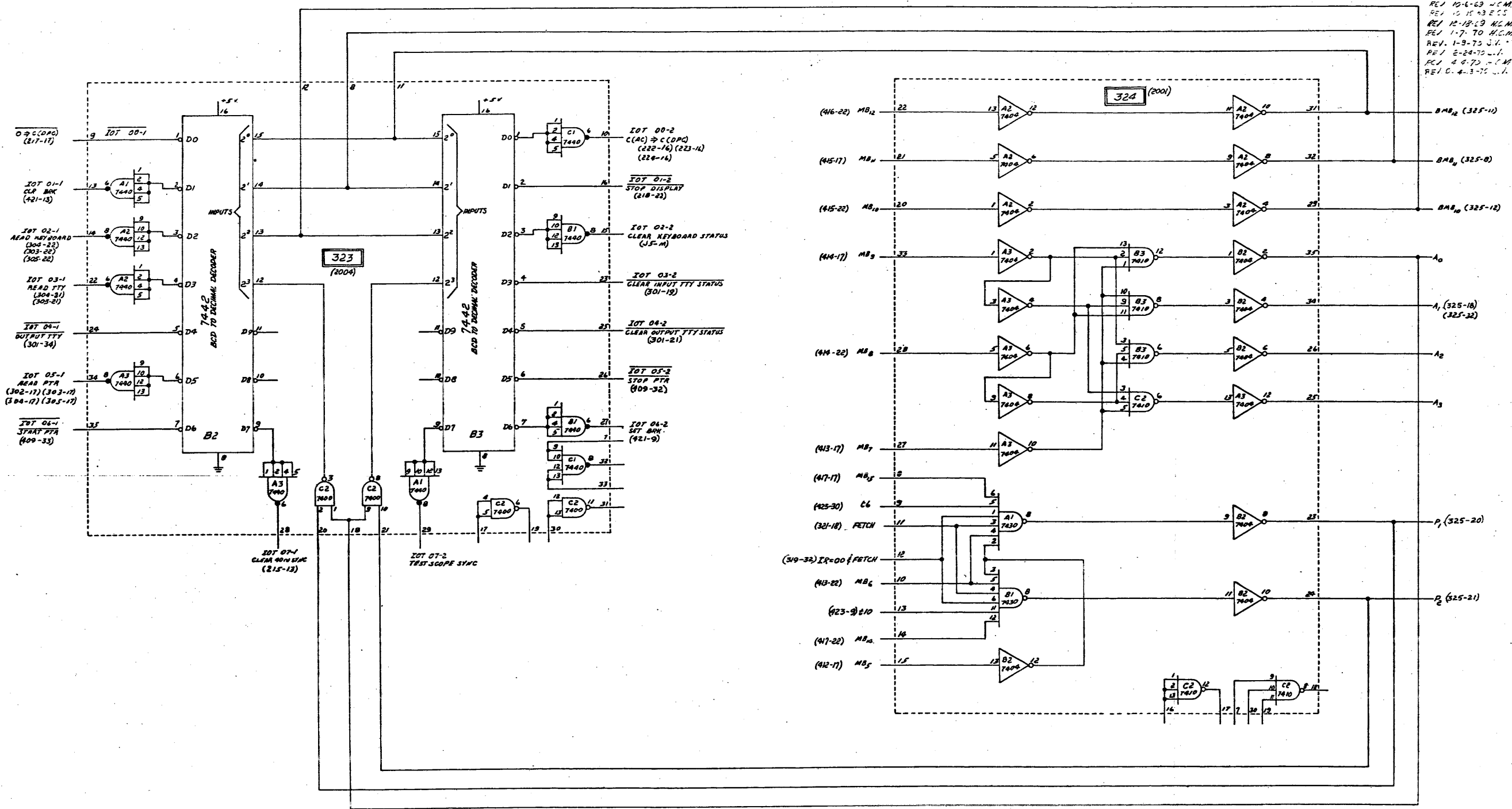
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AB = DEVICE NUMBER

REV 324 CHECKED AGAINST SK 2059 KCM 2-23-70	BY DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE
REV 324 CHECKED AGAINST ARTWORK 01-11-57-1 AM 2-23-70	LAYOUT		EXPANDED IO CONTROL
	DRAWN		PREFIX
	CHECKED		SIZE
	APPROVED		DRAWING NUMBER
	ISSUE	680	REV.
	COPIED		
	MATERIAL	PROJECT	
		PRODUCTION UNITS	

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REV 1-12-70 H.C.M.
 REV 8 10-2-69 H.C.M.
 REV 10-16-63 H.C.M.
 REV 10-15-63 E.C.S.
 REV 12-12-63 H.C.M.
 REV 1-7-70 H.C.M.
 REV 1-9-70 J.V.
 REV 2-24-70 J.V.
 REV 4-9-70 H.C.M.
 REV 6-4-70 J.V.



IOT FORMAT

0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0	0	0	0	0	0	1	A	B	0	P1	P1				

AB=DEVICE NUMBER

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REV 1-12-70 H.C.M.
 REV 8 10-2-69 H.C.M.
 REV 10-16-63 H.C.M.
 REV 10-15-63 E.C.S.
 REV 12-12-63 H.C.M.
 REV 1-7-70 H.C.M.
 REV 1-9-70 J.V.
 REV 2-24-70 J.V.
 REV 4-9-70 H.C.M.
 REV 6-4-70 J.V.

NOTE: REPLACES LOGIC SHOWN ON
 DWG 563

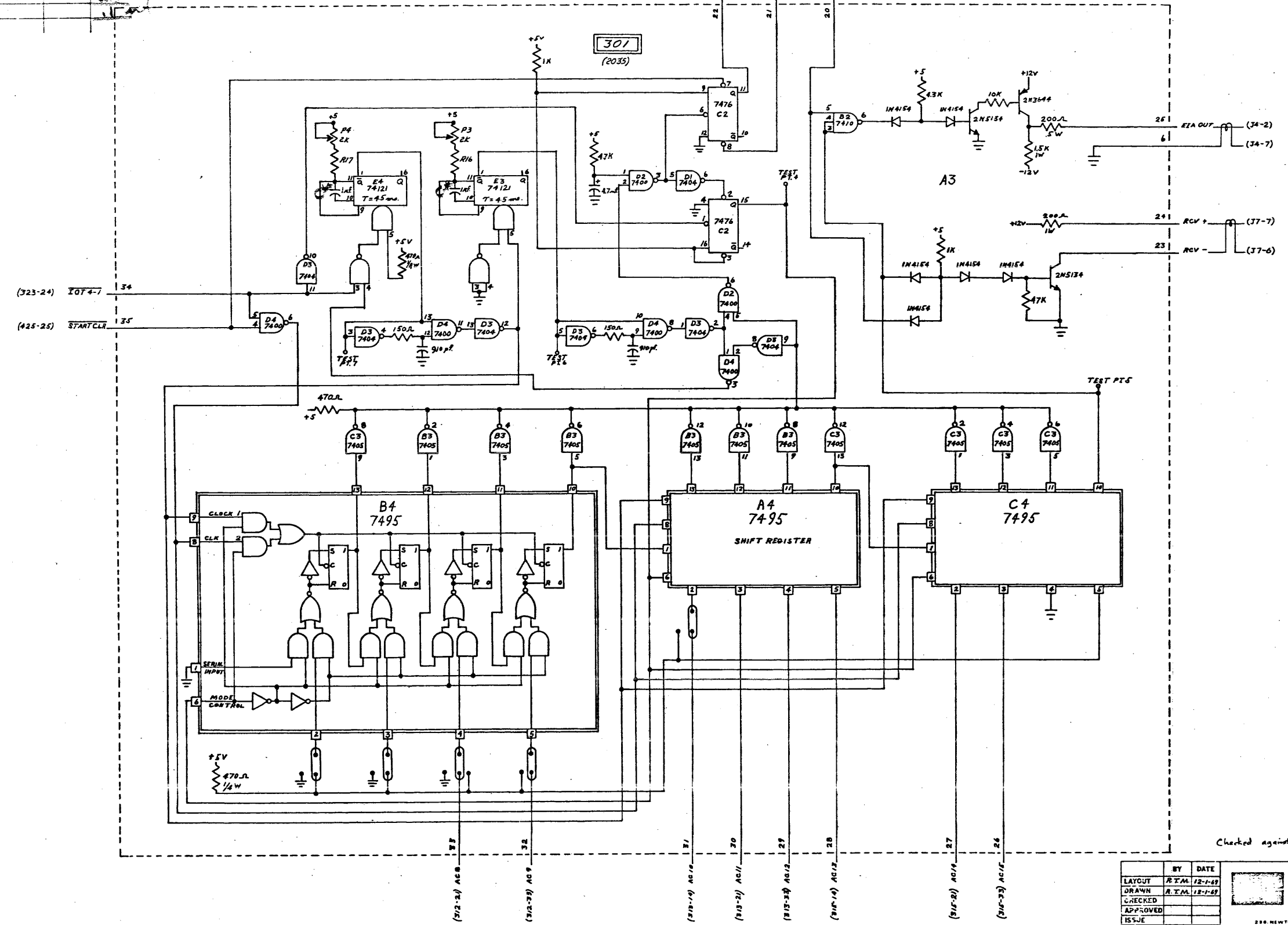
12

BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 01984	TITLE	
LAYOUT	J.V. 7-9-67		STANDARD IOT CONTROL	
DRAWN	J.V. 7-9-67		PREFIX	SIZE
CHECKED			L	D
APPROVED	H.E.B. 4-13-70		DRAWING NUMBER	REV.
ISSUE		621	D	
COPIED		Scale	Sheet	
MATERIAL		PROJECT	PRODUCTION UNITS	

	110 BAUD	300 BAUD	
R 16	5.1K	12K	2*
R 17	5.1K	12K	2*

(418-24) TTY
 (323-25) CLR TTY
 (421-10) OUTPUT STATUS GND TO BRK

234 12-2-69
 235 12-2-69
 236 12-2-69
 237 12-2-69



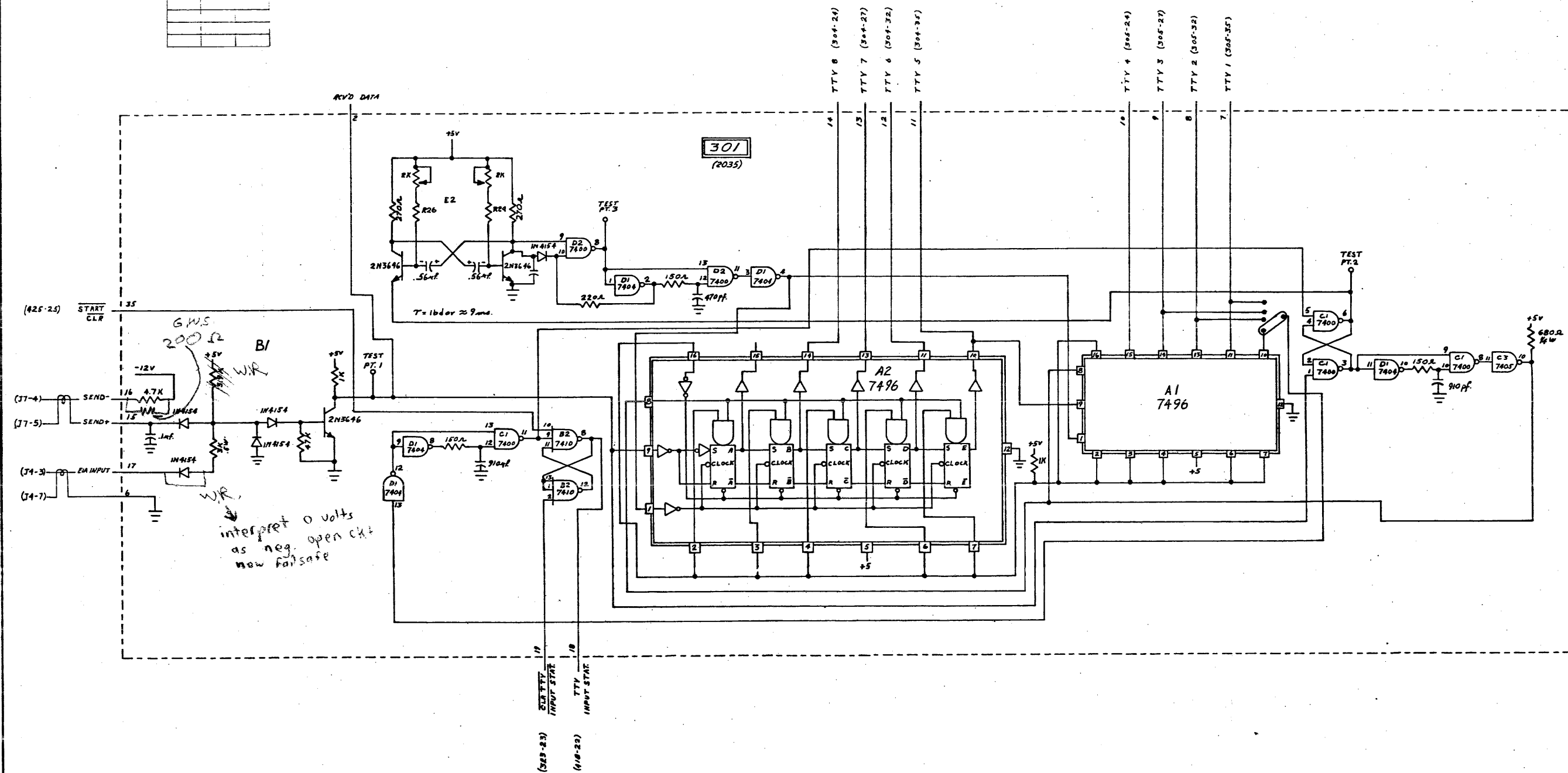
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Checked against schematic 12-2-69 B. Faust

16

LAYOUT	BY	DATE	 IMLAC CORPORATION 230 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	R.T.M.	12-1-69		TTY TRANSMIT		
CHECKED	R.T.M.	12-1-69		PREFIX	SIZE	DRAWING NUMBER
APPROVED				L		661
ISSUE						
COP. ED.						
MATERIAL	PROJECT		PRODUCTION UNITS			
			Sc: 15			

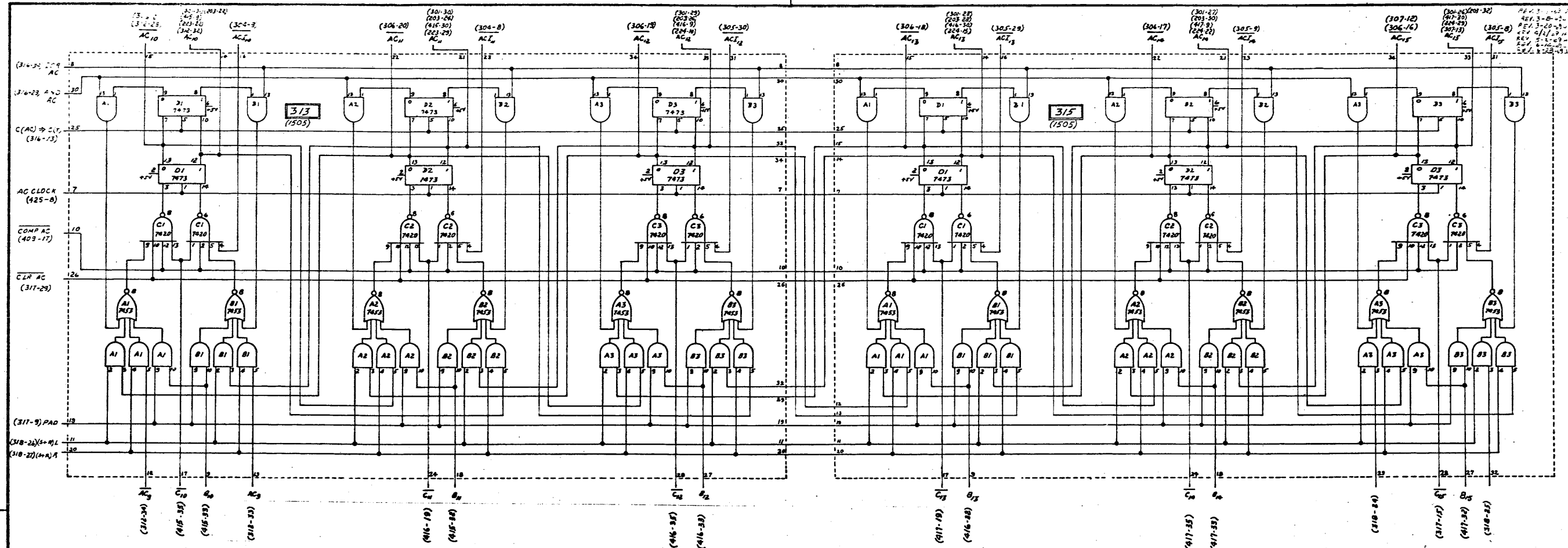
	100	300
	BAUD	BAUD
R26	10K	3K
R24	11K	4.3K



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Checked against Schematics 12-2-67 B. Faust

LAYOUT	BY DATE	R.T.M. 12-2-67	TITLE	TTY RECEIVE
DRAWN	BY DATE	R.T.M. 12-2-67	IMLAC CORPORATION	
CHECKED			288 NEWTON STREET	
APPROVED			WALTHAM, MASSACHUSETTS 02154	
ISSUE				
COPIED				
MATERIAL	PROJECT	PRODUCTION UNITS	PREFIX	SIZE
			L	D
			662	REV.
				5
			Scale	Sheet

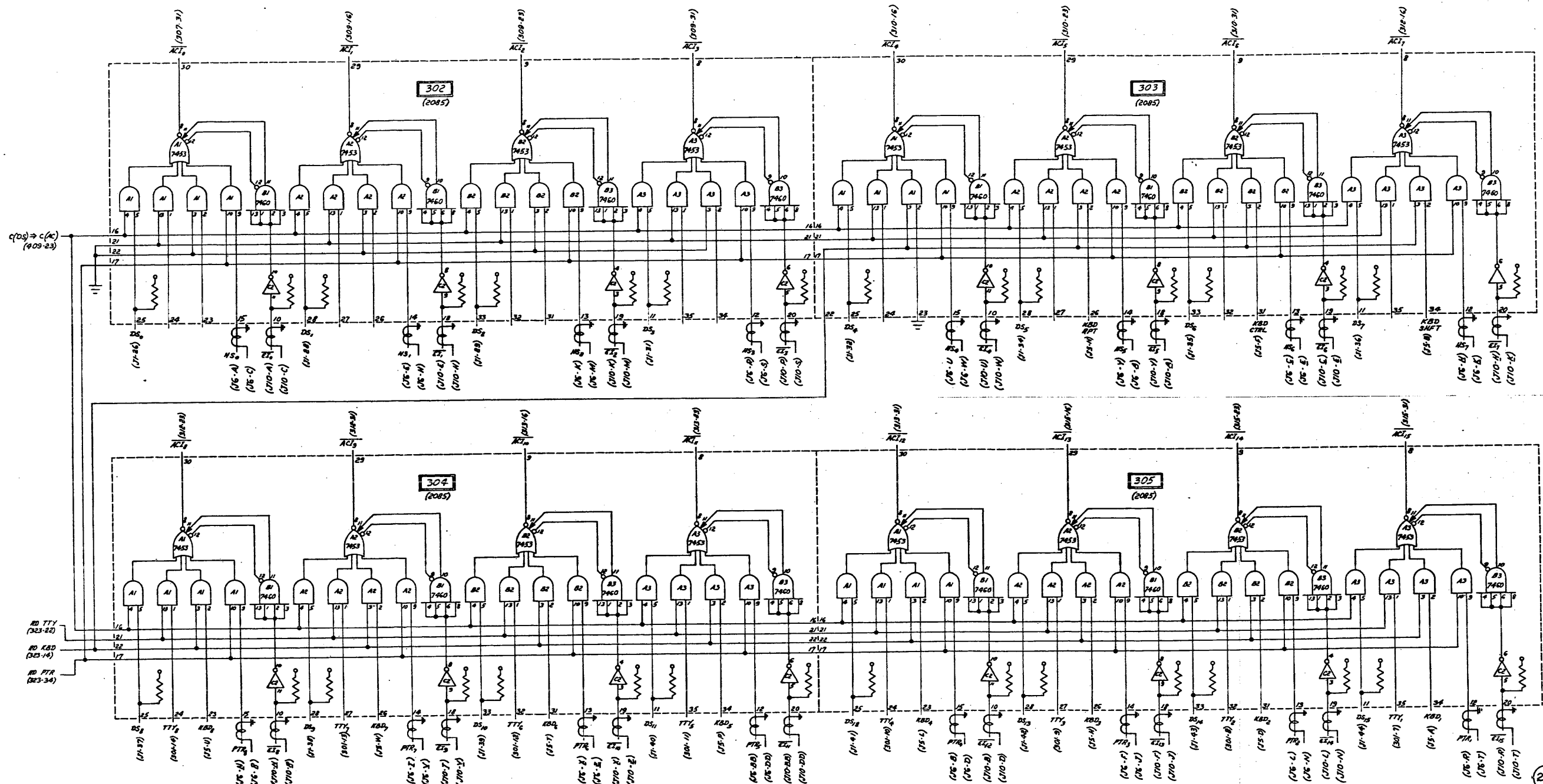


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REV. A 4-13-70 J.V.
 REV 4-3-70 N.C.M.
 REV 1-8-70 N.C.M.
 REV A 10-19-69 N.C.M.
 REV 10-19-69 N.C.M.
 REV 10-2-69 N.C.M.
 REV 10-1-69 N.C.M.

BY		DATE	TITLE	
LAYOUT	J.V.	11-1-68	ACCUMULATOR	
DRAWN	J.V.	11-1-68	BITS 10-15	
CHECKED				
APPROVED	J.D.D.	9-13-70		
ISSUE				
COPIED				
MATERIAL			PROJECT	
IMLAC			PRODUCTION UNITS	
36 Pleasant St. Watertown, Mass. 02172			PREFIX	SIZE
			L	D
			DRAWING NUMBER	REV.
			513	A
			Scale	Sheet

PC1 3-12-70 -24
 EE1 3-20-70
 PE1 4-3-70 H. V.



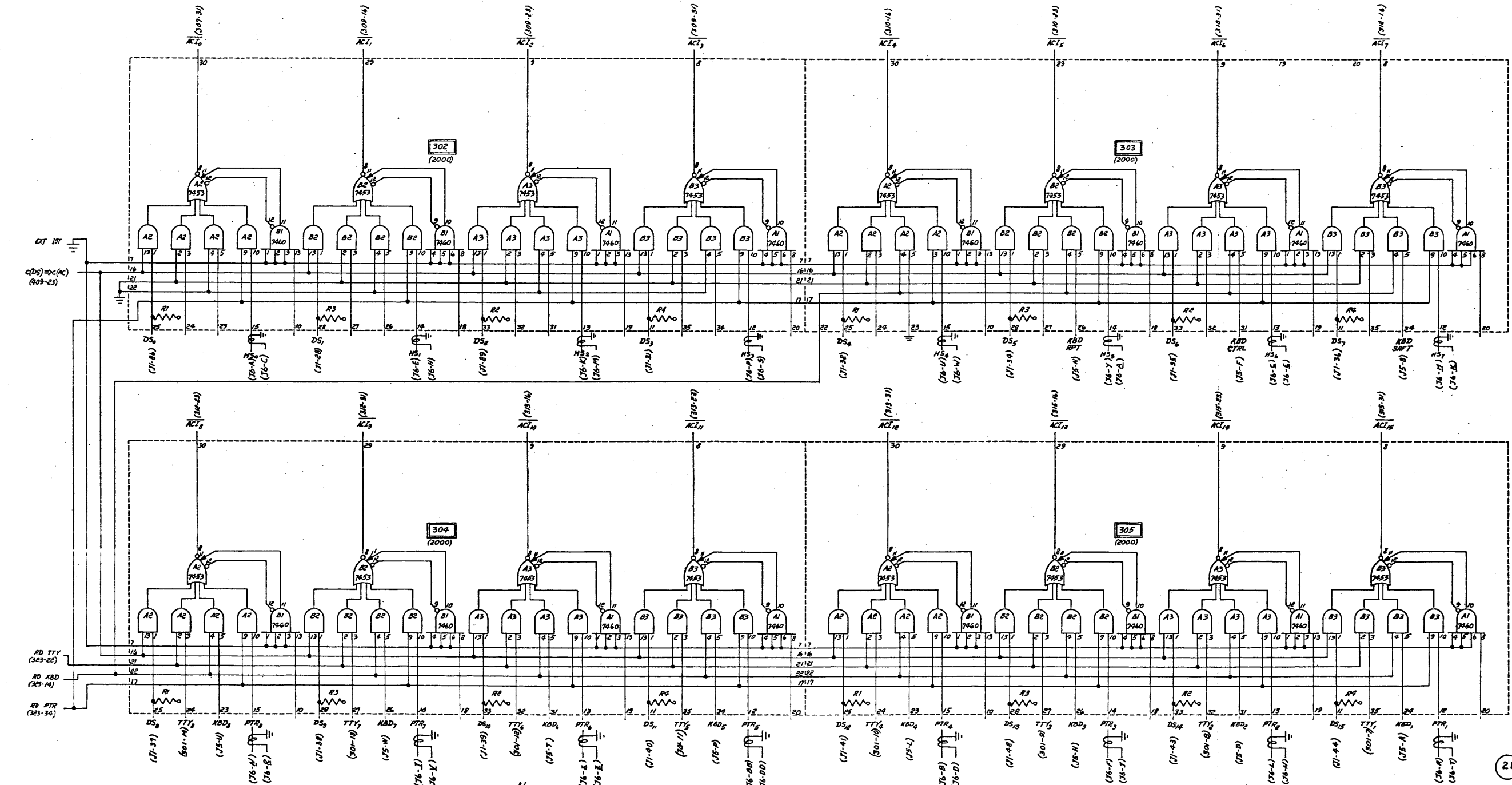
QDS → C(A)
 (909-23)

NO TTY
 (323-22)
 NO KBD
 (323-14)
 NO PTR
 (323-34)

- NOTES:
1. ALL RESISTORS ON DS LINES ARE 47K 1/4 W.
 2. ALL RESISTORS ON EXPANDED IO LINES ARE 330Ω 1/4 W.
 3. ALL RESISTORS ARE CONNECTED TO +5V UNLESS SPECIFIED OTHERWISE.
 4. INDICATES A PULL UP, UNLESS SPECIFIED OTHERWISE.


ALL BBS CHECKED AGAINST SLD/DBS ICM 3-30-70		BY	DATE	 IMLAC CORPORATION 300 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE
LAYOUT	KCM	3-26-70			ACC INPUT MIXER FOR EXPANDED IO
DRAWN	KCM	3-23-70			PREFIX SIZE
CHECKED					DRAWING NUMBER
APPROVED	JDS	4-13-70			678
ISSUE					REV.
COPYED				Scale	Sheet
MATERIAL				PROJECT	
				PRODUCTION UNITS	

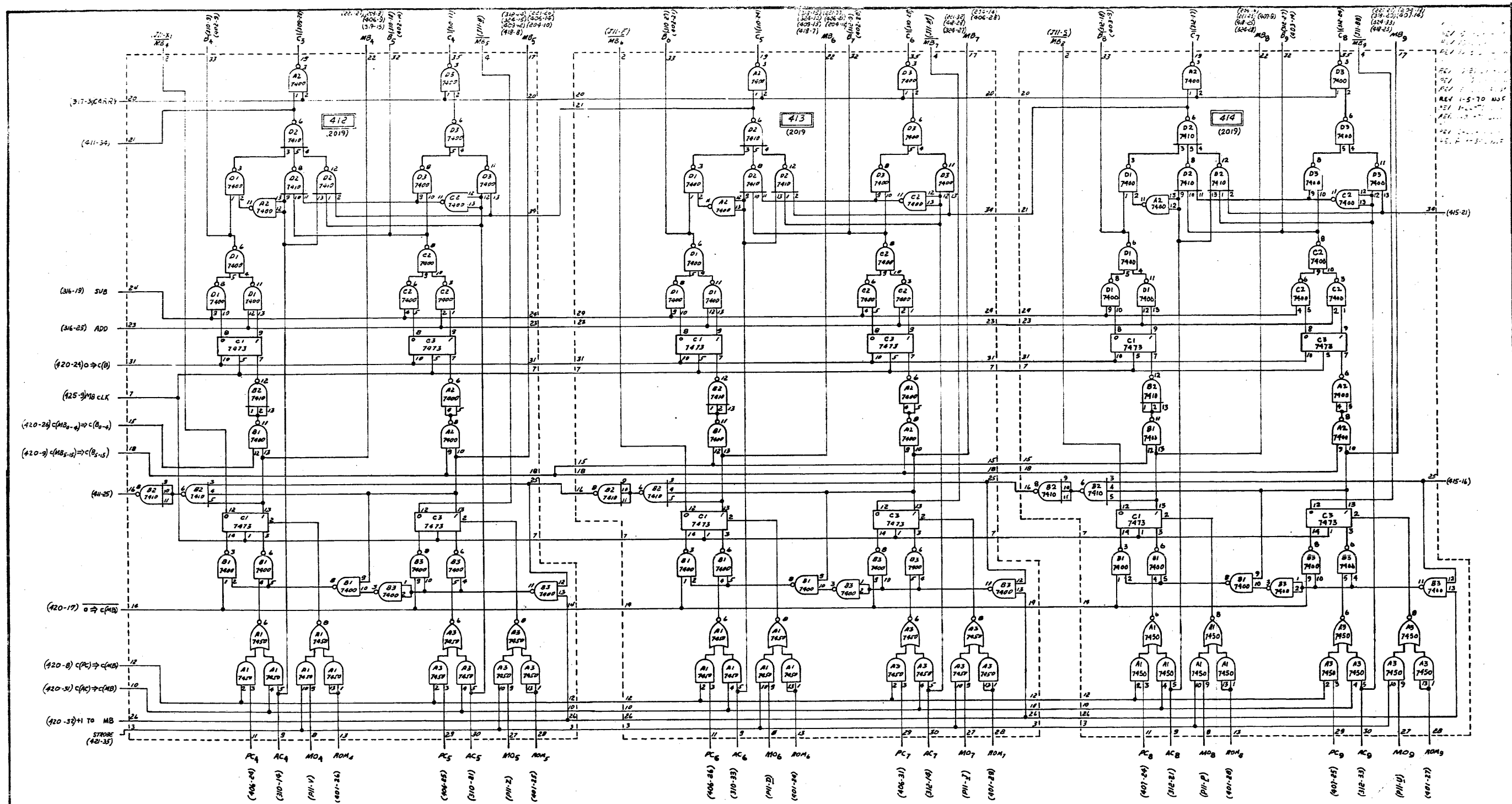
ACI - ISOLATED ALL 7440
 PA-PAGES ON ALL BD'S
 H.C.M. 2-15-69
 REV 10-2-69 H.C.M.
 REV 12-9-69 H.C.M.
 REV 1-12-70 J.V.
 REV 4-3-73 H.C.M.



NOTE:
 1. ALL RESISTORS ARE 47K 1/4W, UNLESS SPECIFIED OTHERWISE.
 2. ALL RESISTORS ARE CONNECTED TO +5V UNLESS SPECIFIED OTHERWISE.

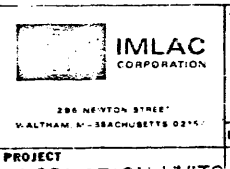
IMLAC, CORP.
 PROPRIETARY
 INFORMATION

BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	
LAYOUT	H.C.M. 2-29-67		AC INPUT MIXER	
DRAWN	H.C.M. 2-30-69		FOR STANDARD IO	
CHECKED			PREFIX	SIZE
APPROVED	J.B.D. 4-13-70		L	D
ISSUE			DRAWING NUMBER	
COPIED		628		
MATERIAL		PROJECT	Scale	Sheet / of /
		PRODUCTION UNITS		

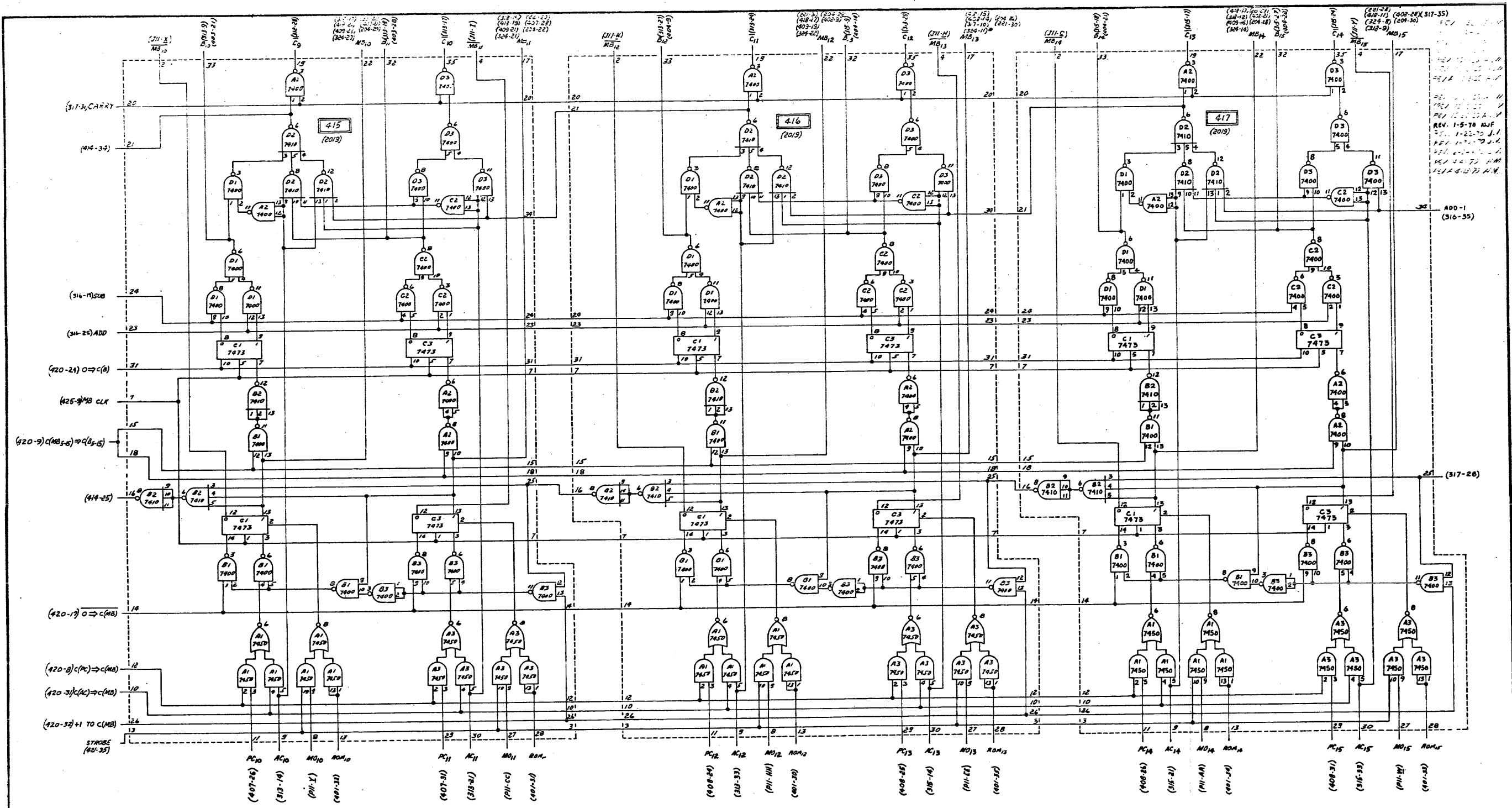


IMLAC, CORP.
 PROPRIETARY
 INFORMATION

BY	DATE
LAYOUT NTF	5-21-69
DRAWN NTF	5-21-69
CHECKED	
APPROVED BDB	7-15-70
ISSUE	
COPIED	
MATERIAL	



TITLE		CARRY LOGIC & MEMORY BUFFER REGISTER	
BITS		4 - 9	
PRELIM	SIZE	DRAWING NUMBER	PC
L	D	635	IA
PROJECT		PRODUCTION UNITS	
Scale		15mm	



REV. 1-5-78 AJF
 1-22-78 J.J.
 1-23-78 J.J.
 1-24-78 J.J.
 1-24-78 J.J.
 1-24-78 J.J.

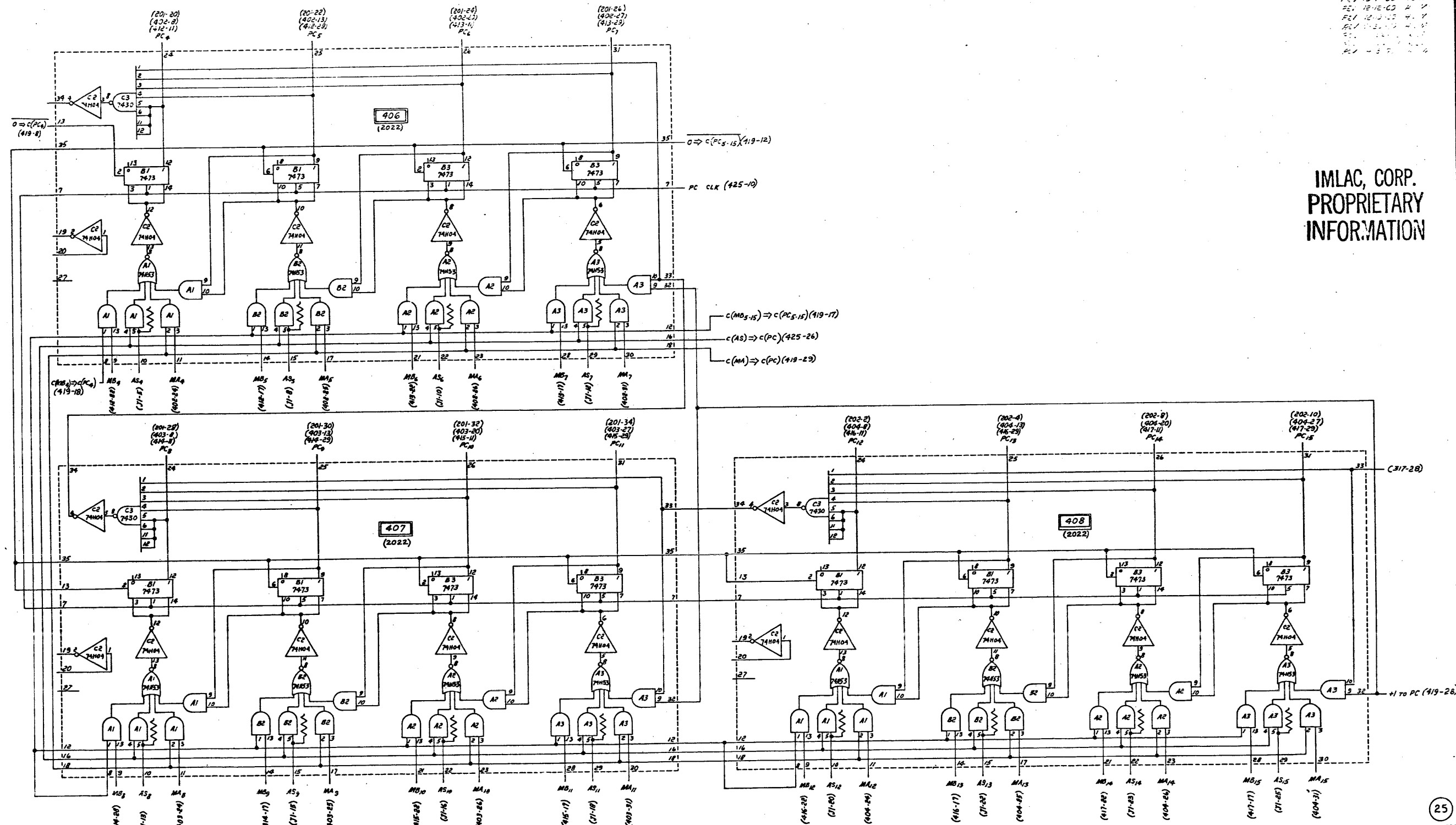
Note
 * CONNECTION FOR EXPANDED IO.

IMLAC, CORP.
 PROPRIETARY
 INFORMATION

BY DATE	BY DATE	IMLAC CORPORATION	TITLE CARRY LOGIC & MEMORY BUFFER REGISTER BITS 10-15
LAYOUT MCM 9-20-68	BY DATE 9-20-68		
EX-10N BCB 9-20-68	BY DATE 9-20-68	318 ALLEN STREET WALTHAM, MASSACHUSETTS 01184	PREFIX SIZE
CHECKED	BY DATE		L D
APPROVED MBB 9-19-78	BY DATE	PROJECT	DRAWING NUMBER:
COPIED	BY DATE	PRODUCTION UNITS	632
MATERIAL	BY DATE	Scale	Sheet
	BY DATE		4

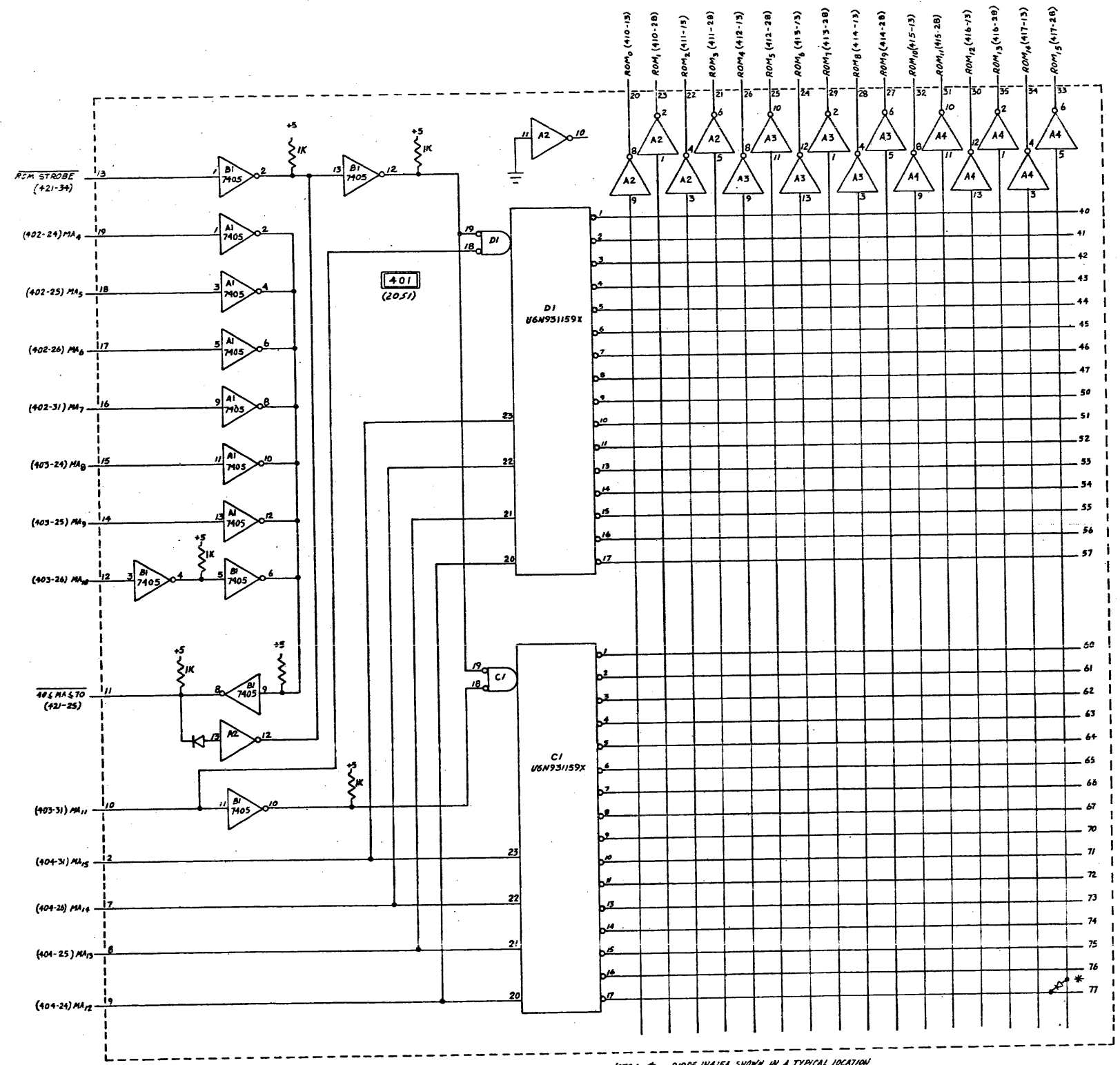
FEI 9-25-63 H.C.M.
 FEI 10-1-63 H.C.M.
 FEI 12-12-63 H.C.M.
 FEI 12-12-63 H.C.M.
 FEI 12-12-63 H.C.M.
 FEI 12-12-63 H.C.M.
 FEI 12-12-63 H.C.M.

IMLAC, CORP.
 PROPRIETARY
 INFORMATION



NOTES:
 1 ALL RESISTORS ARE 1K, 1/4 W AND ARE CONNECTED TO +5V.

BY	DATE	 IMLAC CORPORATION 238 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
LAYOUT	H.C.M.		PROGRAM COUNTER		
DRAWN	H.C.M.		BITS 4-15		
CHECKED	H.C.M.		PREFIX	SIZE	DRAWING NUMBER
APPROVED	H.C.M.		L	D	636
ISSUE		PROJECT	Scale	Sheet	REV.
COPIED		PRODUCTION UNITS			

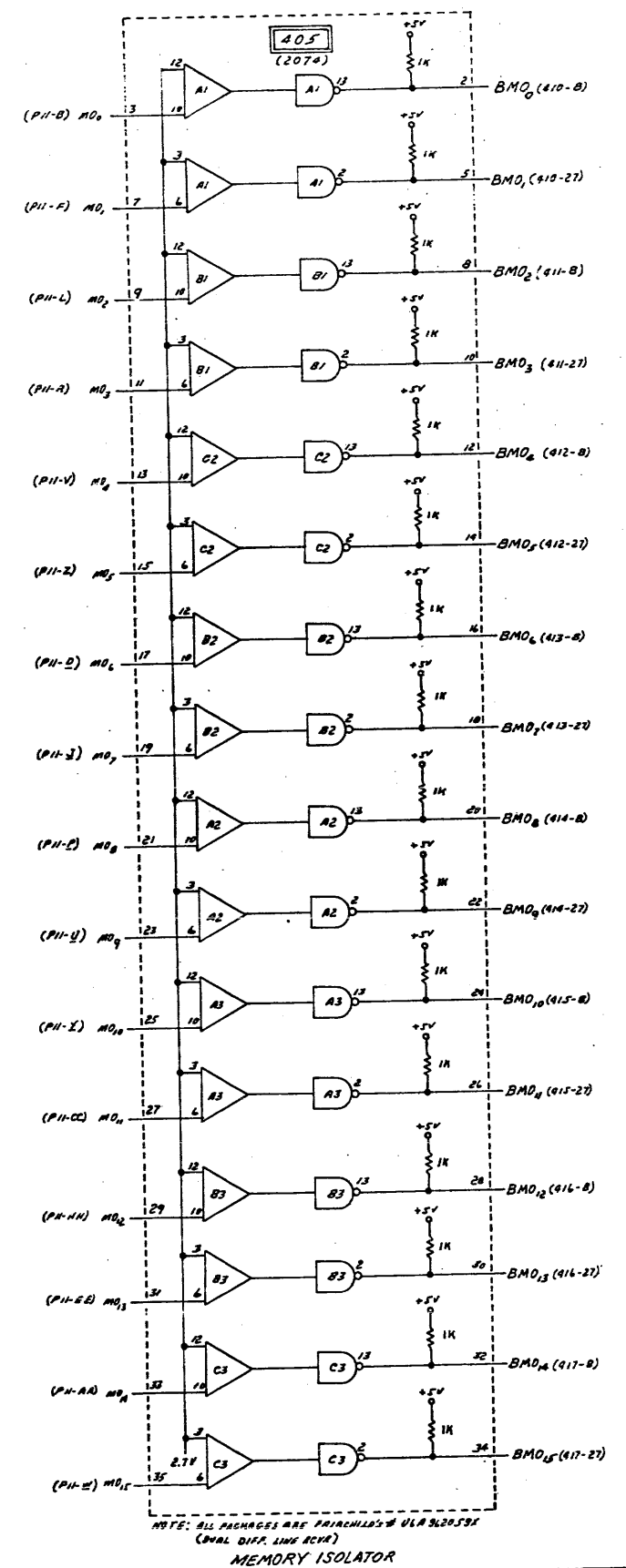
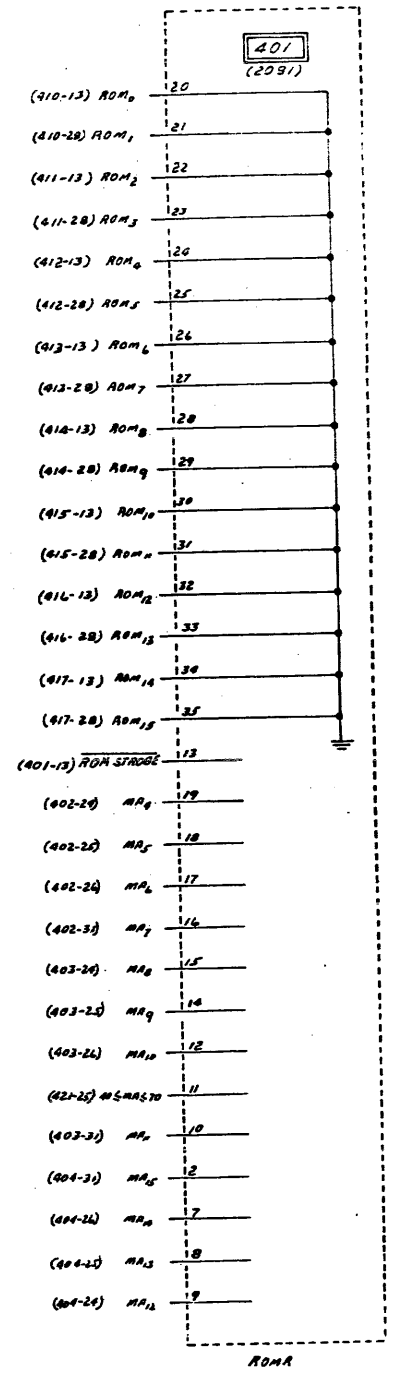


NOTE 1. * DIODE IN 4154, SHOWN IN A TYPICAL LOCATION TO PROGRAM UP TO 32 ADDRESSES. A DIODE IS USED TO GENERATE A "0" IN THE OUTPUT WORD.

IMLAC, CORP.
 PROPRIETARY
 INFORMATION

27-A

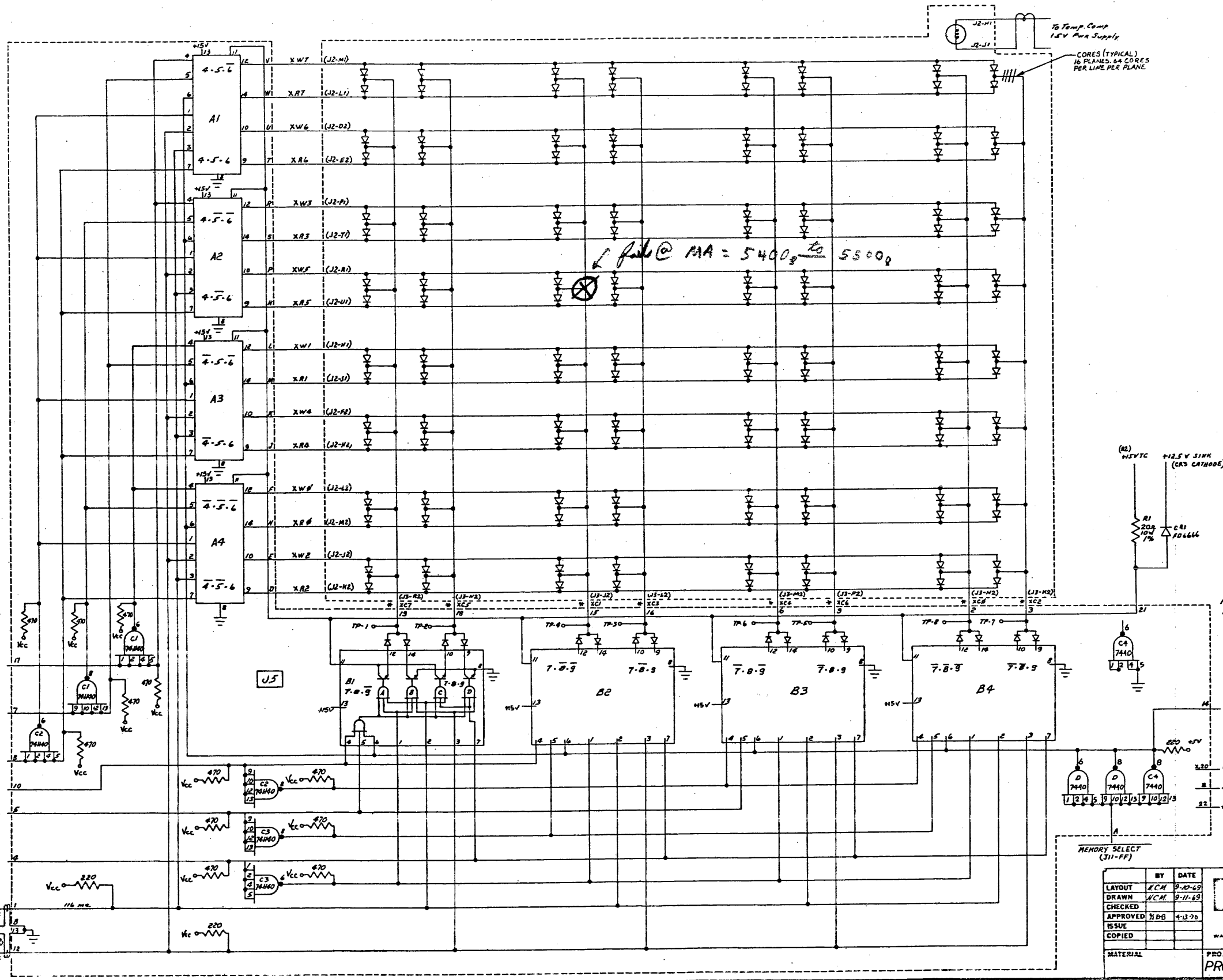
BY		DATE		TITLE	
LAYOUT	NJF	2-24-70	IMLAC CORPORATION		READ ONLY MEMORY
DRAWN	NJF	2-11-70	288 NEWTON STREET		
CHECKED			WALTHAM, MASSACHUSETTS 02154		
APPROVED			PREFIX	SIZE	DRAWING NUMBER
ISSUE			L	D	691
COPIED			Scale		Sheet
MATERIAL		PROJECT			



IMLAC, CORP.
 PROPRIETARY
 INFORMATION

BY DATE		 224 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	
LAYOUT	J.K. 6-1-70		MEMORY ISOLATOR & READ ONLY MEMORY REPLACEMENT	
DRAWN	J.V. 6-1-70		PREFIX	SIZE
CHECKED			L	D
APPROVED			DRAWING NUMBER	676
ISSUE		Scale	Sheet	
COPIED		PROJECT		
MATERIAL				

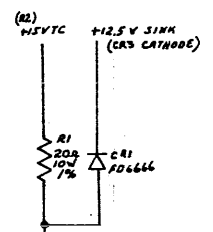
REV. 2-17-70 ADDED CAPACITORS
 REV. 2-26-70
 REV. 3-3-75
 REV. 3-17-75
 REV. 2-24-75
 REV. 2-24-75
 REV. 2-24-75



fail @ MA = 5400 to 5500

TO Temp Comp
 1.5V Para Supply

CORES (TYPICAL)
 16 PLANES, 64 CORES
 PER LINE PER PLANE

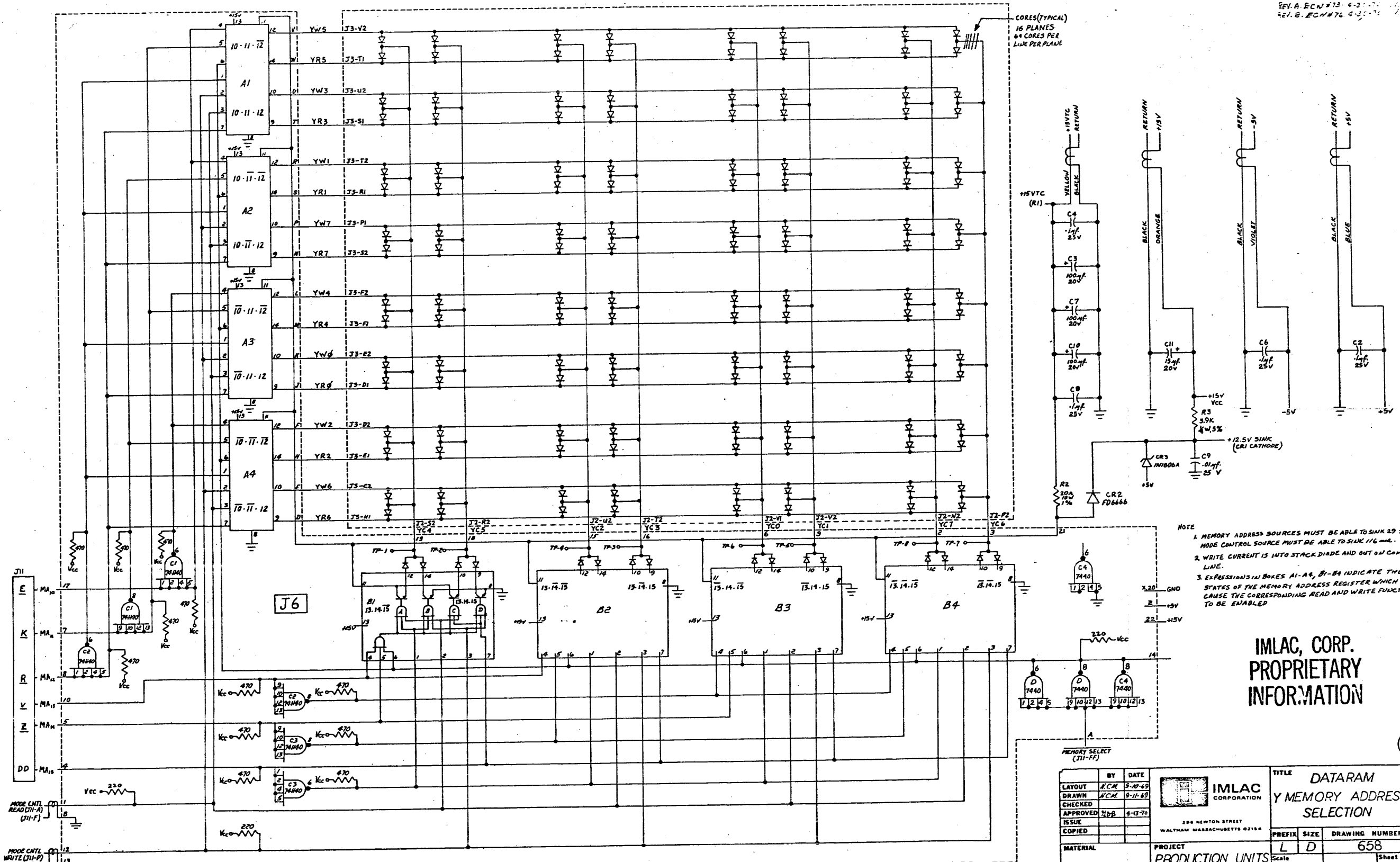


- NOTES:
- 1- MEMORY ADDRESS SOURCES MUST BE ABLE TO SINK 25 mA. MODE CONTROL SOURCES MUST BE ABLE TO SINK 116 mA.
 - 2- WRITE CURRENT IS INTO STACK BIDDIE AND OUT ON COMMON LINE.
 - 3- * INDICATES HAND WIRED CONNECTION.
 - 4- EXPRESSIONS IN BOXES A1-A4 & B1-B4 INDICATE THE STATES OF THE MEMORY ADDRESS REGISTER WHICH CAUSE THE CORRESPONDING READ AND WRITE FUNCTIONS TO BE ENABLED.

IMLAC, CORP.
 PROPRIETARY
 INFORMATION

BY DATE		TITLE	
LAYOUT	KCM 9-10-69	DATARAM XMEMORY ADDRESS SELECTION	
DRAWN	KCM 9-11-69	IMLAC CORPORATION	
CHECKED		288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	
APPROVED	NJB 4-13-76	PREFIX	SIZE
ISSUE		L	D
COPIED		DRAWING NUMBER 659	
MATERIAL		PROJECT	REV. B
		PRODUCTION UNITS	Sheet

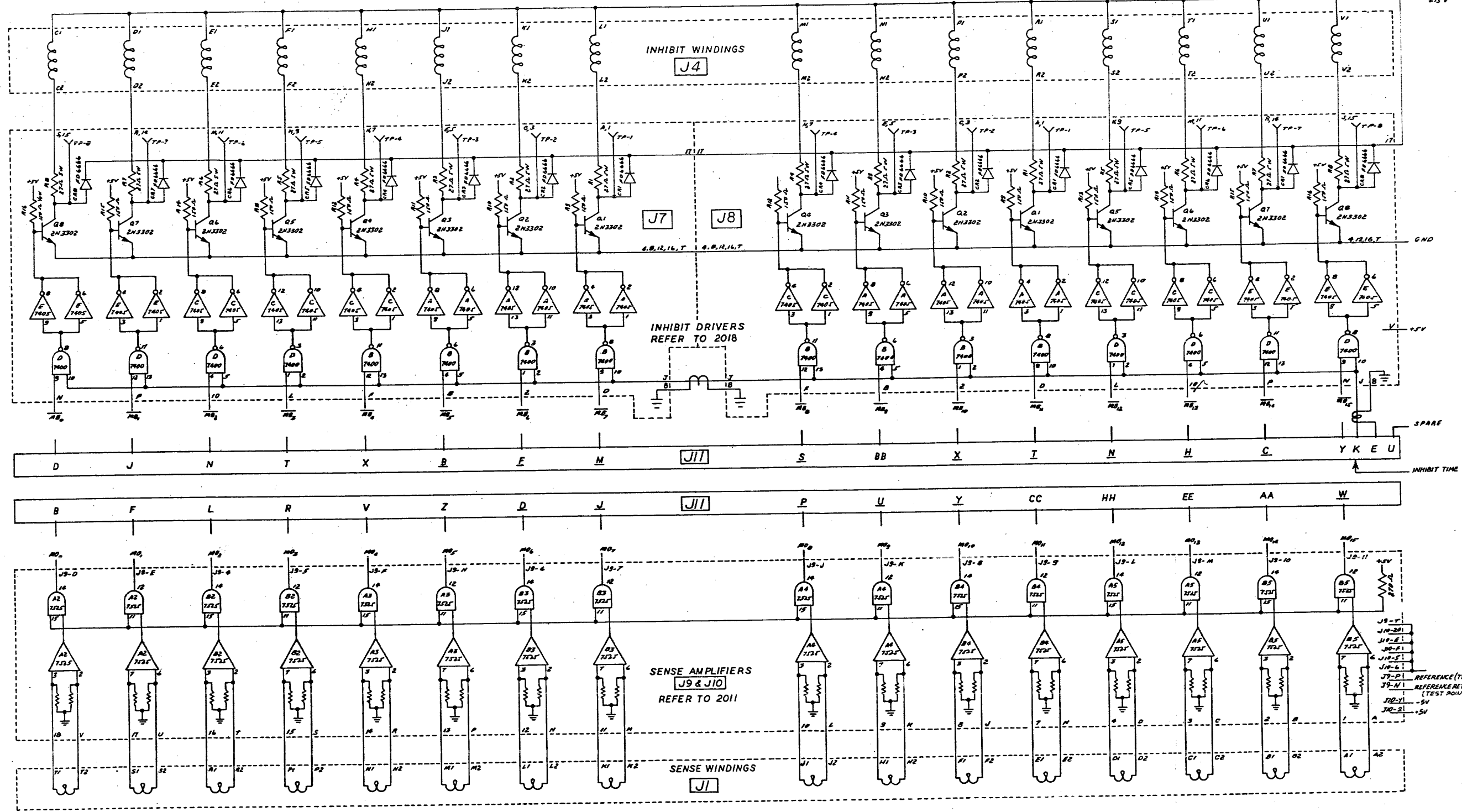
REV. A. ECU #73 6-23-69
 REV. B. ECU #76 6-23-69



IMLAC, CORP.
PROPRIETARY
INFORMATION

LAYOUT	BY	DATE	 IMLAC CORPORATION 226 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		DATARAM	
DRAWN	KCM	5-10-69		Y MEMORY ADDRESS		SELECTION	
CHECKED	KCM	5-11-69		PREFIX	SIZE	DRAWING NUMBER	REV.
APPROVED	YDB	4-13-70		L	D	658	B
ISSUE				PROJECT	PRODUCTION UNITS	Scale	Sheet
COPIED							
MATERIAL							

COMPENSATED
W15 V



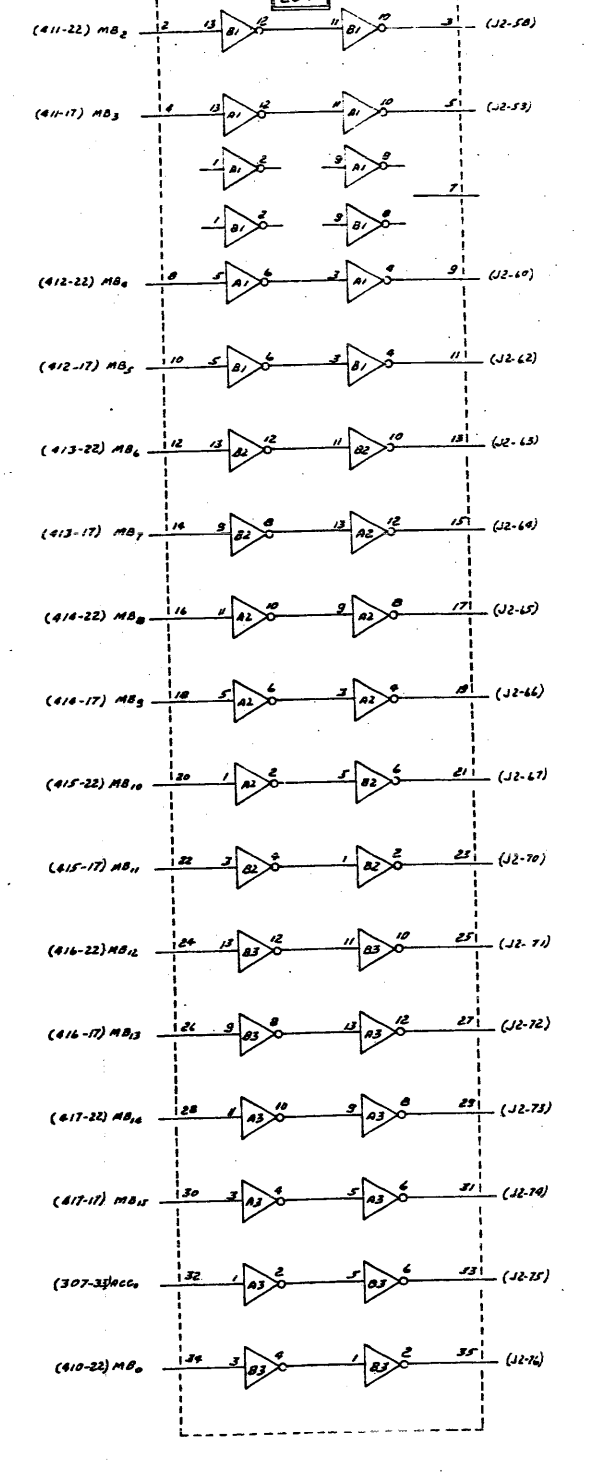
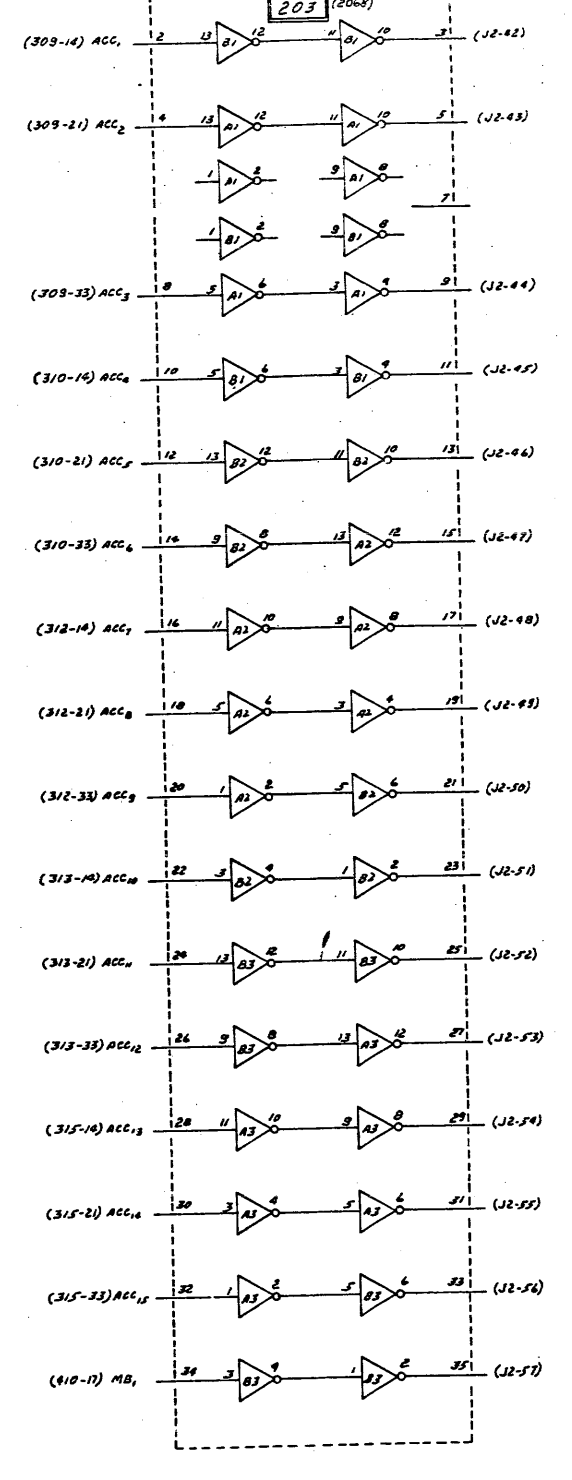
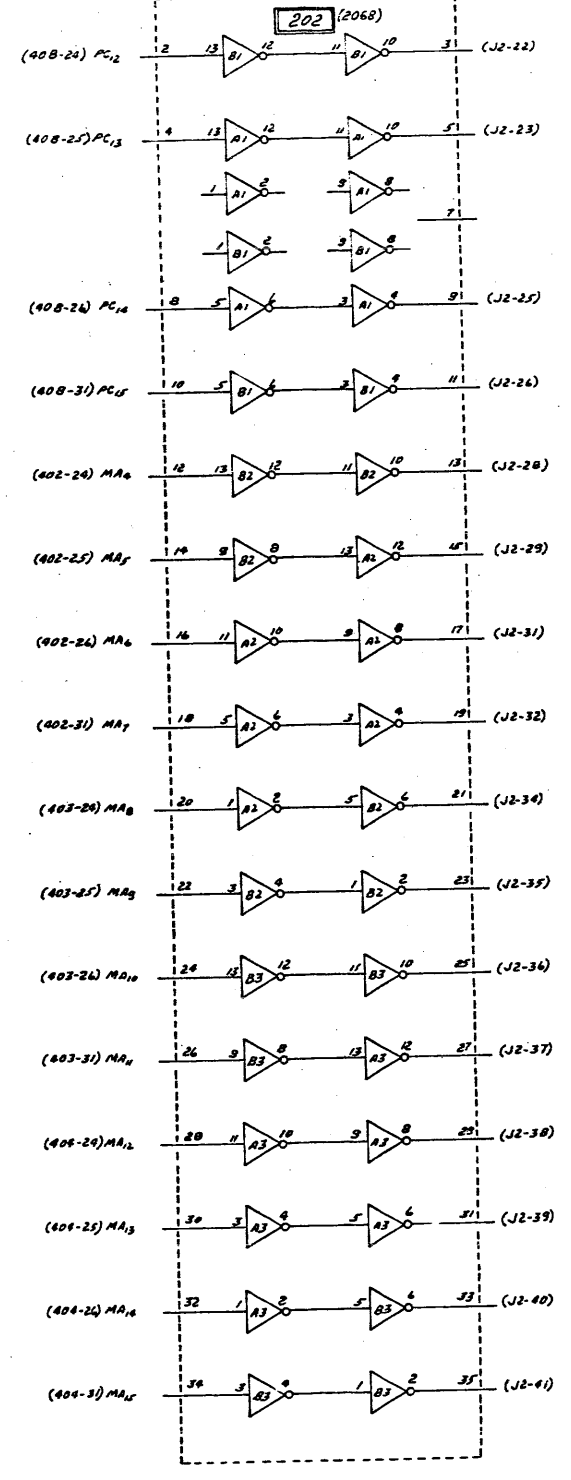
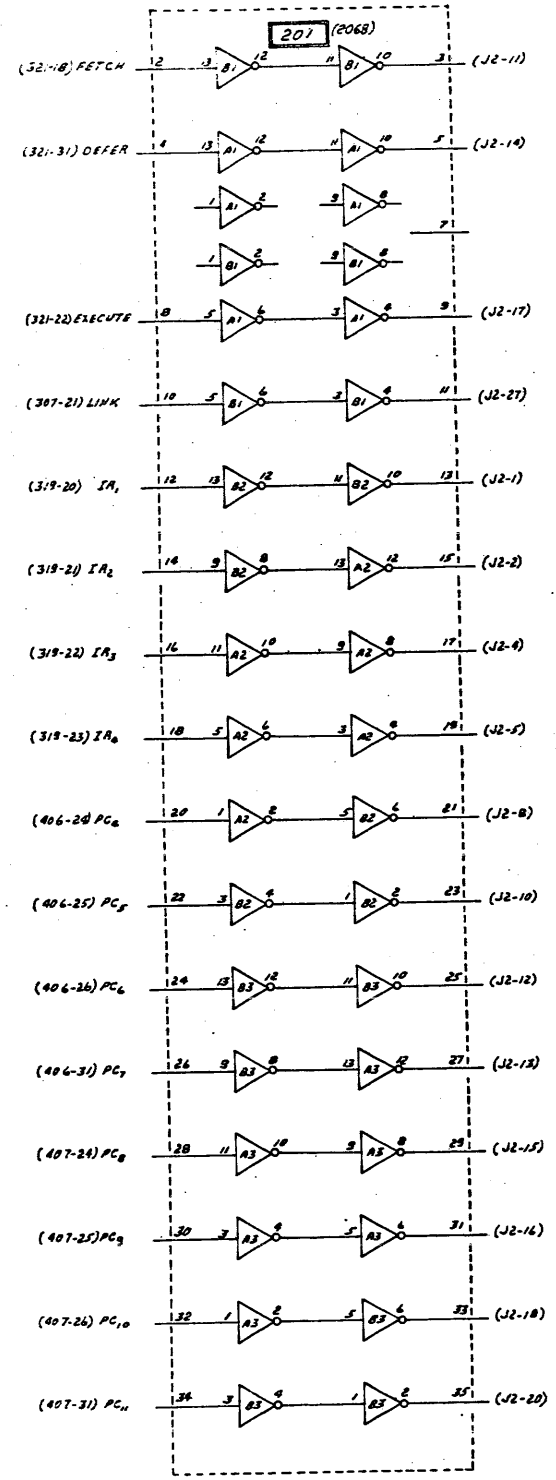
IMLAC, CORP.
PROPRIETARY
INFORMATION

REV. INFORMATION ON SENSE AMPLIFIER & SENSE WINDING
 REVERSE, 1-30-70 J.V.
 REV. ADDD. RES. RETURN 2-17-70 M.V.
 REV. 2-26-70 R.C.M.
 REV. 3-3-70 J.V.

BY	DATE
LAYOUT JY	11-17-65
DRAWN JY	11-18-65
CHECKED	
APPROVED JDD	4-13-70
ISSUE	
COPIED	
MATERIAL	

IMLAC CORPORATION	
288 NEWTON STREET WALTHAM MASSACHUSETTS 02154	
PROJECT	PRODUCTION UNITS

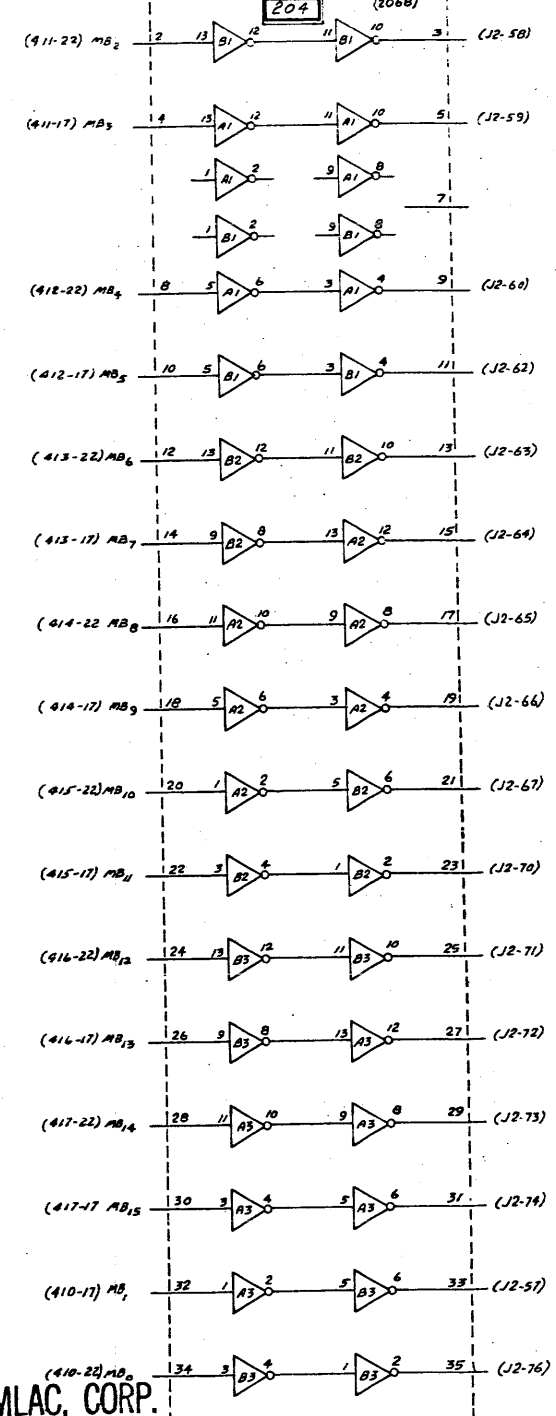
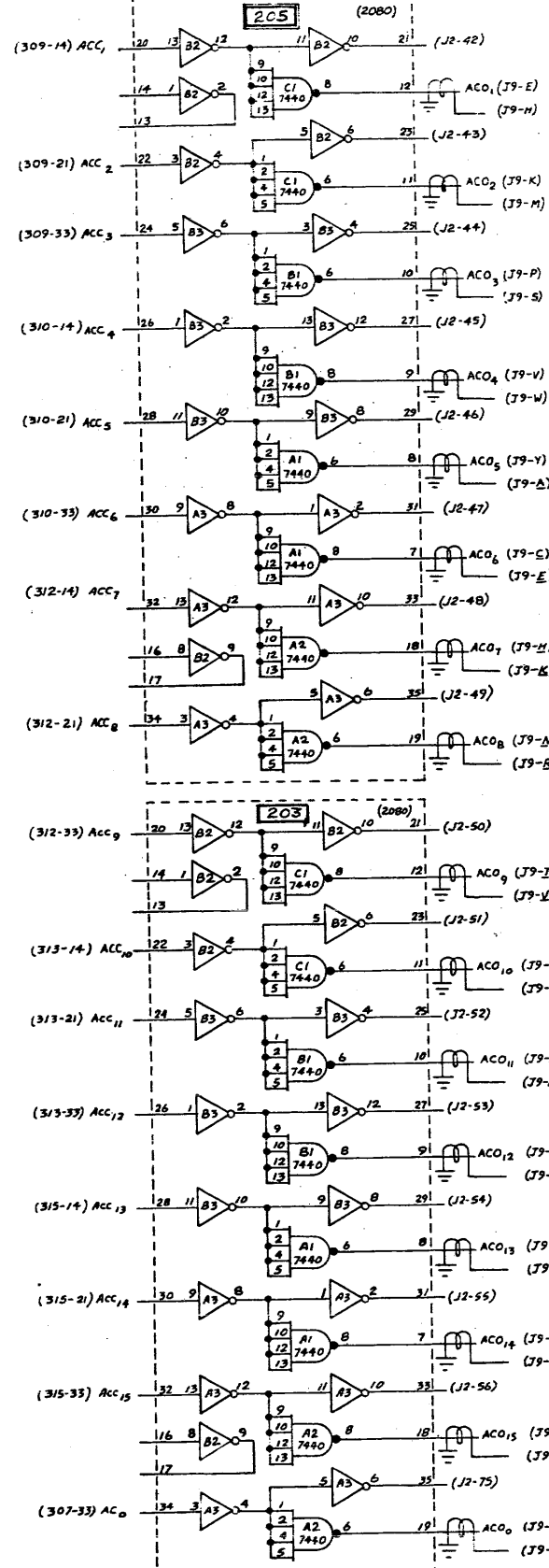
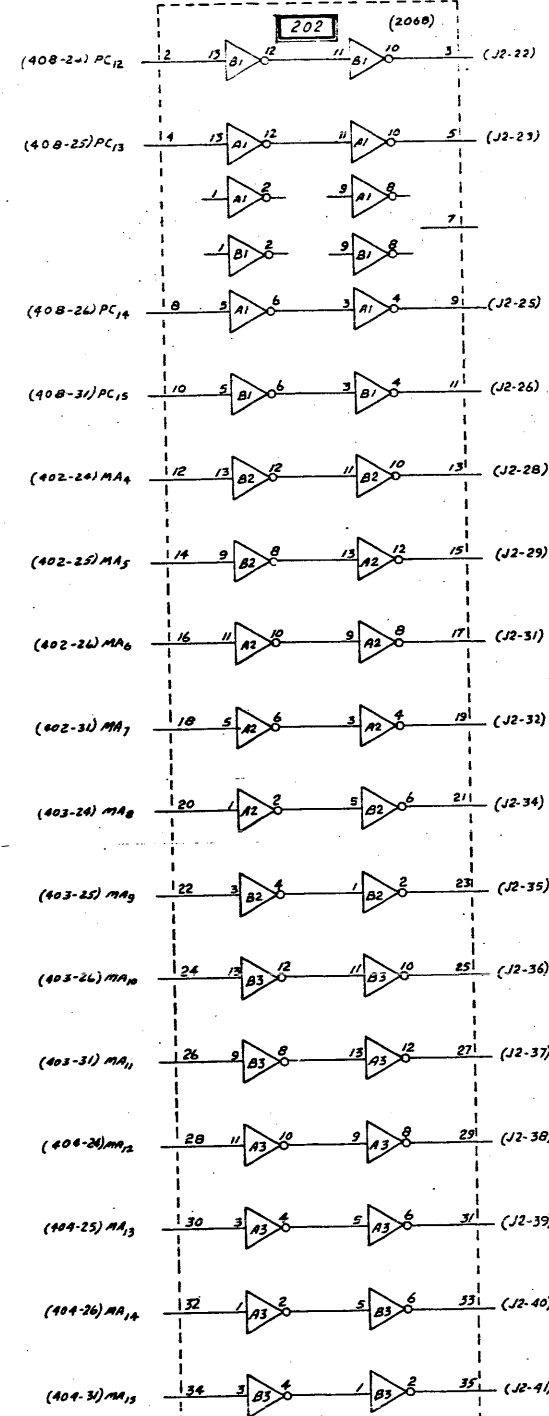
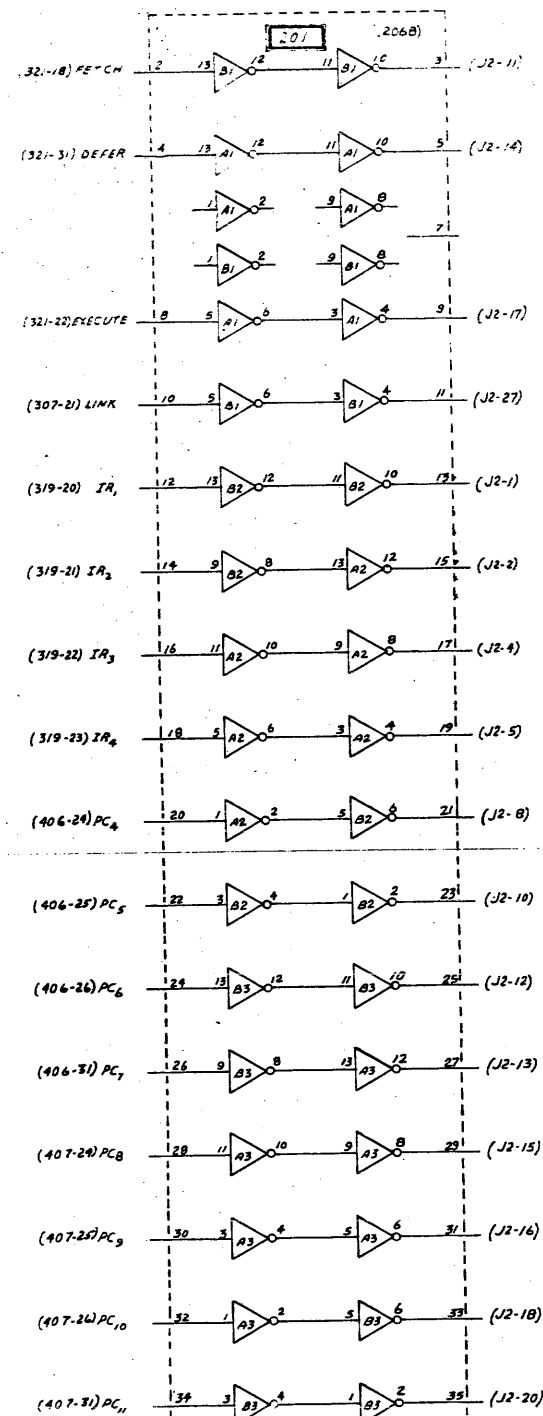
TITLE DATARAM INHIBIT DRIVERS & SENSE AMPLIFIERS			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	657	
Scale		Sheet	



NOTE: ALL PACKAGES ARE HEX INVERTER 740404M.

IMLAC, CORP.
 PROPRIETARY
 INFORMATION

LAYOUT	J.V.	DATE	1-21-70	 288 NEWTON STREET WALTHAM MASSACHUSETTS 02154	TITLE			
DRAWN	J.V.	DATE	1-21-70		CONTROL CONSOLE LAMP BUFFER FOR STANDARD IO			
CHECKED					PREFIX	SIZE	DRAWING NUMBER	REV
APPROVED	J.S.B.	DATE	4-13-70		L	D	668	A
ISSUE					Scale			Sheet
COPIED				PROJECT				
MATERIAL								



NOTE: SYMBOL FOR SECTION SW7409 HEX INVERTER

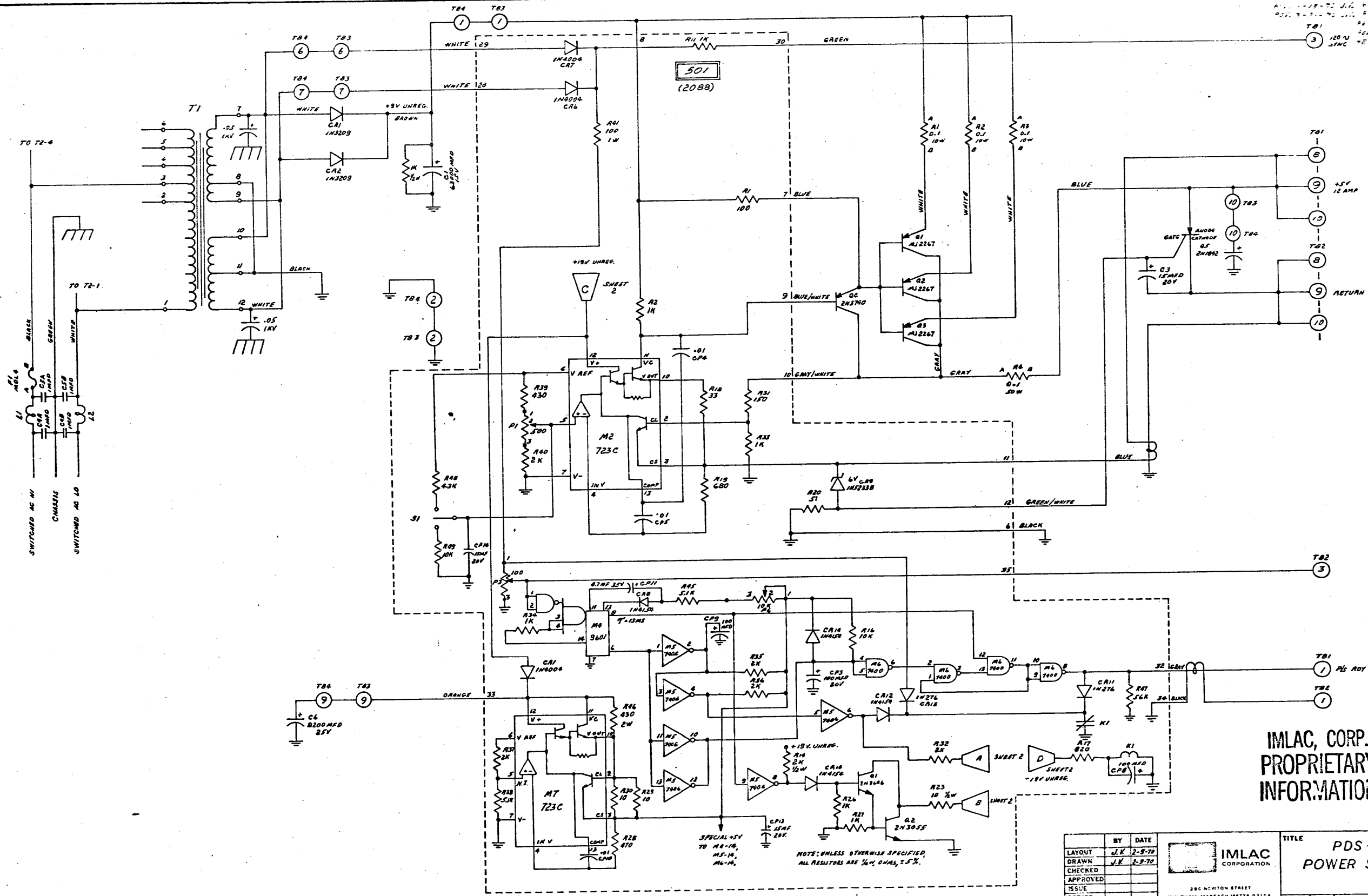
IMLAC, CORP.
PROPRIETARY
INFORMATION

BY	DATE
DRAWN	CHECKED
APPROVED	ISSUE
COPIED	
MATERIAL	

IMLAC
CORPORATION
288 NEWTON STREET
MILFORD, MASSACHUSETTS 02154

TITLE BUFFERS FOR CONT. CONSOLE LAMPS & EXPANDED IO AC OUTPUTS			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	679	A
Scale			Sheet

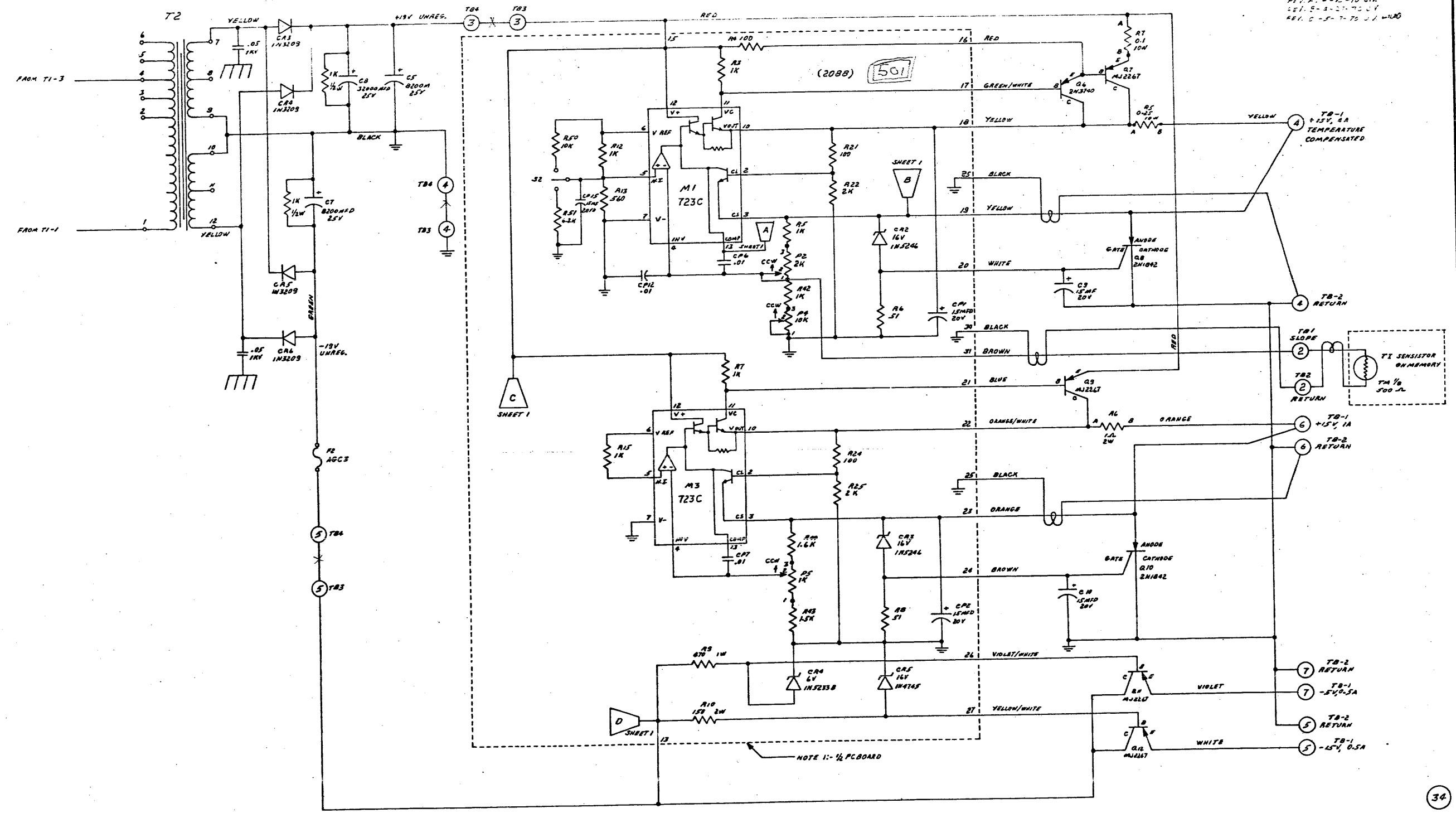
REV. 1-10-70 TO J.V. REF. 4-1-70
 REV. 1-15-70 TO J.V. REF. 4-1-70
 REV. 2-10-70 TO J.V. REF. 4-1-70
 T81 120V
 T82 120V
 T83 120V
 T84 120V



IMLAC, CORP.
PROPRIETARY
INFORMATION

LAYOUT	J.V.	DATE	2-5-70	 IMLAC CORPORATION 280 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	PDS-1 POWER SUPPLY		
DRAWN	J.V.	2-5-70			PREFIX	SIZE	DRAWING NUMBER	REV.
CHECKED					L	D	670	?
APPROVED					PROJECT			Scale
ISSUE								
COPIED								
MATERIAL								

REV. 2-12-70 J.V.
 REV. 3-13-70 J.V.
 REV. 4-1-70 J.V.
 REV. 5-7-70 J.V.
 REV. A-15-70 J.V.
 REV. B-3-27-70 J.V.
 REV. C-5-7-70 J.V. WLAB

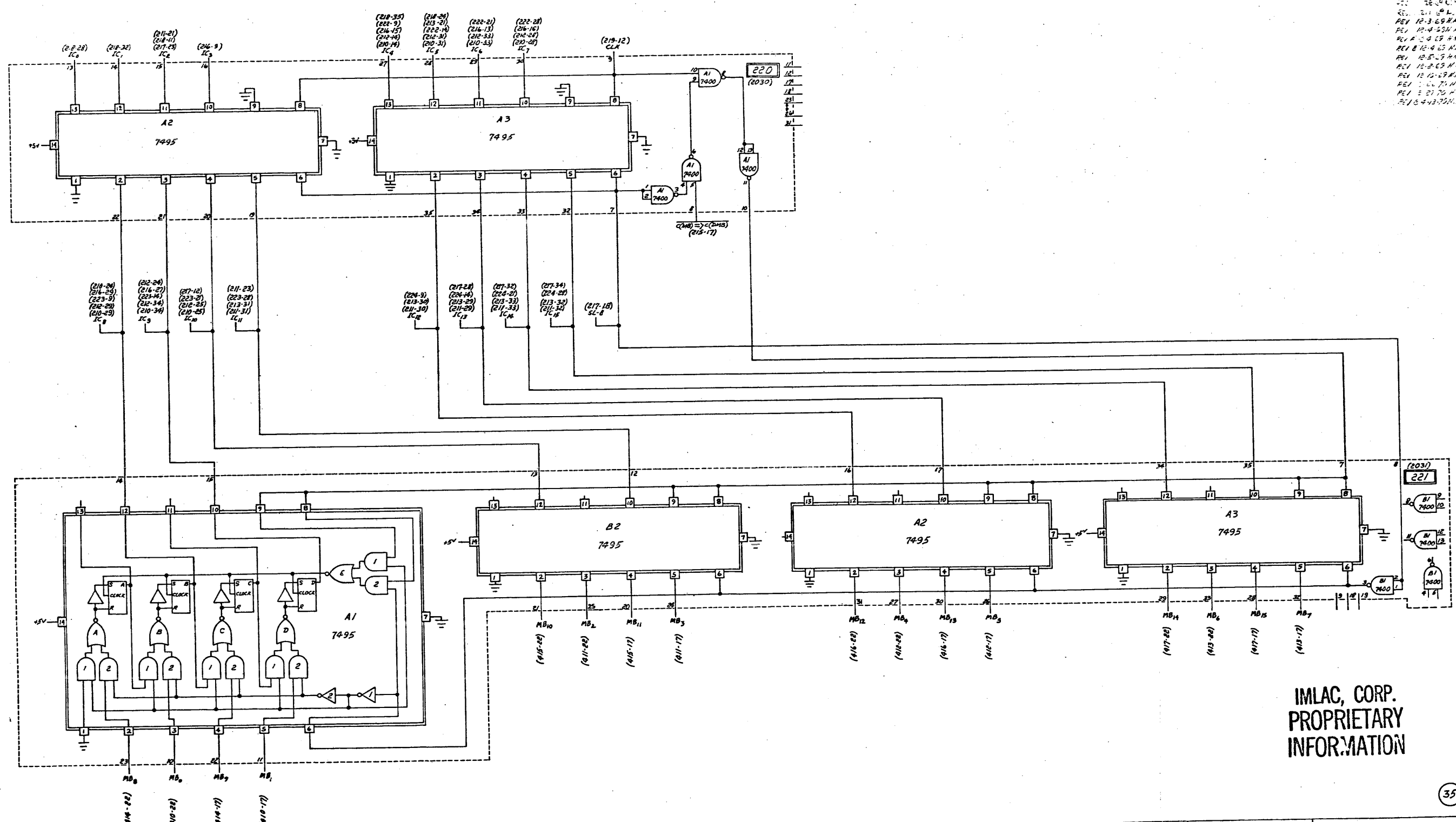


+15V @ 4A, +15V @ 1A, -5V @ 0.5A, -15V @ 0.5A SECTIONS.

IMLAC, CORP.
 PROPRIETARY
 INFORMATION

BY DATE		IMLAC CORPORATION 328 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
LAYOUT	J.V. 2-9-70		PDS-1 POWER SUPPLY		
DRAWN	J.V. 2-9-70	PREFIX	SIZE	DRAWING NUMBER	REV
CHECKED		L	D	670	C
APPROVED		PROJECT		Scale	
ISSUE				Sheet 2 of 2	
COPIED					
MATERIAL					

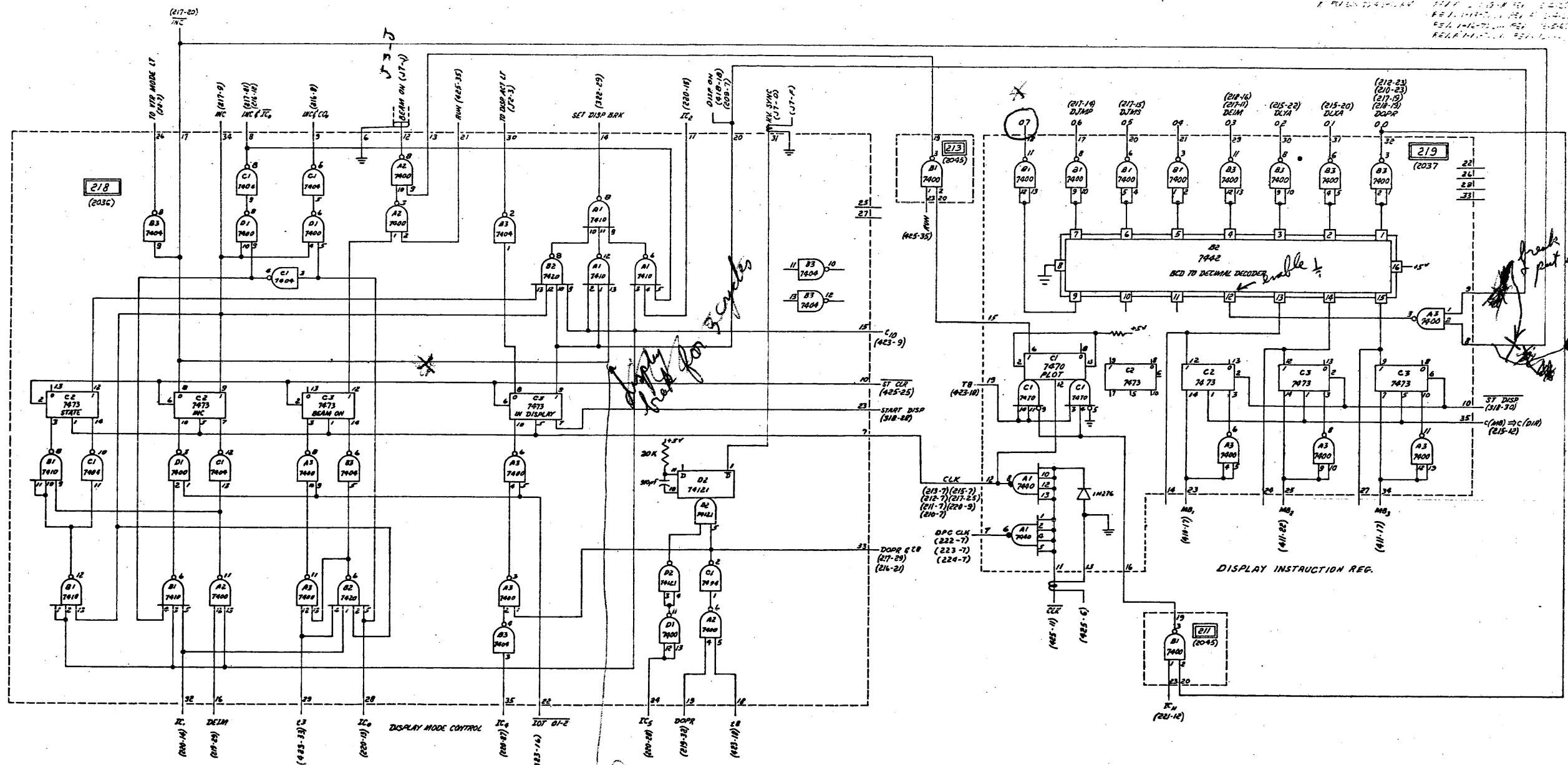
REV 12-3-69 H.M.
 REV 12-4-69 H.M.
 REV 12-5-69 H.M.
 REV 12-6-69 H.M.
 REV 12-7-69 H.M.
 REV 12-8-69 H.M.
 REV 12-9-69 H.M.
 REV 12-10-69 H.M.
 REV 12-11-69 H.M.
 REV 12-12-69 H.M.



**IMLAC, CORP.
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 INFORMATION**

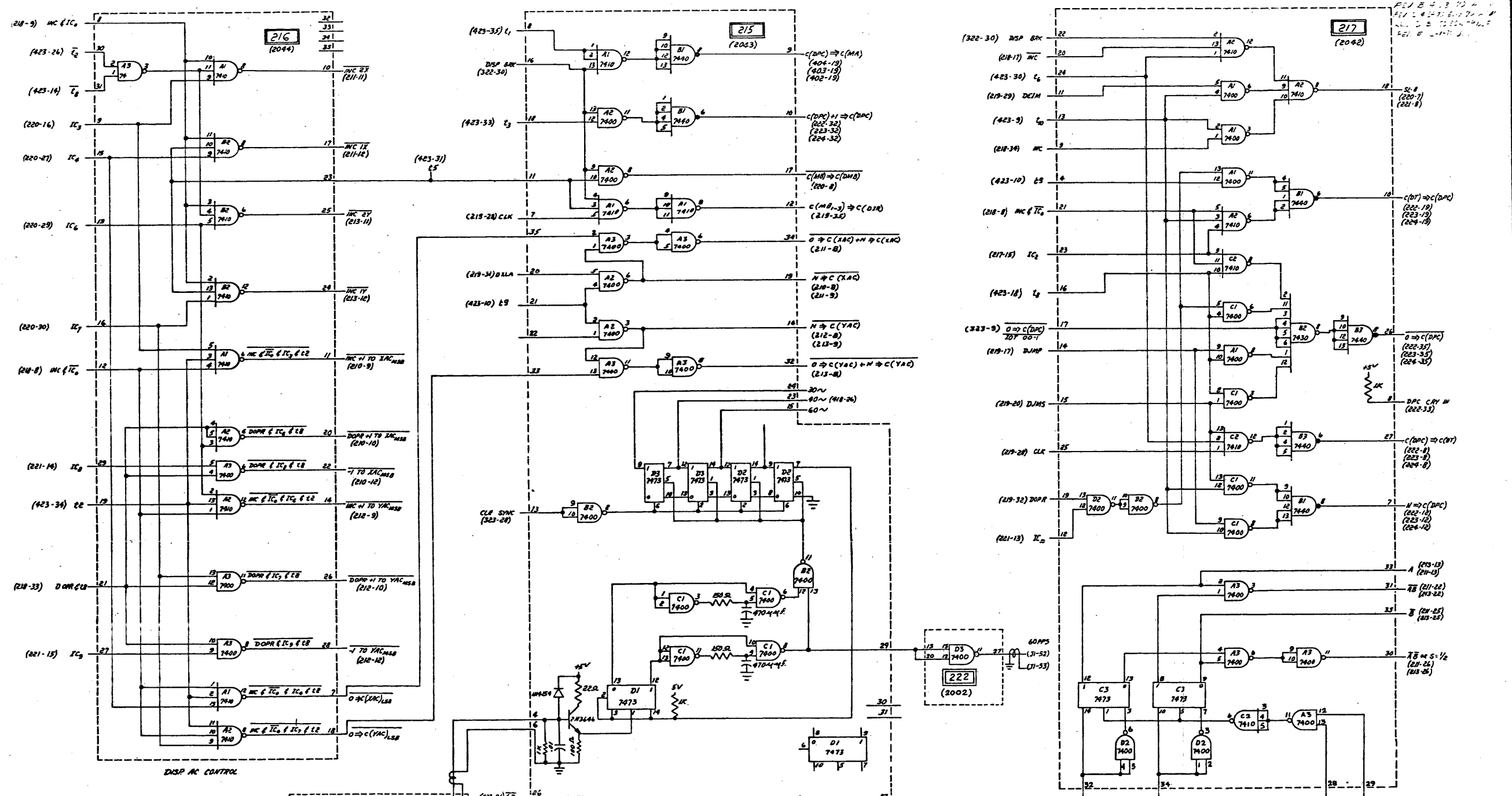
35

NO 201 ISS. REVISIONS C.K. AGUIRRE SCHEMATIC 2/21 11-13-69 NO 220 INCR. CONT. REG. CHR. ASHMIT SCHEMATIC 2/23 12-9-69		BY DATE LAYOUT N.C.M. 7-11-69 DRAWN N.C.M. 7-16-69 CHECKED APPROVED J.D.P. 4-13-70 ISSUE COPIED	IMLAC CORPORATION 388 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE DISPLAY MEMORY BUFFER & INCREMENT CONTROL REGISTERS PREFIX SIZE DRAWING NUMBER REV. L D 620 B Scale Sheet / of
PROJECT PRODUCTION UNITS				



IMLAC, CORP.
 PROPRIETARY
 INFORMATION

SD 218 CHECKED AGAINST SC: DWG 2336 12/7/63 R.M. SD 219 CHECKED AGAINST SC: DWG 2337 1-4-70 R.M.		BY: [Signature] DATE: 4-15-70	TITLE: DISPLAY MODE CONTROL & DISPLAY INSTRUCTION REG.
LAYOUT: H.C.1	DATE: 11-26-69	IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	PROJECT: PRODUCTION UNITS SIZE: L D DRAWING NUMBER: 660 REV: A
DRAWN: H.C.1	DATE: 11-26-69		
CHECKED: [Signature]	DATE: 4-15-70	PREFIX: L D SCALE: [Blank]	
APPROVED: [Signature]	DATE: 4-15-70	SHEET: [Blank] OF [Blank]	
ISSUE: [Blank]	DATE: [Blank]	COPIES: [Blank]	
COPIED: [Blank]	DATE: [Blank]	MATERIAL: [Blank]	

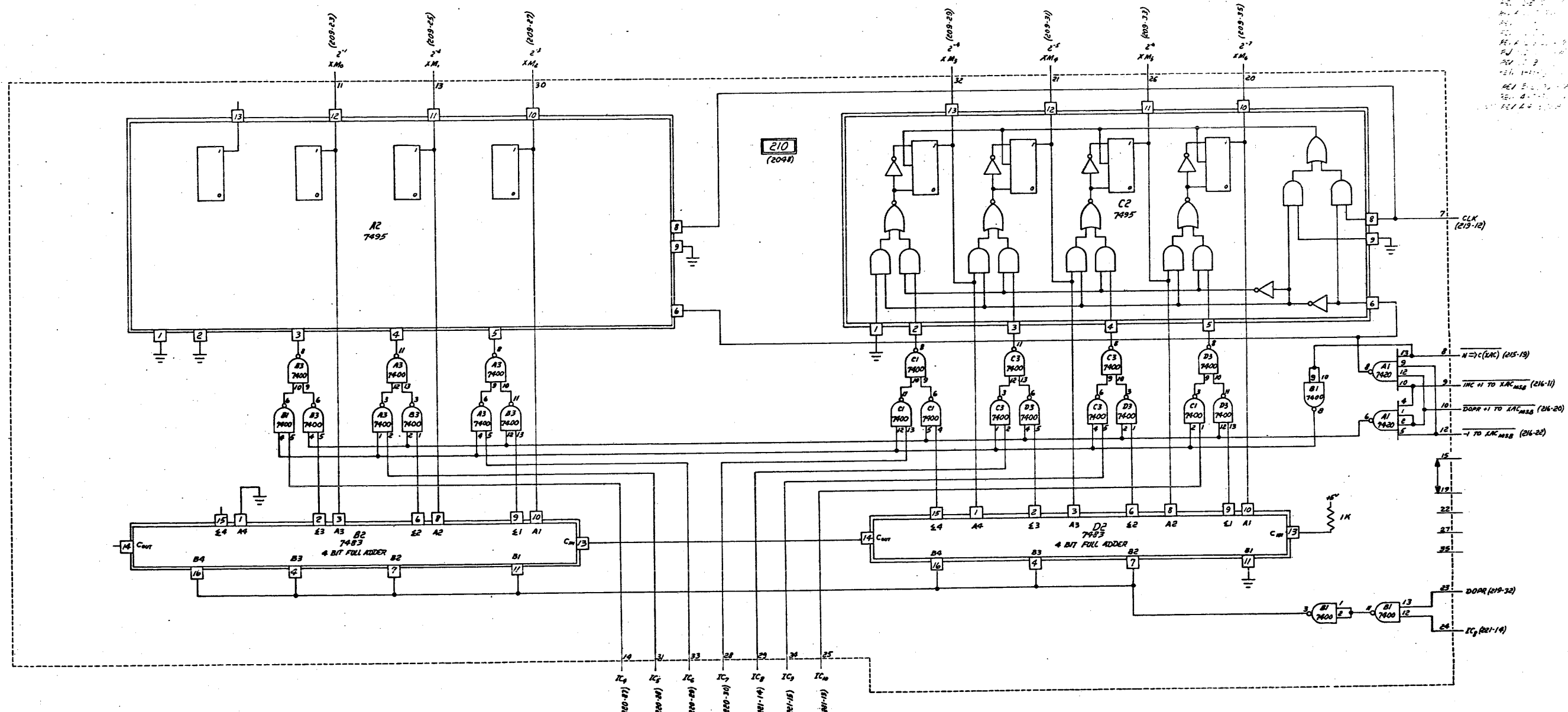


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DO NOT CHECK AGAINST SEE DMC 2043 4-17-69 N.M.

IMLAC, CORP. PROPRIETARY INFORMATION

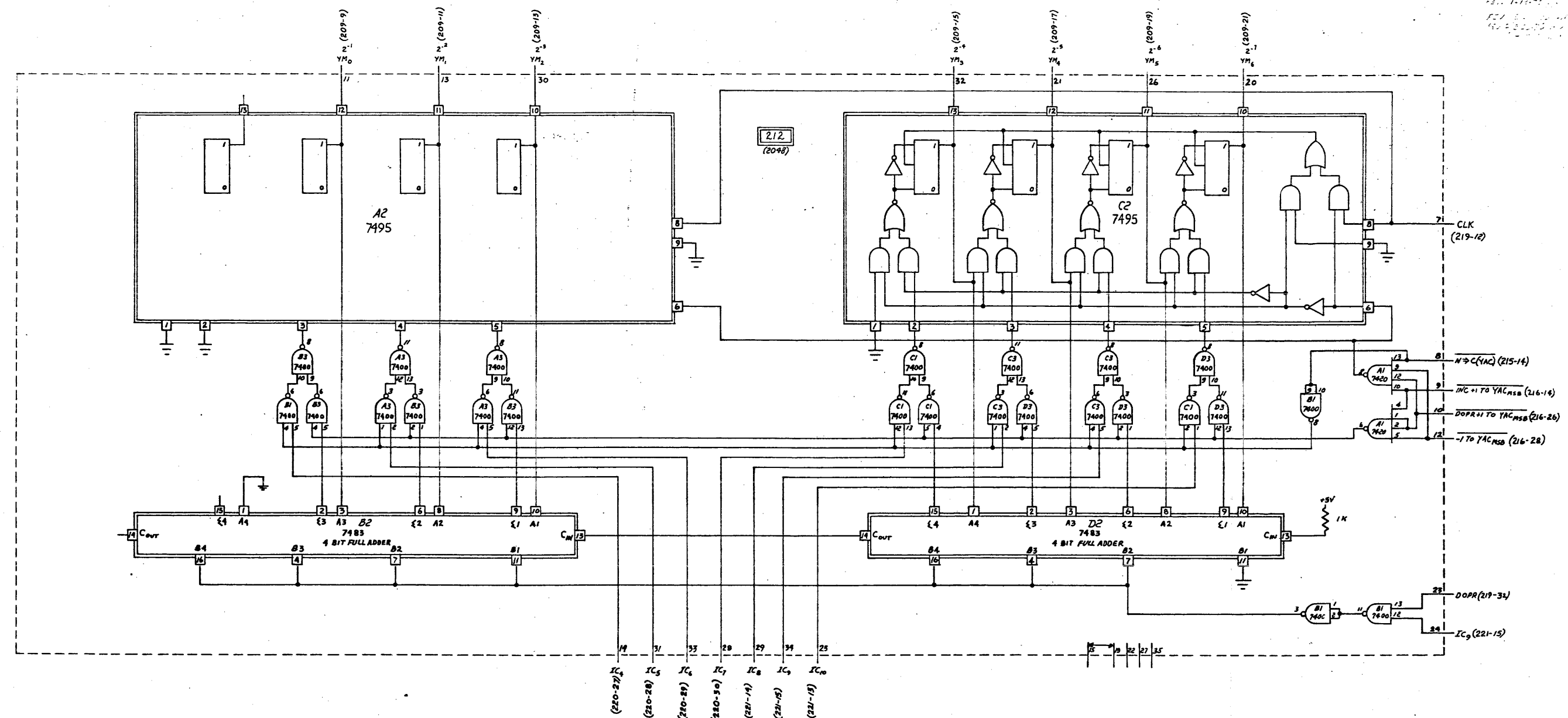
LAYOUT	BY	DATE	 IMLAC CORPORATION 288 WASHINGTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE			
DRAWN	BY	DATE		DISPLAY CONTROLS			
CHECKED	BY	DATE		PREFIX	SIZE	DRAWING NUMBER	REV.
APPROVED	BY	DATE		L	D	663	1
ISSUE	BY	DATE		Scale			Sheet
COPIED			PROJECT	PRODUCTION UNITS			



IMLAC, CORP.
 PROPRIETARY
 INFORMATION

CHECKED AGAINST SCHEMATIC 2048 12-18-69 R.C.M.		BY H.C.M.	DATE 7-23-69		TITLE X ACCUMULATOR MOST SIGNIFICANT BITS	
DRAWN H.C.M.	CHECKED H.C.M.	APPROVED H.C.M.	DATE 7-24-69		PREFIX L D	SIZE 624
PROJECT PRODUCTION UNITS				DRAWING NUMBER 624		
MATERIAL				REV.		

COPIED FROM SCHEM
 664 12-11-69 H.J.F.
 12-15-69 J.V.
 12-18-69 H.C.M.

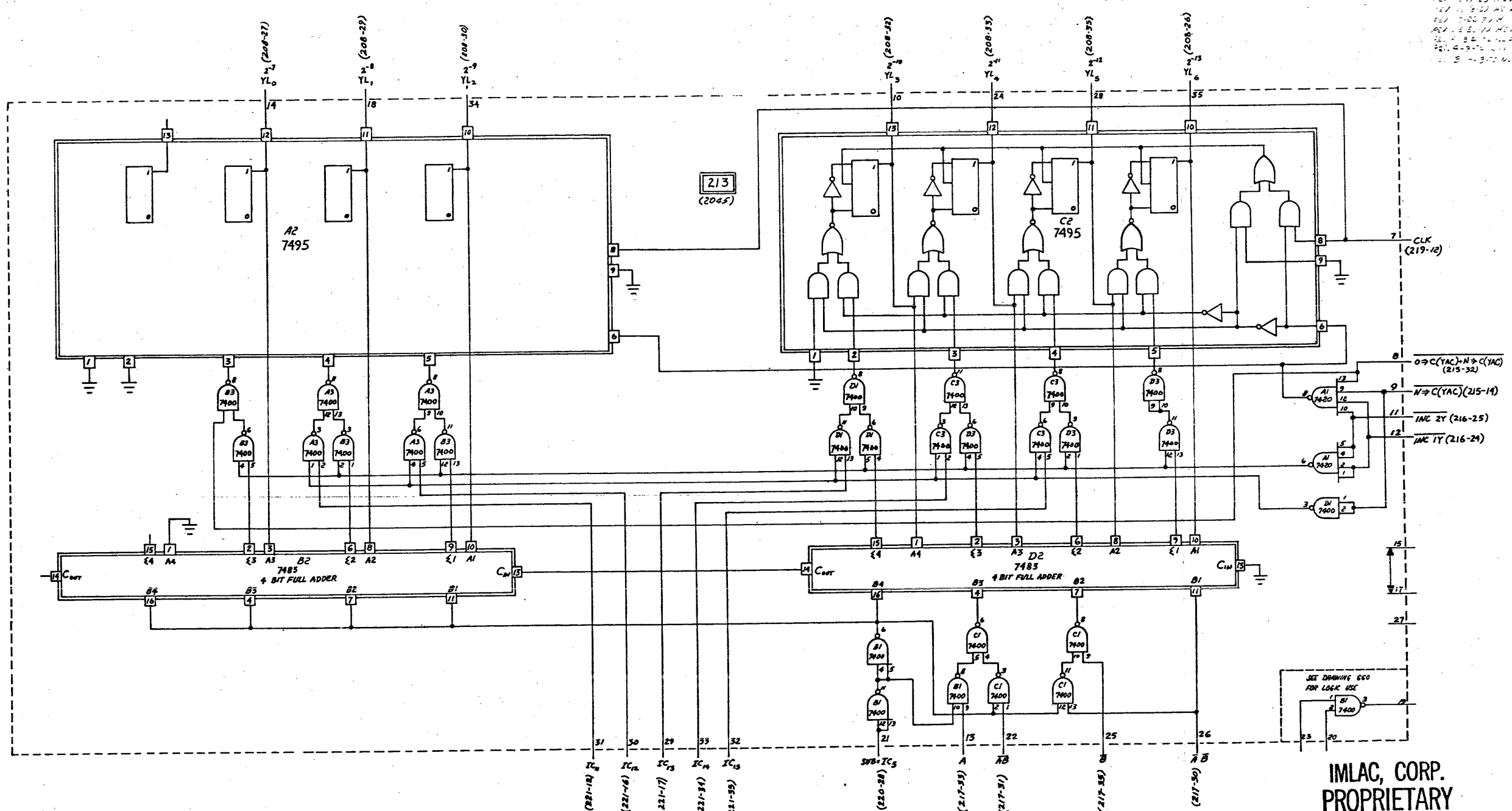


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 INFORMATION

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COPIED FROM SCHEM # 664-12-11-69 H.J.F. CHECKED AGAINST SCHEM # 664-12-15-69 J.V. LACK CHECKED AGAINST SCHEMATIC 2048 12-18-69 H.C.M.		BY H.J.F.	DATE 12-11-69	IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE Y ACCUMULATOR MOST SIGNIFICANT BITS
LAYOUT	H.J.F.	12-11-69	PREFIX L D		SIZE 664
DRAWN	H.J.F.	12-11-69	PROJECT PRODUCTION UNITS	SCALE	REV. A
CHECKED	H.J.F.	12-11-69			
APPROVED	H.J.F.	12-11-69			
ISSUE	H.J.F.	12-11-69			
COPIED	H.J.F.	12-11-69			
MATERIAL					

TRACED FROM SERA#665
 NJF 12-11-69
 REV. 12-11-69 NJF.
 REV. 12-11-69 NJF.
 REV. 12-11-69 NJF.
 REV. 12-11-69 NJF.
 REV. 12-11-69 NJF.
 REV. 12-11-69 NJF.
 REV. 12-11-69 NJF.



IMLAC, CORP.
 PROPRIETARY
 INFORMATION

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AB	ADD	2'S COMP
00	S=3 000 001	111 111
01	S=1 000 010	111 110
10	S=2 000 100	111 100
11	S=5 000 110	111 010

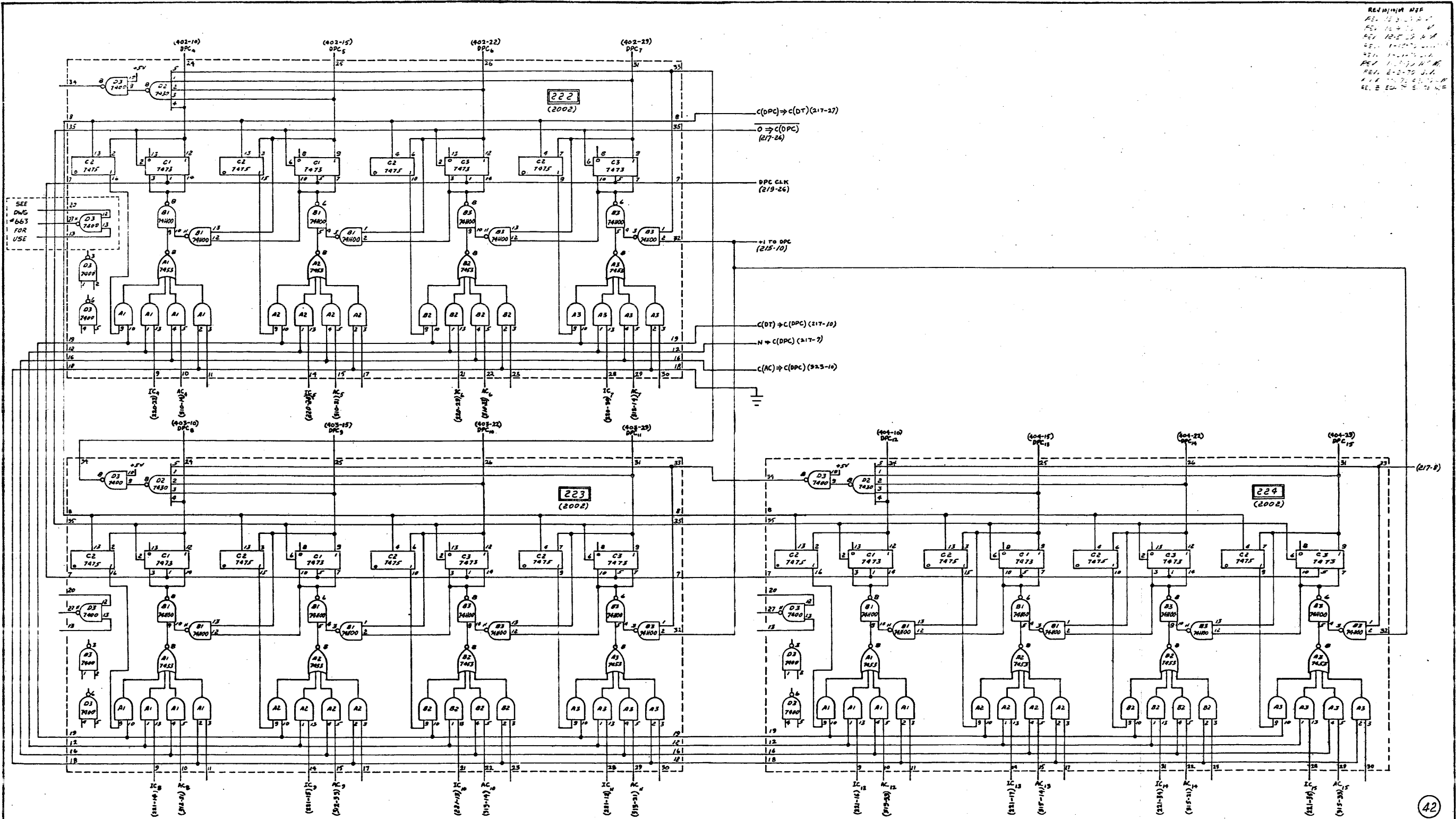
COPIED FROM SERA#665, 12-11-69.
 CHECKED AGAINST SERA#665 + REF. 12-11-69. 12-11-69 NJF.
 IMLAC CHECKED AGAINST SCHEMATIC 2045 12-11-69 NJF.

BY	DATE
LAYOUT	NJF 12-11-69
DRAWN	NJF 12-11-69
CHECKED	
APPROVED	NJD 4-13-70
ISSUE	
COPIED	N.J.F. 12-11-69

IMLAC CORPORATION
 288 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

TITLE Y ACCUMULATOR LEAST SIGNIFICANT BITS			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	665	B
PROJECT		PRODUCTION UNITS	Scale
			Sheet

REVISIONS
 REV. 12-2-69
 REV. 12-2-69
 REV. 12-2-69
 REV. 12-2-69
 REV. 12-2-69
 REV. 12-2-69
 REV. 12-2-69
 REV. 12-2-69



SEE DWG #663 FOR USE

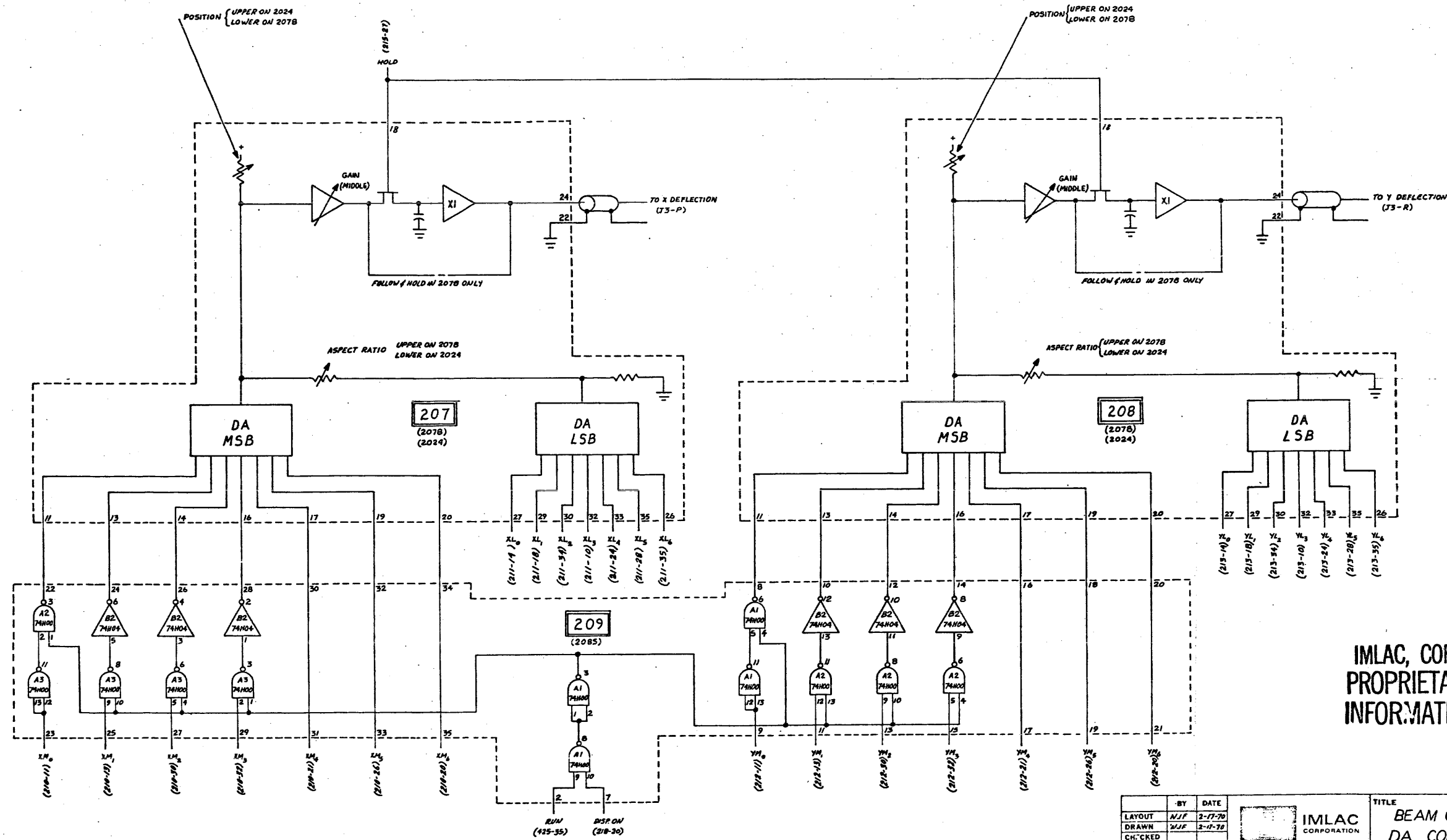
IMLAC, CORP.
 PROPRIETARY
 INFORMATION

LAYOUT	NJP	10/2/69
DRAWN	NJP	11/10/69
CHECKED		
APPROVED	SPB	4-13-70
ISSUE		
COPIED		
MATERIAL		

IMLAC CORPORATION
 288 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

TITLE DISPLAY PROG. COUNTER & DT REGISTER BITS 4 - 15			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	643	2
PROJECT PRODUCTION UNITS		Scale	Sheet

REV.	ECN	DATE	DFTHM	APPVD
A	00	1/14/70	NJF	
B	110	6/2/70	NJF	

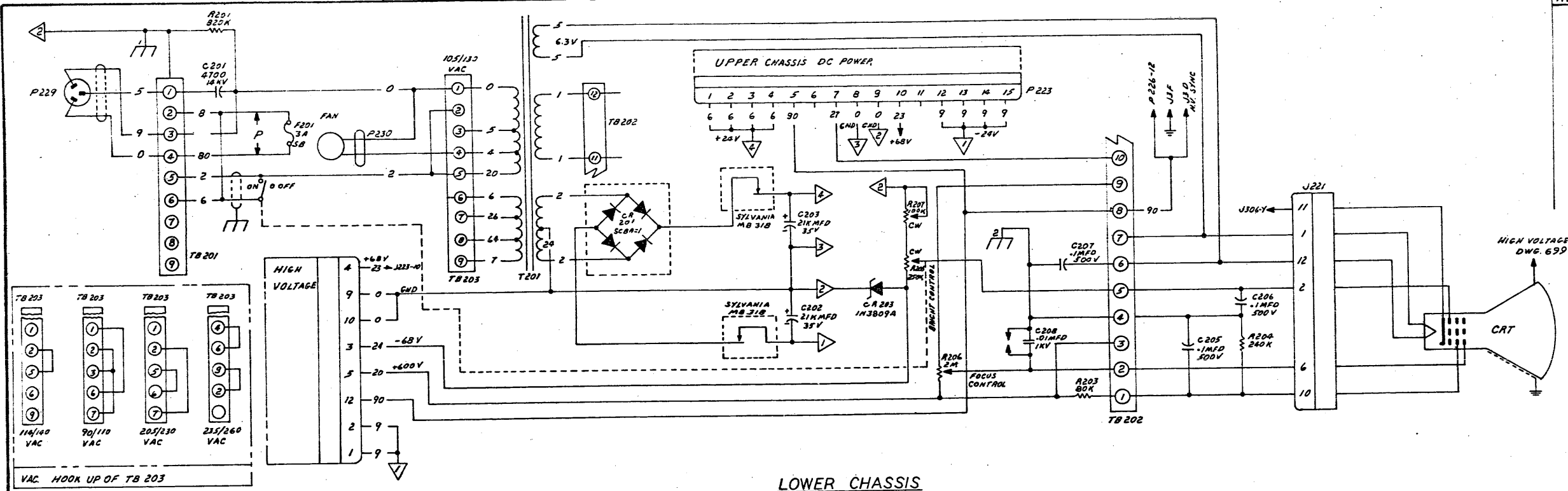


IMLAC, CORP.
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INFORMATION

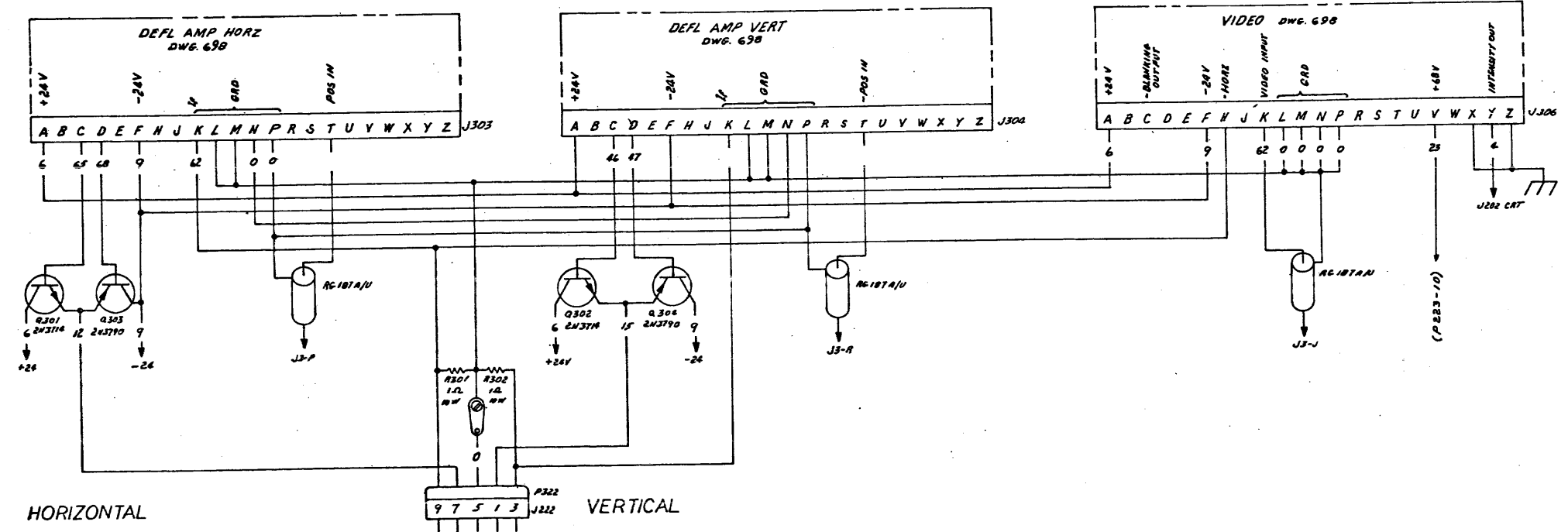
43

BY	DATE	TITLE
LAYOUT	NJF 2-17-70	IMLAC CORPORATION 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154
DRAWN	NJF 2-17-70	
CHECKED	NJF 2-17-70	
APPROVED	RJD 4-13-70	
ISSUE		
COPIED		
MATERIAL		
PROJECT		
PREFIX	SIZE	DRAWING NUMBER
L	D	673
Scale		Sheet

REV.	ECN	DATE	DFTM	APPD



LOWER CHASSIS

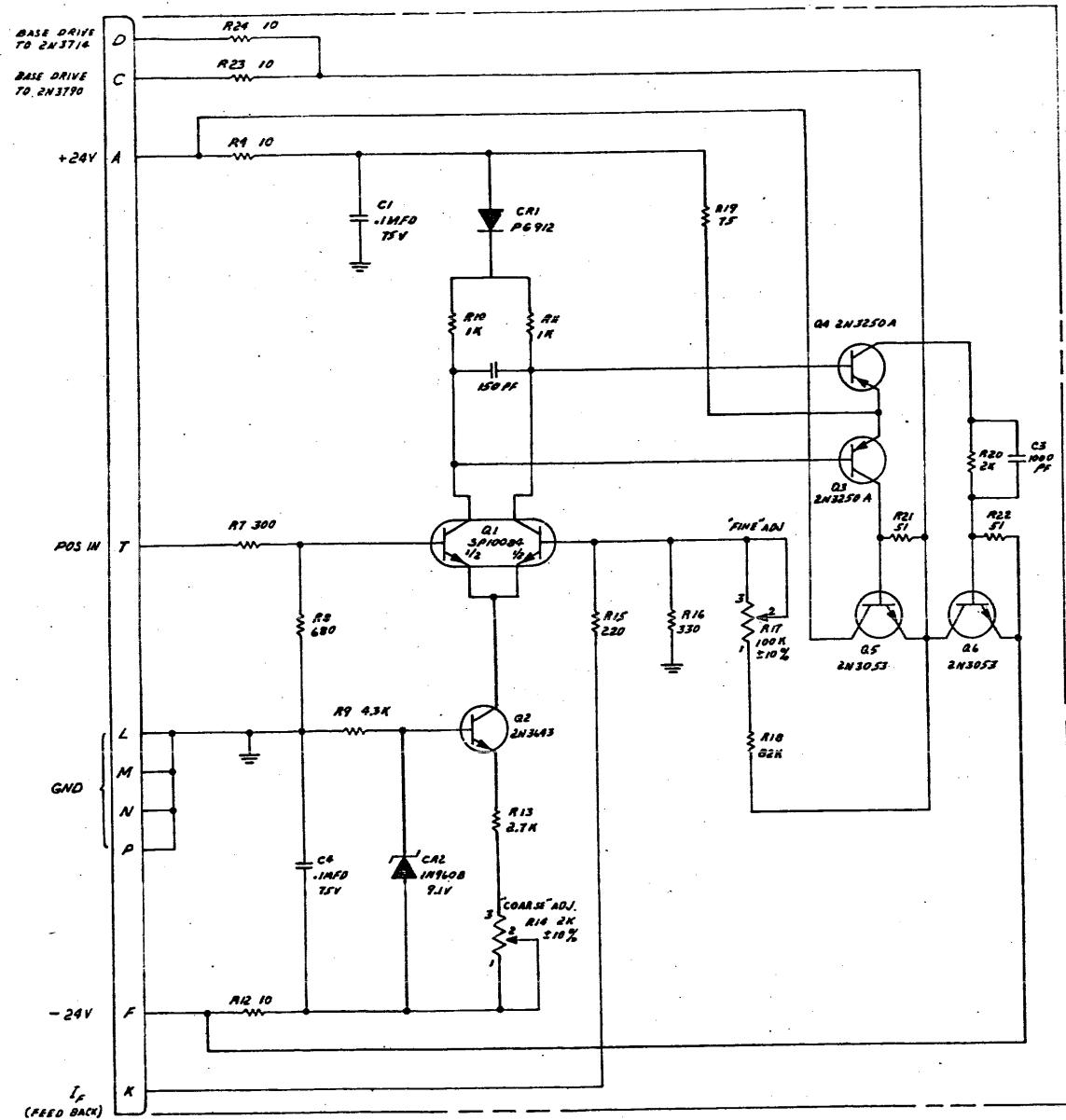


UPPER CHASSIS

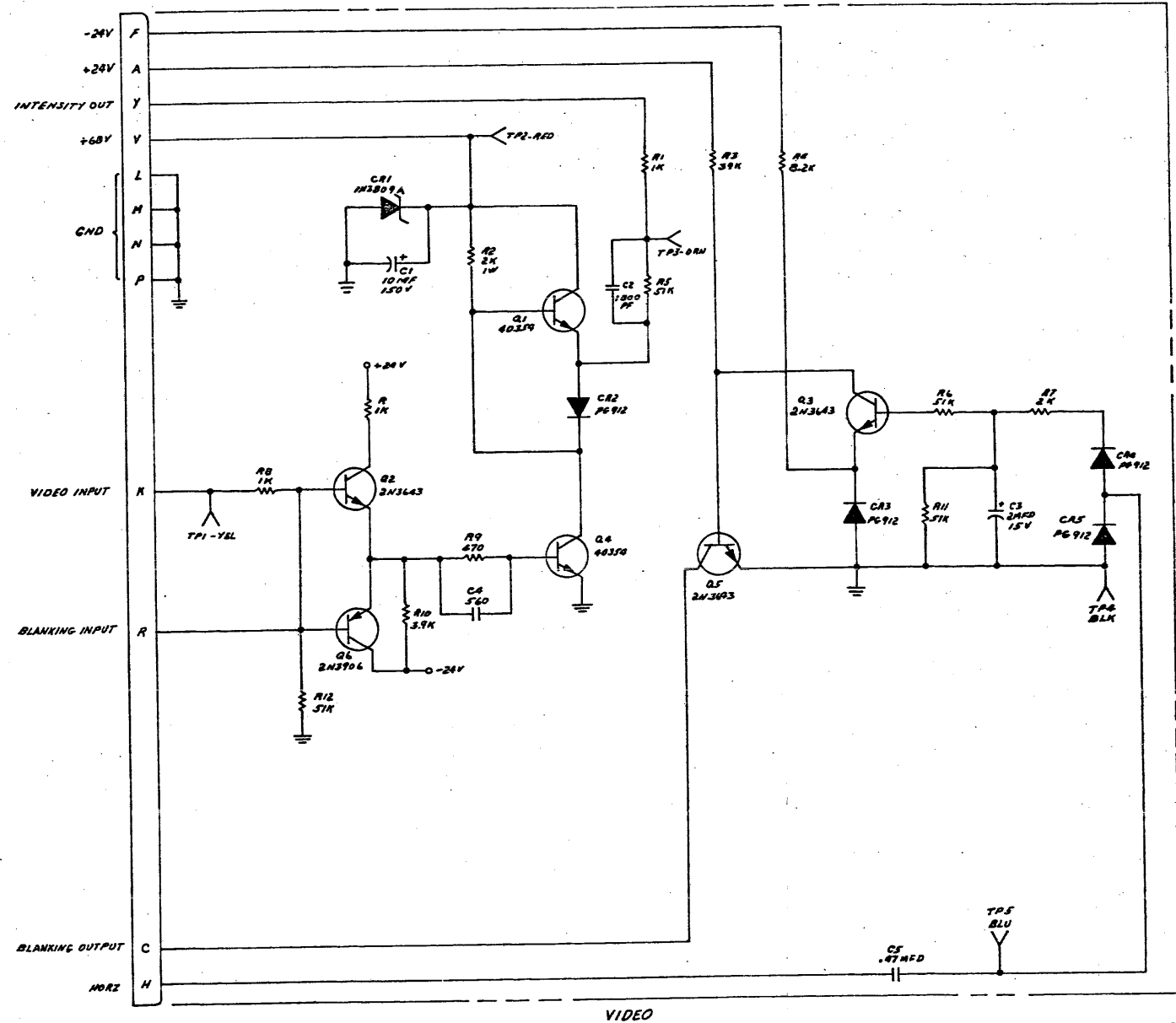
IMLAC, CORP.
PROPRIETARY
INFORMATION

NOTE: -XX- INDICATES WIRE COLOR.

LAYOUT	J.V.	6-5-70	<p>IMLAC CORPORATION 388 HEATON STREET WALTHAM, MASSACHUSETTS 02154</p>	TITLE		DISPLAY UPPER & LOWER CHASSIS	
DRAWN	J.F.	6-8-70		PREFIX	SIZE	DRAWING NUMBER	REV.
CHECKED	J.F.	6-8-70		L	D	697	1
APPROVED	J.F.	6-8-70		Scale			
ISSUE				PROJECT: PRODUCTION UNITS			
COPIED							
MATERIAL							



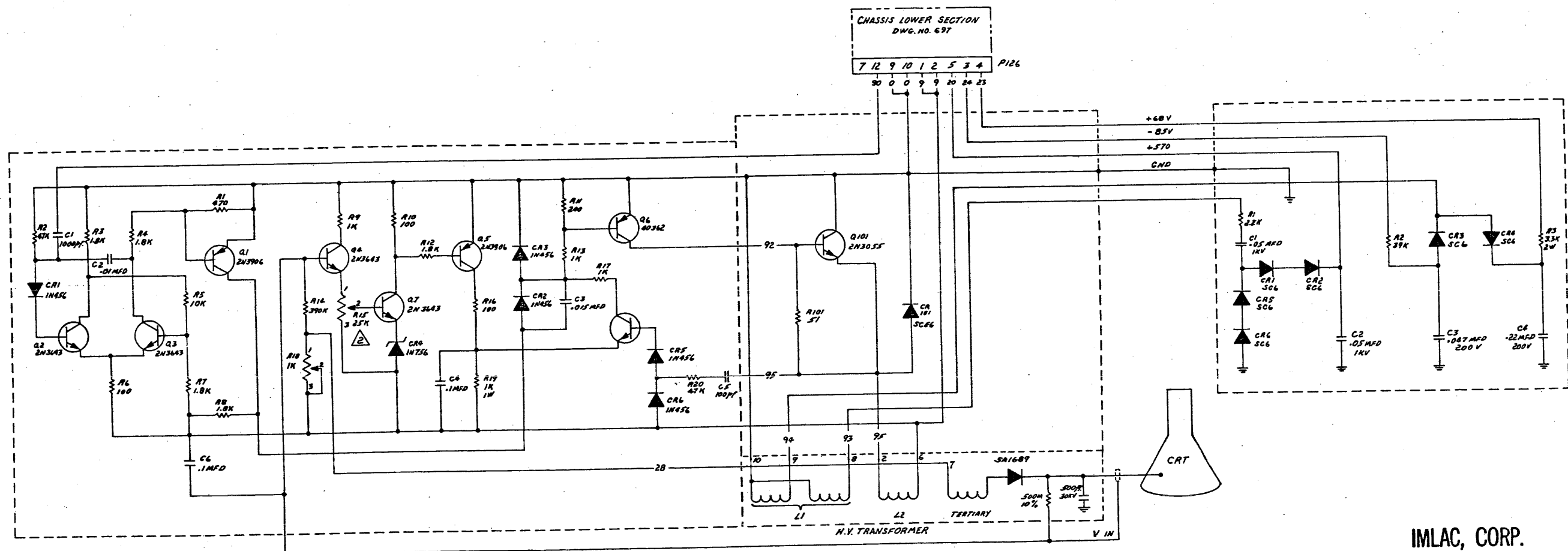
DEFLECTION
(2 PER DISPLAY UNIT)



VIDEO

IMLAC, CORP.
PROPRIETARY
INFORMATION 45

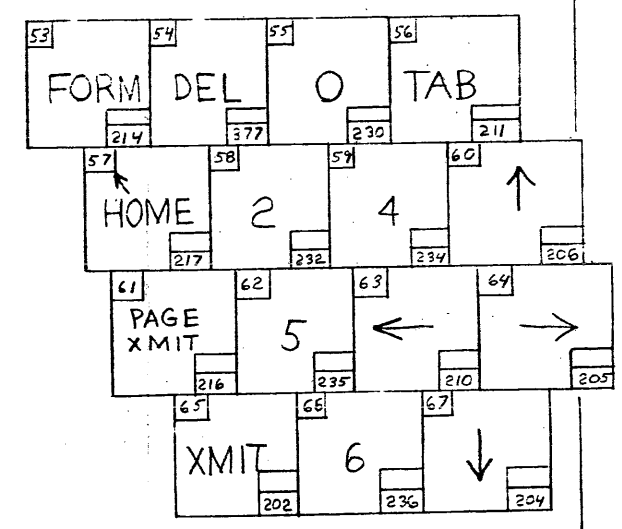
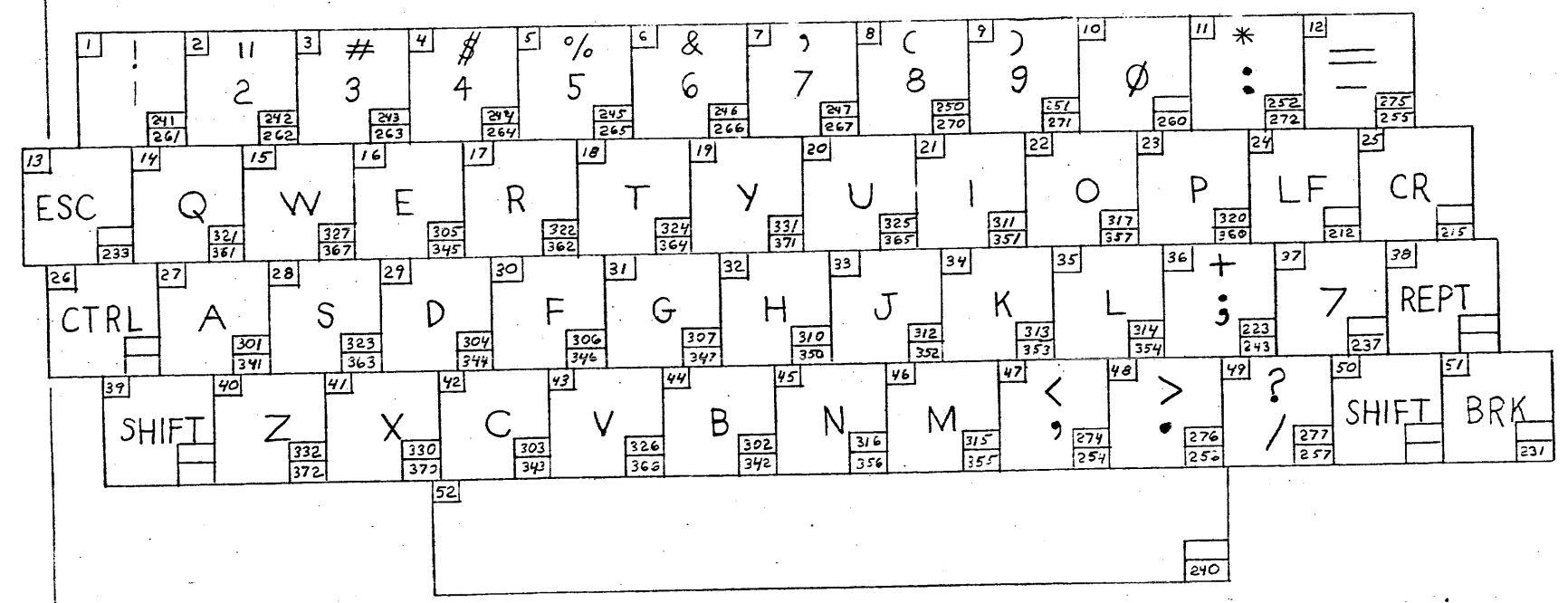
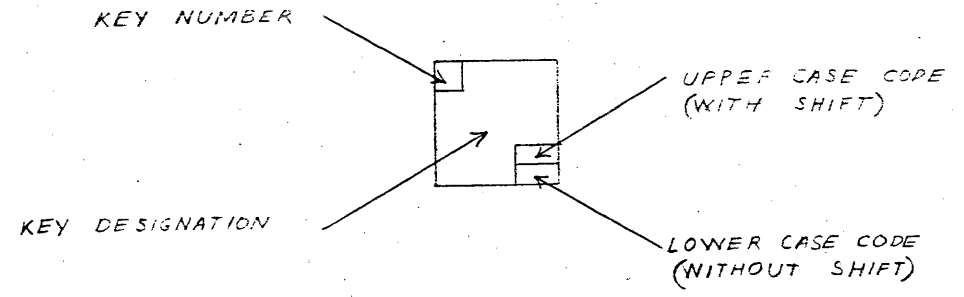
BY	DATE	 IMLAC CORPORATION 236 N. WTON ST. #202 WALTHAM, MASSACHUSETTS 02154	TITLE	DISPLAY
LAYOUT	JY 6-18-70		PREFIX	L D
DRAWN	JY 6-18-70		SIZE	698
CHECKED	JY 6-18-70		DRAWING NUMBER	698
APPROVED	JY 6-18-70		PROJECT	PRODUCTION UNITS
ISSUE			Scale	Sheet
COPIED				



NOTES: UNLESS OTHERWISE SPECIFIED,
ALL RESISTOR VALUES ARE IN OHMS, ±5%, 1/2W
HIGH VOLTAGE ADA.

IMLAC, CORP.
PROPRIETARY
INFORMATION

BY	DATE	IMLAC CORPORATION WALTHAM, MASSACHUSETTS 01981	TITLE			
LAYOUT	J.V. 4-9-70		PRE: IX	SIZE	DRAWING NUMBER	REV.
DRAWN	J.V. 4-9-70	PROJECT PRODUCTION UNITS	L	D	699	
CHECKED			Scale		Sheet	
APPROVED						
ISUE						
COPIED						
MATERIAL						



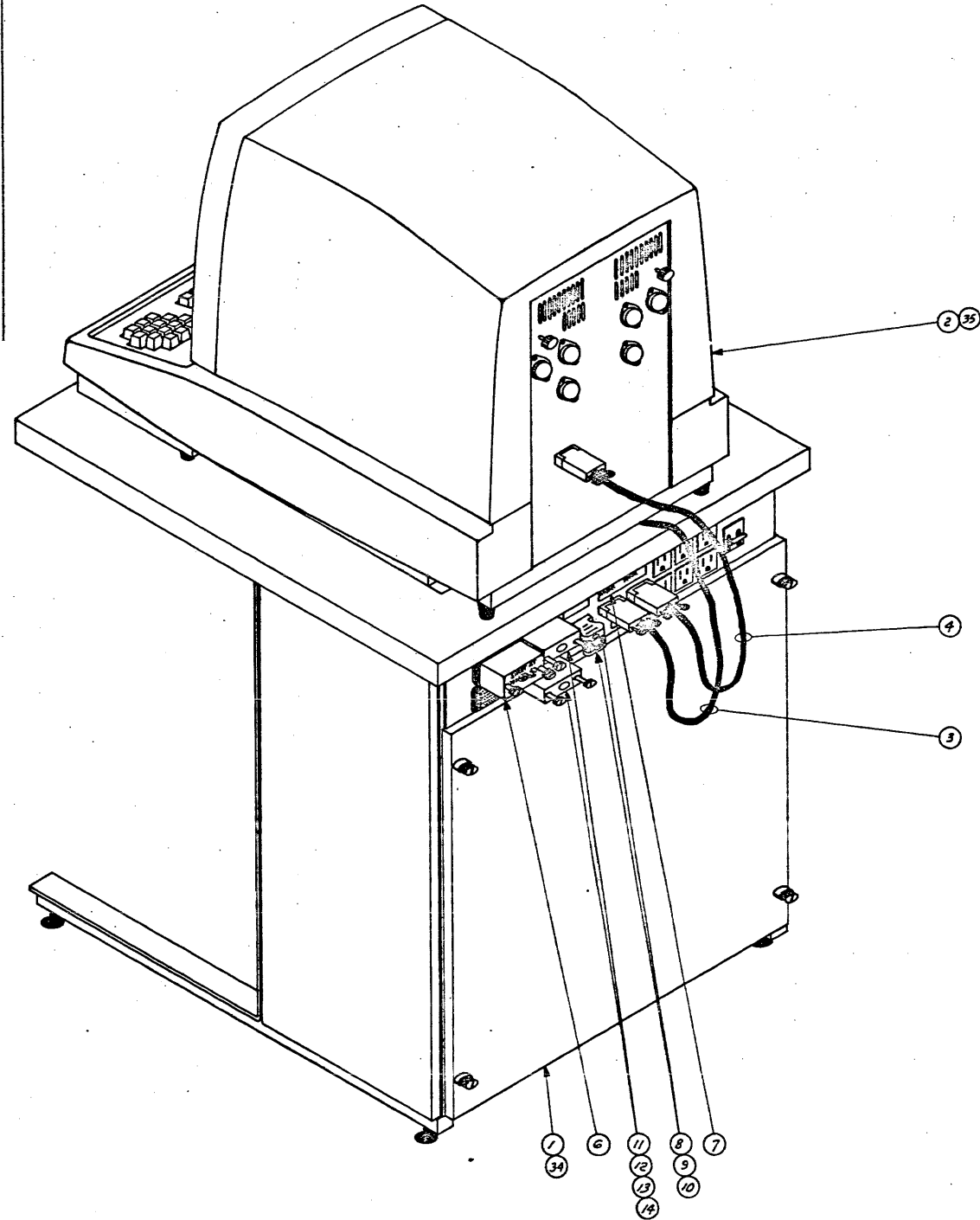
**IMLAC, CORP.
PROPRIETARY
INFORMATION**

(47)

LAYOUT	BY	DATE	 IMLAC CORPORATION 240 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE KEYBOARD LAYOUT			
DRAWN				PREFIX	SIZE	DRAWING NUMBER	REV.
CHECKED						631	
APPROVED							
ISSUE							
COPYED							
MATERIAL			PROJECT			Scale	Sheet


SUFFIX	DESCRIPTION
00	STANDARD, VERTICAL, STANDARD RESOLUTION
01	EXPANDED I/O, VERTICAL, STANDARD RESOLUTION
02	STANDARD, VERTICAL, HIGH RESOLUTION
03	EXPANDED I/O, VERTICAL, HIGH RESOLUTION

REV	ECN	DATE	DTSM	APP'Y
A	98	5-27-70	HCM	

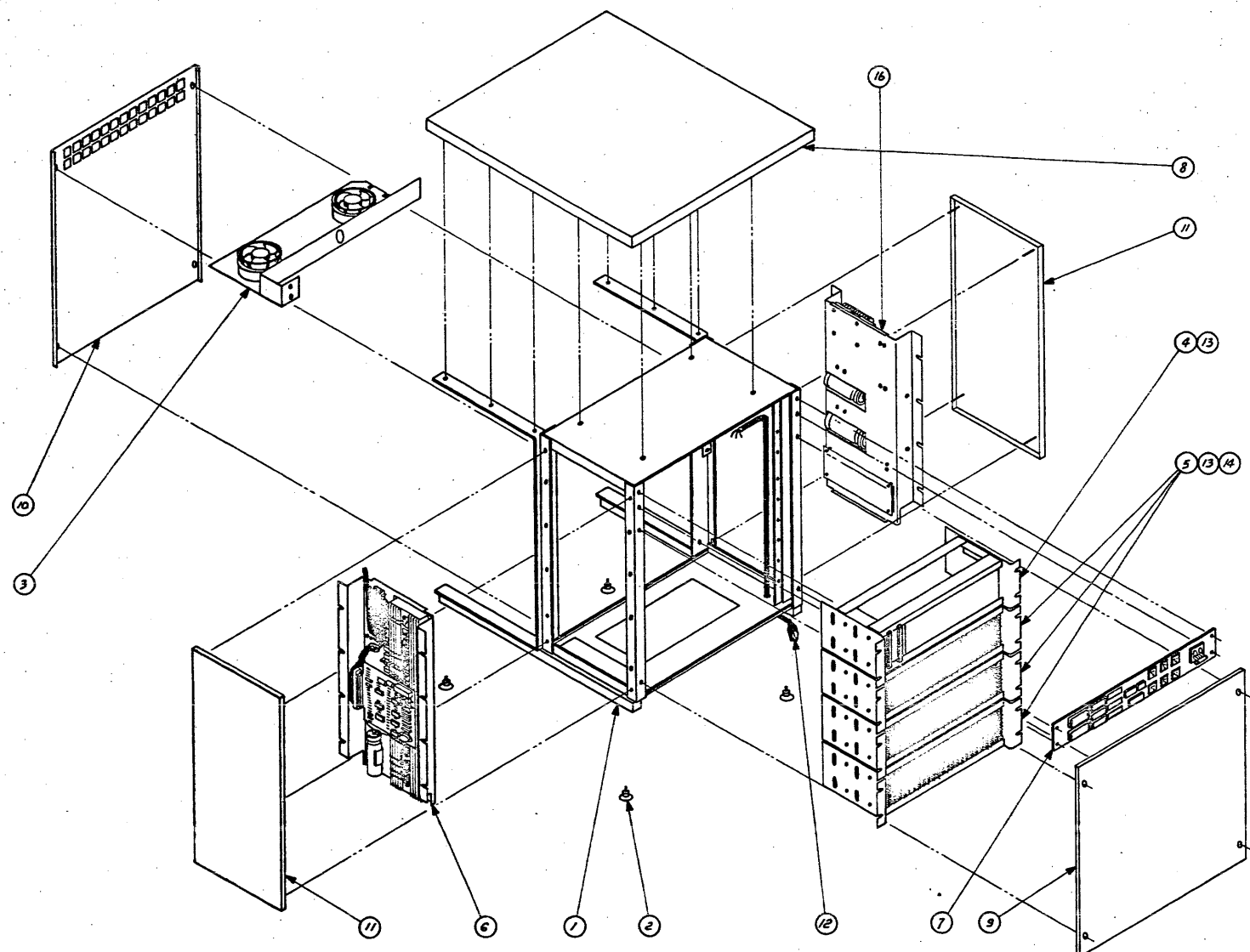


IMLAC, CORP.
 PROPRIETARY
 INFORMATION

REF	QTY	REF	QTY	REF	QTY	REF	QTY	REF	QTY	ITEM NO.	PART NUMBER	DESCRIPTION	MFR.	MFR. NO.
1	1	-	-	35	2083-01	MONITOR ASSY, VERTICAL TUBE, HIGH RESOLUTION	IMLAC							
1	-	1	-	34	2077-01	CRT STAND, FINAL ASSY, REGULAR TOP	IMLAC							
REF	-	REF	-	33	2133	WIRE LIST	IMLAC							
↑	-	↑	-	32	2132									
	-		-	31	2131									
REF	↑	REF	↑	30	2129									
	↑		↑	29	2128									
				28	2122									
				27	2120									
				26	2117									
				25	2114									
				24	2111									
				23	2109									
				22	2108									
				21	2107									
				20	2106									
				19	2105									
				18	2104									
				17	2103									
				16	2102									
REF	REF	REF	REF	15	2101	WIRE LIST	IMLAC							
2	-	2	-	14	03-11756	JACK SCREW FOR P9 AND P10	WINCHESTER							
2	-	2	-	13	03-11755	JACK SOCKET FOR P9 AND P10	WINCHESTER							
2	-	2	-	12	03-11768	HOOD FOR P9 AND P10	WINCHESTER	MRE 50 H						
2	-	2	-	11	03-11752	MATING CONNECTOR P9 AND P10	WINCHESTER	MRA 50 P						
2	2	2	2	10	03-11532	HOOD FOR P4 AND P7	CINCH - JONES	DB-51226-1						
1	1	1	1	9	03-11534	MATING CONNECTOR P4, FEMALE	CINCH - JONES	DB-19604-433						
1	1	1	1	8	03-11533	MATING CONNECTOR P7, MALE	CINCH - JONES	DB-19604-432						
1	1	1	1	7	13-11870	SERIAL NUMBER TAG	IMLAC							
1	1	1	1	6	2094	PROGRAMMING PLUG	IMLAC							
1	1	1	1	5	2084	EXTENDER BOARD	IMLAC							
1	1	1	1	4	2057-01	CRT CABLE	IMLAC							
1	1	1	1	3	2056-02	KEYBOARD CABLE	IMLAC							
-	-	1	1	2	2083-00	MONITOR ASSY, VERTICAL TUBE, STANDARD RESOLUTION	IMLAC							
-	1	-	1	1	2077-00	CRT STAND, FINAL ASSY, REGULAR TOP	IMLAC							

LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	PDS-1 MAIN ASSEMBLY			
DRAWN	H.C.M.	5-11-70		Scale				
CHECKED		6-1-70		PREFIX		SIZE	DRAWING NUMBER	REV.
APPROVED				A		D	2200	A
ISSUED				PROJECT		Sheet		
COPIED								

REV	ECN	DATE	DFW	APP'D
A	99	5/28/70	MJF	



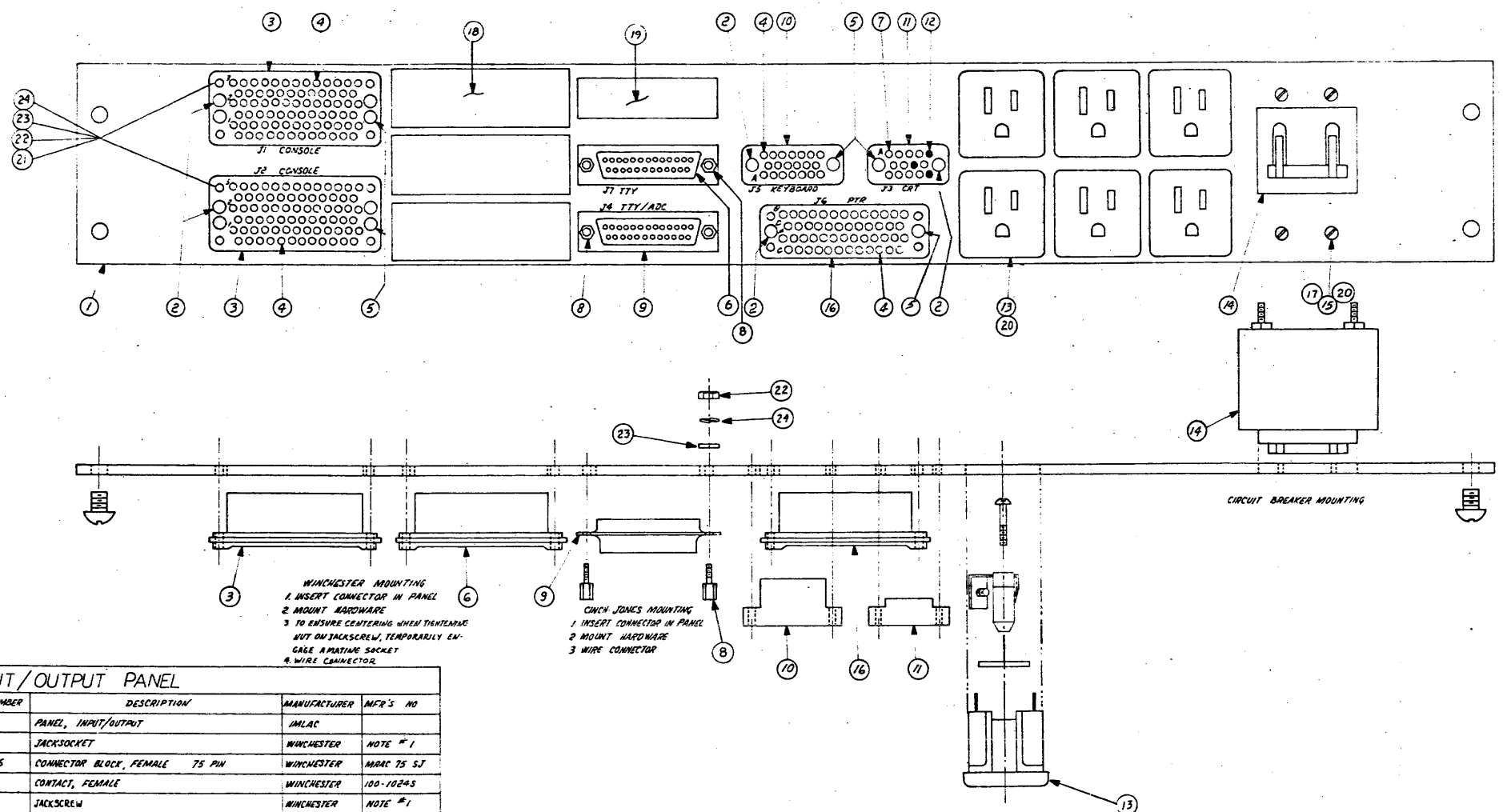
DWG NO. 2077 CRT STAND - FINAL ASSY

PART ASSY	USED ON	FINAL ASSY	QTY REQ'D	ITEM NUMBER	PART NUMBER	DESCRIPTION	MANUFACTURER	MFR NO
		1	1	1	16-11676	CRT STAND	IMLAC	
		4	4	2	13-11728	FELT, RUBBER	PLASTICSLIDE	787-11-2510
		1	1	3	2072	FAN ASSY	IMLAC	
		1	1	4	2076	MEMORY RACK ASSY	IMLAC	
		3	3	5	2073	VARIOMAX ASSY	IMLAC	
		1	1	6	2205	P2 POWER SUPPLY ASSY.	IMLAC	
		-	1	7	2060-00	INPUT/OUTPUT PANEL	IMLAC	
		1	1	8	16-11615	TABLE TOP, LAMINATED		
		1	1	9	16-11680	BACK PANEL		
		1	1	10	16-11681	FRONT PANEL		
		2	2	11	16-11682	SIDE PANELS		
		1	1	12	13-11730	LINE CORD, BLACK RUBBER, 12 FT.	BELDEN	179225 (255CM)
		-	1	13	2100-00	FUNCTION LOCATION	IMLAC	
		1	-	14	2060-01	INPUT/OUTPUT PANEL	IMLAC	
		1	-	15	2100-01	FUNCTION LOCATION	IMLAC	
		1	1	16	2206	P1 POWER SUPPLY ASSY.	IMLAC	

NOTE: 1. 00 - IS QUANTITY OF ITEMS FOR STANDARD POS-1,
01 - IS PDS-1 WITH EXTENDED I/O INTERRUPT.

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BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	
LAYOUT	ACM		CRT STAND	
DRAWN	ACM		FINAL ASSEMBLY	
CHECKED	ACM		REG. TOP	
APPROVED			PREFIX	SIZE
ISSUE		M	D	
COPIED		DRAWING NUMBER		
MATERIAL		2077		
PROJECT		Scale	Sheet	



WINCHESTER MOUNTING
 1 INSERT CONNECTOR IN PANEL
 2 MOUNT HARDWARE
 3 TO ENSURE CENTERING WHEN TIGHTENING NUT ON JACKSCREW, TEMPORARILY ENGAGE ADJUSTING SCREW
 4 WIRE CONNECTOR

CINCH-JONES MOUNTING
 1 INSERT CONNECTOR IN PANEL
 2 MOUNT HARDWARE
 3 WIRE CONNECTOR

NOTES:
 1 JACKSCREWS AND JACKSOCKETS ARE PART OF CONNECTOR ASSEMBLY

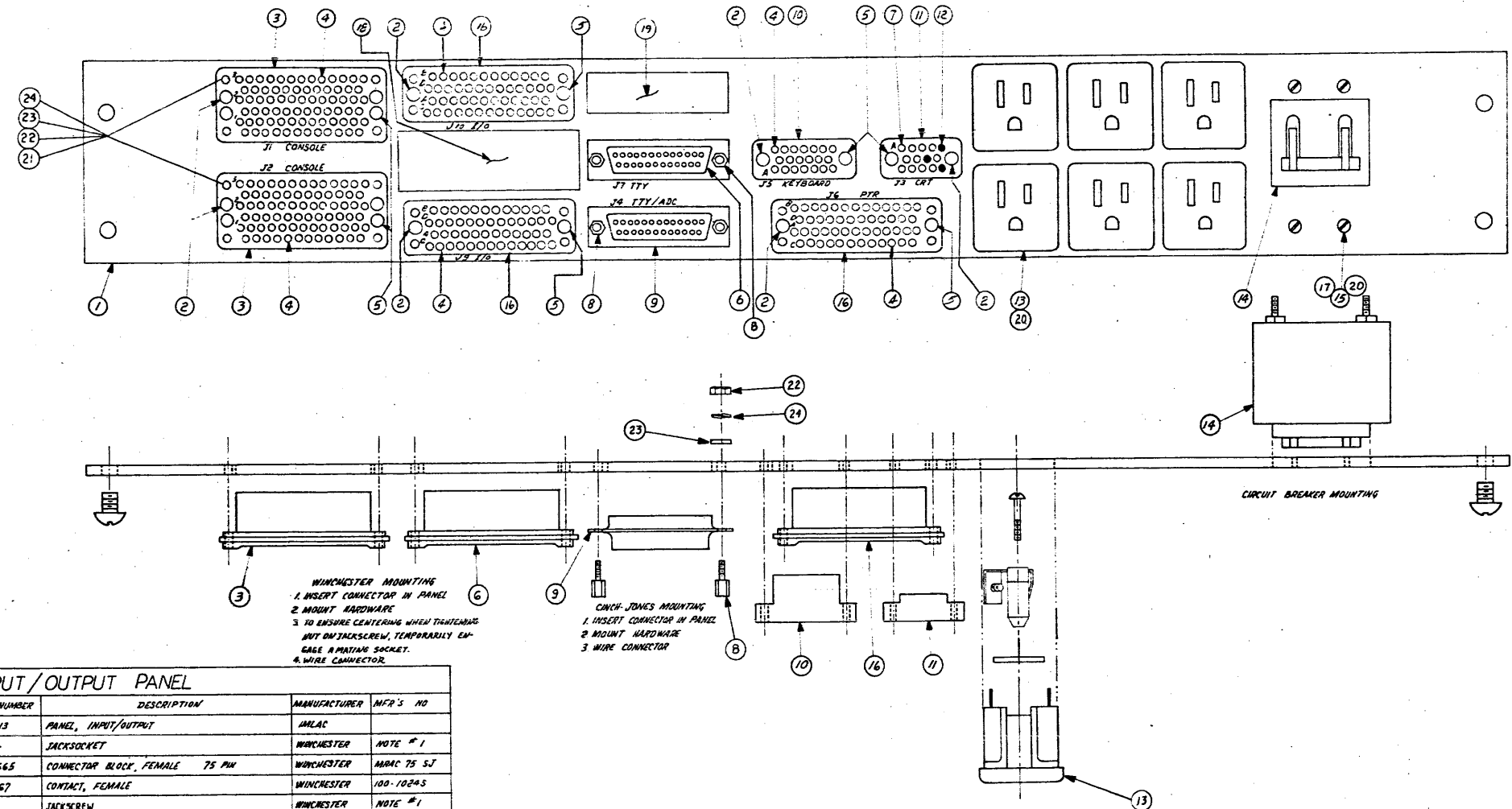
DWG NO 2060 INPUT/OUTPUT PANEL

NEXT ASSY	USED ON	FINAL ASSY	QTY REQ'D	ITEM NO	PART NUMBER	DESCRIPTION	MANUFACTURER	MFR'S NO
			1	1	16-11613	PANEL, INPUT/OUTPUT	IMLAC	
			5	2	-	JACKSOCKET	WINCHESTER	NOTE #1
			2	3	03-11665	CONNECTOR BLOCK, FEMALE 75 PIN	WINCHESTER	MBAC 75 SJ
			14	4	03-11267	CONTACT, FEMALE	WINCHESTER	100-1024S
			5	5	-	JACKSCREW	WINCHESTER	NOTE #1
			1	6	03-11534	CONNECTOR, FEMALE 25 PINS	CINCH-JONES	DB-1969-933
			2	7	03-11717	CONTACT, MALE	WINCHESTER	100-1024P
			4	8	13-11732	SCREW-LOCK ASSY	CINCH-JONES	D20418-2
			3	9	03-11533	CONNECTOR MALE 25 PIN	CINCH-JONES	DB-1969-932
			1	10	03-11667	CONNECTOR BLOCK, FEMALE, 20 PIN	WINCHESTER	MBAC 20 SJ
			1	11	03-11668	CONNECTOR BLOCK, MALE, 14 PIN	WINCHESTER	MBAC 14 PJ
			3	12	03-11661	CONTACT, MALE, COAX	WINCHESTER	100-8001P
			6	13	13-11257	RECEPTACLE, AC GROUND	WABER	S 2538
			1	14	10-11666	CIRCUIT BREAKER, 15 AMP	HEINEMAN	AM33ATGG
			4	15	-	SCREW, 6-32, 3/4" LONG, PAN HEAD STAINLESS		
			1	16	03-11665	CONNECTOR BLOCK, FEMALE, 50 PIN	WINCHESTER	MBAC 50 SJ
			4	17	-	WASHER, SPLIT LOCK, #6 STAINLESS		
			3	18	10-11654 P1	-OLE COVER	IMLAC	
			1	19	10-11654 P3	-OLE COVER	IMLAC	
			10	20	-	WASHER SPLIT LOCK, #6 STAINLESS		
			12	21	-	SCREW, 4-40, 1/2" LONG, FILLISTER HEAD STAINLESS		
			10	22	-	NUT, 4-40		
			16	23	-	WASHER FLAT, #4 STAINLESS		
			16	24	-	WASHER SPLIT LOCK #4 STAINLESS		

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THIS DRAWING MADE FROM 2060.

LAYOUT	BY	DATE	<p>IMLAC CORPORATION 288 NEWTON STREET WALTHAM MASSACHUSETTS 02154</p>	TITLE INPUT/OUTPUT PANEL FOR STANDARD PDS-1		
DRAWN	BY	DATE		PREFIX	SIZE	DRAWING NUMBER
CHECKED	BY	DATE		D		2060-20
APPROVED						
ISSUE						
COPIED	J.V.	5-27-70	MATERIAL	PROJECT	Scale	Sheet



WINCHESTER MOUNTING
 1. INSERT CONNECTOR IN PANEL
 2. MOUNT HARDWARE
 3. TO ENSURE CENTERING WHEN TIGHTENING, BUT ON JACKSCREW, TEMPORARILY ENGAGE A PULLING SOCKET.
 4. WIRE CONNECTOR

CINCH-JONES MOUNTING
 1. INSERT CONNECTOR IN PANEL
 2. MOUNT HARDWARE
 3. WIRE CONNECTOR

NOTES:
 1. JACKSCREWS AND JACKSOCKETS ARE PART OF CONNECTOR ASSEMBLY

DWG NO. 2060		INPUT/OUTPUT PANEL						
NET ASST	USED ON	FINAL ASSY	QTY REQ'D	ITEM NO	PART NUMBER	DESCRIPTION	MANUFACTURER	MFR'S NO
			1	1	16-11613	PANEL, INPUT/OUTPUT	IMLAC	
			7	2	-	JACKSOCKET	WINCHESTER	NOTE # 1
			2	3	03-11665	CONNECTOR BLOCK, FEMALE 75 PIN	WINCHESTER	MBAC 75 SJ
			246	4	03-11267	CONTACT, FEMALE	WINCHESTER	100-10245
			7	5	-	JACKSCREW	WINCHESTER	NOTE # 1
			1	6	03-11534	CONNECTOR, FEMALE 25 PINS	CINCH-JONES	08-1564-933
			2	7	03-11717	CONTACT, MALE	WINCHESTER	100-10260
			4	8	13-11732	SCREW-LOCK ASSY.	CINCH-JONES	DD418-2
			3	9	03-11533	CONNECTOR, MALE, 25 PIN	CINCH-JONES	08-1564-932
			1	10	03-11667	CONNECTOR BLOCK, FEMALE, 20 PIN	WINCHESTER	MBAC 20 SJ
			1	11	03-11668	CONNECTOR BLOCK, MALE, 14 PIN	WINCHESTER	MBAC 14 PJ
			3	12	03-11661	CONTACT, MALE, COAX	WINCHESTER	100-8001 P
			6	13	13-11887	RECEPTACLE, AC GROUNDED	WABER	S2F3B
			1	14	10-11664	CIRCUIT BREAKER, 15 AMP	DEHNEMAN	AM33MGG
			4	15	-	SCREW, 6-32, 3/4" LONG, PAN HEAD STAINLESS		
			3	16	03-11666	CONNECTOR BLOCK, FEMALE, 50 PIN	WINCHESTER	MBAC 50 SJ
			4	17	-	WASHER, SPLIT LOCK, #6 STAINLESS		
			1	18	10-11654 P1	SOLE COVER	IMLAC	
			1	19	10-11654 P3	SOLE COVER	IMLAC	
			10	20	-	WASHER, SPLIT LOCK, #6 STAINLESS		
			12	21	-	SCREW, 4-40, 1/2" LONG, FLAT HEAD STAINLESS		
			16	22	-	NUT, 4-40		
			16	23	-	WASHER, FLAT, #4 STAINLESS		
			16	24	-	WASHER, SPLIT LOCK, #4 STAINLESS		

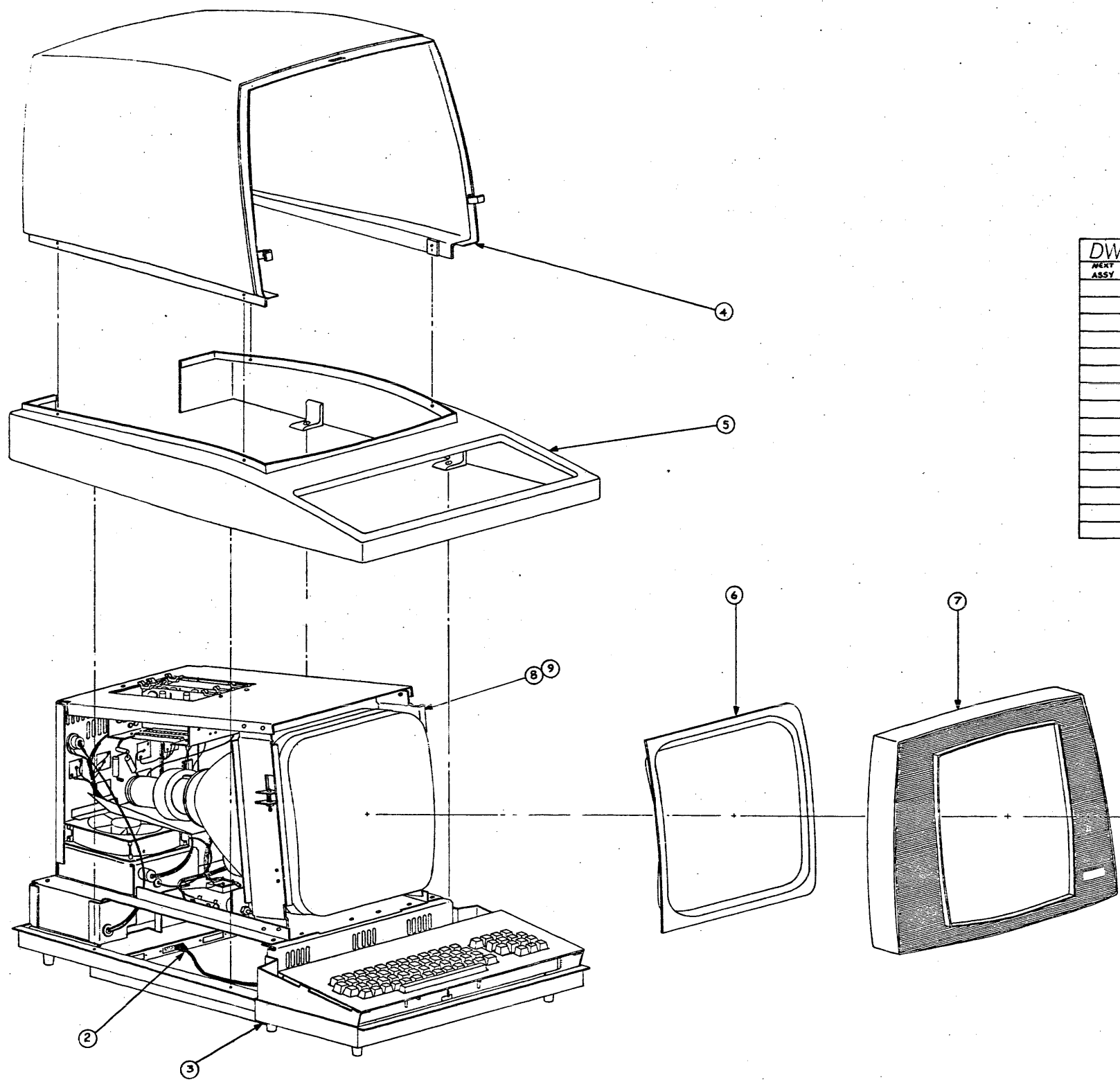
IMLAC, CORP.
PROPRIETARY
INFORMATION

50E

THIS DRAWING MADE FROM 2060

LAYOUT	BY	DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	INPUT/OUTPUT PANEL		
DRAWN	H.C.M.	1-7-70		FOR PDS-1 WITH EXT. I/O AND INTERRUPT			
CHECKED	H.C.M.	1-12-70		PREFIX	SIZE	DRAWING NUMBER	REV.
APPROVED					D	2060-014	1
ISSUE	J.V.	5-22-70		MATERIAL	PROJECT	Scale	Sheet

REV	ECN	DATE	DFTHM	APP'D.
2				
8	107	2-26-70	HCM	



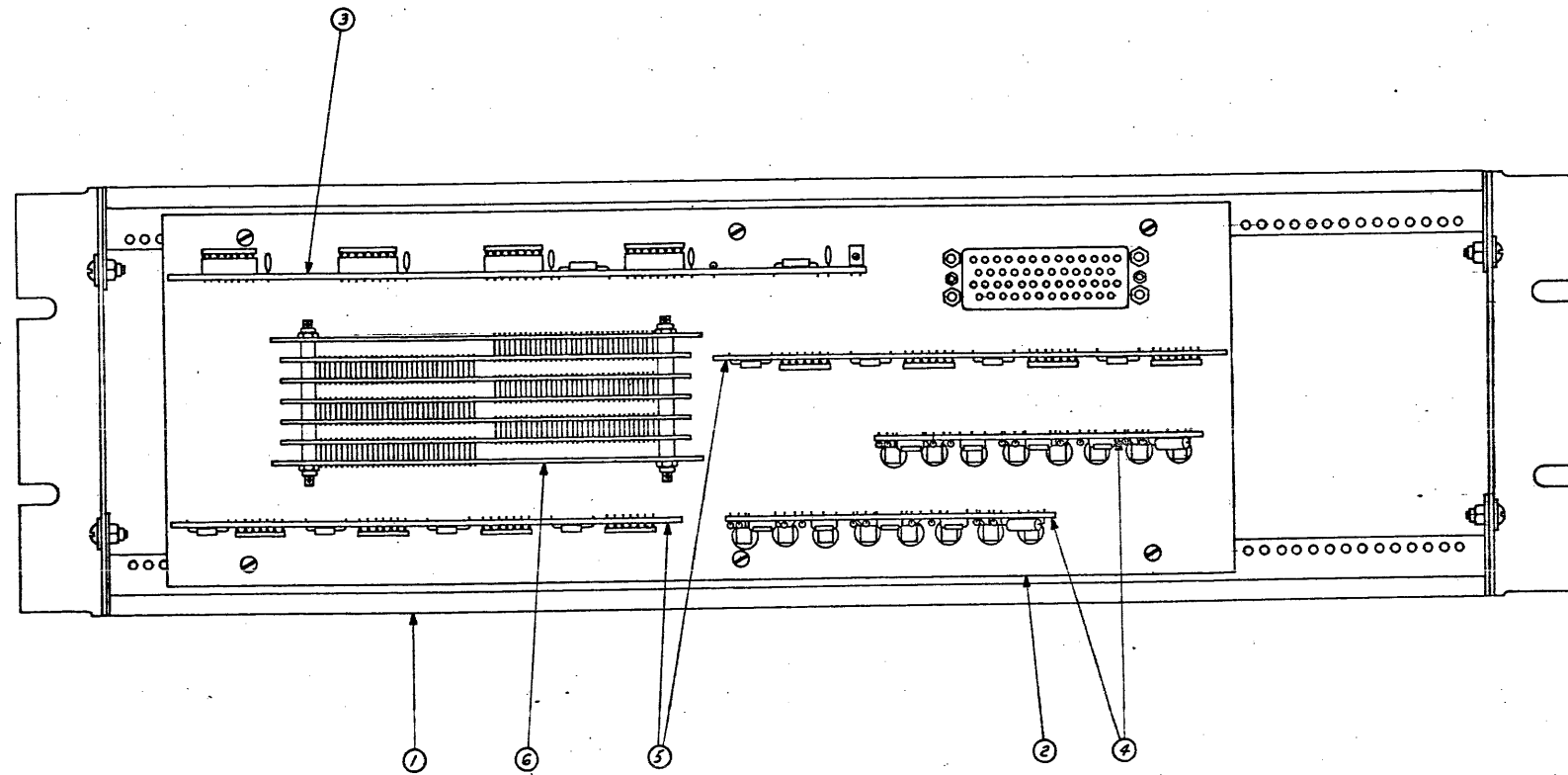
DWG NO. 2083 MONITOR ASSY. VERT. TUBE

NEXT ASSY	USED ON	FINAL ASSY	QTY REQ'D	ITEM	PART NO.	DESCRIPTION	MFR.	MFR. NO.
			1	2	2056	KEYBOARD CABLE (INTERNAL) JS		
			1	3	2079	KEYBOARD, & CHASSIS PAN ASSY		
			1	4	15-11577	SHROUD		
			1	5	16-11576	BOTTOM SECTION		
			1	6	15-11564	MONITOR MASK		
			1	7	15-11580	BEZEL, VERT. TUBE		
			-	8	12-11336	CRT ASSY (REV)		
			1	9	12-11733	CRT ASSY (HI RESOLUTION)		

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LAYOUT	BY	DATE	IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	
DRAWN	MJF	5-27-70		MONITOR ASSY VERT. TUBE	
CHECKED	MJF	5-27-70	PREFIX	SIZE	DRAWING NUMBER
APPROVED			S	D	2083
ISSUE			Scale		REV
COPIED					8
MATERIAL	PROJECT				12-1-70



DWG NO. 2076 MEMORY RACK ASSY

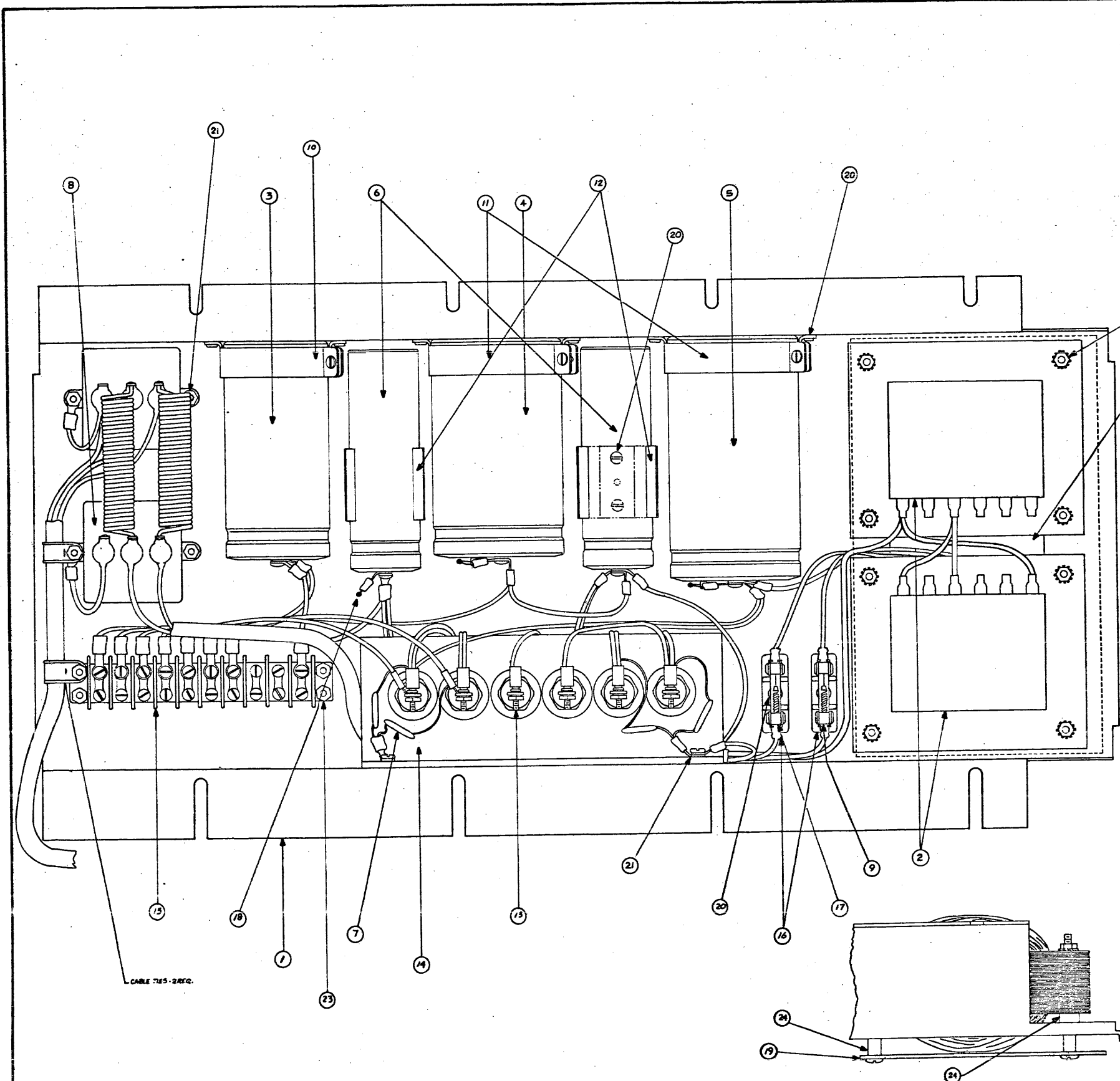
NEXT ASSY	USED ON	FINAL ASSY	QTY REQ'D	ITEM NO.	PART NUMBER	DESCRIPTION	MANUFACTURER	MFR. NO.
			1	1	2073	VARI-PAK ASSY	IMLAC	
			1	2	2040	DATARAM MOTHER BOARD	IMLAC	
			1	3	2011	SENSE AMP	IMLAC	
			2	4	2018	INHIBIT DRIVER	IMLAC	
			2	5	2021	MEMORY ADDRESS SELECTION	IMLAC	
			1	6	12-11585	CORE MEMORY DATARAM	DATARAM	

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LAYOUT	BY	DATE	<p>IMLAC CORPORATION 384 NEWTON STREET WALTHAM, MASSACHUSETTS 02154</p>	TITLE			
DRAWN	H.C.M.	4-2-70		MEMORY RACK ASSY			
CHECKED	H.C.M.	4-10-70		PREFIX	SIZE	DRAWING NUMBER	REV.
APPROVED				M	D	2076	
ISSUE				Scale		Sheet	
COPIED							
MATERIAL			PROJECT				

REV.	ECN.	DATE	DFTM.	APPV.



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QTY.	REQD.	PART NO.	DESCRIPTION	MFR.	MFR. NO.	
8	24		# 8 STANDOFF $\frac{1}{8}$ LONG			
4	23		8-32x $\frac{1}{4}$ PAN HEAD SS. W/WASHER/NUT			
8	22		8-32x $\frac{1}{4}$ PAN HEAD SS. W/LOCKWASHER/NUT			
6	21		6-32x $\frac{1}{2}$ PAN HEAD SS. W/WASHER/NUT			
12	20		6-32x $\frac{1}{2}$ PAN HD. SS. W/WASHER/NUT			
1	19	13-11901	INSLTC CARD, $\frac{1}{16}$ GLASS EPOXY LMNTE, 4 $\frac{3}{4}$ x 8"	IMLAC		
3	18	04-11049	RESISTOR, 1K, $\frac{1}{4}$ W, 5%			
FI	1	17	13-11819	FUSE, 4 AMP. SLOWBLOW	BUS MCL-4	
2	16	13-11797	FUSE HOLDER	LITTLE FUSE 357001-346TYPE-S		
TD-4	1	15	13-11798	TERMINAL BOARD	CINCH-TONES 10-141	
1	14	16-11811	DIODE MOUNTING BRACKET	IMLAC		
CR1-CR6	6	13	07-11772	DIODE, RECTIFIER	MOTOROLA MCGE IN3809	
2	12	13-11804	CLAMP, CAPACITOR	AUGAT 6176-1		
2	11	13-11805	CLAMP, CAPACITOR, 2 $\frac{1}{2}$ DIA., W/TWO MATING FEET	SANGAMO CE70		
1	10	13-11806	CLAMP, CAPACITOR, 2 $\frac{1}{2}$ DIA., W/TWO MATING FEET	SANGAMO CE70		
F2	1	9	13-11900	FUSE, 3AMP	BUS ACC-3	
2	8	2212	CAPACITOR, ASSY., 600V	IMLAC		
4	7	05-11783	CAPACITOR, DISC., .005 MFD., 10V.			
CS, CT	2	6	05-11774	CAPACITOR, ELECTRO. 8200 MFD., 25V	SPRAGUE 36D823025AC2A	
C1	1	5	05-11818	CAPACITOR, ELECTRO. 83,000 MFD., 15V.	SPRAGUE 36D833005CD2A	
C8	1	4	05-11775	CAPACITOR, ELECTRO. 32,000 MFD., 25V	SPRAGUE 36D323025CC2A	
C2	1	3	05-11776	CAPACITOR, ELECTRO. 42,000 MFD., 10V	SPRAGUE 36D423005CB2A	
T1, T2	2	2	13-11769	TRANSFORMER	TITAN TRANS. CO. TT 90B1	
1	1	16-11719	PI - POWER SUPPLY MOUNTING PANEL	IMLAC		

NEXT ASSY.	USED ON	FINAL ASSY.	LOCAT.	QTY. REQD.	ITER. NO.	PART NO.	DESCRIPTION	MFR.	MFR. NO.

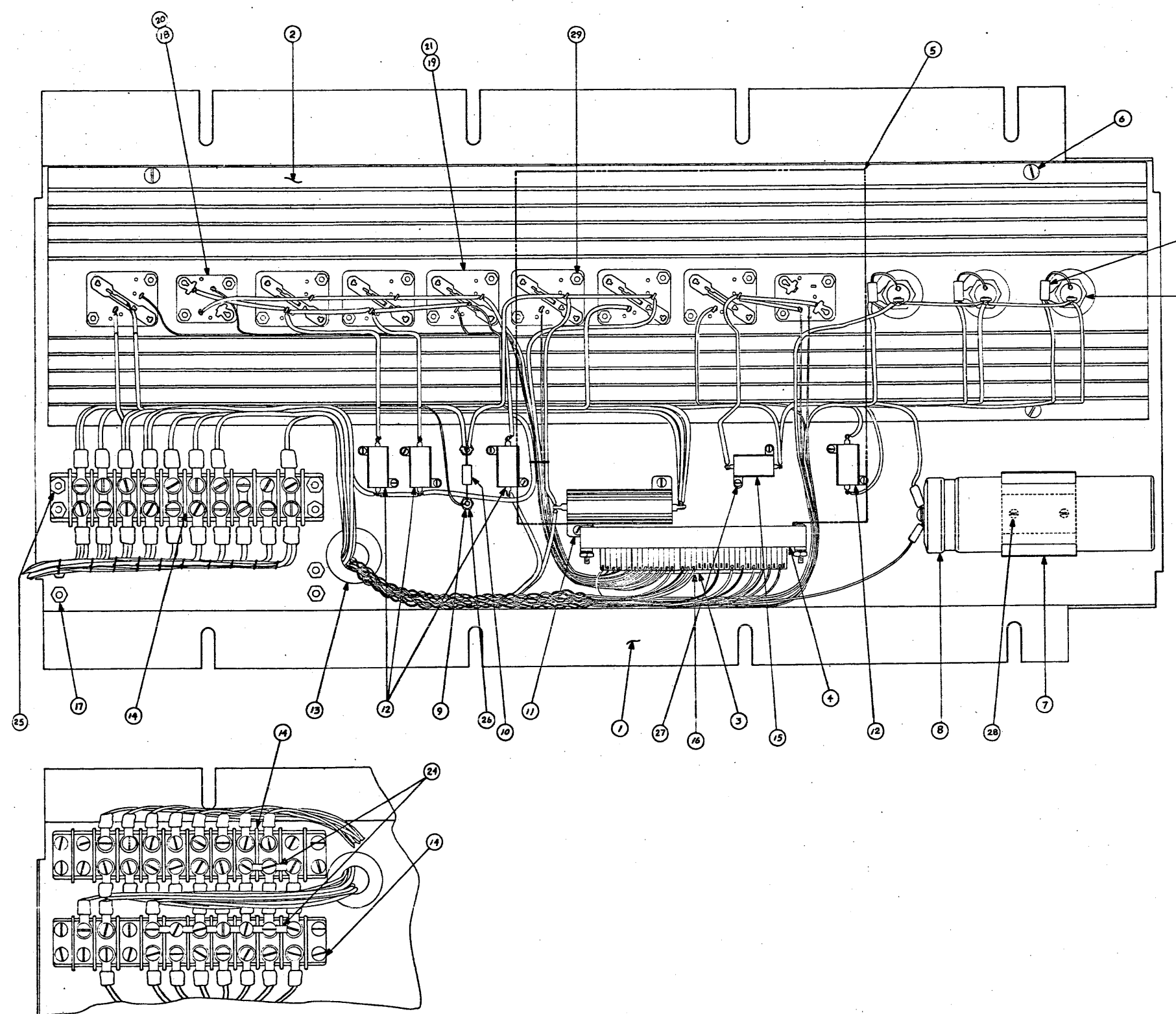
BY DATE
 LAYOUT A/JF 5/11/70
 DRAWN A/JF 5/13/70
 CHECKED
 APPROVED
 ISSUE
 COPIED
 MATERIAL

IMLAC
 CORPORATION
286 ALWTON STREET
 WALTHAM MASSACHUSETTS 02154

TITLE
PI POWER SUPPLY ASSEMBLY

PREFIX	SIZE	DRAWING NUMBER	REV.
S	D	2205	
Scale 1/41	Sheet		

REV	ECN	DATE	DTM	APPVD
1				
2	23			
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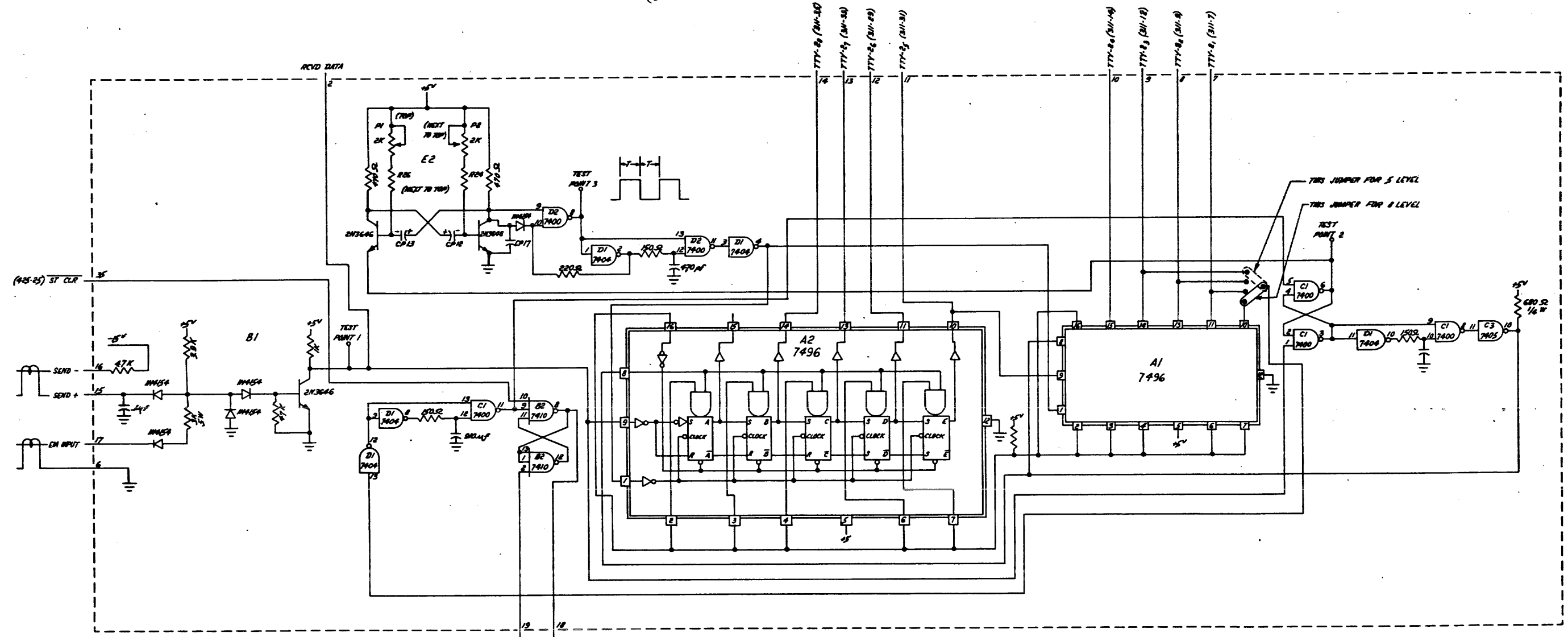
IMLAC, CORP.
PROPRIETARY
INFORMATION

QTY	ITEM NO.	LOCAT.	PART NUMBER	DESCRIPTION	MFR.	MFR. NO.
18	29	-	-	4-40x 1/2 PAN HEAD, S.S. W/NUT (18 REQ.)		
2	28	-	-	6-32x 3/8 PAN HEAD, SS W/WASHER & NUT (2 REQ.)		
12	27	-	-	4-40x 3/8 PAN HEAD BR. W/WASHER & NUT (12 REQ.)		
2	26	-	-	6-32x 1/2 PAN HEAD (2 REQ.)		
4	25	-	-	8-32x 1/4 PAN HEAD SS W/WASHER & NUT (4 REQ.)		
8	24	-	-	SHORTING CLIPS		
3	23	C3, C9, C10	05-11263	CAPACITOR, TANTALUM, 15 uf, 20V	SPRAGUE	150D54X9020B2
3	22	05, 0R, 010	08-11775	SILICON CONTROLLED RECTIFIER	MOTOROLA	2N1842
2	21	-	08-11784	TRANSISTOR, PNP SILICON POWER	MOTOROLA	2N3740
7	20	-	08-11771	TRANSISTOR, PNP SILICON POWER	MOTOROLA	MT2267
2	19	-	03-11799	TRANSISTOR MOUNTING KIT	MOTOROLA	MK25
7	18	-	03-11782	TRANSISTOR MOUNTING KIT	MOTOROLA	MK20
4	17	-	-	8-32x 3/4 PAN HEAD, SS W/WASHER & NUT		
1	16	-	-	BRACKET, CONNECTOR MOUNT	IMLAC	
1	15	R5	04-11780	RESISTOR, 0.25 W, 10% 1% ²	DALE	RH10
3	14	T81, T83	13-11798	TERMINAL BOARD	CINCH-JONES	10-141
1	13	-	-	GROMMET, RUBBER 1/2" ID.		
4	12	R1, R2, R7	04-11779	RESISTOR, 0.1 W, 10% 1% ²	DALE	RH10
1	11	R4	04-11778	RESISTOR, 0.1 W, 10% 1% ²	DALE	RH50
1	10	R6	04-11777	RESISTOR, 1 W, 2 W, 5% CARBON	A. BRADLEY	
2	9	-	13-11902	INSULATED STANDOFF	CTC	1917-5
1	8	C6	05-11774	CAPACITOR, ELECTROLYTIC, 200 uf, 25V	SPRAGUE	36D8226025AC2A
1	7	-	13-11806	CLAMP, 2 1/8" DIA.	SARGANT	CE70
4	6	-	-	8-32x 3/8 PAN HEAD, SS W/STANDOFF FASTENERS	ELEC. FASTENER	F22NC3-82
1	5	-	2088	POWER SUPPLY REGULATOR CARD	IMLAC	01-11770
1	4	-	03-11282	CONNECTOR	ELCO	7008-035-063-002
1	3	-	-	HINGE, CONNECTOR MOUNT		
1	2	-	13-11796	HEAT SINK	WAKEFIELD	TYPE 400
1	1	-	16-11750	CHASSIS, POWER SUPPLY P2	IMLAC	

REV	DATE	BY	CHKD	APPD	TITLE
2077	5/23/70	AJF	AJF		P2 POWER SUPPLY ASSEMBLY
	5/23/70	AJF			
					IMLAC CORPORATION 201 NEWTON STREET WALTHAM, MASSACHUSETTS 02154
					PREFIX: S
					SIZE: 10
					DRAWING NUMBER: 2206
					REV: 5
					Scale: Sheet

REV	ECN	DATE	DTSN	APP'V
A	-	9-13-78	MMF	KDP

314
(2035)



600 2400
P1 7.5K 3.9K
P2 13K 6.8K

BAUD SEND	110	300	-	75	1200	1800	110	75	2400	300	2400
BAUD RCV	110	300	-	75	1200	1800	110	75	2400	300	1800
LEVEL	8	8	-	8	8	8	5	5	8	8	
2035 GROUP	00	01	02	03	04	05	06	07	08	09	
R 26 (OHMS)	10K	3K	-	2.2K	3.3K	2K	10K	2.2K	3.9K	2K	9.9K
R 24 (OHMS)	11K	4.3K	-	9.1K	6.2K	4.3K	11K	2.1K	6.2K	3.3K	7.9K
CP 16 C 13 (NF)	.56	.56	-	1	0.1	0.1	.56	1	.047	.01	.020
CP 17 (NF)	0.1	0.1	-	0.1	.01	.01	0.1	0.1	.01	.01	
T (SEND) MILLISECONDS	4.55	1.67	-	6.67	0.416	0.278	4.55	6.67	0.208	1.67	1.875
T (RCV) MILLISECONDS	4.55	1.67	-	6.67	0.416	0.278	4.55	6.67	0.208	.278	

STARTS FROM 2444 200 (20-40)
TTY-2 INPUT STATUS (20-45)

IMLAC, CORP.
PROPRIETARY
INFORMATION

64

LAYOUT	BY	DATE	TITLE
DRAWN	MM	23-4-78	TTY-2 RECEIVE
CHECKED			
APPROVED			
ISSUE			
COPIED			
TRACED	MM	23-4-78	
MATERIAL			

288 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

PROJECT
TTKA OPTION

PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	713	A

Scale _____ Sheet _____

		100		200		300			
		POWER SUPPLY		POWER SUPPLY		POWER SUPPLY			
32	X DRIVER, SECTION A	10-12 54-56	(2246) (1200) (902-A)	MISC CONTROL	18-20 58-60	(2317) (12243) (872)	TKA SEND	18-20 58-60	(2318) (12244) (898)
31	Y DRIVER, SECTION A	10-12 54-56	(2246) (1200) (903-A)	RUH CONTROL	10-12 66-68	(2263) (12075) (848)	TKA REC	18-20 60-62	(2319) (12245) (899)
30	INHIBIT DRIVER, SECTION A	10-12 56-58	(2247) (12002) (904-A)	16 K MEM CONTROL Δ	20-22 66-68	(2337) (12297) (901-16K)	TKA MULTI-SPEED	20-22 70-72	(2338) (12298)
29							MDS-2, DFI-1	22-24 54-56	(2356) (12338) (928)
28	STACK, SECTION A	12-14 62-64	(12-12134) (904-A)	STACK, SECTION A	12-14 62-64	(12-12134) (902-A) (903-A)	ASYNC SEND	18-20 58-60	(2318) (12244) (863)
27	SENSE AMP, SECTION A	10-12 58-60	(2254) (12009) (904-A)	MEMORY CONTROL	16-18 56-58	(2307) (12219) (849-16K) (849)*	ASYNC REC	18-20 60-62	(2319) (12245) (870)
26	SENSE AMP, SECTION B	10-12 58-60	(2254) (12009) (907-A)	INST REG & DECODER	16-18 66-68	(2310) (12224) (856-A)	ASYNC MULTI-SPEED	20-22 70-72	(2338) (12298)
25							SERIAL BIT LOADER	14-16 66-68	(2299) (12186) (897)
24	STACK, SECTION B	12-14 62-64	(12-12134) (907-A)	STACK, SECTION B	12-14 62-64	(12-12134) (905-A) (906-A)	SYNC SEND	10-12 60-62	(2253) (12019) (867)
23	INHIBIT DRIVER, SECTION B	10-12 56-58	(2247) (12002) (907-A)	ACC CONTROL	20-22 60-62	(2303) (12203) (840)	SYNC REC	10-12 62-64	(2253) (12021) (860)
22	Y DRIVER, SECTION B	10-12 54-56	(2246) (12001) (906-A)	ACC & ACI	12-15 54-56	(2287) (12145) (824)	H.S. 16 BIT INTERFACE	16-18 68-70	(2311) (12225) (857)
21	X DRIVER, SECTION B	10-12 54-56	(2246) (12001) (905-A)	ACC & ACI	8-11 54-56	(2287) (12145) (823)	CABLE FOR 16 BIT INTERFACE	16-18 62-64	(12361)
20	X DRIVER, SECTION C Δ	10-12 54-56	(2246) (12001) (908-16K)	ACC & ACI	4-7 54-56	(2287) (12145) (822)	CABLE, CONSOLE SWITCHES & MISC LAMP DRIVE	16-18 64-66	(855-16K) Δ (855)*
19	Y DRIVER, SECTION C Δ	10-12 54-56	(2246) (12001) (909-16K)	ACC & ACI	0-3 54-56	(2287) (12145) (821-16K) (821)*	CABLE IOT	16-18 62-64	(12361) 363
18	INHIBIT DRIVER, SECTION C Δ	10-12 56-58	(2247) (12002) (910-16K)	SKIP & LINK	14-16 72-74	(2302) (12217) (845)	IOT CARD	12-14 58-60	(2272) (12100) (847-16K) Δ (847)*
17							PROG CLOCK	10-12 70-72	(2267) (12086) (859)
16	STACK, SECTION C Δ	12-14 62-64	(12-12134) (910-16K)	STACK, SECTION C Δ	12-14 62-64	(12-12134) (908-16K) (909-16K)	LIGHT PEN	16-18 70-72	(2312) (12227) (862-16K) Δ (862)*
15	SENSE AMP, SECTION C Δ	10-12 58-60	(2254) (12009) (910-16K)	JPG & CLOCK	10-12 72-74	(2265) (12089) (820-16K) Δ (820)*	D.C.U. CABLE	18-20 66-68	(2328) (12278) (885)
14	MEMORY OUTPUT BUFFER	14-16 64-66	(2295) (12162) (843-16K)	CYCLE CONTROL	12-14 66-68	(2272) (12127) (772)	D.C.U. DRIVE INTERFACE	20-22 56-58	(2332) (12285) (889)
13	READ ONLY MEMORY	30-32	(2306) (12218) (846-A)	MB	8-15 70-72	(2283) (12138) (819-A)	D.C.U. DATA REGISTERS	18-20 64-66	(2327) (12277) (884)
12	SENSE AMP, SECTION D Δ	10-12 58-60	(2254) (12009) (913-16K)	MB	0-7 70-72	(2282) (12138) (818-A)	D.C.U. STATUS LOGIC	20-22 56-58	(2335) (12292) (896)
11							D.C.U. MEMORY CONTROL	20-22 58-60	(2334) (12289) (893)
10	STACK, SECTION D Δ	12-14 62-64	(12-12134) (913-16K)	STACK, SECTION D Δ	12-14 62-64	(12-12134) (911-16K) (912-16K)	D.C.U. CLK, SECTOR, HD LOGIC	20-22 54-56	(2331) (12282) (887)
9	INHIBIT DRIVER, SECTION D Δ	10-12 56-58	(2247) (12002) (913-16K)	MA	8-15 70-72	(2283) (12132) (817-A)	D.C.U. ADDRESS REGISTERS	18-20 68-70	(2329) (12279) (886)
8	Y DRIVER, SECTION D Δ	10-12 54-56	(2246) (12001) (912-16K)	MA	1-7 70-72	(2283) (12132) (816-A)	CABLE, LAMP DRIVE	16-18 64-66	(12302) (855-16K) Δ (855)*
7	X DRIVER, SECTION D Δ	10-12 54-56	(2246) (12001) (911-16K)	B, MB, MA, PC CNTL MA AUTO INDEX DET	14-16 68-70	(2302) (12202) (842)	DMA & HIGH LEVEL INTERRUPT	12-14 60-62	(2340) (12300) (916)
6	X YR OPTION	20-22 72-74	(2245) (12323) (915)	PC	8-15 70-72	(2283) (12138) (815)	POINT PLOT		931
5	Y D/A	14-16 60-62	(2293) (12153) (852)	PC	1-7 70-72	(2283) (12138) (814-16K) Δ (814)*	SUPPRESSED GRID	20-22 64-66	(2336) (12293) (900)
4	Y DISPLAY ACC	12-14 58-60	(2308-A) (12220-A) (851) (2309-G) (12221-G)	DPC	8-15 70-72	(2283) (12132) (813)	B LEVEL DT	12-14 68-70	(2279) (12130) (858-16K) Δ (858)*
3	DMB & IC REG & 40~SYNC	12-14 64-66	(2275) (12125) (771-A)	DPC	1-7 70-72	(2283) (12138) (812-16K) Δ (812)*	L.V. REGISTERS	12-14 56-58	(2270) (12091) (854)
2	X DISPLAY ACC	12-14 58-60	(2308-A) (12220-A) (850) (2309-G) (12221-G)	DMC & DIR	12-14 72-74	(2286) (12140) (798-A)	L.V. STATE CNTL	12-14 54-56	(2269) (12090) (853)
1	X D/A	14-16 60-62	(2293) (12159) (844)	DISPLAY CONTROL	14-16 62-64	(2292) (12161) (838)	L.V. TIMING CNTL	12-14 58-60	(2271) (12092) (853)

A	ROBERT	11/27/71	H.C.M.
B		27 JUN 71	J.V.
C		30 JUN 71	H.C.M.
D		5 AUG 71	H.C.M.
E		8-9-71	J.V.
F		11 AUG 71	H.C.M.
G		12 AUG 71	S.O.B. 71B
H		25 AUG 71	J.V. 71B
I		25 SEP 71	H.C.M.
J		6 OCT 71	G.B. 71B

Plotter INT.

- NOTES:
1. THE SET OF NUMBERS BEFORE THE PARENTHESIS ARE THE KEYING SLOTS FOR EACH BOARD.
 2. THE FIRST NUMBER IN PARENTHESIS IS THE ASSEMBLY DRAWING NUMBER.
 3. THE SECOND NUMBER IS THE ARTWORK DRAWING NUMBER AND APPEARS ON THE PRINTED CIRCUIT BOARD.
 4. THE THIRD NUMBER IS THE LOGIC DRAWING NUMBER, WHILE THE BOARD IS USED.
 5. Δ USED ONLY ON 16K CONFIGURATION (TYPE III BACKPLANE).
 6. * USED ONLY ON 8K CONFIGURATION (TYPE IV BACKPLANE).

DWG. NO. WAS 2266-16K

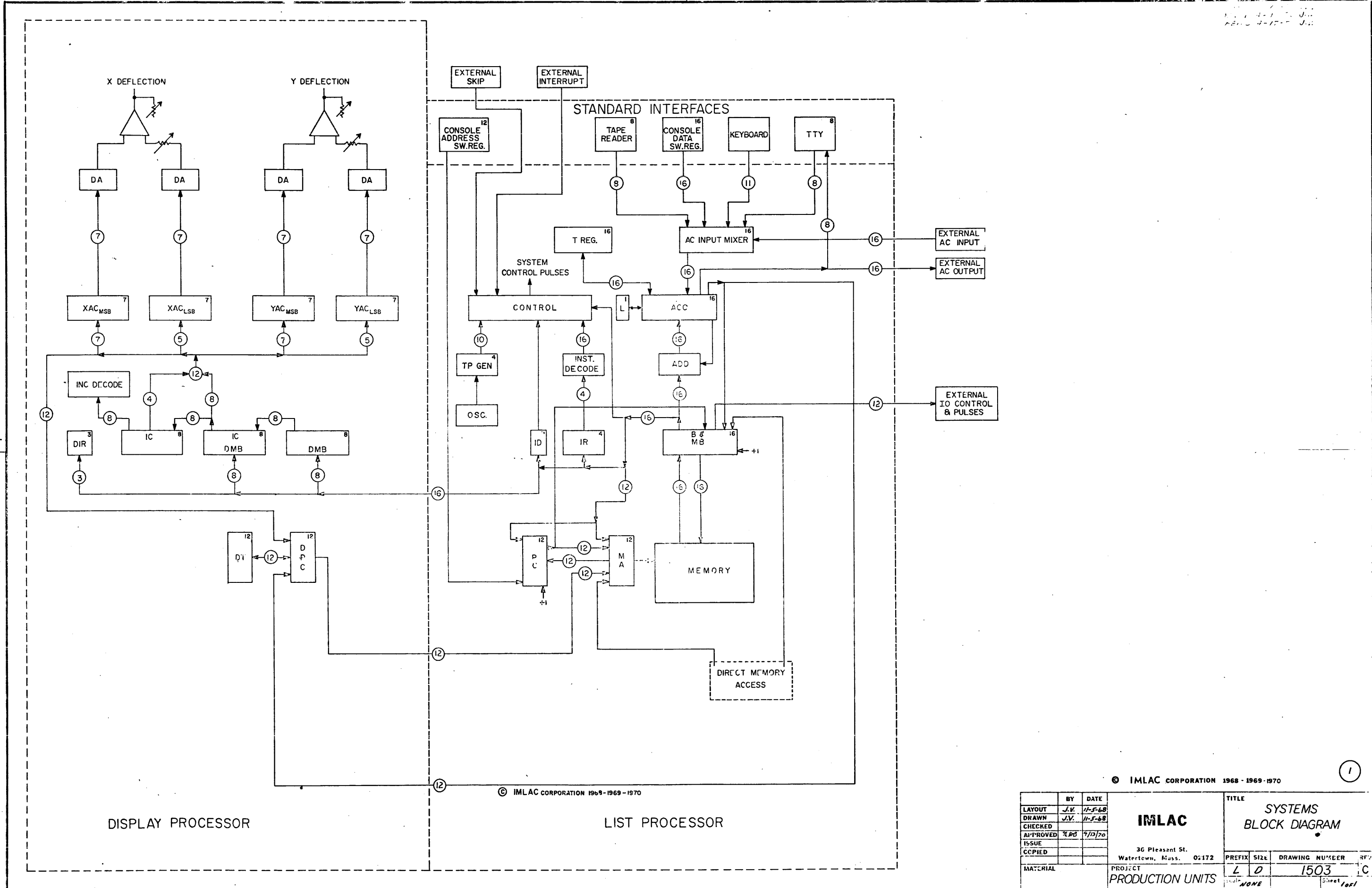
H.C.M. 12/6/71
H.C.M. 11/2/71

FUNCTION LOCATION
TYPE III AND TYPE IV BACKPLANE

PROD

D 2266-A J

REV. 4-1-70
REV. 4-17-70



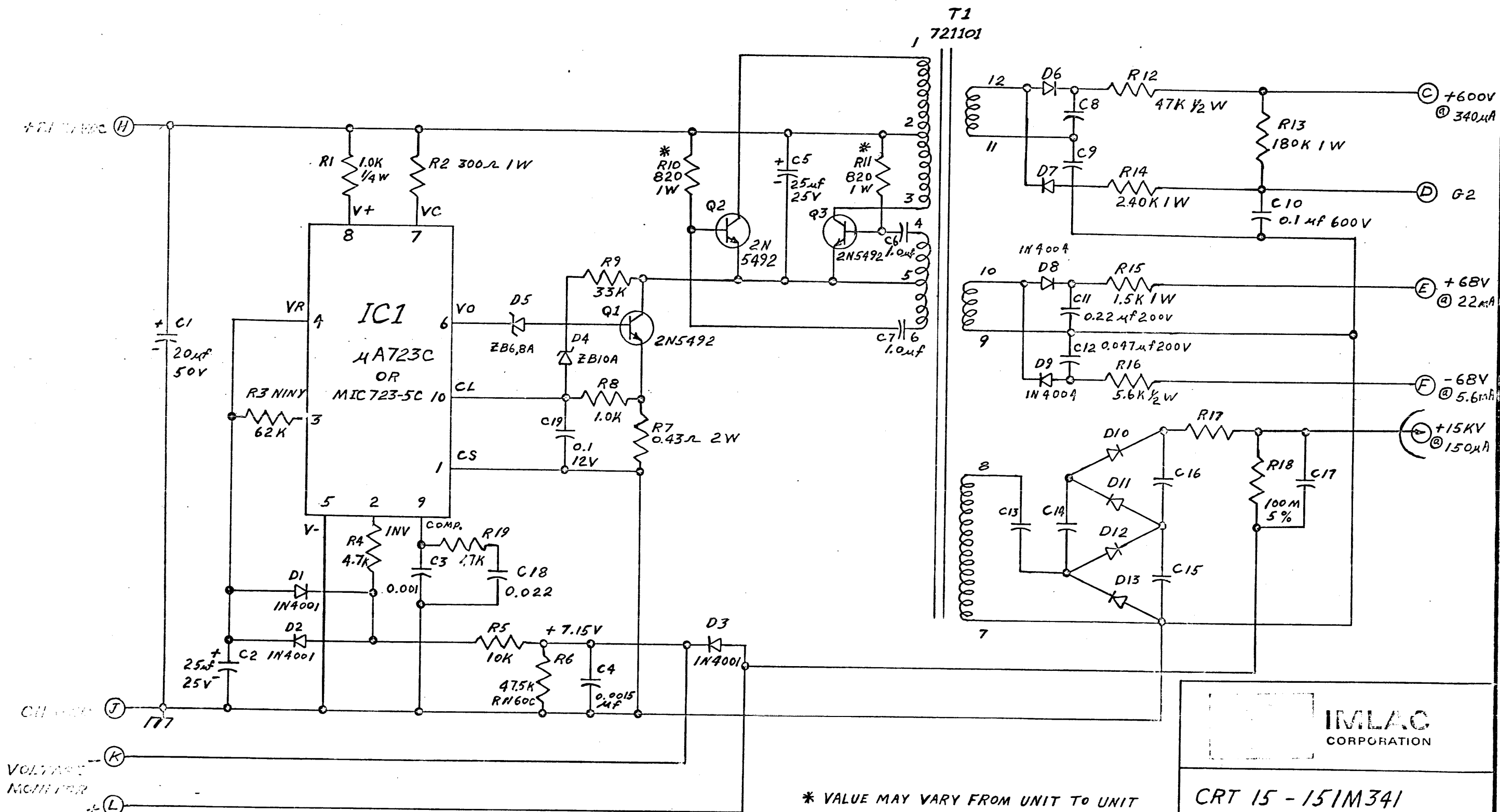
DISPLAY PROCESSOR

LIST PROCESSOR

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LAYOUT		BY	DATE	IMLAC 36 Pleasant St. Watertown, Mass. 02172 PROJECT: PRODUCTION UNITS	TITLE		SYSTEMS BLOCK DIAGRAM	
DRAWN		J.V.	11-5-68		PREFIX	SIZE	DRAWING NUMBER	REV.
CHECKED		J.V.	11-5-68		L	D	1503	C
APPROVED		J.P.D.	4/10/70		MATERIAL		Sheet 1 of 1	
ISSUE					NONE			
COPIED								



* VALUE MAY VARY FROM UNIT TO UNIT

NOTE: DWG WAS WALDEN B1119

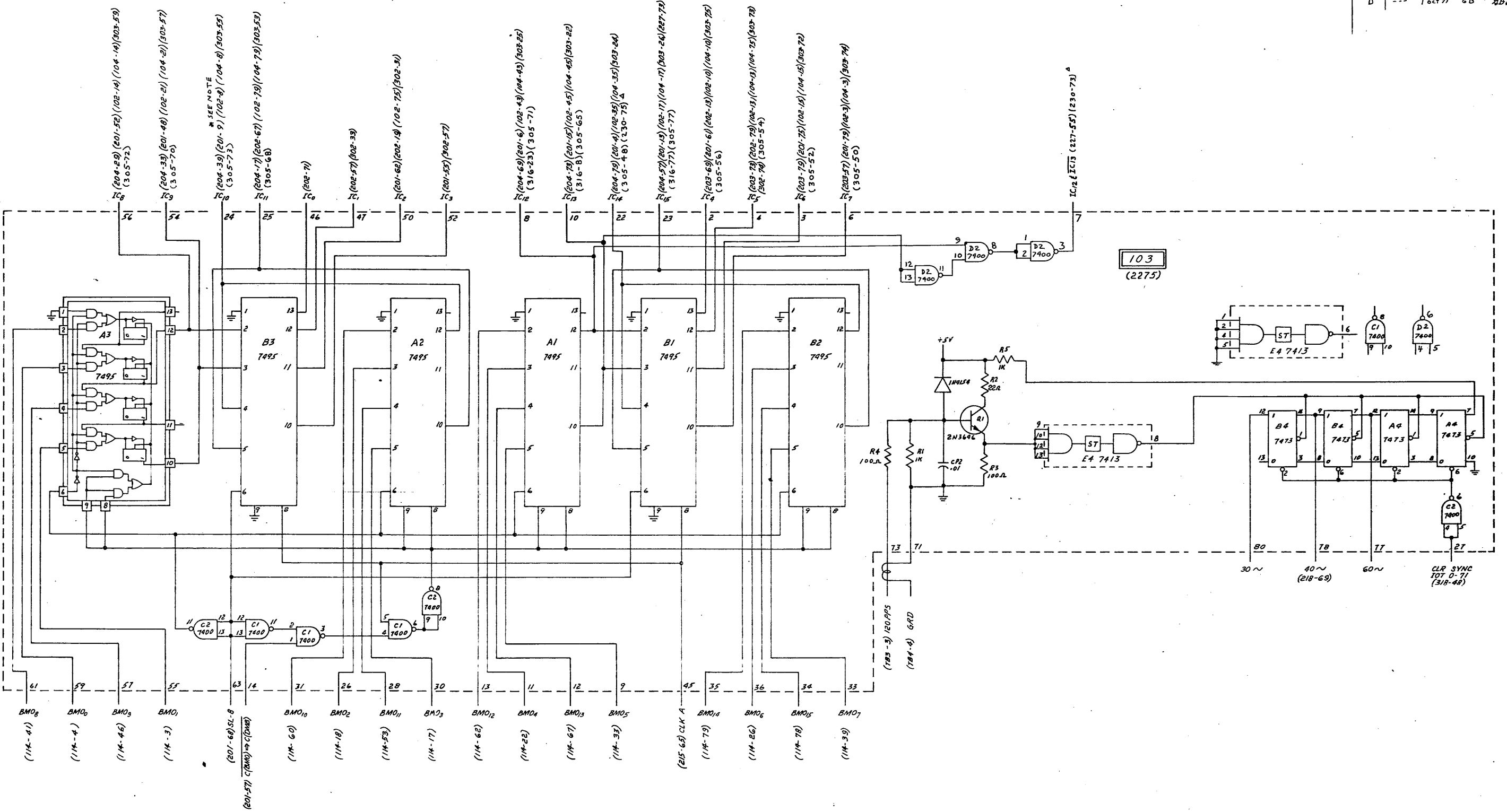
CH 177 (J)
 VOLTAGE MONITOR (K)
 + (L)

IMLAC
CORPORATION

CRT 15 - 151M341

DATE 21OCT 70	749	REV D
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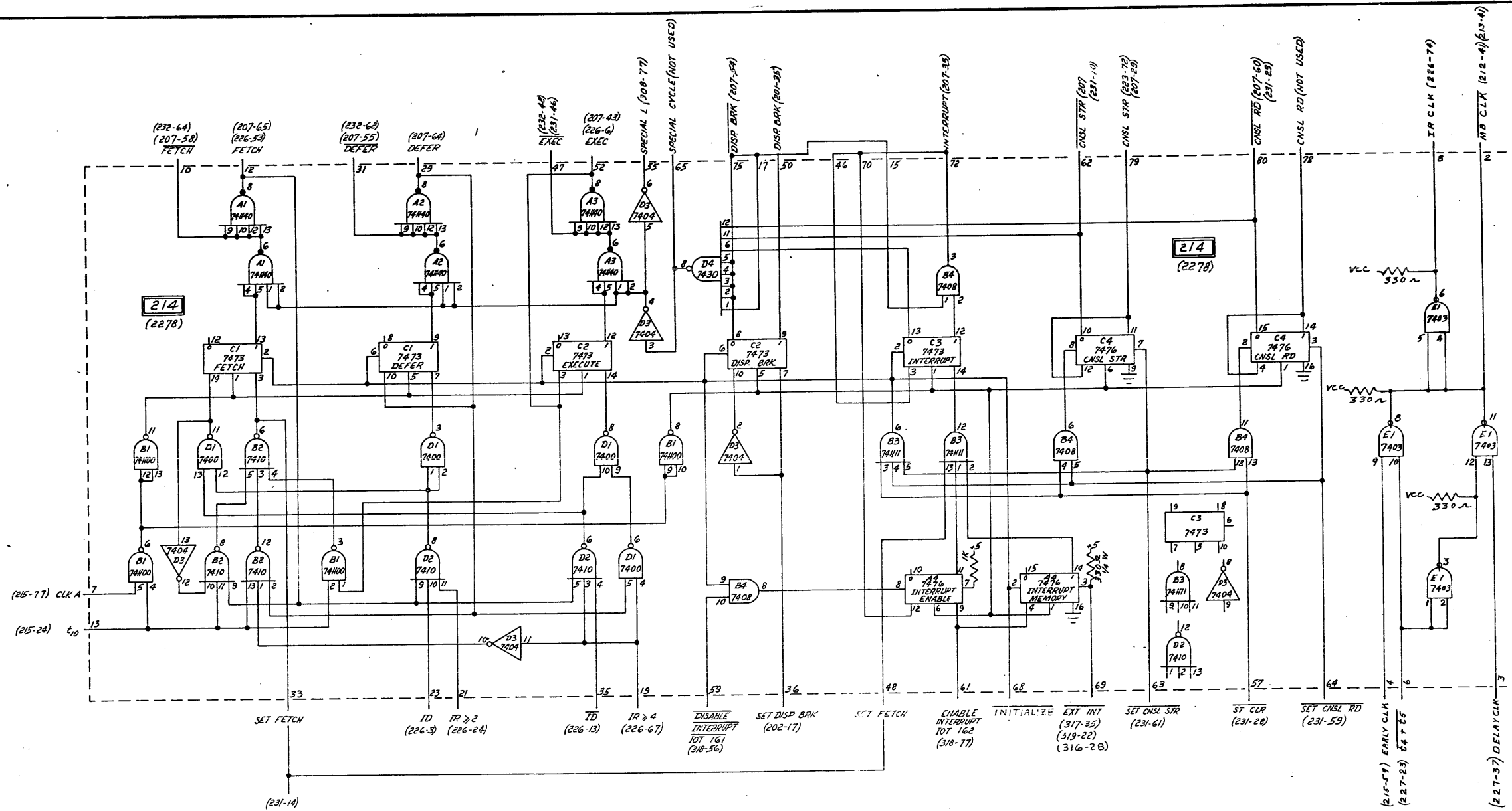
REV.	ECN	DATE	DFTM	APP'D
D	---	1 OCT 71	GB	ADB



* NOTE: IC₁₀ DOES NOT CONNECT TO 201-9 IF SUPPRESSED GRID CARD 305-15 INSTALLED.
 Δ USED ON 16K ONLY

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LAYOUT	BY	DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	J.V.	1-13-71		DISPLAY MEMORY BUFFER & INCREMENT CONTROL REGISTERS & 40 CYCLES SYNC.		
CHECKED	CBA	3-19-71		PREFIX	SIZE	DRAWING NUMBER
APPROVED				L	D	771-A
ISSUE				Scale		Sheet
COPIED						
PROJECT			REV.			
PROD			D			

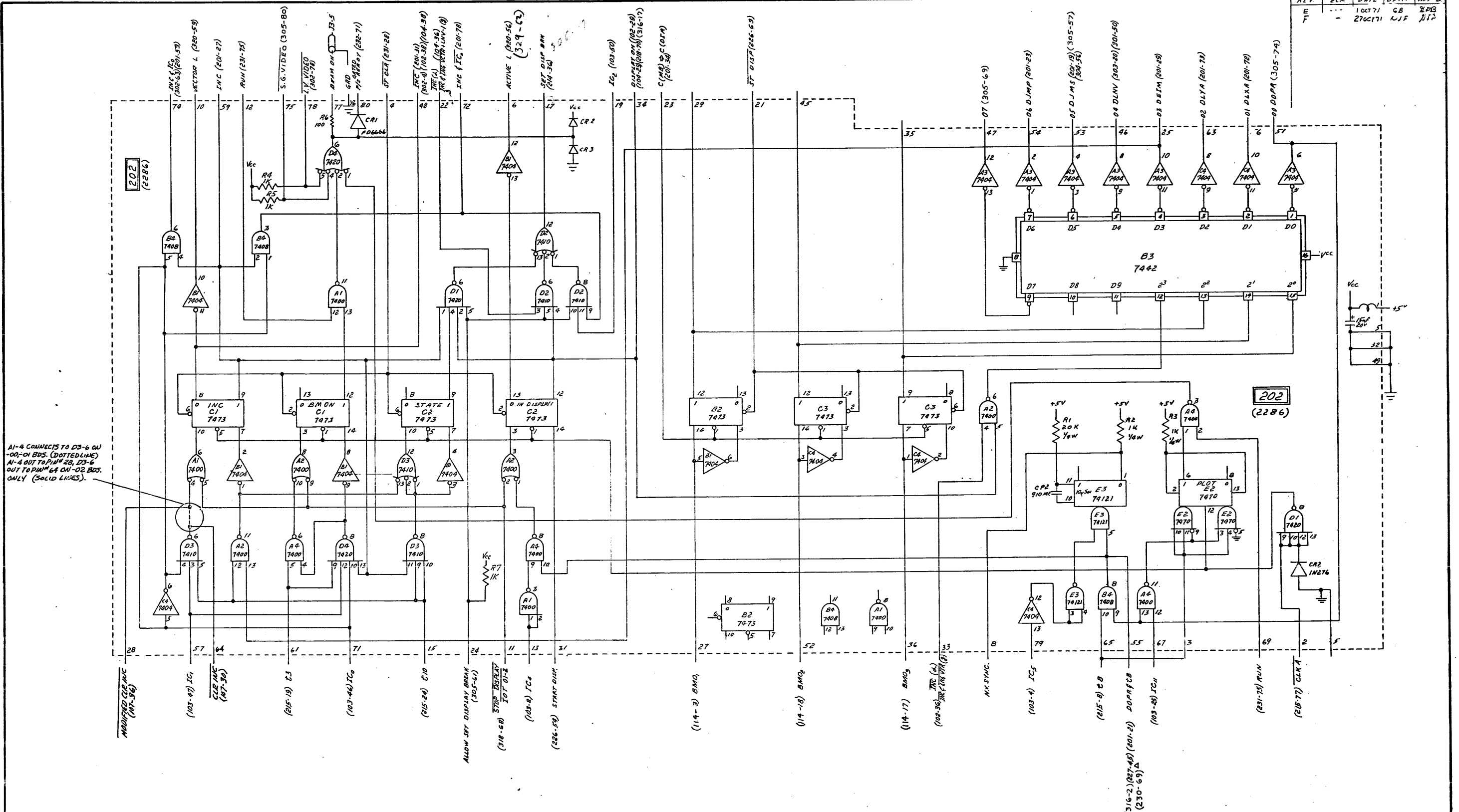


REV	ECN	DATE	DEFIN	APPRV
A		1/15/71	H.C.M.	C.B.R.
B		2/2/71	H.C.M.	C.B.R.
C		22 Mar 71	H.C.M.	C.B.R.
D		23 Mar 71	H.C.M.	C.B.R.
E		23 Mar 71	H.C.M.	C.B.R.
F		1 Apr 71	H.C.M.	C.B.R.
G		5 May 71	H.C.M.	C.B.R.
H		24 May 71	H.T.M.	3FD
I		3 Jun 71	GB	3FD
J		7 Jun 71	H.C.M.	3FD
K		22 Jun 71	G.B.	3FD
L		12 Jul 71	H.C.M.	3FD
M				

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LAYOUT	BY	DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE
DRAWN	H.C.M.	29 Dec 70		CYCLE CONTROL
CHECKED	H.C.M.	29 Dec 70		
APPROVED				
ISSUE				
COPIED				
MATERIAL				
			PROJECT	PROD
			PREFIX	L D
			SIZE	772
			DRAWING NUMBER	M
			Scale	Sheet

REV	ECN	DATE	BY	APP'D
F	-	10/27/71	CB	WDB
E	-	2/26/71	WJF	JLJ

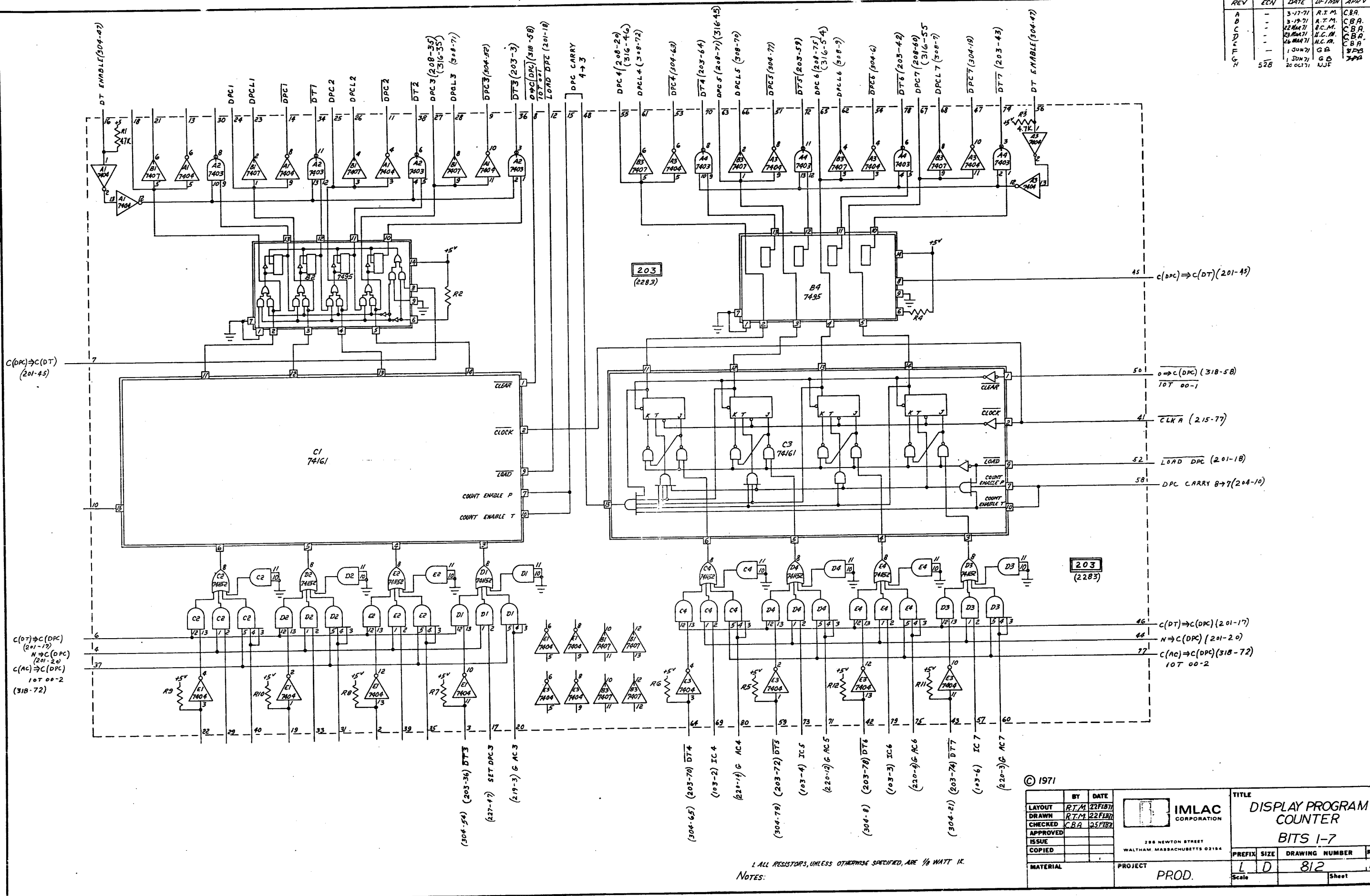


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LAYOUT	BY	DATE	 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	J.V.	2-4-77		DISPLAY MODE CONTROL & DISPLAY INSTRUCTION REG.		
CHECKED	J.V.	2-4-77		PREFIX	SIZE	DRAWING NUMBER
APPROVED				L	D	798-A
ISSUE				Scale		Sheet
COPIED			PROJECT	PROD		
MATERIAL						

NOTES:
I. Δ USED ON 16K ONLY

REV	ECN	DATE	DFTM	APRV
A	-	3-17-71	R.T.M.	C.B.A.
B	-	3-19-71	R.T.M.	C.B.A.
C	-	22 MAR 71	R.C.M.	C.B.A.
D	-	26 MAR 71	H.C.M.	C.B.A.
E	-	1 JUN 71	G.B.	G.P.S.
F	-	1 JUN 71	G.B.	G.P.S.
G	528	20 OCT 71	N.J.F.	N.J.F.



C(DPC) → C(DT) (201-45)

C(DT) → C(DPC) (201-17)
 N → C(DPC) (201-20)
 C(AC) → C(DPC) (318-72)
 10T 00-2

c(DPC) → c(DT) (201-45)

0 → c(DPC) (318-58)
 10T 00-1

CLK A (215-77)

LOAD DPC (201-18)

DPC CARRY B → 7 (204-10)

C(DT) → C(DPC) (201-17)

N → C(DPC) (201-20)

C(AC) → C(DPC) (318-72)
 10T 00-2

ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT 1K.
 NOTES:

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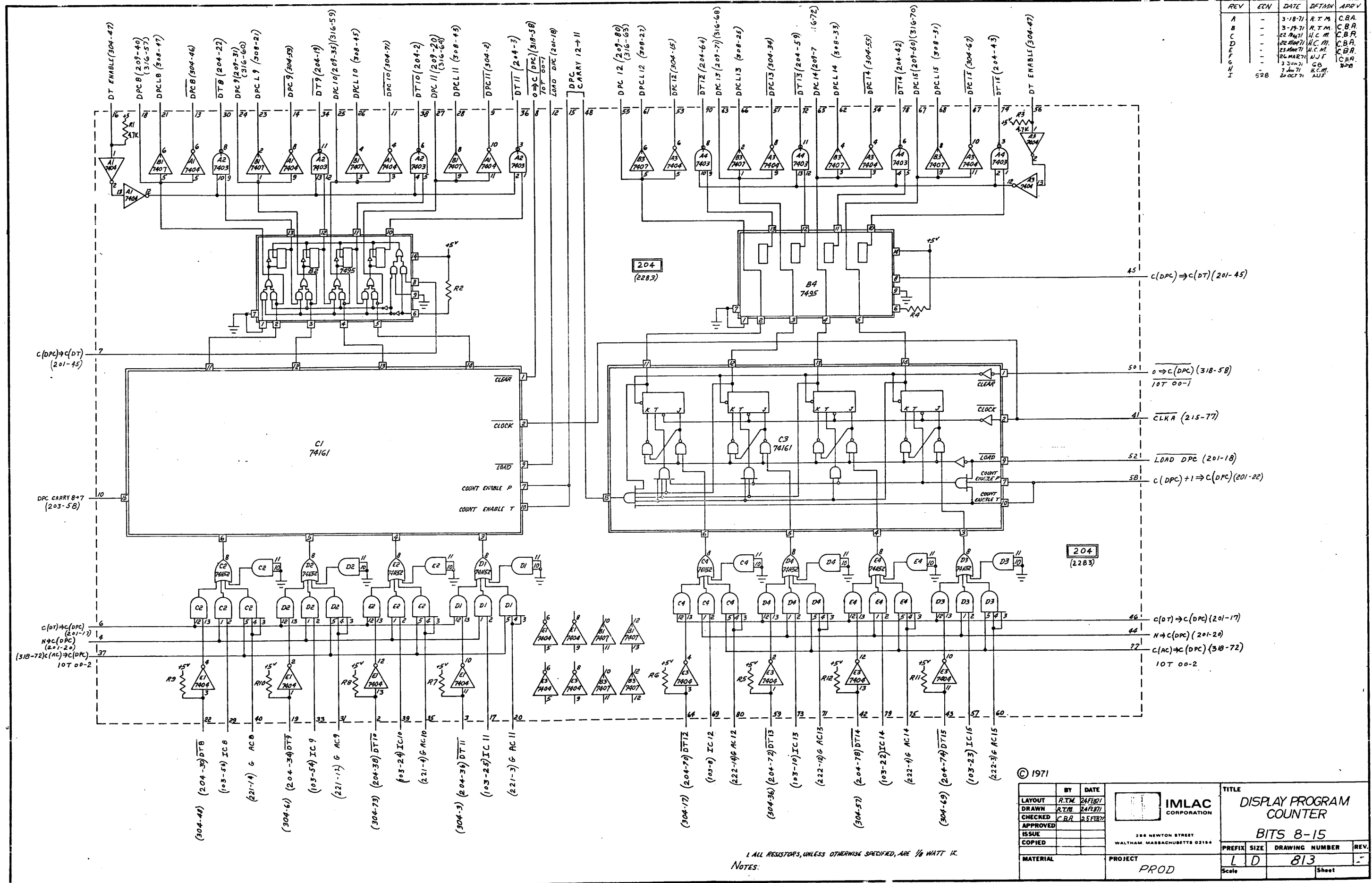
LAYOUT	BY	DATE
DRAWN	R.T.M.	22 FEB 71
CHECKED	R.T.M.	22 FEB 71
APPROVED	C.B.A.	25 FEB 71
ISSUE		
COPIED		
MATERIAL		

IMLAC CORPORATION
 288 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

TITLE		DRAWING NUMBER		REV.
DISPLAY PROGRAM COUNTER		812		H
BITS 1-7		Scale		Sheet

PROD.

REV	ECN	DATE	DFTM	APRV
A	-	3-18-71	R.T.M.	C.B.A.
B	-	3-19-71	R.T.M.	C.B.A.
C	-	22 MAR 71	H.C.M.	C.B.A.
D	-	22 MAR 71	H.C.M.	C.B.A.
E	-	23 MAR 71	H.C.M.	C.B.A.
F	-	26 MAR 71	H.J.F.	C.B.A.
G	-	3 JUN 71	GB	C.B.A.
H	-	7 JUN 71	H.C.M.	W.D.
I	528	20 OCT 71	A.J.F.	

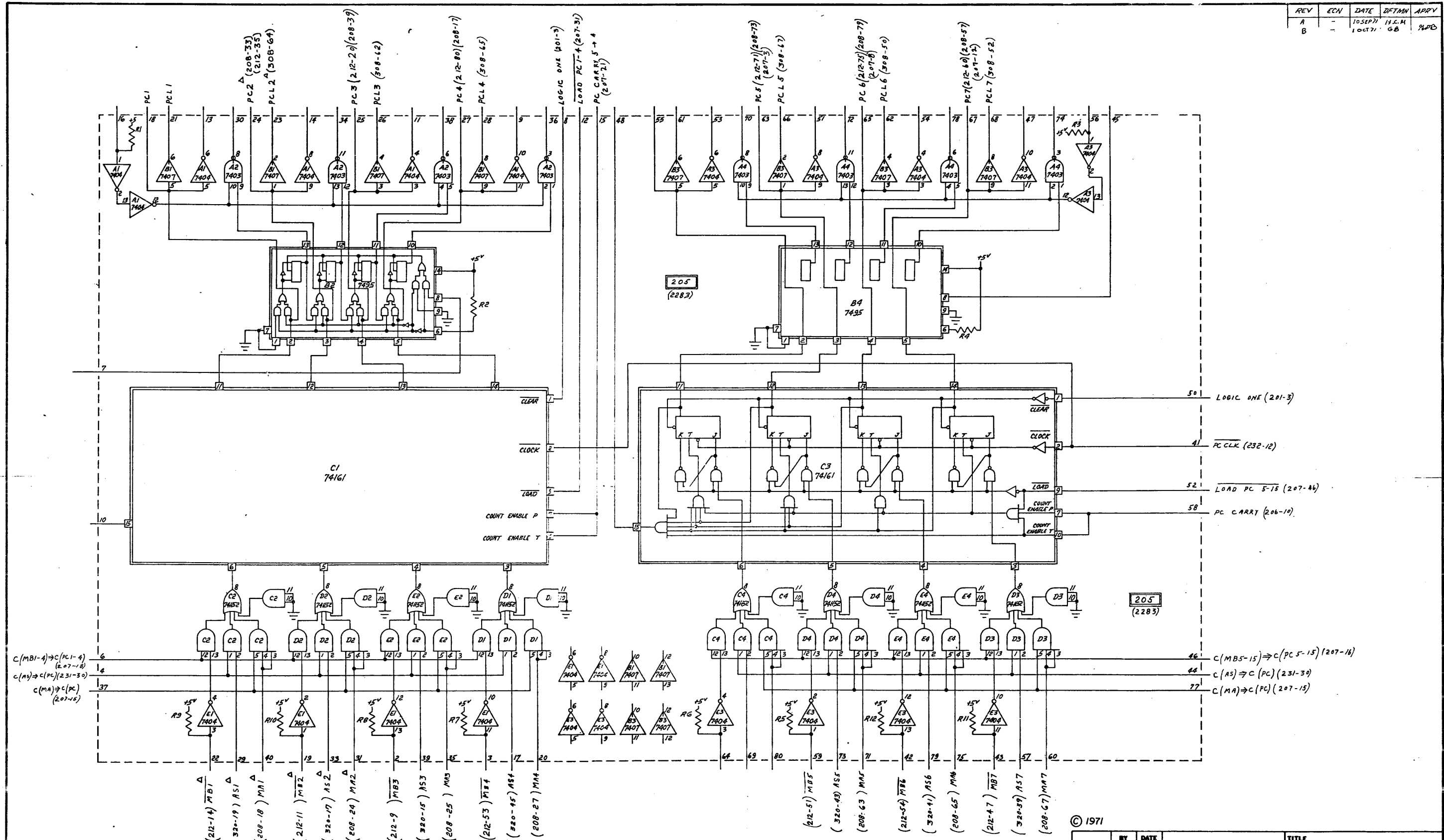


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LAYOUT	BY	DATE	TITLE	
DRAWN	R.T.M.	24 FEB 71	DISPLAY PROGRAM COUNTER	
CHECKED	R.T.M.	24 FEB 71	BITS 8-15	
APPROVED	C.B.A.	25 FEB 71	PREFIX SIZE DRAWING NUMBER REV.	
ISSUE			L	D
COPIED			813	
MATERIAL			Scale	Sheet
PROJECT			PROD	

ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT 1%.
NOTES:

REV	ECN	DATE	DFTM	APPV
A	-	10 SEP 77	13 L M	
B	-	1 OCT 77	6 B	JPD



3 Δ FOR 16K ONLY
2 * FOR 8K ONLY
1 ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT 1K.

NOTES:

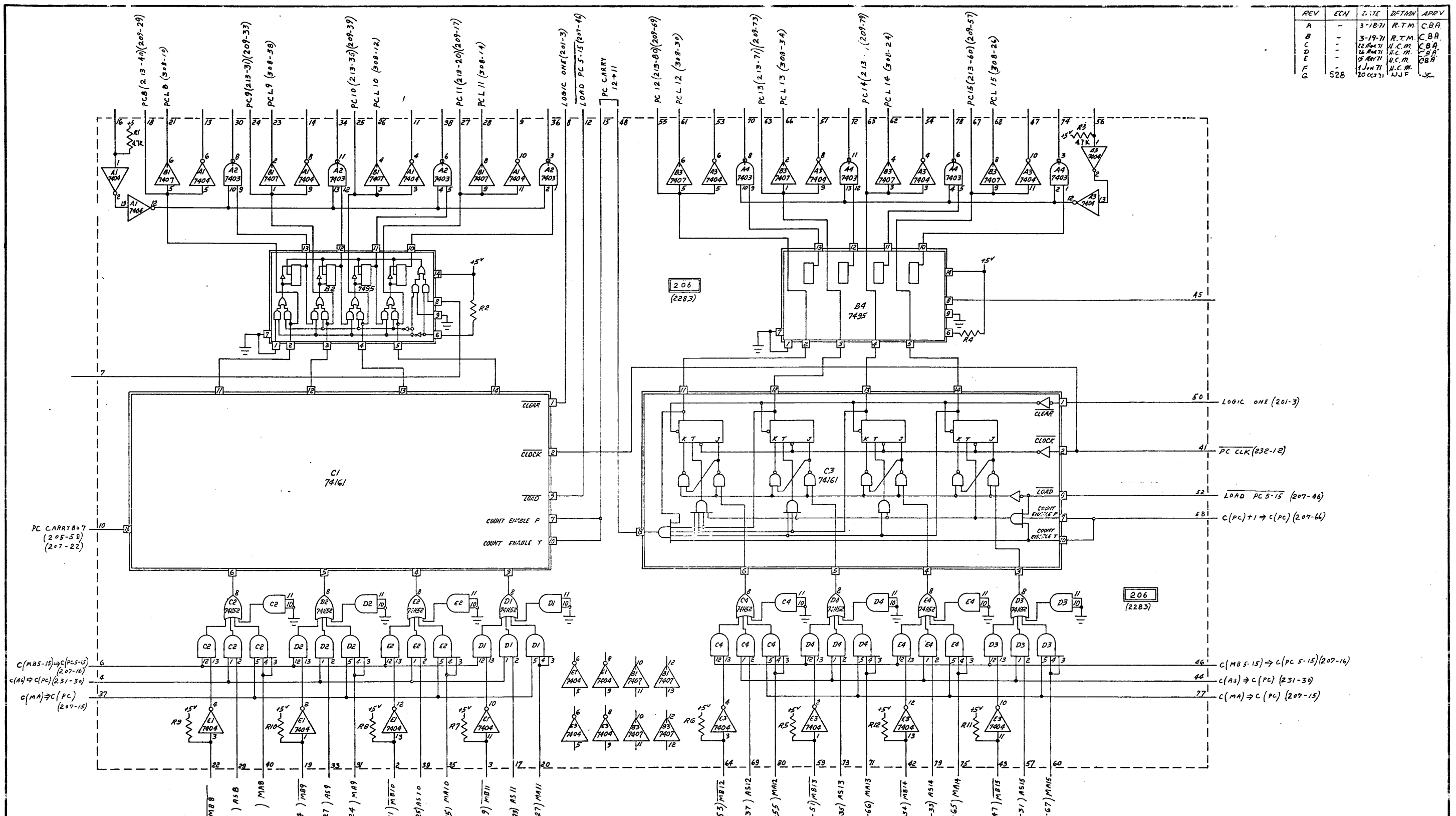
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LAYOUT	BY	DATE	TITLE
DRAWN	R.T.M.	26 FEB 77	PROGRAM COUNTER BITS 1-7
CHECKED	C.B.A.	26 FEB 77	
APPROVED			
ISSUE			
COPIED			


PREFIX		SIZE	DRAWING NUMBER	REV.
L	D		814-A	B
MATERIAL		PROJECT	Scale	Sheet
		PROD		



REV	ECN	DATE	DESIGN	APPROV
A	-	3-18-71	R.T.M.	C.B.A.
B	-	3-19-71	R.T.M.	C.B.A.
C	-	22 Apr 71	H.C.M.	C.B.A.
D	-	26 Apr 71	H.C.M.	C.B.A.
E	-	15 Jun 71	H.C.M.	C.B.A.
F	-	1 Jun 71	H.C.M.	C.B.A.
G	526	20 Oct 71	N.J.F.	J.C.

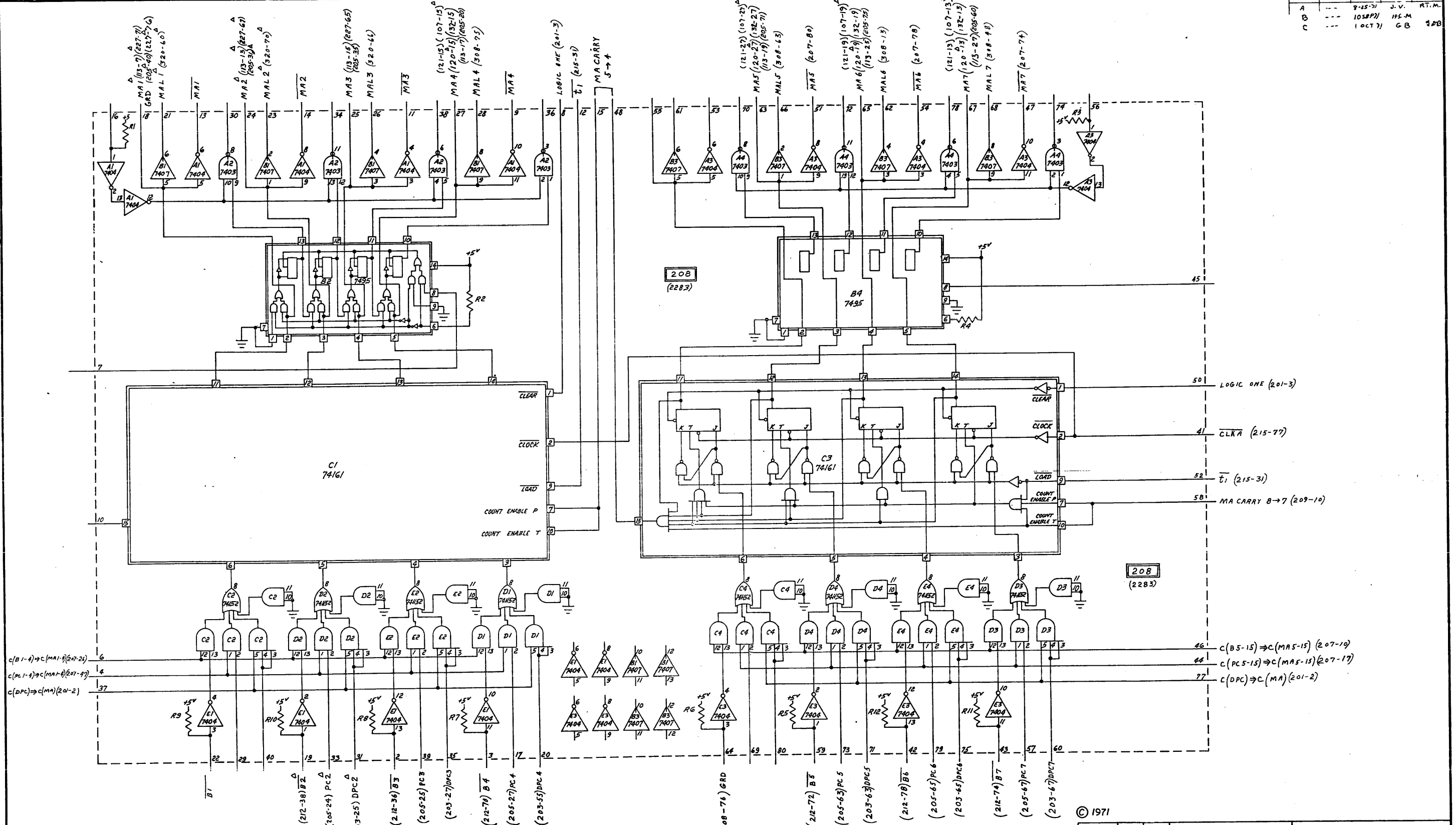


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LAYOUT	BY	DATE	 IMLAC CORPORATION <small>286 NEWTON STREET WALTHAM, MASSACHUSETTS 02154</small>	TITLE	
DRAWN	R.T.M.	26 FEB 71		PROGRAM COUNTER	
CHECKED	C.B.A.	26 FEB 71		BITS 8-15	
APPROVED				PREFIX	SIZE
ISSUE				L	D
COPIED				815	REV. C
MATERIAL			PROJECT	Scale	
			PROD	Sheet	

1. ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT 1K.
 NOTES:

REV	ECN	DATE	DTM	APPV
A		9-15-71	J.V.	R.T.M.
B		10 SEP 71	H.M.	
C		1 OCT 71	G.B.	128



c(B1-4) → c(MA1-4) (207-24)
 c(PC1-4) → c(MA1-4) (207-27)
 c(DPC) → c(MA) (201-2)

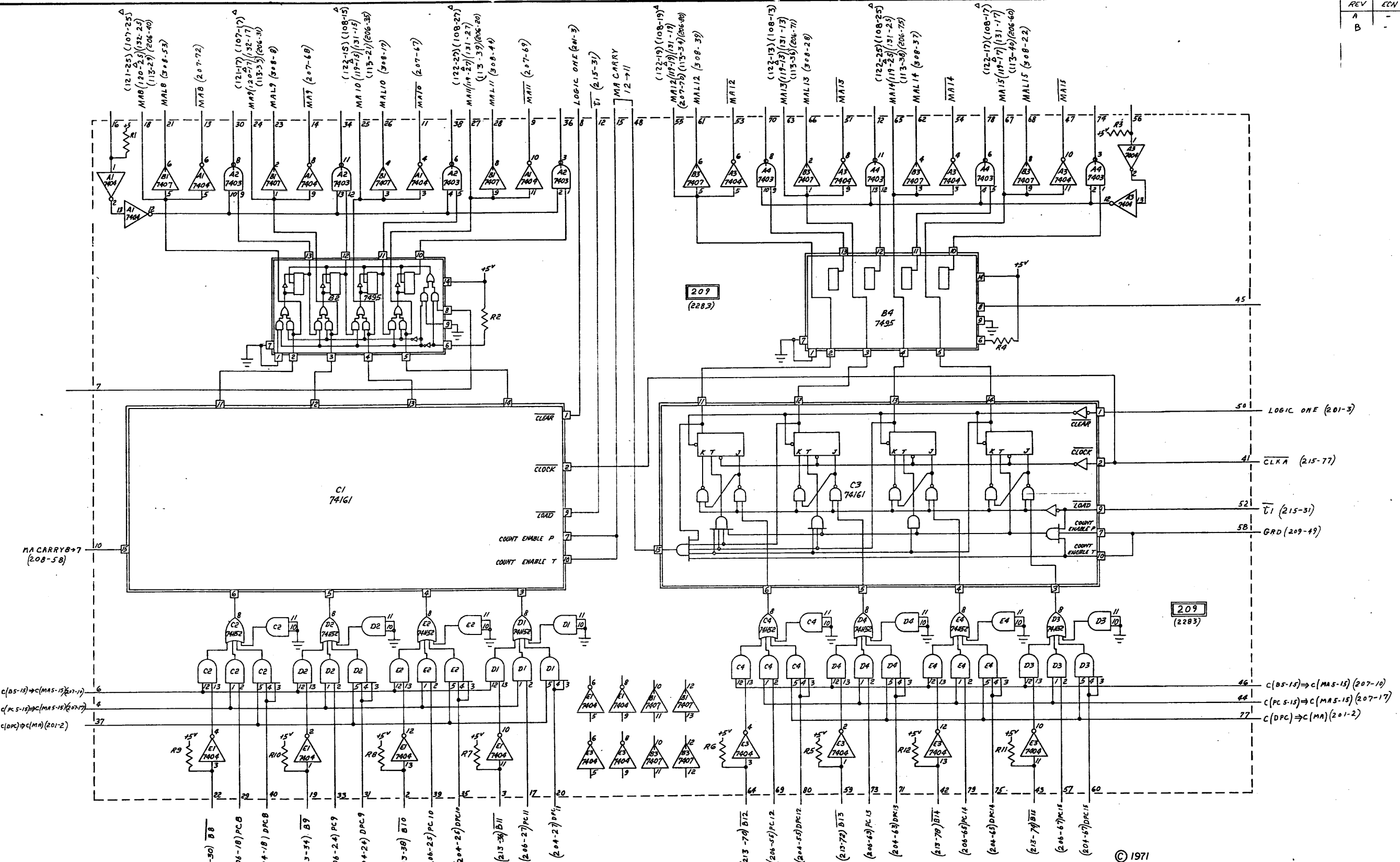
46 c(B5-15) → c(MA5-15) (207-19)
 44 c(PC5-15) → c(MA5-15) (207-17)
 77 c(DPC) → c(MA) (201-2)

3. Δ FOR 16K CONFIGURATION
 2. * FOR 8K CONFIGURATION ONLY
 1. ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT 1K.
 NOTES:

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LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	R.T.M.	1 MAR 71		MEMORY ADDRESS REGISTER		
CHECKED	R.T.M.	1 MAR 71		BITS 1-7		
APPROVED	C.B.A.	2 MAR 71		PREFIX	SIZE	DRAWING NUMBER
ISSUE				L	D	816-A
COPIED			Scale		Sheet	
MATERIAL			PROJECT	PROD		

REV	ECN	DATE	DFTM	APRV
A	-	8-25-71	J.V.	JFB
B	-	28 SEP 71	G.B.	JFB

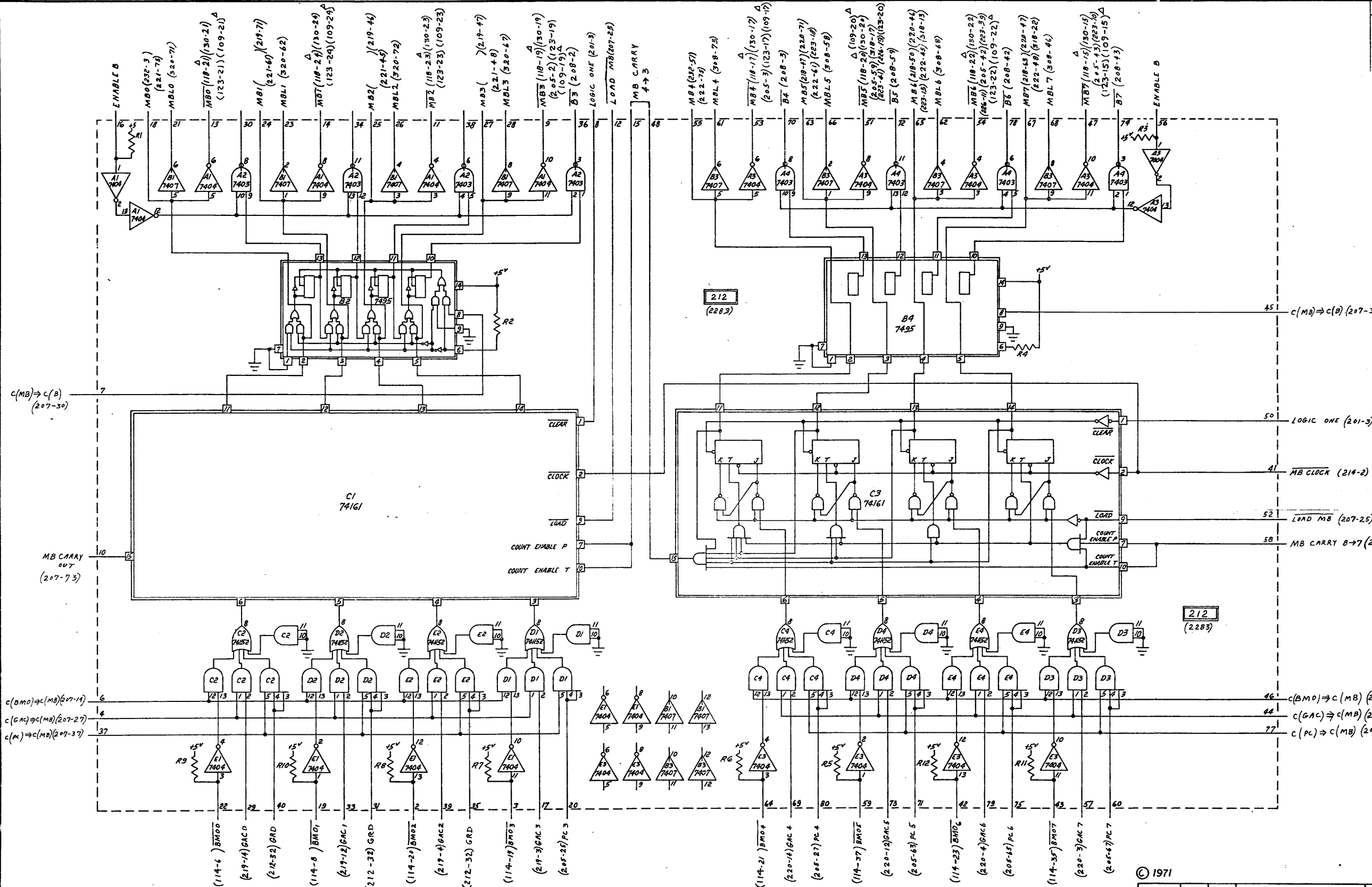


2. Δ USED ON 16K ONLY
 1. ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT 1K.
 NOTES:

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LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	A.T.M.	3 MAR 71		MEMORY ADDRESS REGISTER		
CHECKED	C.B.B.	3 MAR 71		BITS 8-15		
APPROVED				PREFIX		
ISSUE				SIZE		
COPIED			DRAWING NUMBER	REV.		
MATERIAL			L	D	817-A	B
			Scale			Sheet
			PROJECT	PROD		

REV	ECN	DATE	DTN	APRV
A		8-25-71	J.V.	SHAB
B		10-28-71	H.M.	
C		2-8-72	G.B.	SHAB



c(MB) → c(B) (207-30)

MB CARRY OUT (207-73)

c(BMD) → c(MB) (207-14)

c(CAC) → c(MB) (207-27)

c(PC) → c(MB) (207-37)

c(MB) → c(B) (207-39)

LOGIC ONE (201-3)

MB CLOCK (214-2)

LOAD MB (207-25)

MB CARRY B → 7 (213-19)

c(BMD) → c(MB) (207-14)

c(GAC) → c(MB) (207-27)

c(PC) → c(MB) (207-37)

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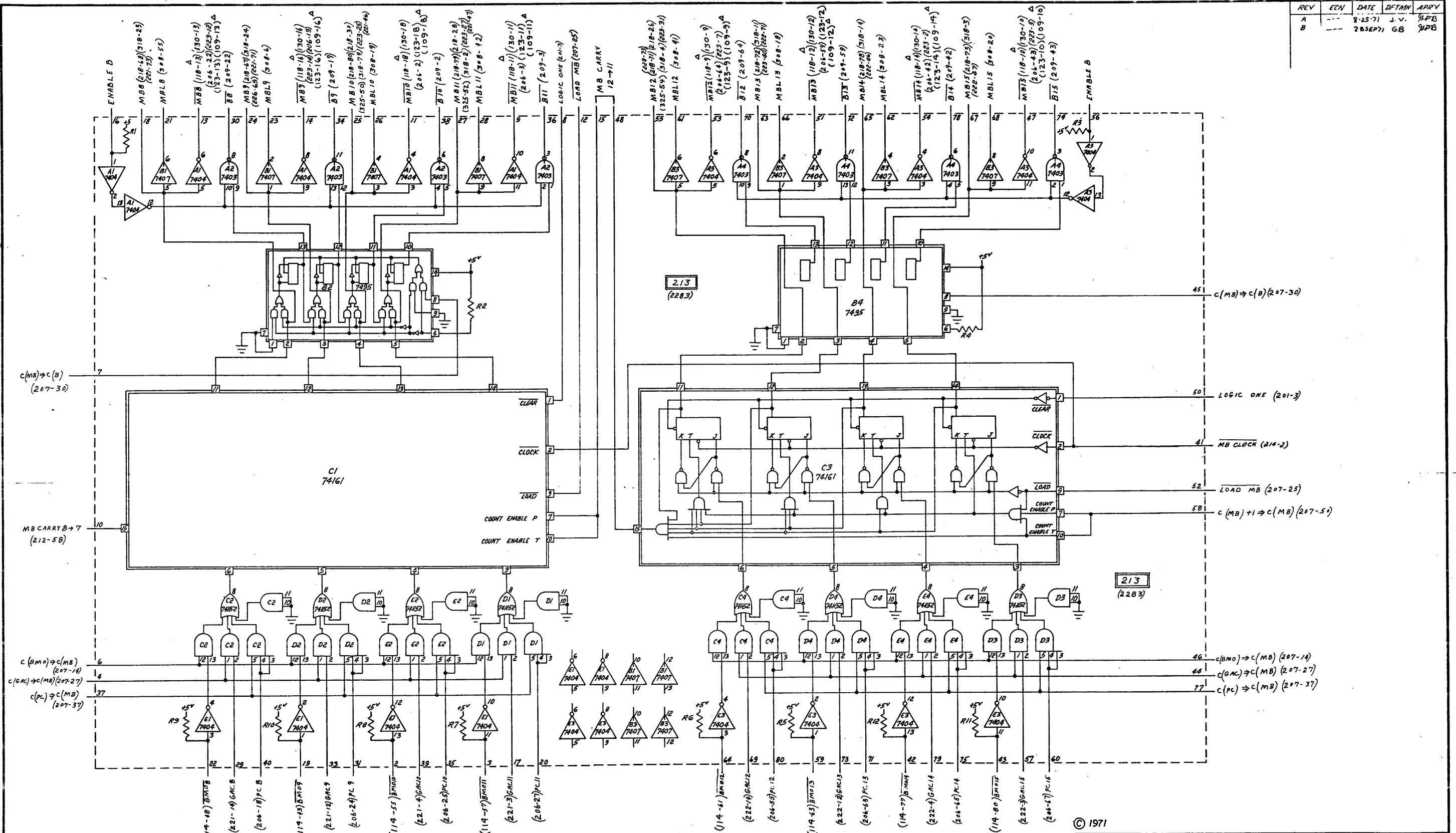
	BY	DATE
LAYOUT	R.T.M.	3 MAR 71
DRAWN	R.T.M.	3 MAR 71
CHECKED	C.B.R.	3 MAR 71
APPROVED		
ISSUE		
COPIED		
MATERIAL		

 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE
	MEMORY BUFFER BITS 0-7
PROJECT	PROD
PREFIX	LD
SIZE	818-A
DRAWING NUMBER	C
REV.	Sheet

3. * USED ON 8 K ONLY
 2. Δ USED ON 16 K ONLY
 1. ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT 1K.

NOTES:

REV	ECN	DATE	DTM	APRV
A		8-25-71	J.V.	JFB
B		28SEP71	GB	JFB



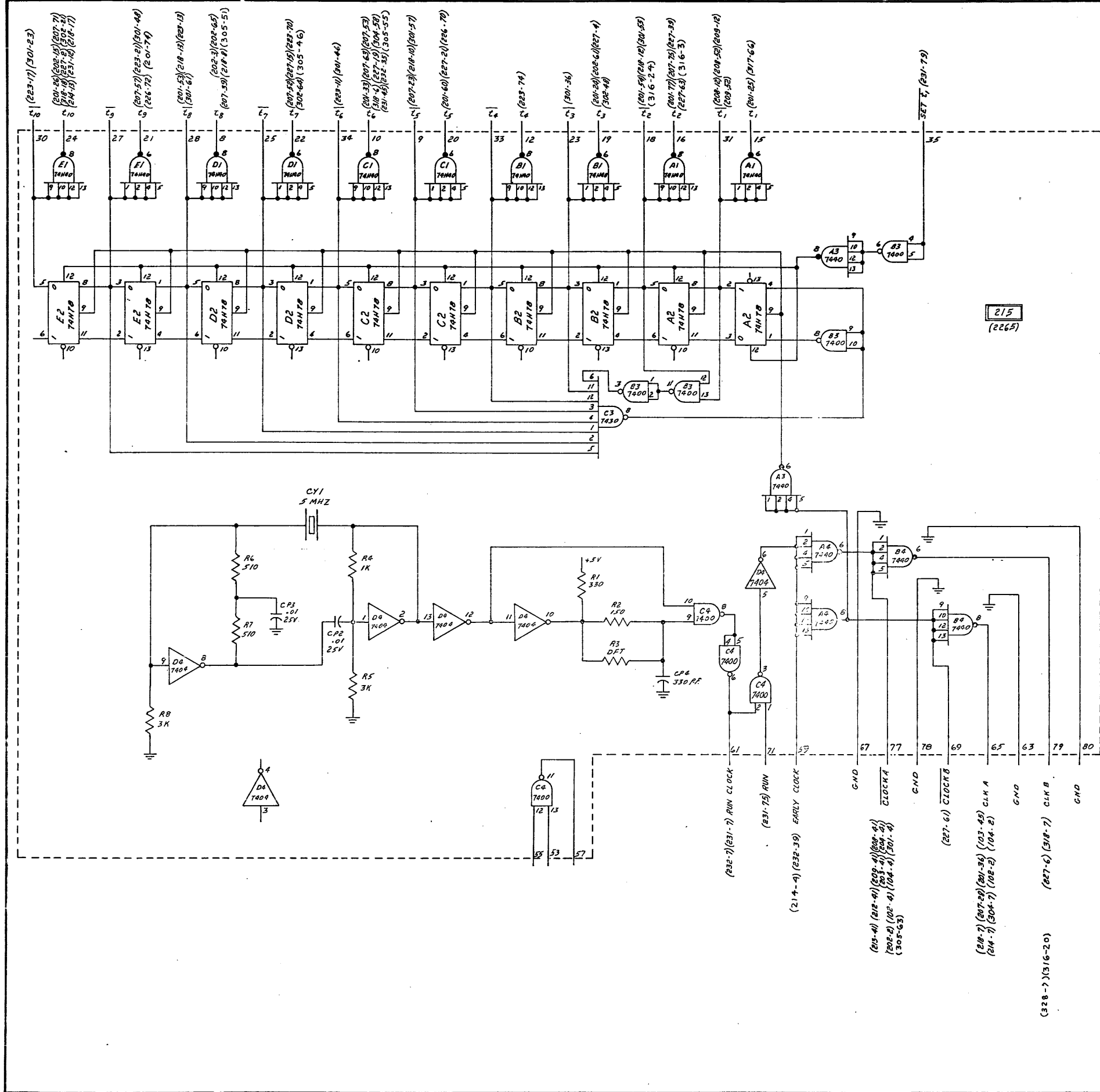
2. Δ USED ON 16K ONLY
 1. ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT 1K.
 NOTES:

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LAYOUT	BY	DATE	TITLE
DRAWN	R.T.M.	AMR71	MEMORY BUFFER
CHECKED	R.T.M.	AMR71	BITS 8-15
APPROVED	C.B.R.	4 NBR71	
ISSUE			
COPIED			
MATERIAL			

IMLAC CORPORATION		288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	819-A	B
PROJECT			Scale
PROD			Sheet

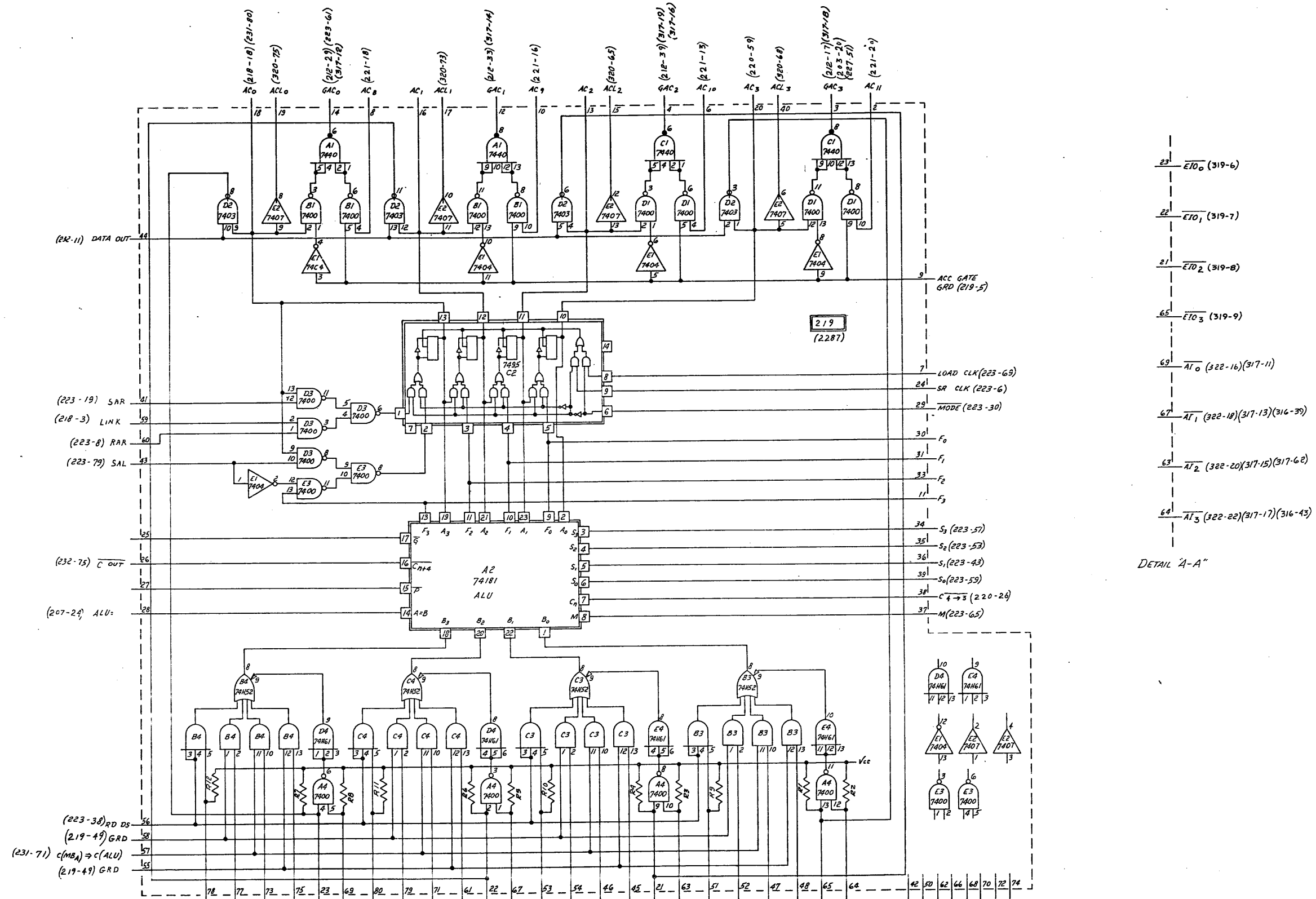
REV	ECN	DATE	DTM	APPD
A	-	20 MAR 71	J.V.	C.B.A.
B	-	22 MAR 71	H.C.M.	C.B.A.
C	-	23 MAR 71	H.C.M.	C.B.A.
D	-	24 MAR 71	J.J.F.	C.B.A.
E	-	17 APR 71	H.C.M.	C.B.A.
F	-	3 MAY 71	GD	W.P.
G	-	7 MAY 71	H.C.M.	W.P.
H	-	22 JUN 71	GD	H.D.B.
I	-	8 SEP 71	J.V.	R.T.M.
J	-	9 SEP 71	R.T.M.	



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BY	DATE	IMLAC CORPORATION		TITLE	
LAYOUT	J.V. 11-11-70	200 NEWTON STREET		TIME PULSE GENERATOR AND CLOCK	
DRAWN	J.V. 11-11-70	WALTHAM, MASSACHUSETTS 02154			
CHECKED	C.B.A. 3-15-71			PREFIX	SIZE
APPROVED				D	DRAWING NUMBER
ISSUE					820
COPIED				Scale	Sheet
MATERIAL		PROJECT		PROD	

REV	ECN	DATE	DFTHW	APPV
A	-	19 JUN 71	H.C.M.	C.B.A.
B	-	20 JUN 71	H.C.M.	C.B.A.
C	-	23 JUN 71	A.J.F.	C.B.A.
D	-	26 JUN 71	H.C.M.	C.B.A.
E	-	15 JUL 71	H.C.M.	A.J.F.
F	-	26 JUL 71	A.J.F.	C.B.A.
G	-	1 AUG 71	H.C.M.	A.J.F.
H	-	12 AUG 71	H.C.M.	G.B.
J	-	23 SEP 71	G.B.	Y.D.B.



- 23 $\overline{E10_0}$ (319-6)
- 22 $\overline{E10_1}$ (319-7)
- 21 $\overline{E10_2}$ (319-8)
- 65 $\overline{E10_3}$ (319-9)
- 69 $\overline{A1_0}$ (322-16)(317-11)
- 67 $\overline{A1_1}$ (322-18)(317-13)(316-39)
- 63 $\overline{A1_2}$ (322-20)(317-15)(316-62)
- 64 $\overline{A1_3}$ (322-22)(317-17)(316-43)

DETAIL "A-A"

(231-11) DATA OUT
 (223-19) SAR
 (218-3) LINK
 (223-8) RAR
 (223-79) SAL
 (232-75) C OUT
 (207-24) ALU
 (223-38) RD DS
 (219-49) GRD
 (231-71) C(MB) → C(ALU)
 (219-49) GRD
 (320-38) DS0
 (232-64) G MB0
 (320-40) DS1
 (212-24) MB1
 (320-42) DS2
 (212-25) MB2
 (320-44) DS3
 (212-27) MB3
 (212-27) MB5
 SEE DETAIL "A-A"
 SEE DETAIL "A-A"
 SEE DETAIL "A-A"
 SEE DETAIL "A-A"

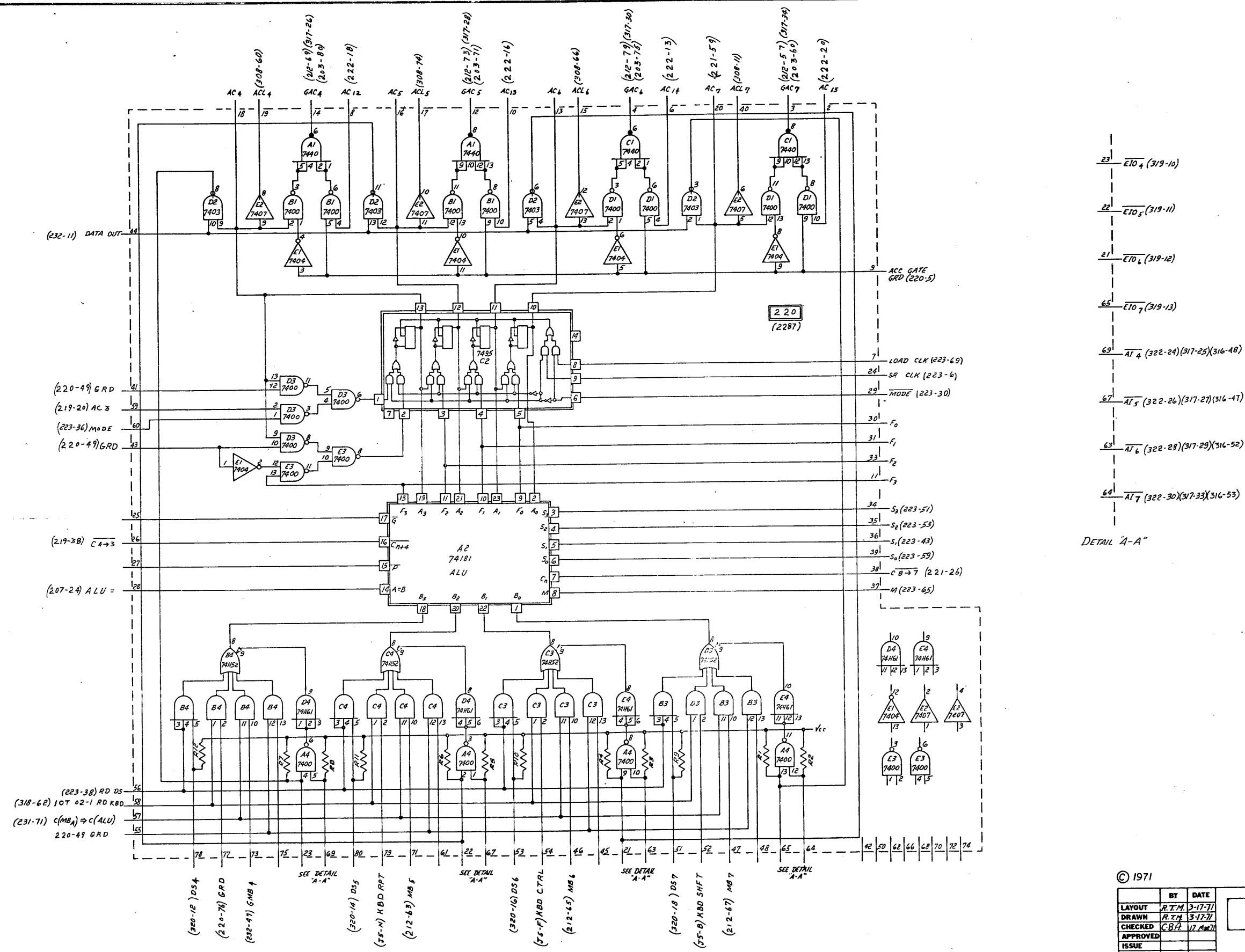
ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 W. 330-Ω.
 NOTES:

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LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	ACCUMULATOR & INPUT MIXER BITS 0-3
DRAWN	R.T.M.	3-17-71		PREFIX	L D
CHECKED	C.B.A.	3-17-71		SIZE	821
APPROVED				DRAWING NUMBER	J
ISSUE				REV.	
COPIED				Scale	Sheet

MATERIAL PROJECT PROD

REV	ECN	DATE	DESIGNER	APPROV
A	-	19 APR 71	H.C.M.	C.B.A.
B	-	20 APR 71	H.C.M.	C.B.A.
C	-	23 APR 71	H.C.M.	C.B.A.
D	-	23 APR 71	H.C.M.	C.B.A.
E	-	15 MAY 71	H.C.M.	C.B.A.
F	-	26 MAY 71	H.C.M.	C.B.A.
G	-	1 JUN 71	H.C.M.	C.B.A.
H	-	12 JUN 71	H.C.M.	C.B.A.



- 23 E10 4 (319-10)
- 22 E10 5 (319-11)
- 21 E10 6 (319-12)
- 65 E10 7 (319-13)
- 69 AT 4 (322-24)(317-25)(316-48)
- 67 AT 5 (322-26)(317-27)(316-47)
- 63 AT 6 (322-28)(317-29)(316-52)
- 64 AT 7 (322-30)(317-33)(316-53)

DETAIL 'A-A'

(232-11) DATA OUT
 (220-49) GRD
 (219-20) AC 3
 (223-36) MODE
 (220-49) GRD
 (219-38) C4→3
 (207-24) ALU =

(223-38) RD DS
 (318-62) 10T 02-1 RD KBD
 (231-71) C(MB_A)→C(ALU)
 220-49 GRD

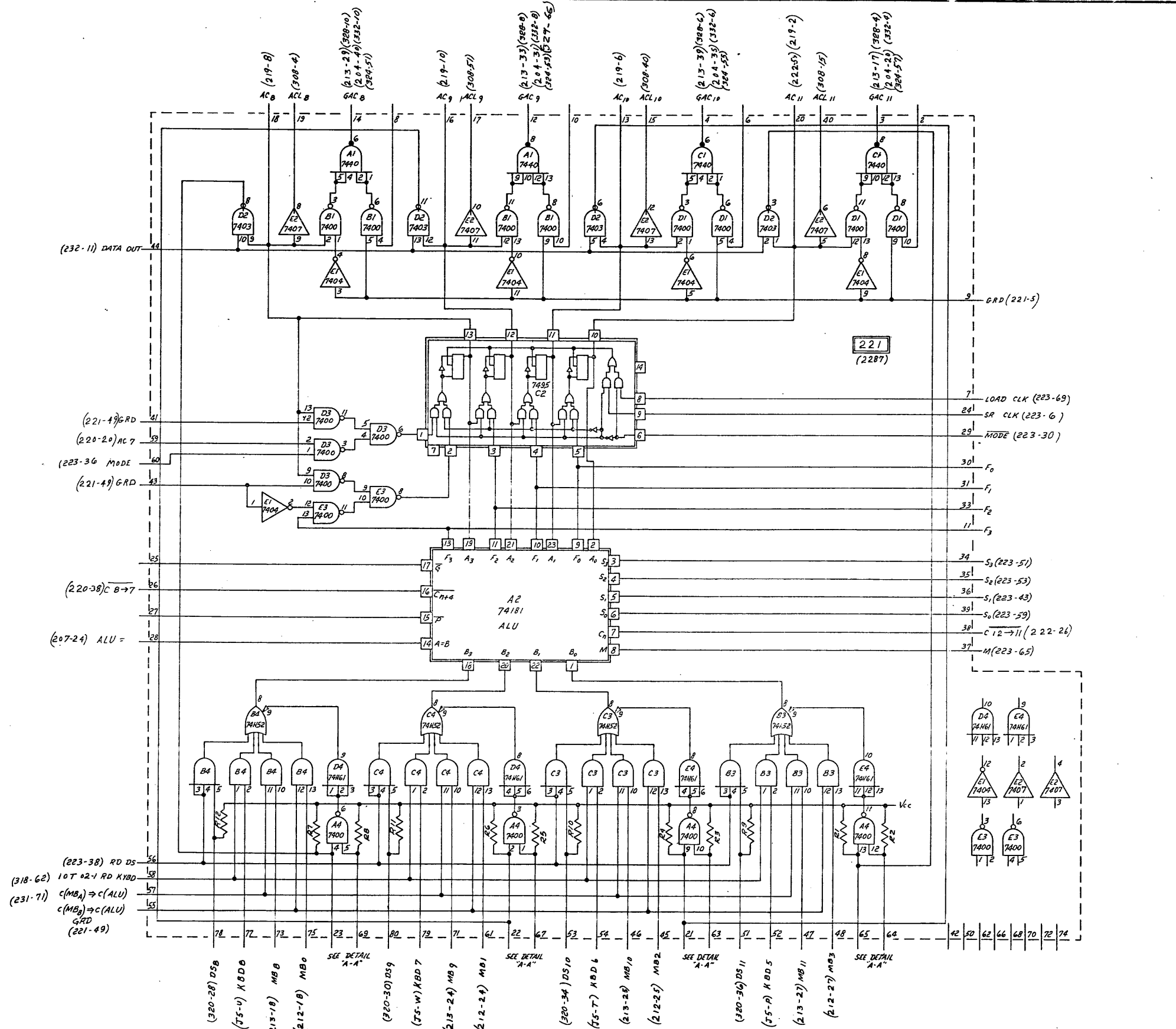
(320-12) DS 4
 (220-76) GRD
 (232-47) GMB 4
 SEE DETAIL 'A-A'
 (320-14) DS 5
 (32-1) KBD RPT
 (212-67) MB 5
 SEE DETAIL 'A-A'
 (320-16) DS 6
 (32-7) KBD CTRL
 (212-65) MB 6
 SEE DETAIL 'A-A'
 (320-18) DS 7
 (32-8) KBD SHFT
 (212-67) MB 7
 SEE DETAIL 'A-A'

1 ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 W 330-Ω.
 NOTES:

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LAYOUT	BY	DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE ACCUMULATOR & INPUT MIXER BITS 4-7
DRAWN	R.T.M.	3-17-71		
CHECKED	R.T.M.	3-17-71		
APPROVED	C.B.A.	17 MAR 71		
ISSUE				
COPIED				
MATERIAL			PROJECT	PROD
			PREFIX	LD
			SIZE	822
			DRAWING NUMBER	
			REV.	4
			Scale	Sheet

REV	ECN	DATE	DFI/IN	APP V
A	-	19/04/71	H.C.M.	C.B.A.
B	-	20/04/71	H.C.M.	C.B.A.
C	-	23/04/71	H.C.M.	C.B.A.
D	-	26/04/71	H.C.M.	C.B.A.
E	-	26/04/71	H.C.M.	C.B.A.
F	-	26/04/71	H.C.M.	C.B.A.
G	-	26/04/71	H.C.M.	C.B.A.
H	-	26/04/71	H.C.M.	C.B.A.
I	-	26/04/71	H.C.M.	C.B.A.



- 23 - E10₈ (319-14)
- 22 - E10₉ (319-15)
- 21 - E10₁₀ (319-16)
- 65 - E10₁₁ (319-17)
- 69 - AT₈ (322-60)(317-53)(323-51)(316-71)(328-75)
- 67 - AT₉ (322-62)(317-55)(323-53)(316-62)(328-78) (329-58)
- 63 - AT₁₀ (322-64)(317-57)(323-55)(316-61)(328-79) (329-52)
- 64 - AT₁₁ (322-66)(317-59)(323-57)(316-73)(328-68) (329-50)

DETAIL 'A-A'

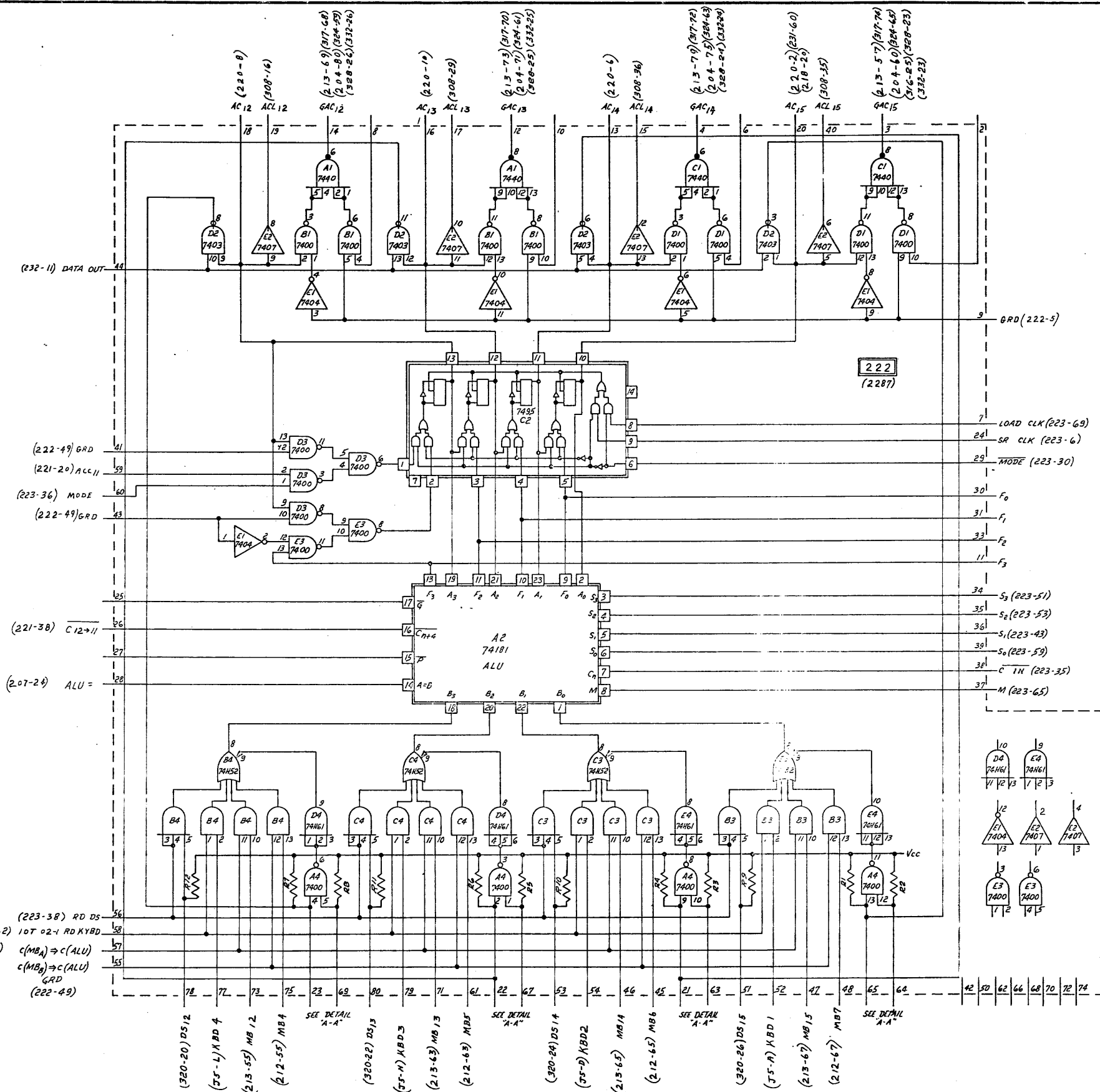
ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 W 330 Ω.

NOTES:

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LAYOUT BY DATE		IMLAC CORPORATION 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02155	TITLE	
DRAWN	R.T.M. 3-17-71		ACCUMULATOR & INPUT MIXER BITS 8-11	
CHECKED	C.B.A. 3-17-71	PROJECT	PREFIX	SIZE
APPROVED			L	D
ISSUE			DRAWING NUMBER	
COPIED		823		REV.
MATERIAL		PROD	Scale	Sheet

REV	ECH	DATE	DESIGN	APPROV
A		19 MAR 71	H.C.M.	C.B.F.
B		23 MAR 71	H.C.M.	C.B.A.
C		26 MAR 71	H.J.F.	C.B.A.
D		19 MAR 71	H.C.M.	C.B.A.
E		26 MAR 71	H.J.F.	C.B.A.
F				H.P.T.
G		1 Jun 71	H.C.M.	
H		9 Jul 71	H.C.M.	
I		8-26-71	J.V.	R.T.M.



- 23 ETO 12 (319-18)
- 22 ETO 13 (319-19)
- 21 ETO 14 (319-20)
- 65 ETO 15 (319-21)
- 69 A1 12 (322-68)(317-67)(323-59)(316-65)(327-66)
- 67 A1 13 (322-70)(317-69)(323-61)(316-67)(327-80)
- 63 A1 14 (322-72)(317-71)(323-63)(316-74)(327-77)
- 64 A1 15 (322-74)(317-73)(323-65)(316-69)(316-31)(327-78)

DETAIL "A-A"

(223-38) RD DS
 (318-62) 10T 02-1 RD KYBD
 (231-71) c(MB_A) → c(ALU)
 c(MB_B) → c(ALU)
 GRD
 (222-49)

(320-20) DS12
 (35-L) MB D 4
 (213-55) MB 12
 (212-55) MB 4
 SEE DETAIL "A-A"
 (320-22) DS13
 (35-N) MB D 3
 (213-63) MB 13
 (212-63) MB 7
 SEE DETAIL "A-A"
 (320-24) DS14
 (35-D) MB D 2
 (213-65) MB 14
 (212-65) MB 6
 SEE DETAIL "A-A"
 (320-26) DS15
 (35-A) MB D 1
 (213-67) MB 15
 (212-67) MB 7
 SEE DETAIL "A-A"

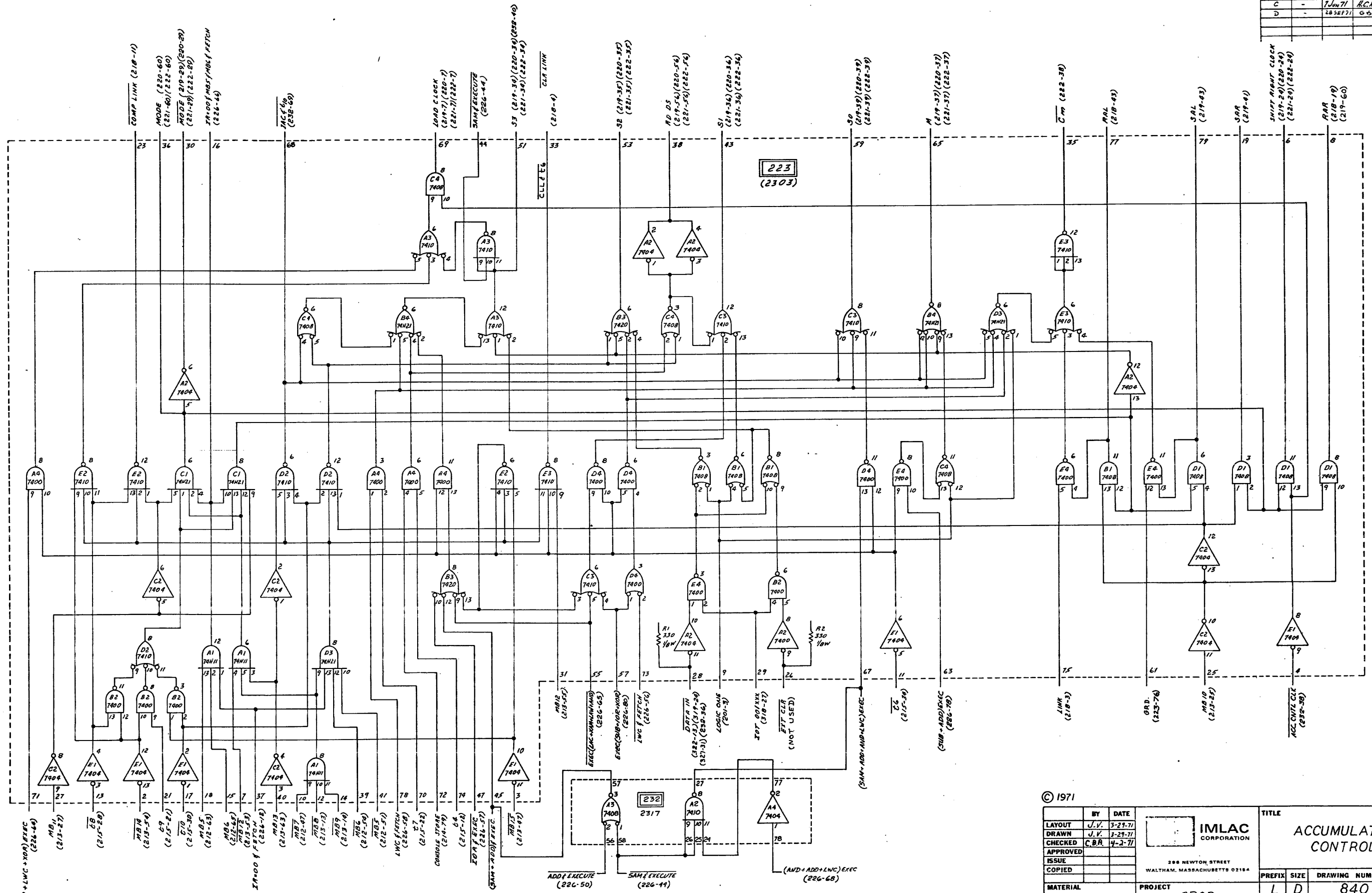
ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 W. 330-Ω.
 NOTES:

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LAYOUT	BY	DATE	 388 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE ACCUMULATOR & INPUT MIXER BITS 12-15		
DRAWN	R.T.M.	3-17-71				
CHECKED	C.B.A.	7-14-71				
APPROVED						
ISSUE						
COPIED			PREFIX	SIZE	DRAWING NUMBER	REV.
MATERIAL			L	D	824	I
			Scale			Sheet

PROJECT: PROD

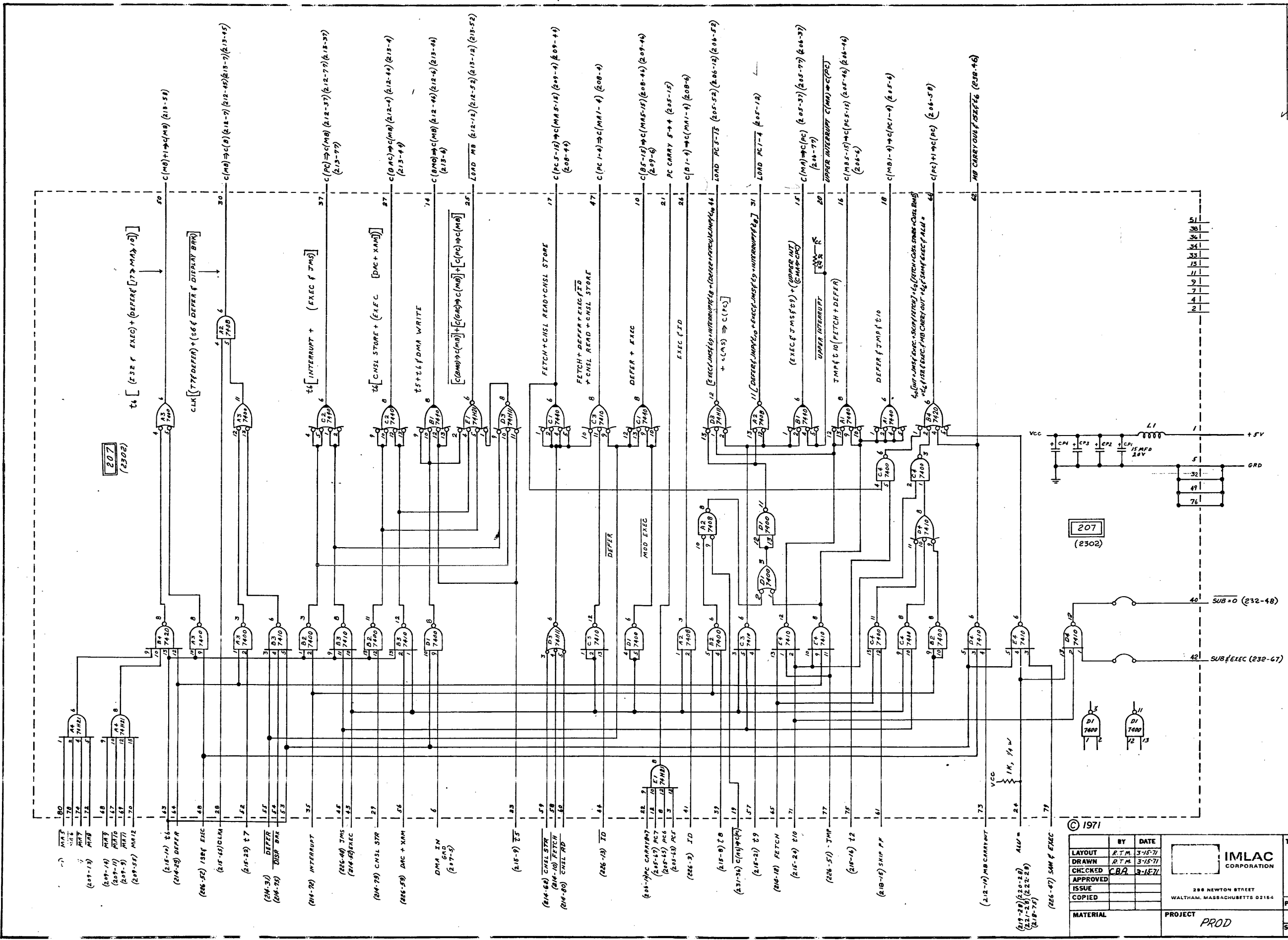
REV	ECN	DATE	DFTM	APP'D
A	-	17 MAY 71	UJF	C.R.B.
B	-	3 JUN 71	GB	UJF
C	-	7 JUN 71	A.C.M.	
D	-	28 SEP 71	G.S.	UJF



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LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	J.V.	3-27-71		ACCUMULATOR CONTROL		
CHECKED	C.B.R.	4-2-71		PREFIX	SIZE	DRAWING NUMBER
APPROVED				L	D	840
ISSUE				Scale		Sheet
MATERIAL			PROJECT	REV.		
			PROD	D		

REV	ECN	DATE	DFINA	APRV
A	-	3-19-71	R.T.M.	C.B.A.
B	-	22 MAR 71	H.C.M.	C.B.A.
C	-	26 MAR 71	N.J.F.	C.B.A.
D	-	4-7-71	J.V.	
E	-	17 MAY 71	N.J.F.	
F	-	17 MAY 71	R.T.M.	J.F.S.
G	-	2 JUN 71	G.B.	R.P.B.
H	-	7 JUN 71	H.C.M.	
J	-	23 JUN 71	G.B.	H.P.S.
K	-	12 JUL 71	H.C.M.	



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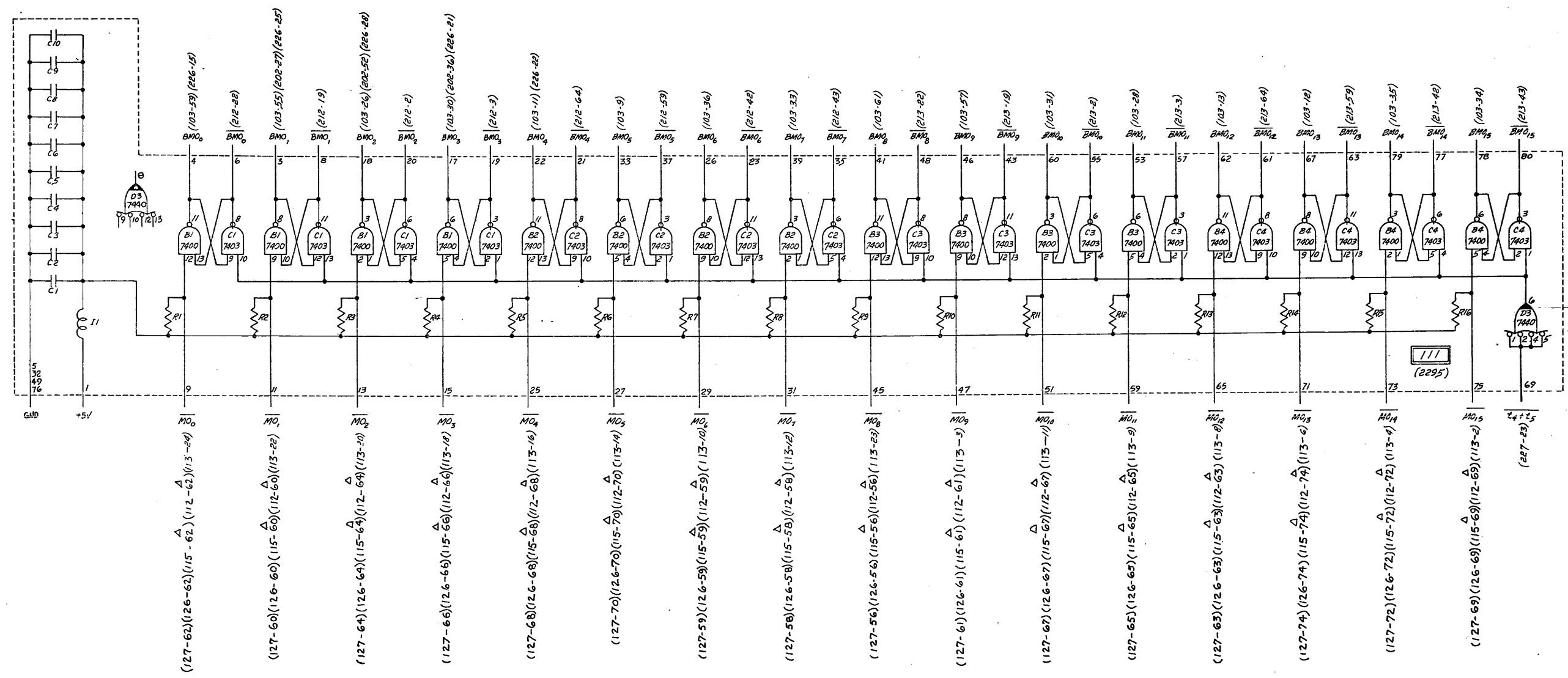
LAYOUT	BY	DATE
DRAWN	R.T.M.	3-15-71
CHECKED	C.B.A.	3-15-71
APPROVED		
ISSUE		
COPIED		

IMLAC CORPORATION
288 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

TITLE
PC, MB, & MA
CNTL

PREFIX	SIZE	DRAWING NUMBER	REV.
L		842	J
MATERIAL	PROJECT	Scale	Sheet
	PROD		

REV	ECN	DATE	DFTM	APRV
A	--	8-25-71	J.V.	JPB
B	---	28 SEP 71	G.B.	4PB

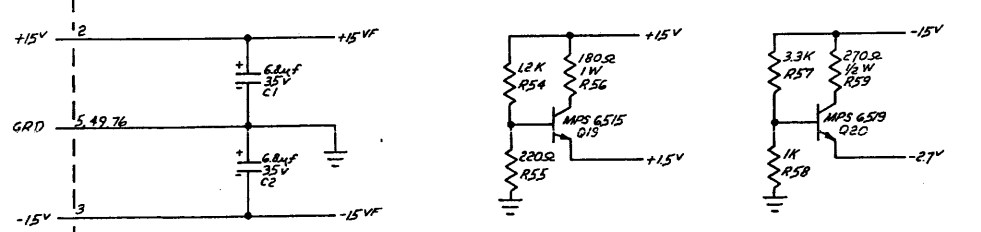
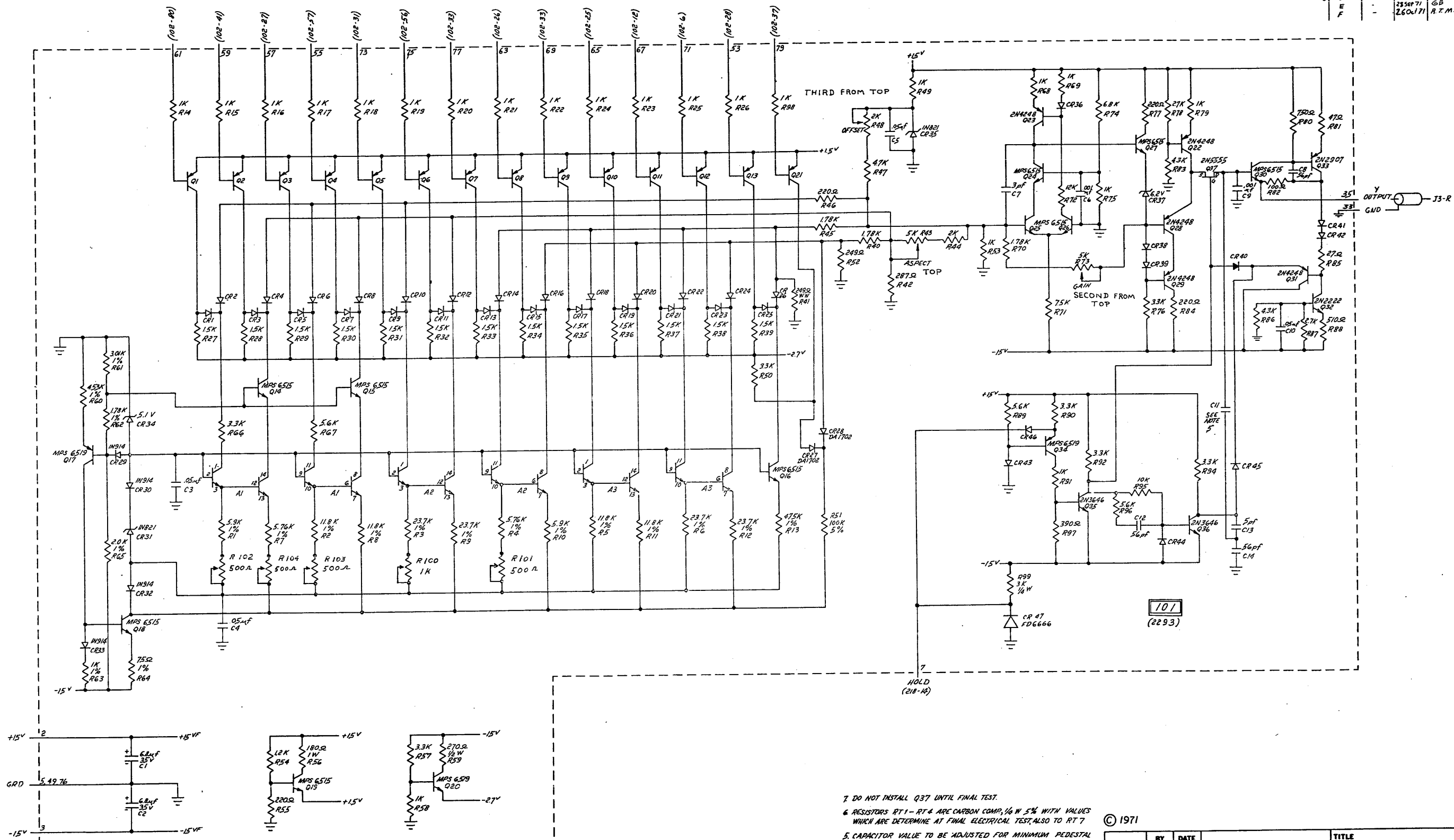


NOTES:
 2. Δ USED ON 1K ONLY
 1 RESISTORS R1 - R16 ARE 1K 1/8 W.

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LAYOUT DRAWN CHECKED APPROVED ISSUE COPIED	BY	DATE	IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE MEMORY OUTPUT BUFFER
	H.C.M.	5 Mar 71		
	H.C.M.	8 Mar 71		
	C.B.R.	3-19-71		
MATERIAL		PROJECT	PROD	PREFIX SIZE L D
				DRAWING NUMBER 843-A B
				Scale Sheet

REV	ECN	DATE	DESIGN	APPV
A	-	20 MAY 71	R.T.M.	C.L.H.
B	-	1 JUN 71	H.C.M.	
C	-	12 JUL 71	H.C.M.	
D	-	28 SEP 71	GB	W.P.B.
E	-	26 OCT 71	R.T.M.	



- NOTES:
- DO NOT INSTALL Q37 UNTIL FINAL TEST.
 - RESISTORS RT1 - RT4 ARE CARBON COMP, 1/4 W 5% WITH VALUES WHICH ARE DETERMINED AT FINAL ELECTRICAL TEST, ALSO TO RT7
 - CAPACITOR VALUE TO BE ADJUSTED FOR MINIMUM PEDESTAL PER THE TEST PROCEDURE.
 - ALL RESISTORS ARE 1/4 W CARBON COMP, UNLESS OTHERWISE SPECIFIED
 - A1, A2, A3 ARE RCA CA3046 TRANSISTOR ARRAYS.
 - ALL DIODES ARE DA1702, UNLESS OTHERWISE SPECIFIED.
 - Q1 - Q13, Q22 ARE 2N5055.

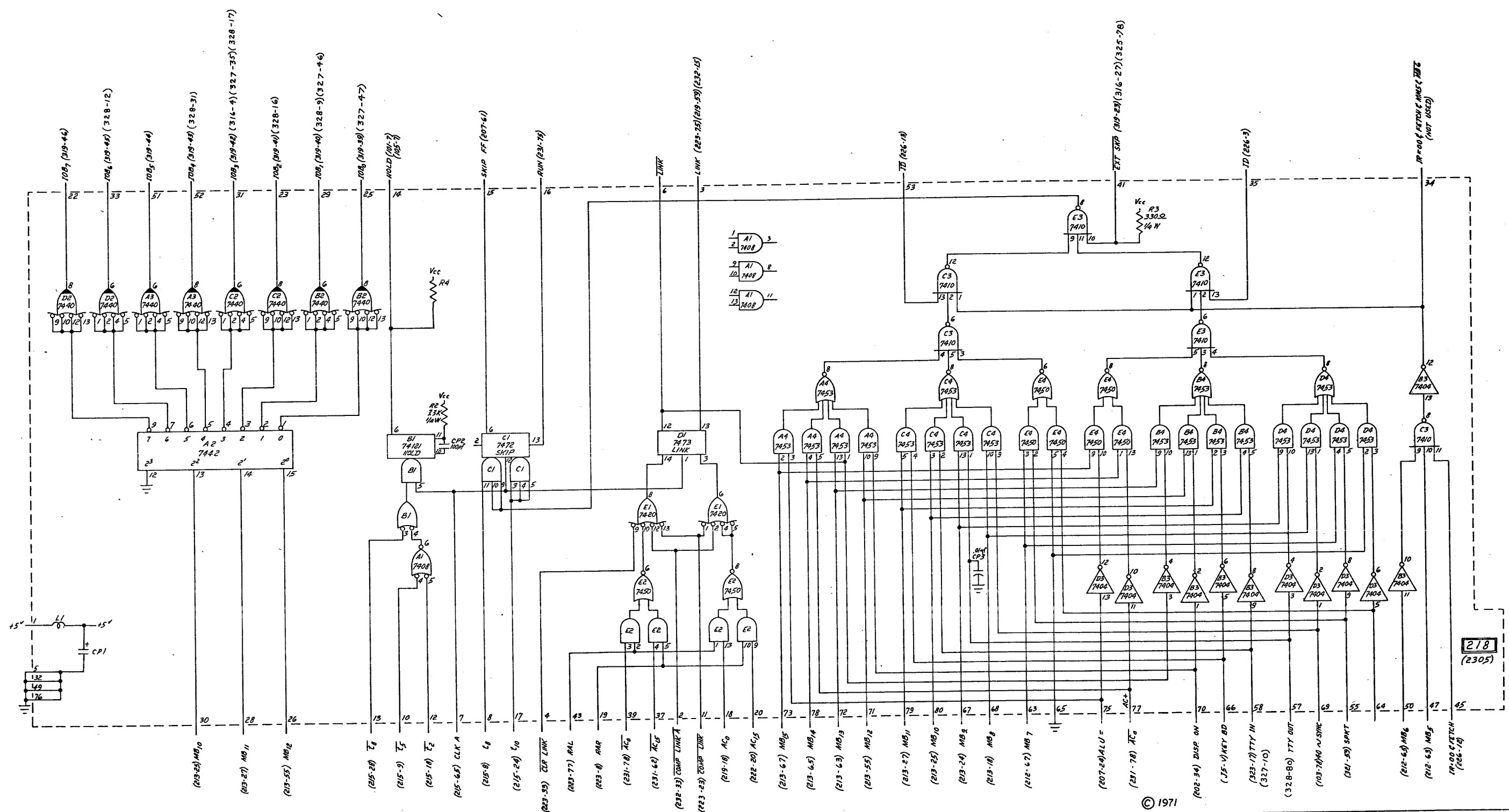
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BY		DATE		TITLE
LAYOUT	H.C.M.	18 Feb 71		
DRAWN	H.C.M.	22 Feb 71		
CHECKED	C.B.A.	23 MAR 71		PREFIX
APPROVED				SIZE
ISSUE				DRAWING NUMBER
COPIED				844
MATERIAL				REV.
				F
				Scale
				Sheet

IMLAC CORPORATION
228 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

PROJECT
PROD

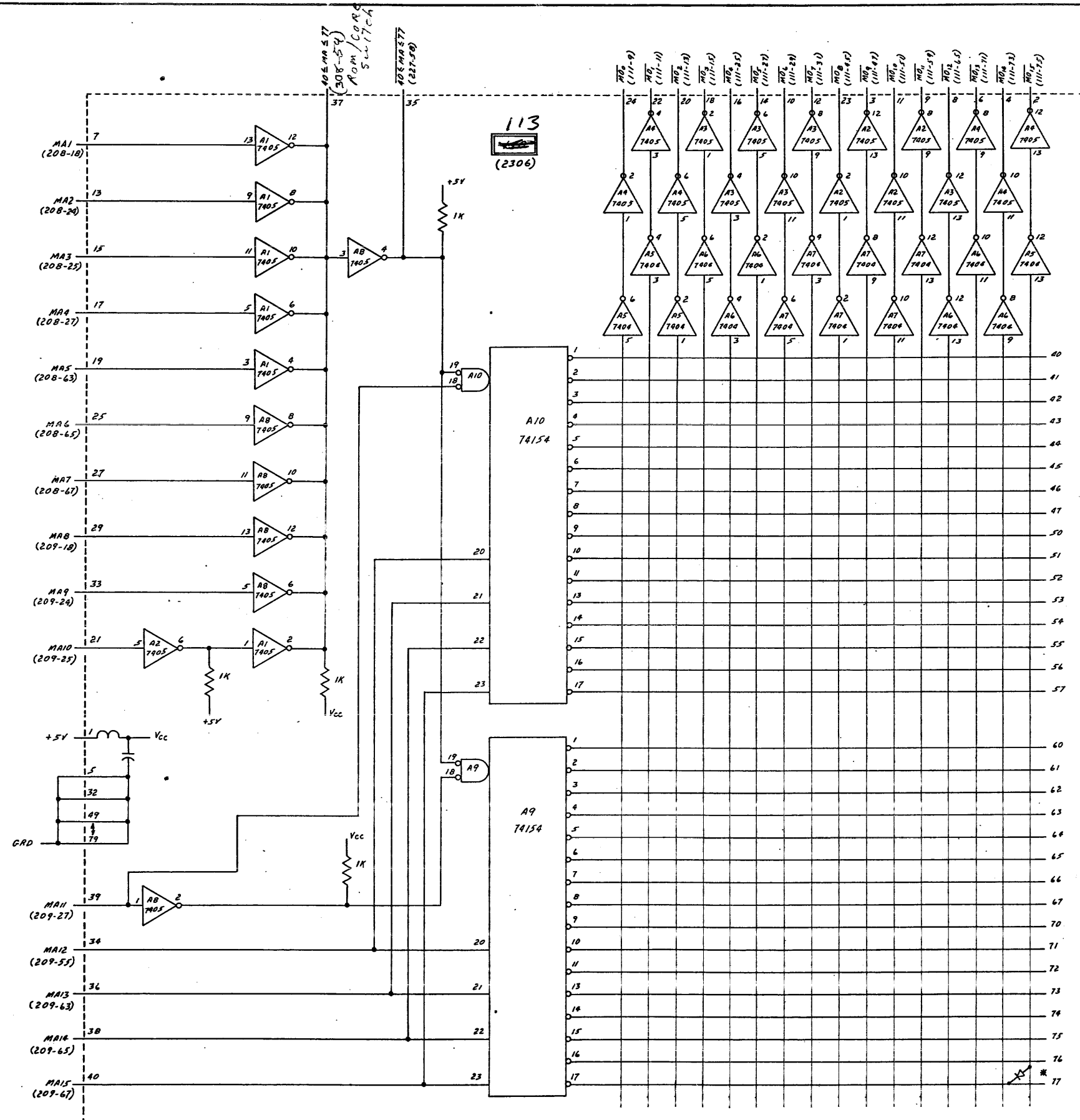
REV	ECN	DATE	DFTM	APPV
A	-	11 May 71	H.C.M.	
B	-	15 Jun 71	H.C.M.	CBA
C	-	3 Jul 71	G.B.	T.D.B.
D	-	7 Jun 71	H.C.M.	
E	-	12 Jun 71	H.C.M.	



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BY	DATE	TITLE
LAYOUT	H.C.M. 12 Jun 71	IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154
DRAWN	H.C.M. 5 Jun 71	
CHECKED		
APPROVED		
ISSUE		
COPIED		
MATERIAL		SKIP & LINK PREFIX SIZE DRAWING NUMBER REV L D 845 E Scale Sheet

REV	ECN	DATE	DFTM	APP'D
A	-	6 MAR 71	NJS	CBA
B	-	1 Jun 71	H.C.M.	

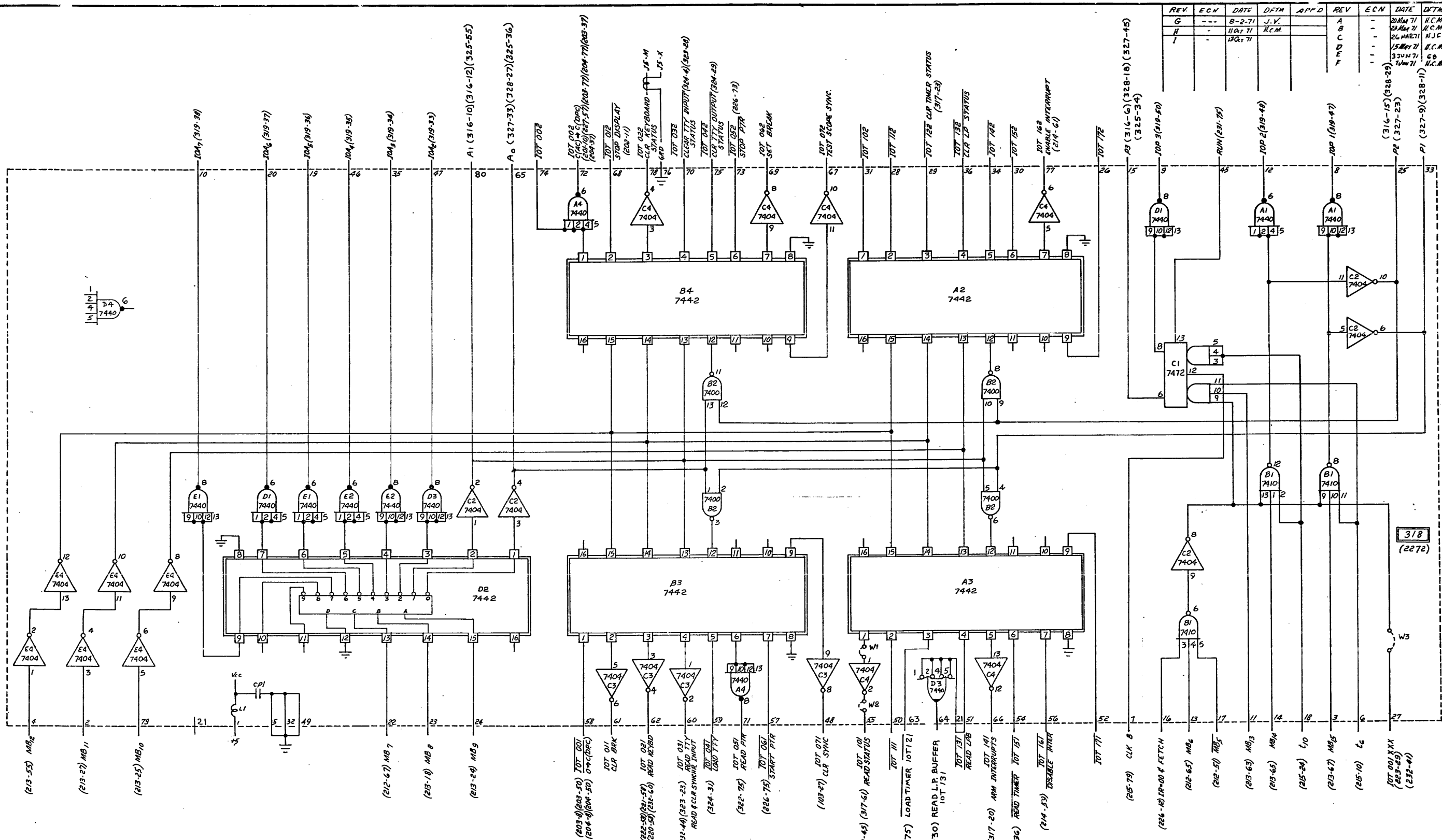


NOTE: * DIODE, INRIS, SHOW IN A TYPICAL LOCATION TO PROGRAM UP TO 32 ADDRESSES. A DIODE IS USE TO GENERATE A "ONE" IN THE OUTPUT WORD.

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LAYOUT	JY	4-3-71	 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		READ ONLY MEMORY PREFIX SIZE DRAWING NUMBER REV L D 846 B Scale Sheet
DRAWN	JY	4-5-71		PROJECT		
CHECKED	CBA	4-7-71		PROD		
APPROVED						
ISSUE						
COPIED						
MATERIAL						

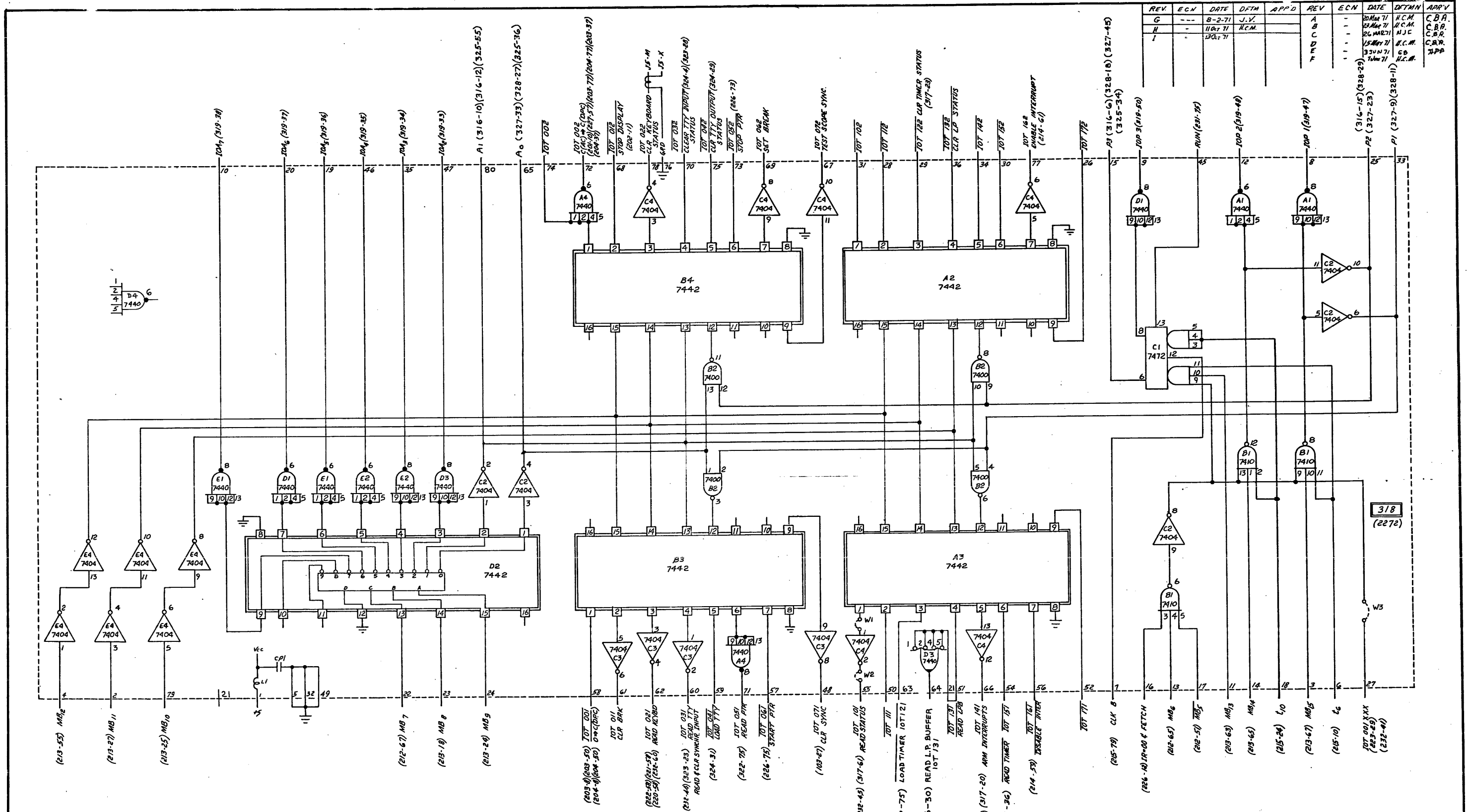
REV	ECN	DATE	DFTN	APPD	REV	ECN	DATE	DFTN	APPV
G	---	8-2-71	J.V.		A	-	20 MAR 71	H.C.M.	C.B.A.
H	-	11 OCT 71	H.C.M.		B	-	23 MAR 71	H.C.M.	C.B.A.
I	-	13 OCT 71			C	-	26 MAR 71	N.J.C.	C.B.A.
					D	-	15 APR 71	H.C.M.	C.B.A.
					E	-	3 JUN 71	G.B.	H.P.P.
					F	-	14 JUN 71	H.C.M.	



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LAYOUT	BY	DATE	 IMLAC CORPORATION 286 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE								
DRAWN	H.C.M.	19 MAR 71		IOT CONTROL								
CHECKED	C.B.A.	3-19-71										
APPROVED												
ISSUE												
COPIED												
MATERIAL	PROJECT	PROD		<table border="1"> <tr> <th>PREFIX</th> <th>SIZE</th> <th>DRAWING NUMBER</th> <th>REV</th> </tr> <tr> <td>L</td> <td>D</td> <td>847</td> <td>I</td> </tr> </table>	PREFIX	SIZE	DRAWING NUMBER	REV	L	D	847	I
PREFIX	SIZE	DRAWING NUMBER	REV									
L	D	847	I									

REV	ECN	DATE	DTM	APP'D	REV	ECN	DATE	DTM	APP'D
G	---	8-2-71	J.V.		A	---	20 Mar 71	H.C.M.	C.B.A.
H	---	11 Oct 71	H.C.M.		B	---	26 Mar 71	H.C.M.	C.B.A.
I	---	13 Oct 71	H.C.M.		C	---	15 Mar 71	H.C.M.	C.B.A.
					D	---	30 Jun 71	H.C.M.	C.B.A.
					E	---	1 Jun 71	H.C.M.	C.B.A.
					F	---			X.P.P.

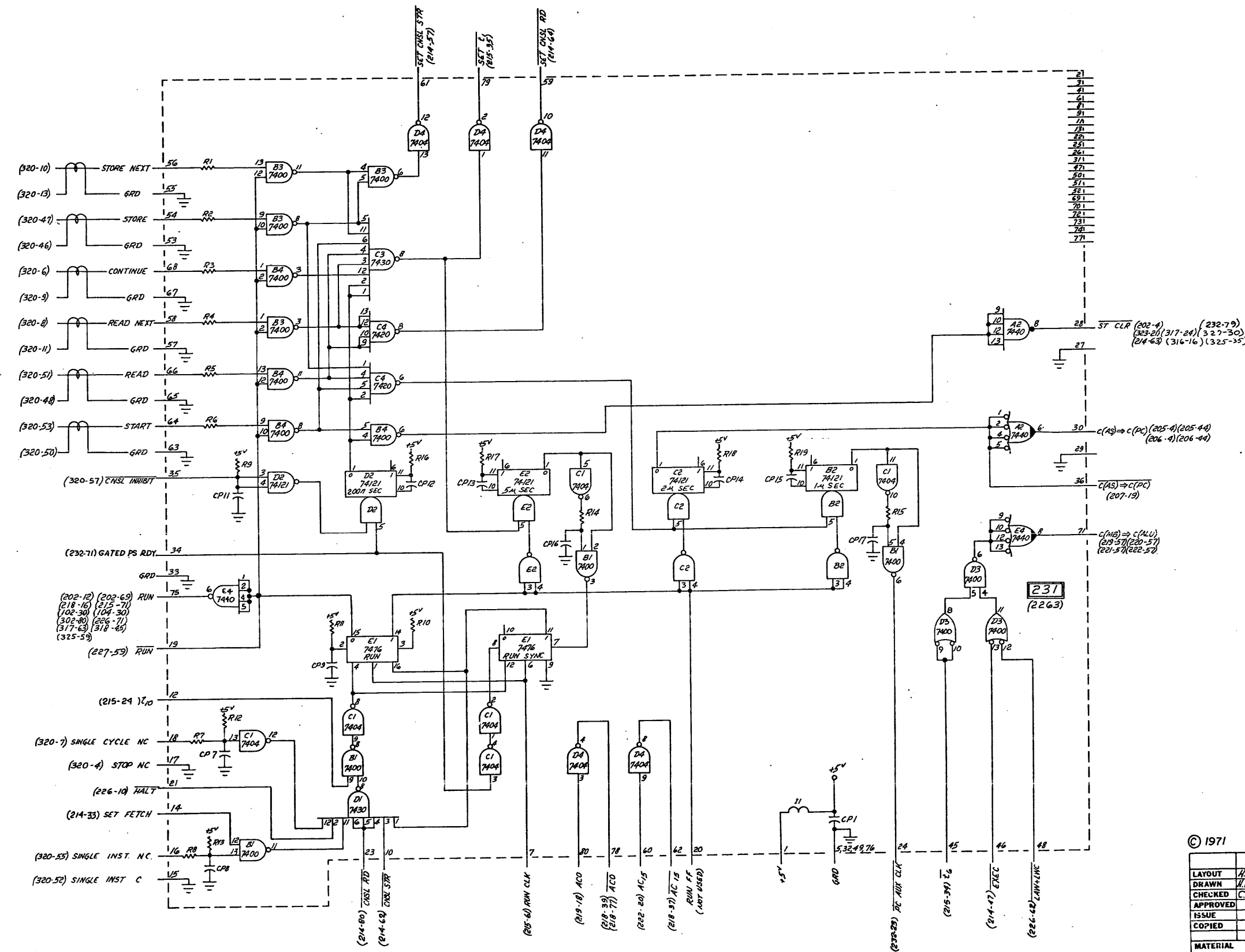


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LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE
DRAWN	H.C.M.	19 Mar 71		IOT CONTROL
CHECKED	C.B.A.	3-17-71		
APPROVED				
ISSUE				
COPIED				

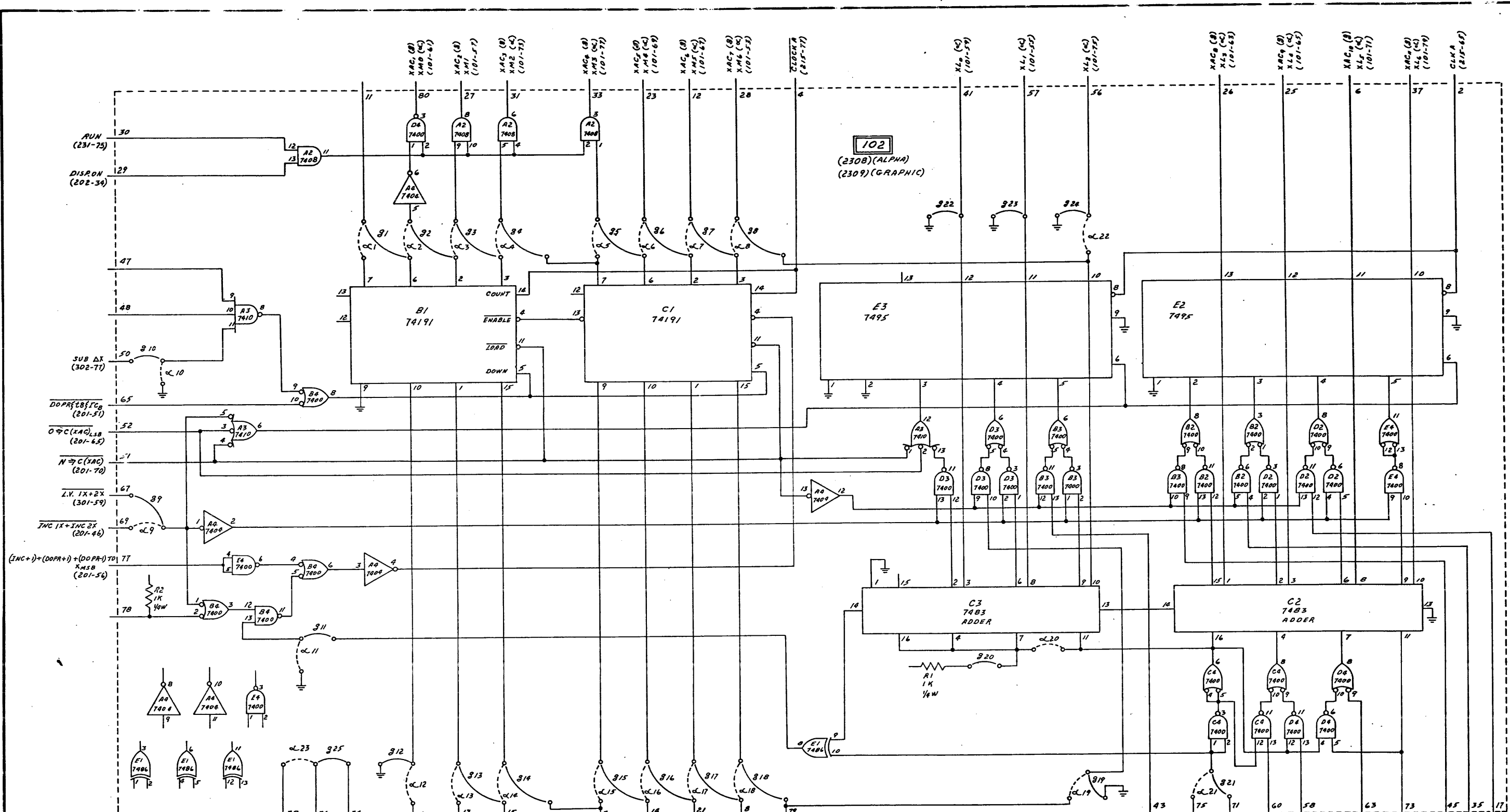
MATERIAL	PROJECT	PROJ	PREFIX	SIZE	DRAWING NUMBER	REV
			L	D	847	I
			Scale		Sheet	

REV	ECN	DATE	DFTM	APRV
A	-	7/18/71	A.J.F.	J.I.
B	-	23/07/71	G.B.	B.P.B.
C	-	7/08/71	A.C.M.	
D	-	8-26-71	J.V.	P.T.M.



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LAYOUT	BY	DATE	 286 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	A.C.M.	26/08/71		RUN CONTROL		
CHECKED	A.C.M.	29/08/71				
APPROVED	C.B.R.	29/08/71				
ISSUE						
COPIED						
MATERIAL	PROJECT	PROD	PREFIX	SIZE	DRAWING NUMBER	REV.
			L	D	848	D
			Scale		Sheet	



NOTE:
 TO USE GRAPHIC CARD WHEN LONG VECTOR NOT USED;
 ON BACK PLANE:
 1. CONNECT IC2 TO PIN 50.
 2. CONNECT INC IC3 TO PIN 48.
 3. CONNECT PIN 36 TO PIN 38.
 4. CONNECT PIN 67 TO PIN 69.
 5. CONNECT PIN 71 TO PIN 75.
 MACHINE CAN THEN BE USED WITH α CARD ALSO.

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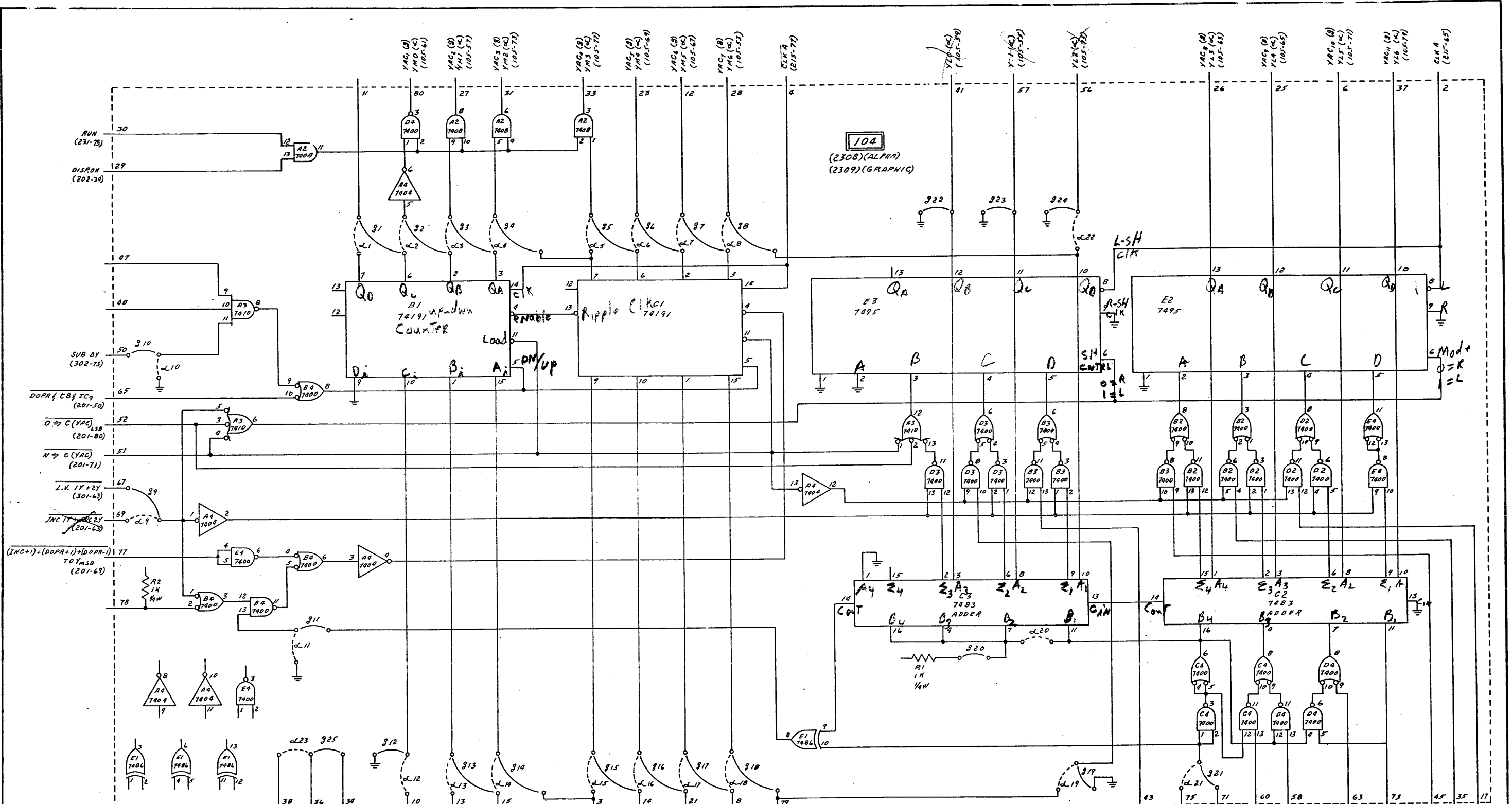
LAYOUT	J.V.	3-22-71
DRAWN	J.V.	3-22-71
CHECKED	C.B.A.	3-25-71
APPROVED		
ISSUE		
COPIED		
MATERIAL		

IMLAC CORPORATION
 288 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

REV	ECN	DATE	BY	APP'D.
F		9-18-71	J.V.	
D		8-26-71	J.V.	R.T.M.
C		1 Jun 71	H.C.M.	
B		20 MAY 71	R.T.M.	
A		5 MAY 71	N.J.F.	C.B.A.

PROJECT: PROD

PREFIX	SIZE	DRAWING NUMBER	REV
L	D	850	E
Scale		Sheet	



NOTE:
 α - CONNECTIONS FOR ALPHA MACHINE.
 β - CONNECTIONS FOR GRAPHIC MACHINE.
 TO USE GRAPHIC CARD WHEN LONG VECTOR NOT USED;
 ON BACK PANEL:
 1. CONNECT IC₂ TO PIN 50.
 2. CONNECT INC IC₂ TO PIN 48.
 3. CONNECT PIN 36 TO PIN 38.
 4. CONNECT PIN 67 TO PIN 69.
 5. CONNECT PIN 71 TO PIN 75.
 MACHINE CAN THEN BE USED WITH α CARD ALSO.

REV	ECN	DATE	DTM	APP'D
F	---	9-13-71	J.V.	
D	---	8-26-71	J.V.	R.T.M.
C	---	1 Jun 71	H.C.M.	
B	---	20 MAY 71	N.I.F.	
A	---			

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LAYOUT	J.V.	3-22-71
DRAWN	J.V.	2-22-71
CHECKED	C.B.A.	4-7-71
APPROVED		
ISS'IE		
COPIED		

IMLAC CORPORATION
 288 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

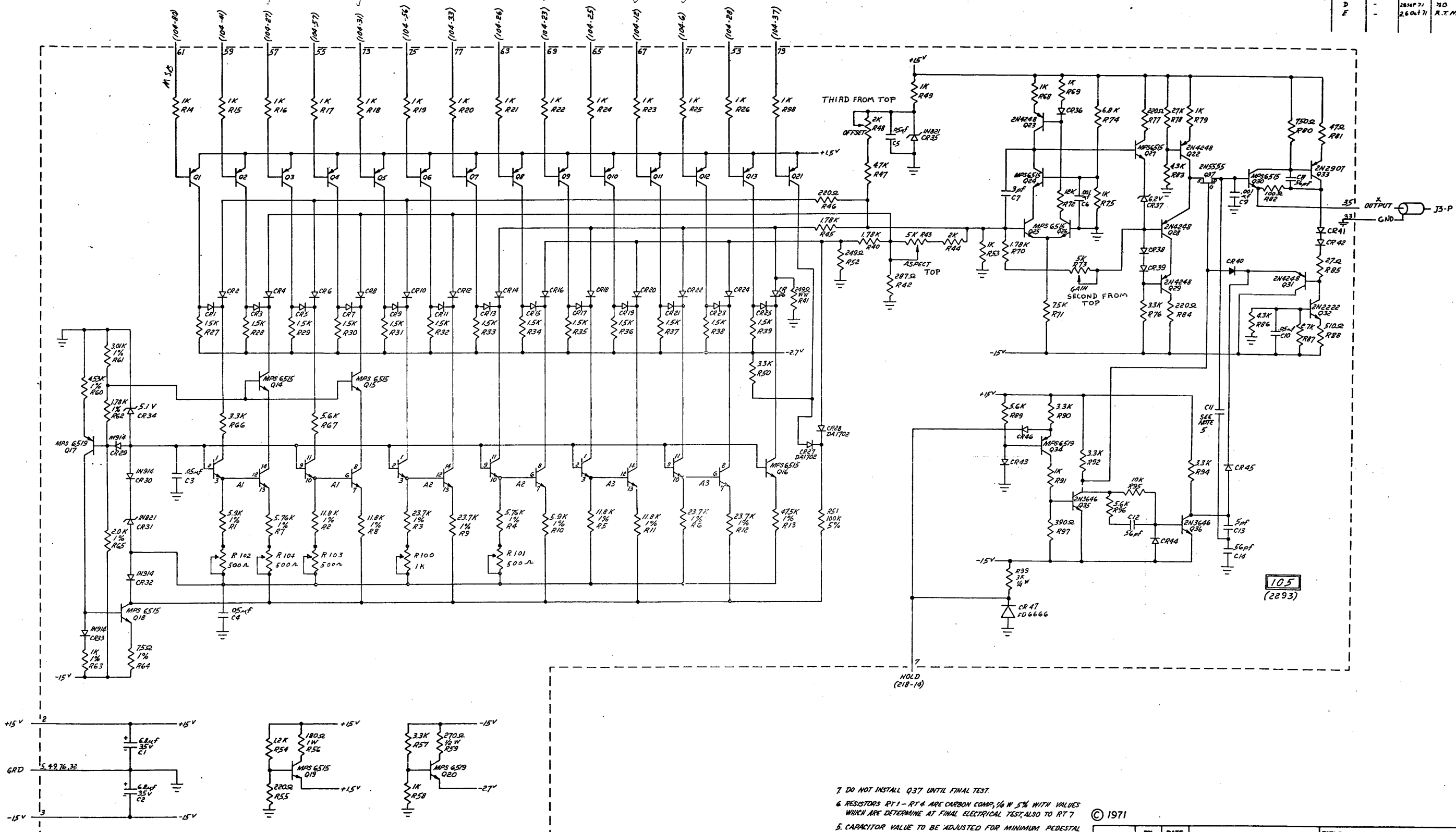
TITLE
 Y DISPLAY ACCUMULATOR

PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	851	E

PROJECT: **PROD**

Scale: _____ Sheet _____

REV	ECN	DATE	DTN	APPV
A	-	17JUN 71	H.C.M.	C.B.A.
B	-	18JUN 71	H.C.M.	C.B.A.
C	-	18JUN 71	H.C.M.	C.B.A.
D	-	26OCT 71	H.C.M.	C.B.A.
E	-			



- 7 DO NOT INSTALL Q37 UNTIL FINAL TEST.
- 6 RESISTORS RT1 - RT4 ARE CARBON COMP, 1/4 W 5% WITH VALUES WHEN ARE DETERMINE AT FINAL ELECTRICAL TEST, ALSO TO RT7
- 5 CAPACITOR VALUE TO BE ADJUSTED FOR MINIMUM PEDESTAL PER THE TEST PROCEDURE.
- 4 ALL RESISTORS ARE 1/4 W CARBON COMP, UNLESS OTHERWISE SPECIFIED
- 3 A1, A2, A3 ARE RCA CA3046 TRANSISTOR ARRAYS.
- 2 ALL DIODES ARE DA1702, UNLESS OTHERWISE SPECIFIED.
- 1 Q1 - Q13, Q22 ARE 2N5055.

NOTES:

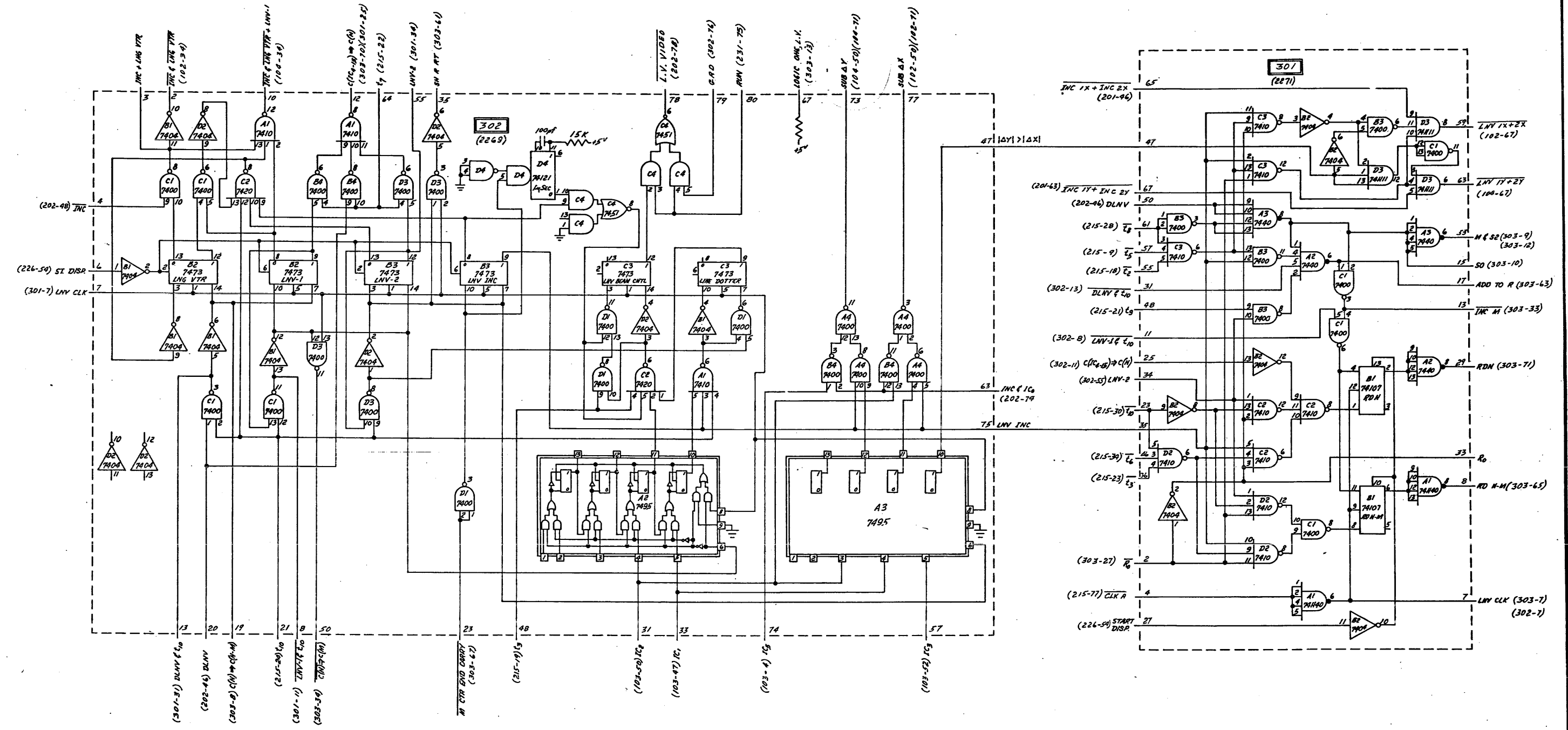
© 1971

LAYOUT	BY	DATE	TITLE
DRAWN	H.C.M.	18 JUN 71	D TO A CONVERTER Y AXIS
CHECKED	H.C.M.	22 JUN 71	
APPROVED	C.B.A.	22 JUN 71	PREFIX SIZE DRAWING NUMBER REV.
ISSUE			
COPIED			
MATERIAL			852 E
PROJECT			Scale Sheet




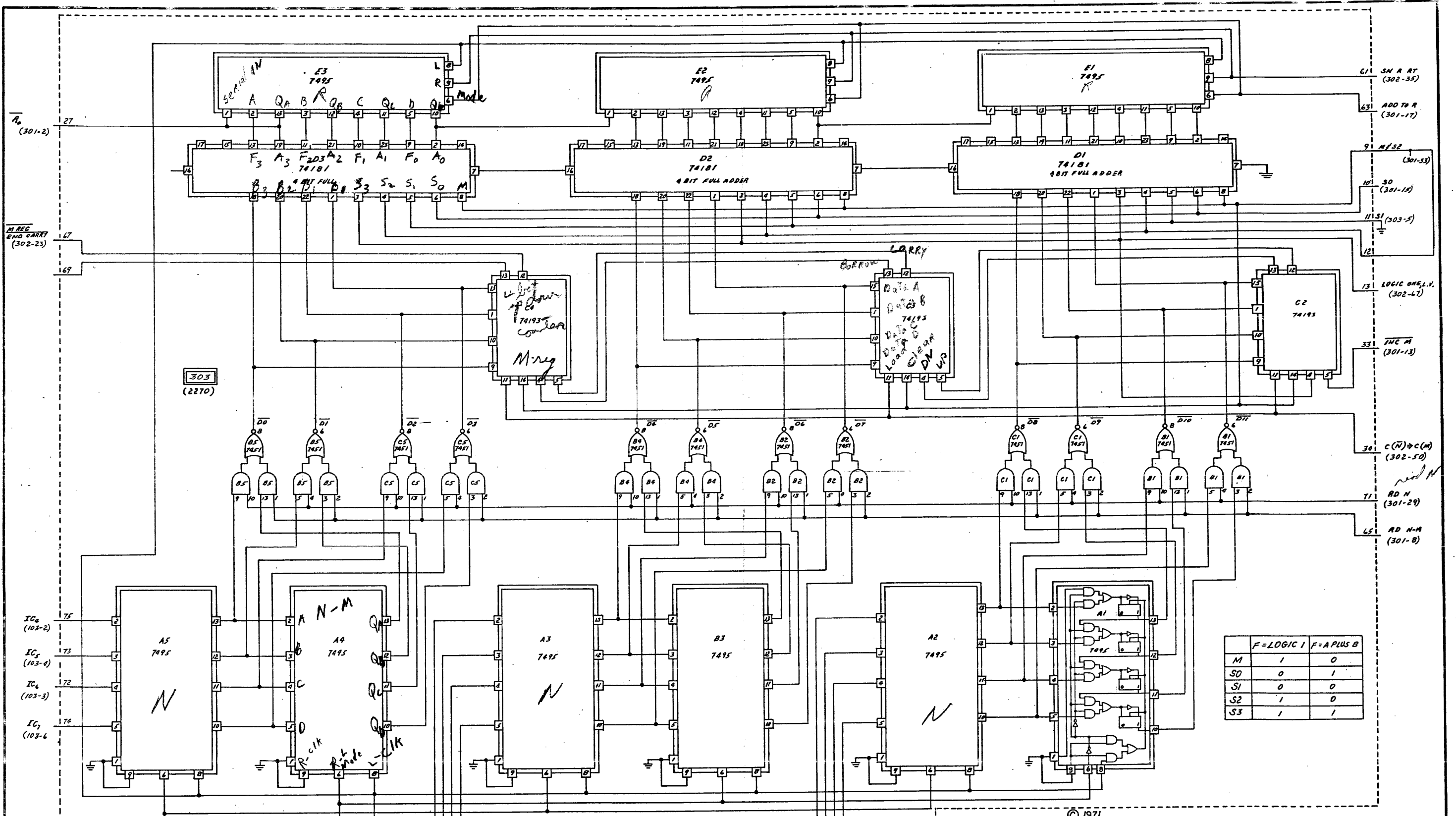
105
(2293)

REV	ECN	DATE	DFTM	APRV
A	-	7/11/71	U.F.	U.B.H.
B	-	1/24/71	H.C.M.	
C	-	12/24/71	H.C.M.	



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LAYOUT	BY	DATE	TITLE								
DRAWN	J.V.	6-9-71	 IMLAC CORPORATION 228 NEWTON STREET WALTHAM, MASSACHUSETTS 02154								
CHECKED	J.V.	6-9-71									
APPROVED											
ISSUE											
COPIED											
MATERIAL	PROJECT	PROD	<table border="1"> <thead> <tr> <th>PREFIX</th> <th>SIZE</th> <th>DRAWING NUMBER</th> <th>REV.</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>D</td> <td>853</td> <td>C</td> </tr> </tbody> </table>	PREFIX	SIZE	DRAWING NUMBER	REV.	L	D	853	C
PREFIX	SIZE	DRAWING NUMBER	REV.								
L	D	853	C								



	F=LOGIC 1	F=A PLUS B
M	1	0
S0	0	1
S1	0	0
S2	1	0
S3	1	1

R₀ (301-2) 27

M REC END CARRY (302-23) 17

303 (2270)

61 SM A RT (302-35)

63 ADD TO R (301-17)

9 MFS2 (301-53)

10 S0 (301-18)

11 S1 (303-5)

12

13 LOGIC ONE L.V. (302-67)

33 INC M (301-13)

34 C(N) → C(M) (302-50)

TI RD N (301-29)

LS RD N-M (301-8)

IC₂ (103-2) 75

IC₅ (103-4) 73

IC₆ (103-3) 72

IC₇ (103-4) 74

C(IC₂ → IC₇) (302-1)

C(IC₂ → IC₇) (302-1)

L.V. CLK (301-7)

IC₈ (103-5)

IC₉ (103-5)

IC₁₀ (103-24)

IC₁₁ (103-25)

IC₁₂ (103-8)

IC₁₃ (103-10)

IC₁₄ (103-23)

IC₁₅ (103-20)

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LAYOUT	BY	DATE
DRAWN	J.V.	4-9-71
CHECKED	J.V.	4-9-71
APPROVED	C.B.A.	4-12-71
ISSUE		
COPIED		

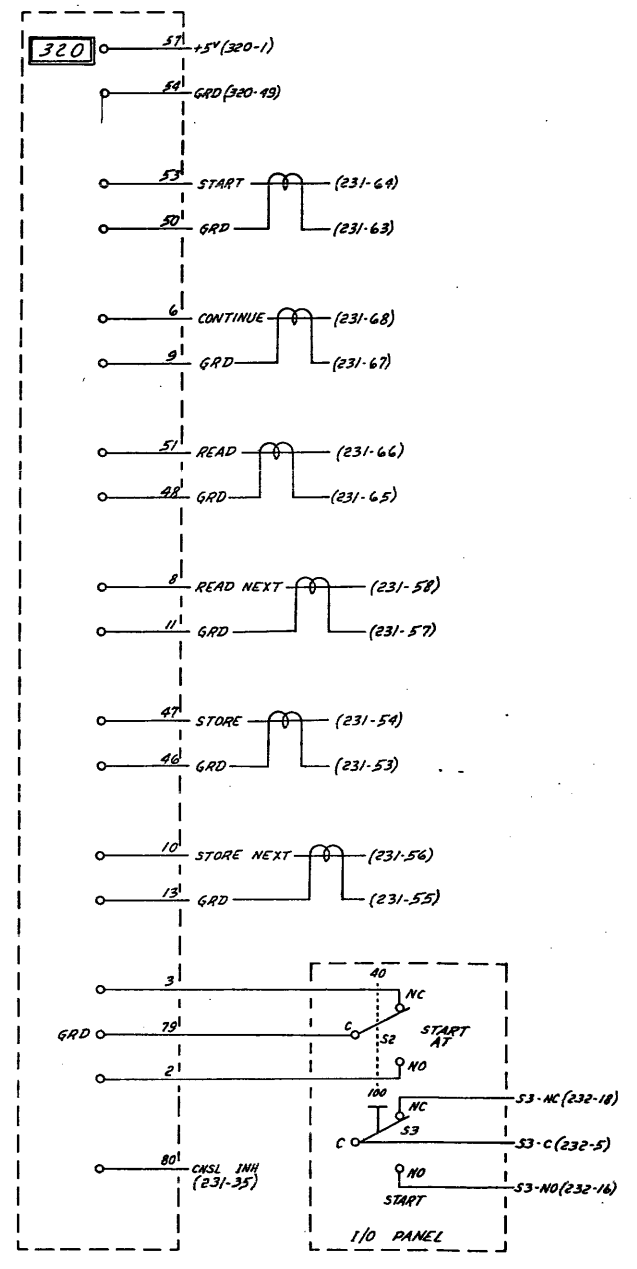
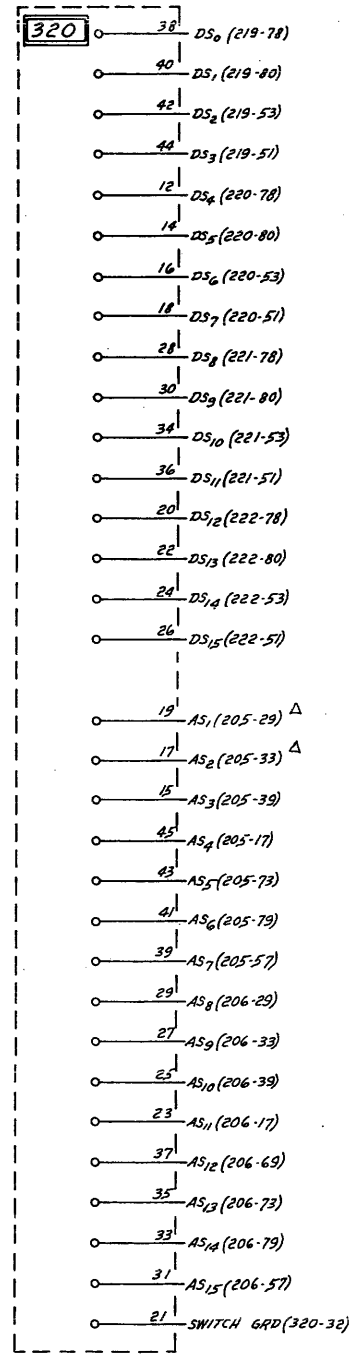
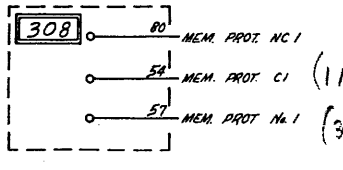
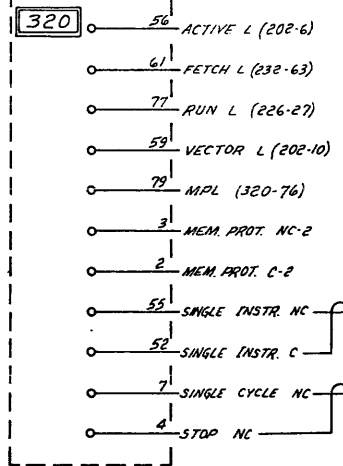
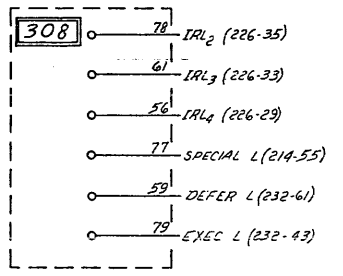
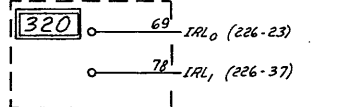
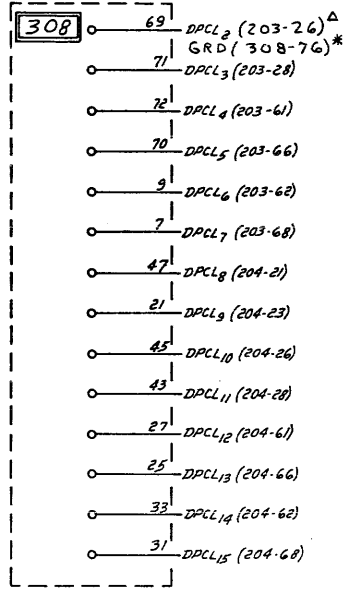
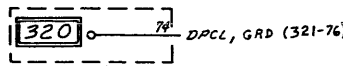
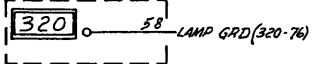
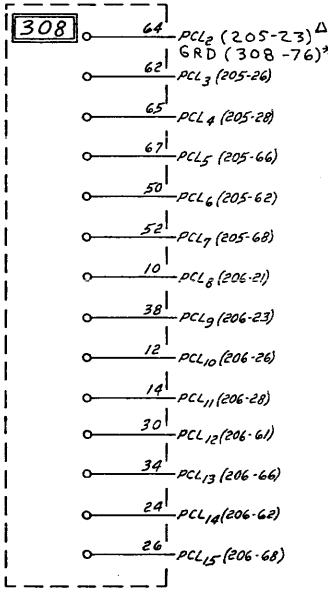
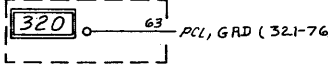
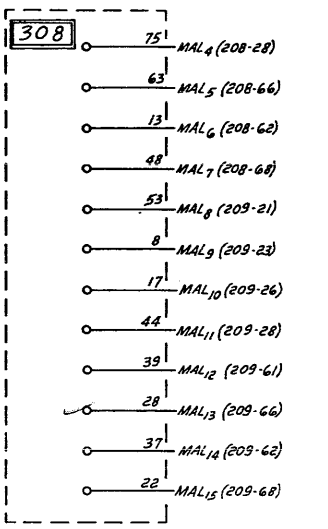
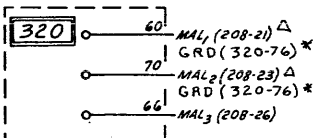
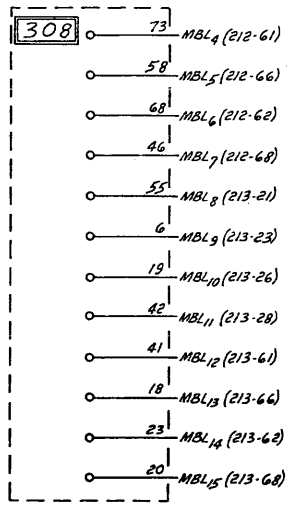
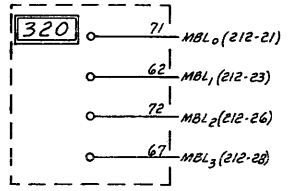
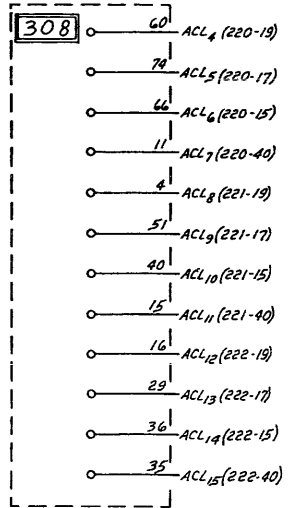
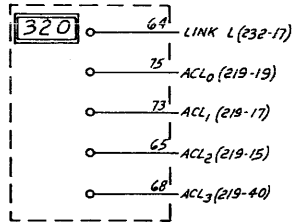
IMLAC CORPORATION
 333 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

TITLE			
LONG VECTOR REGISTERS			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	854	B
Scale			Sheet

REV	ECN	DATE	DTA	APP'D
B	-	10/16/71	H.C.M.	
A	-	1/20/71	H.C.M.	

PROJECT PROD

REV	ECN	DATE	DTM	APP'V



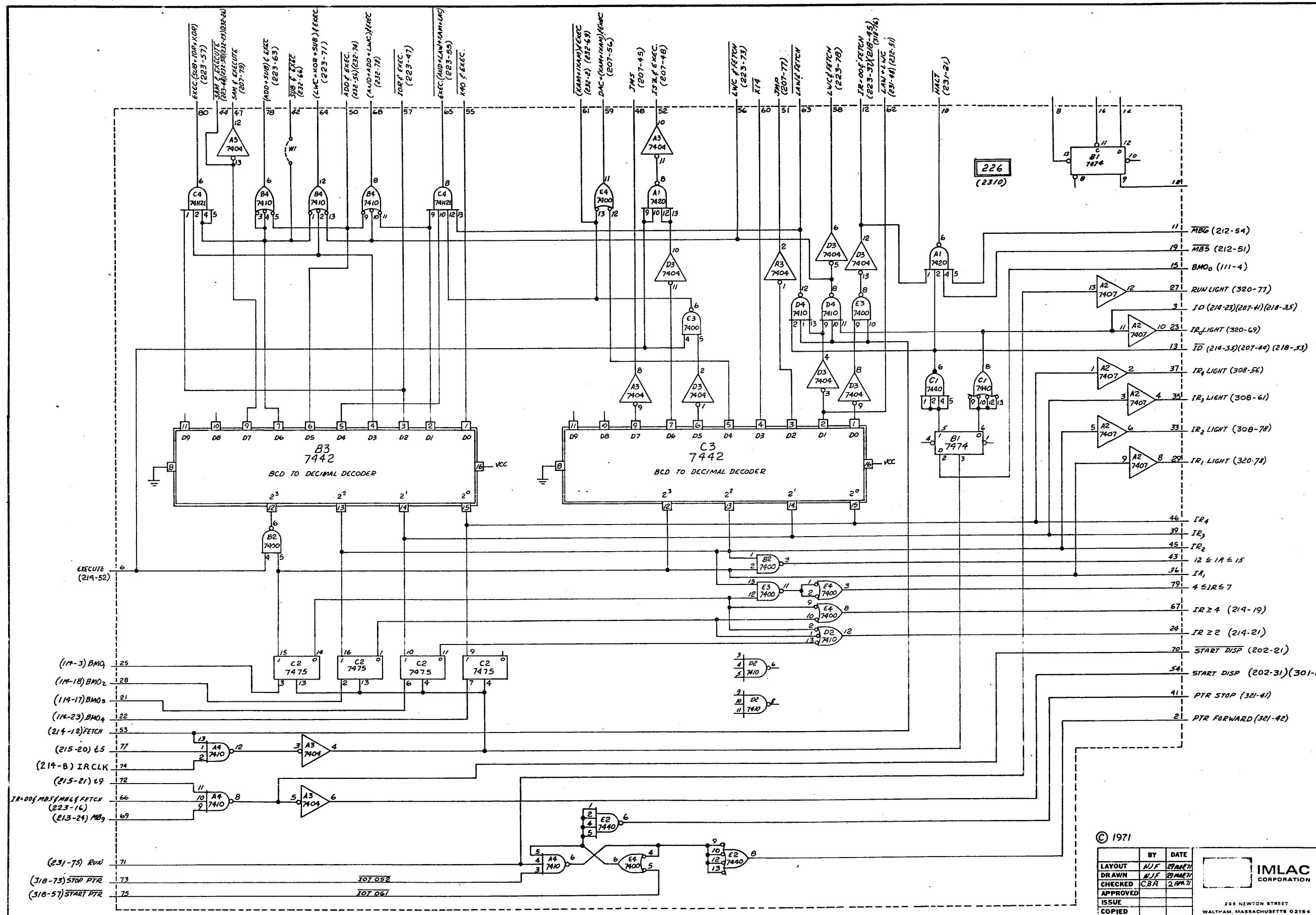
Δ FOR 16K ONLY
* FOR 8K ONLY

NOTE: (113-37) (308-40) G-770

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LAYOUT	BY	DATE	 286 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	CABLE CARD CONNECTION		
DRAWN	H.C.M.	3/11/71		308 & 320			
CHECKED	C.B.R.	4-7-71		PREFIX	SIZE	DRAWING NUMBER	REV.
APPROVED				L	D	855-A	
ISSUE				Scale			Sheet
COPIED				PROJECT	PROD		

REV.	ECN.	DATE	DFTN	APP'D.
A	-	8-25-71	J. V.	R.T.M.
B	-	20 SEP 71	GB	WPS



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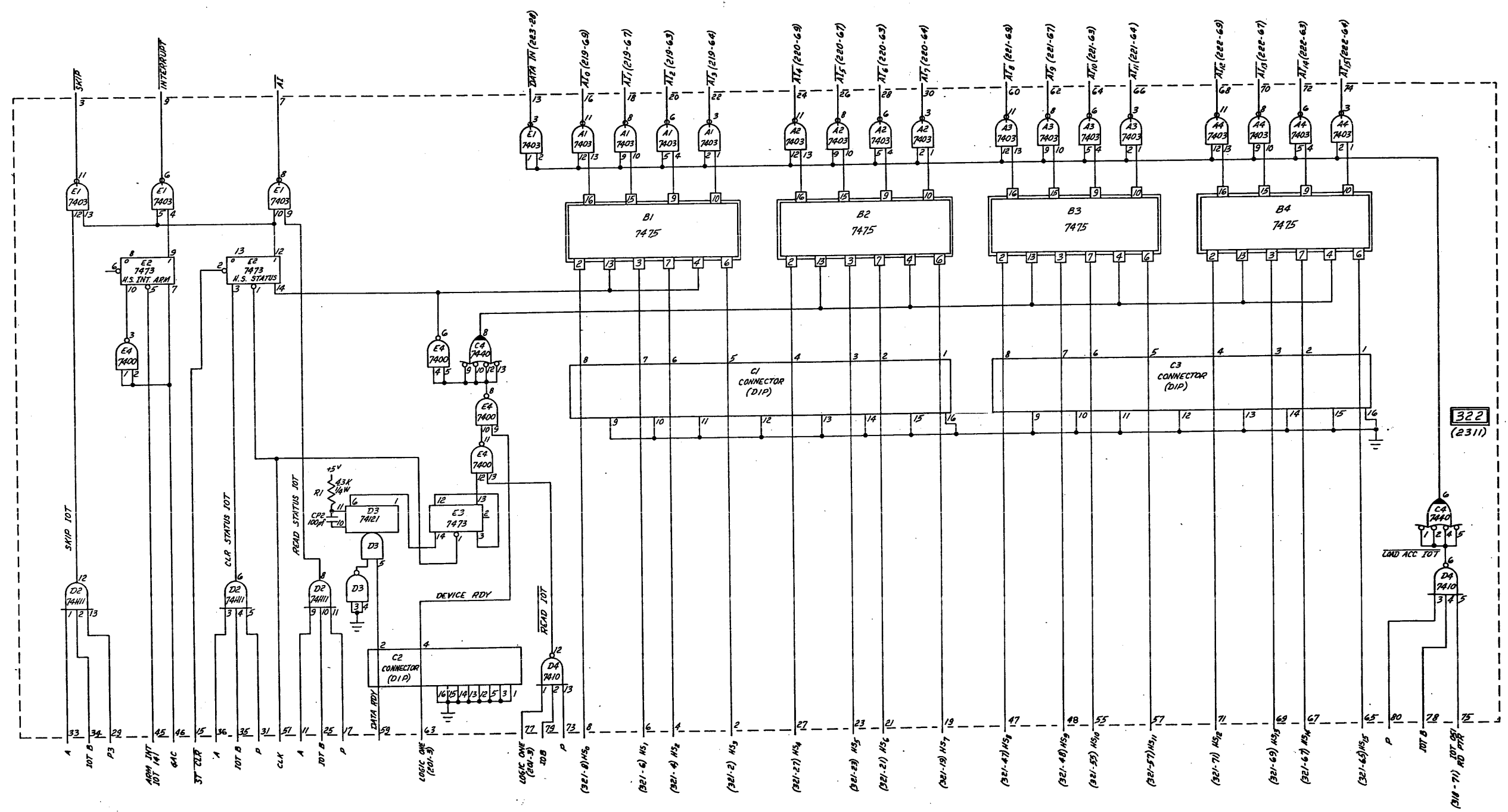
LAYOUT	BY	DATE
DRAWN	AJF	8/25/71
CHECKED	C.B.R.	2/28/77
APPROVED		
ISSUE		
COPIED		



TITLE			
INSTR. REG. & DECODER			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	856-A	B
Scale			Sheet

MATERIAL PROJECT PROD

REV	ECN	DATE	DFTMN	APPRV
A	---	16 APR 71	GB	HDB
B	---	6 MAY 71	AJF	CBA
C	---	17 MAY 71	H.C.M.	CBA
D	---	1 JUN 71	H.C.M.	

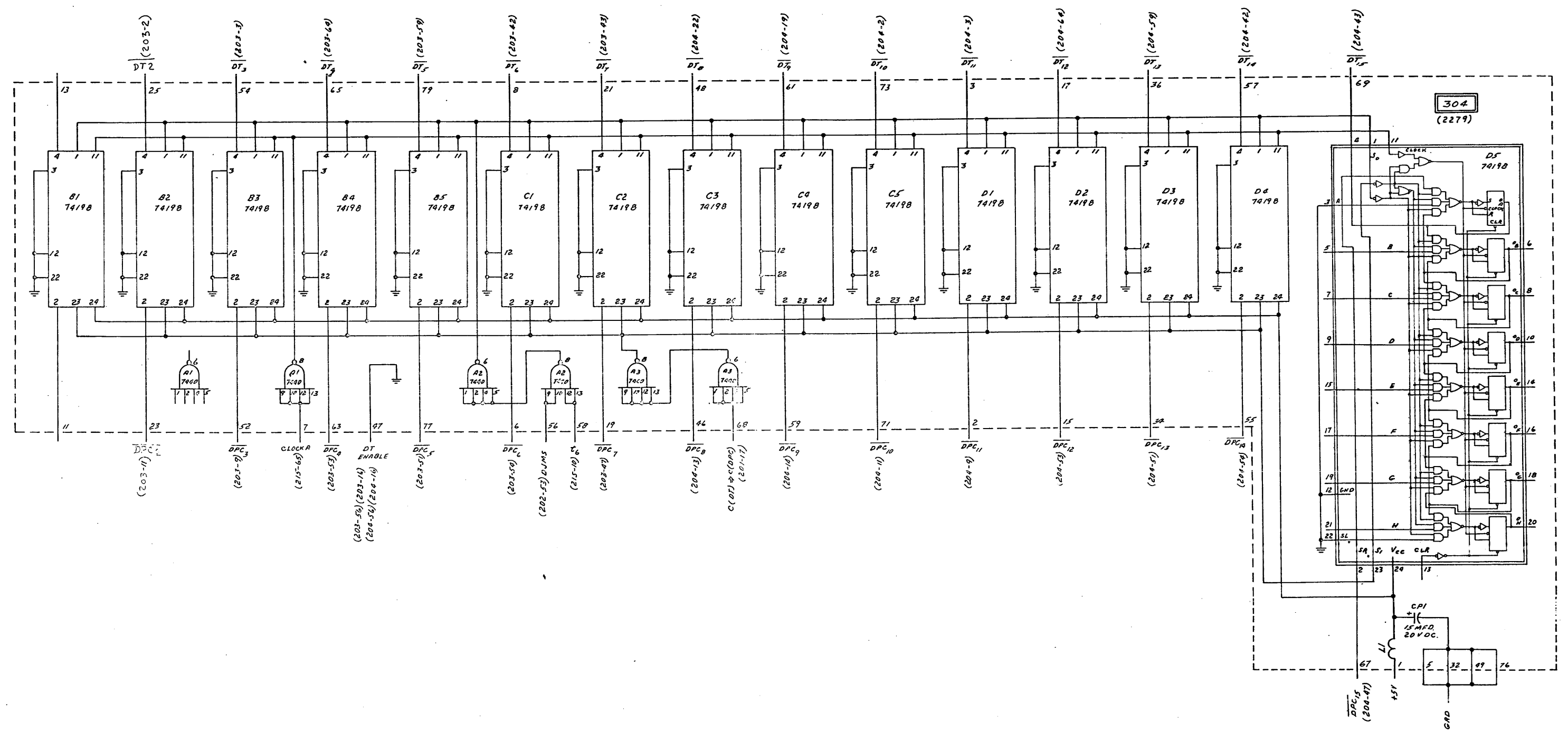


322
(2311)

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BY	DATE	TITLE								
LAYOUT	H.C.M. 29 MAR 71	IMLAC CORPORATION <small>288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154</small>								
DRAWN	H.C.M. 30 MAR 71									
CHECKED	C.B.A. 1 APR 71									
APPROVED										
ISSUE										
COPIED		16 BIT HIGH SPEED INPUT								
MATERIAL		<table border="1"> <thead> <tr> <th>PREFIX</th> <th>SIZE</th> <th>DRAWING NUMBER</th> <th>REV.</th> </tr> </thead> <tbody> <tr> <td>L</td> <td>D</td> <td>857</td> <td>D</td> </tr> </tbody> </table>	PREFIX	SIZE	DRAWING NUMBER	REV.	L	D	857	D
PREFIX	SIZE	DRAWING NUMBER	REV.							
L	D	857	D							
PROJECT		PROD	Scale							
		Sheet								

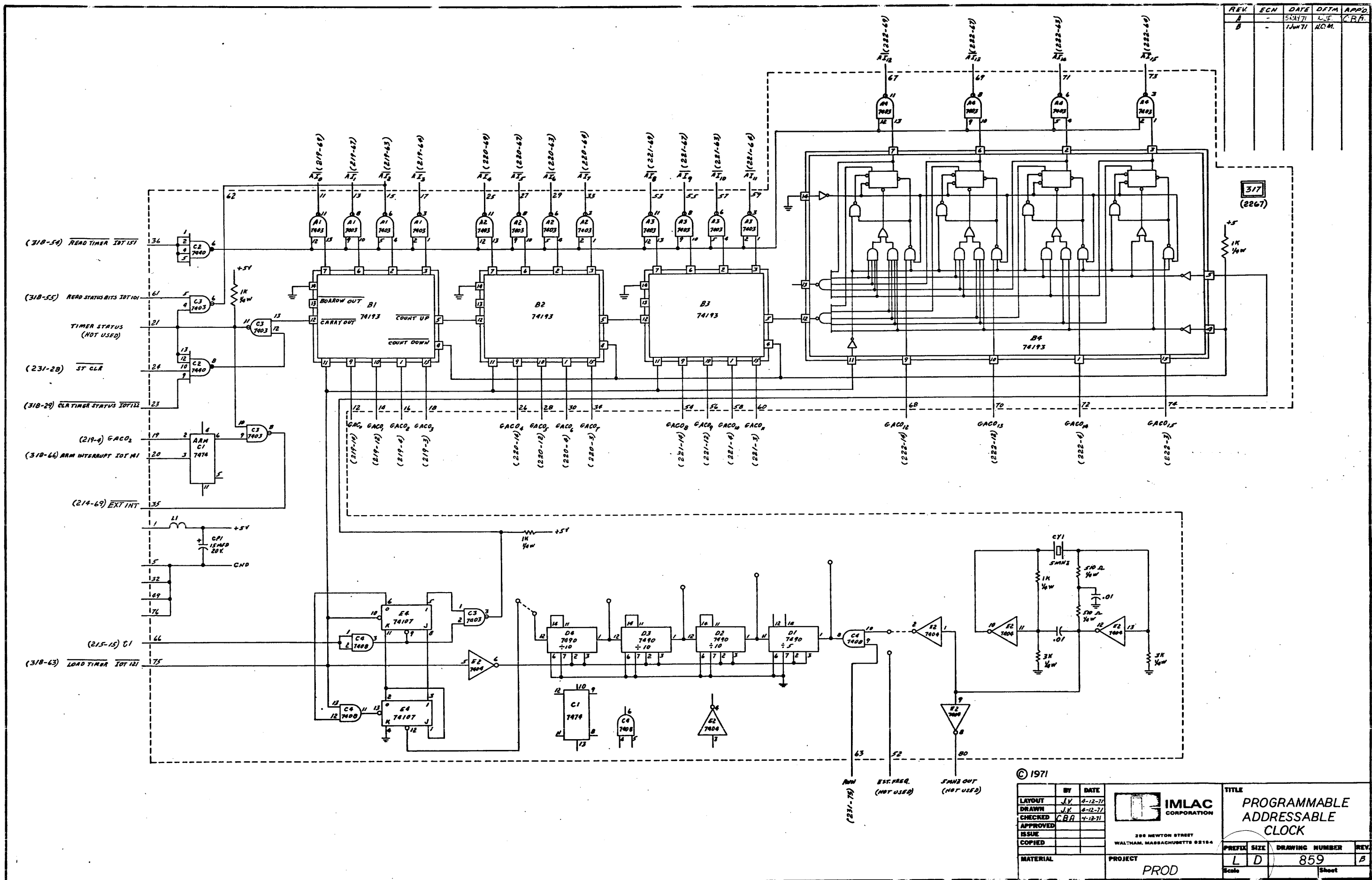
REV	ECN	DATE	DTM	APP'D



BY DATE			TITLE	
LAYOUT	J.V.	4-9-71	8 LEVEL PUSH REGISTER	
DRAWN	J.V.	4-9-71		
CHECKED	C.B.R.	4-13-71		
APPROVED				
ISSUE				
COPIED				
MATERIAL				
PROJECT			PREFIX	SIZE
PROD			S	D
			DRAWING NUMBER	
			858-16K	
			Scale	REV.
				Sheet



REV	ECN	DATE	DTM	APPD.
A	-	5/21/71	LJE	C.R.P.
B	-	1/20/71	ACM	



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LAYOUT	BY	DATE
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CHECKED	J.K.	4-12-71
APPROVED	C.B.A.	7-12-71
ISSUE		
COPIED		

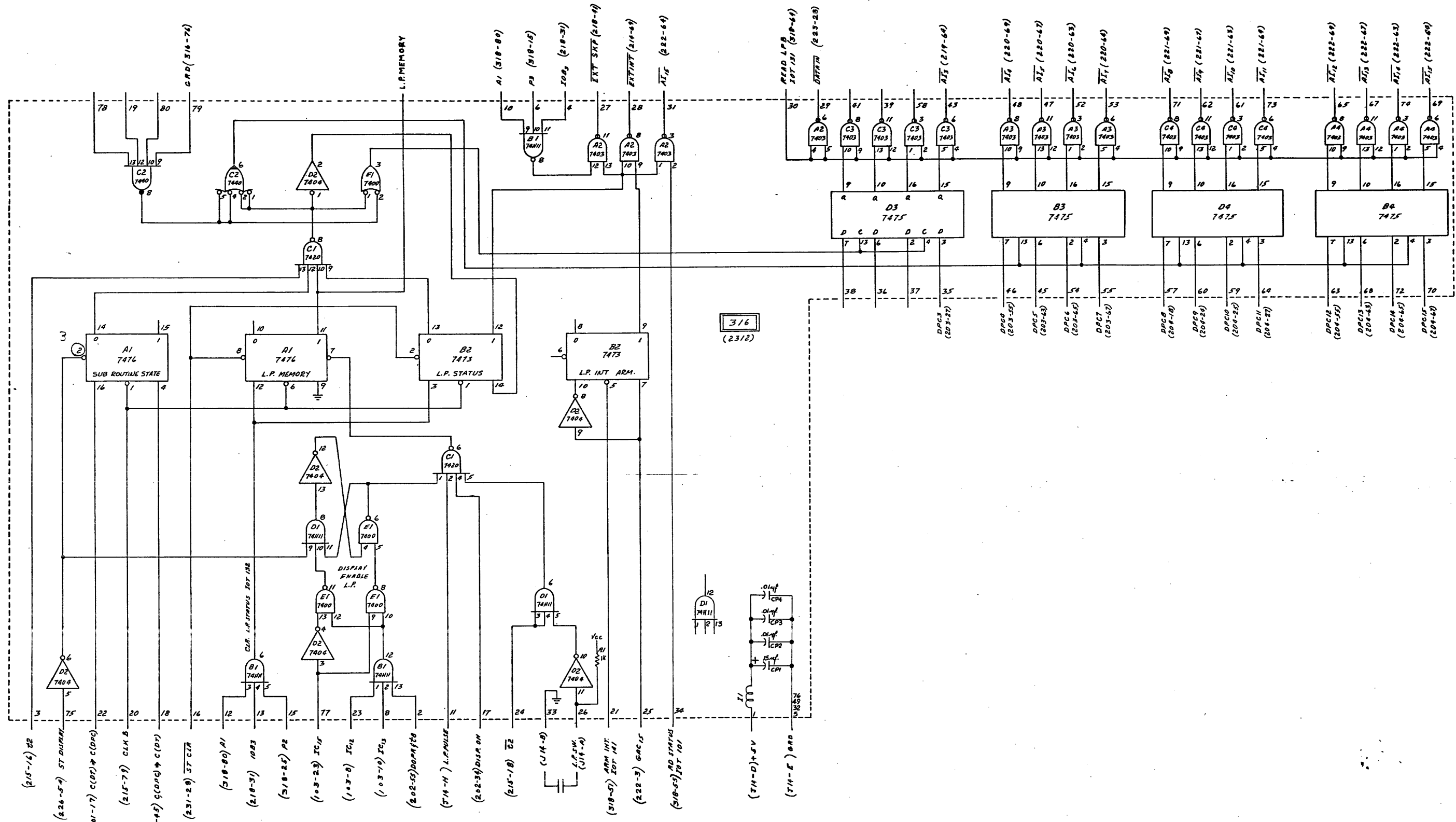
IMLAC CORPORATION
200 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

PROJECT PROD

TITLE PROGRAMMABLE ADDRESSABLE CLOCK

PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	859	B

Scale: _____ Sheet: _____

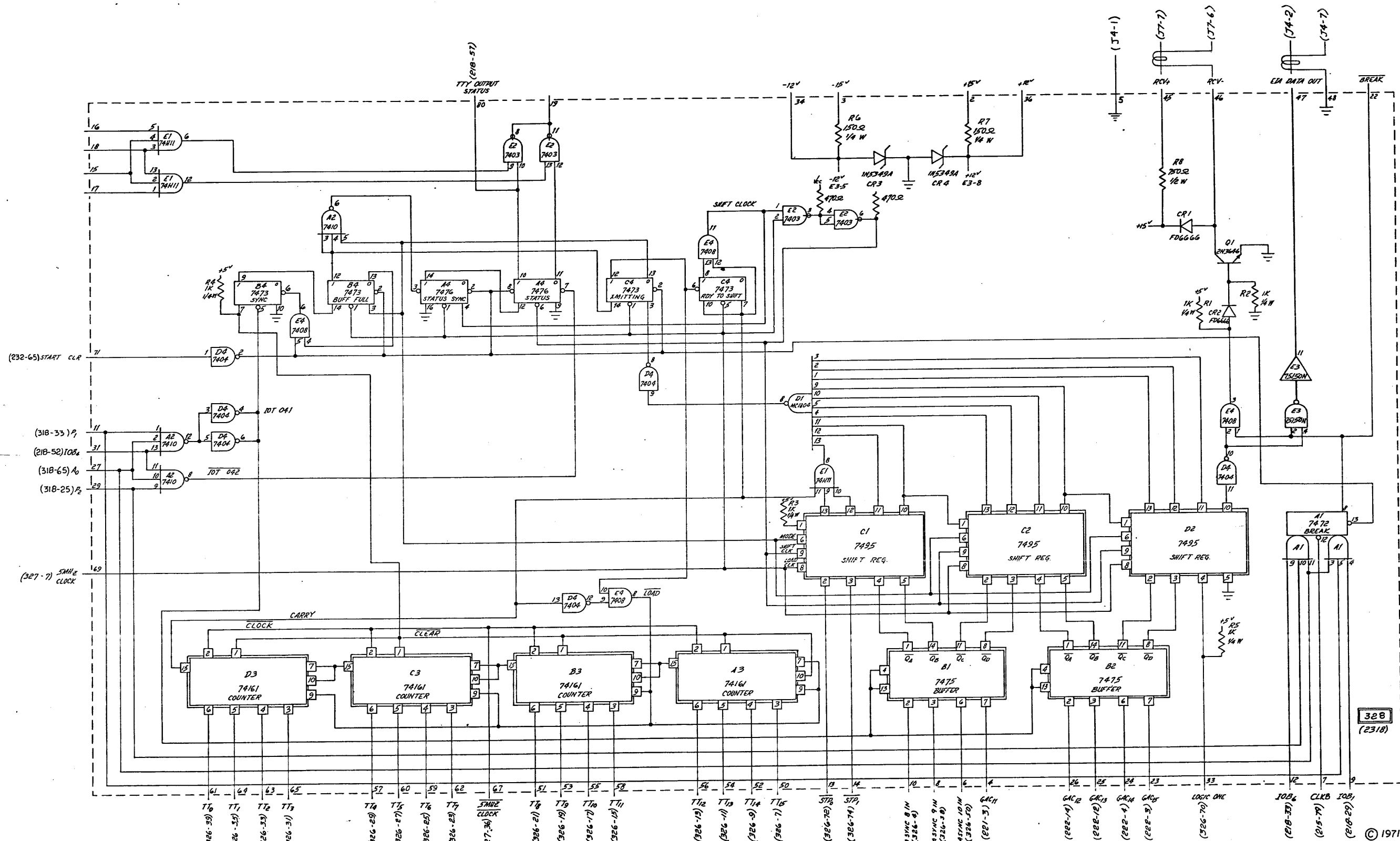


- (215-16) B2
- (226-5-4) ST DISMAN
- (201-17) C(D7) + C(DP0)
- (215-79) CLK B
- (201-45) S(DP0) + C(D7)
- (231-2-8) ST CLR
- (318-80) A1
- (218-31) 10B3
- (318-25) P2
- (103-23) IC15
- (103-8) IC12
- (103-10) IC13
- (202-05) DP0P1P2
- (314-14) L.P. PULSE
- (202-3) DISARM ON
- (215-18) B2
- (314-0) L.P. SW.
- (314-4) ARM INT.
- (318-5) ARM INT. EXT. INT.
- (222-3) GND
- (318-65) AD STATUS
- (314-D) +5V
- (314-E) GND

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(2312)

REV		ECN	DATE	DFTN	APPV	BY		DATE	TITLE	
A		-	3 SEP 71			J.V.		4-8-71	LIGHT PEN	
B		-	1 JUN 71			J.V.		4-8-71	IMLAC CORPORATION	
C		-	24 MAY 71			J.V.			288 NEWTON STREET	
D		-	26 MAY 71			J.V.			WALTHAM, MASSACHUSETTS 02154	
E		-	21 MAY 71			J.V.			PROJECT	
REV		ECN	DATE	DFTN	APPV	PROJECT		PROD		Scale
L		D	DRAWING NUMBER		862	REV.		E		Sheet

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(2318)

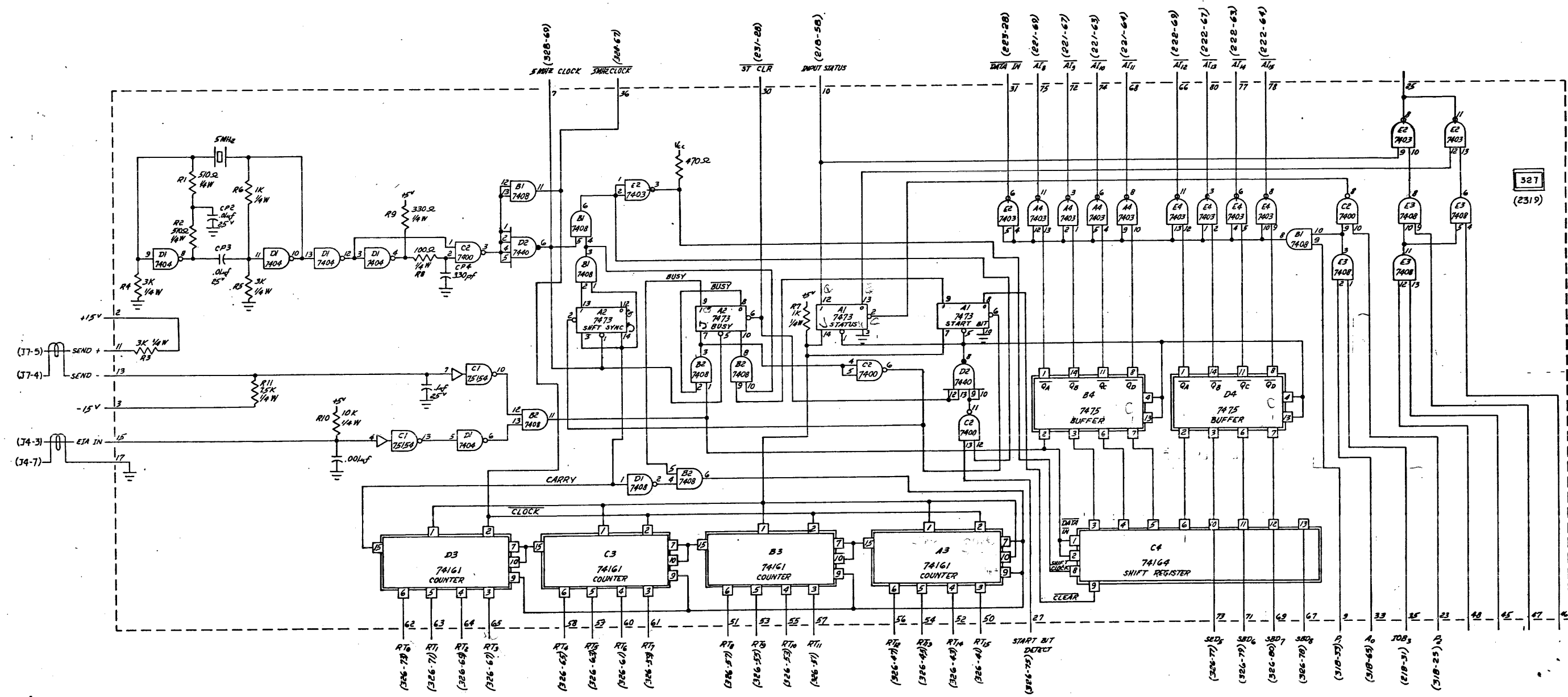
© 1971

H	---	1 OCT 71	GB	947B		BY	DATE
G	---	25 SEP 71	GB	947B	LAYOUT	H.C.M.	14 APR 71
F	---	7 SEP 71	J.V.	947B	DRAWN	H.C.M.	26 APR 71
E	---	3 SEP 71	H.C.M.		CHECKED	D.P.	21 MAR 71
D	---	7 JUN 71	H.C.M.		APPROVED		
C	---	1 JUN 71	H.C.M.		ISSUE		
B	---	1 JUN 71	D.P.		COPIED		
A	---	25 APR 71	N.J.C.				
REV	ECU	DATE	ISTMN	APPVD.	MATERIAL	PROJECT	PROD

IMLAC
CORPORATION
290 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

TITLE ASYNCHRONOUS SERIAL TRANSMITTER			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	869	H
Scale		Sheet	

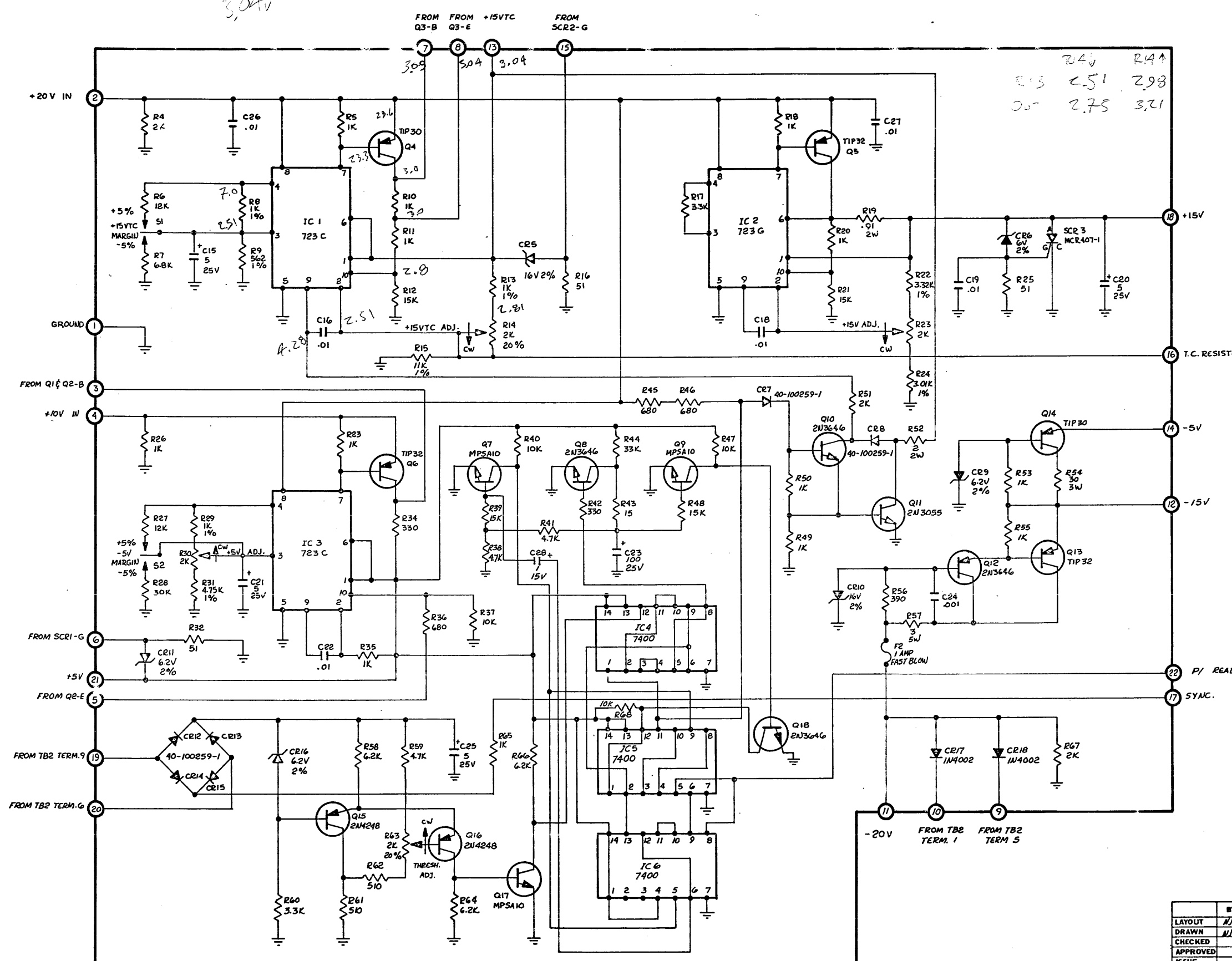
REV	ECN	DATE	DTM	APPV
A	-	25 MAY 71	J.V.	
B	-	26 JUN 71	H.C.M.	D.B.F.
C	-	1 JUN 71	H.C.M.	
D	-	7 JUN 71	H.C.M.	
E	459	16 JUN 71	H.C.M.	J.C.
F	-	30 JUN 71	H.C.M.	
G	-	10-17-71	J.V.	#86
H	-	28 OCT 71	H.C.M.	



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BY DATE		IMLAC CORPORATION 388 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
LAYOUT	A.C.M. 5 MAY 71		ASYNCHRONOUS SERIAL RECEIVE		
DRAWN	H.C.M. 5 MAY 71	PREFIX	SIZE	DRAWING NUMBER	REV.
CHECKED	F.S. 10 JUN 71			870	#
APPROVED		PROJECT		Scale	Sheet
ISSUE		PROD			
COPIED					
MATERIAL					

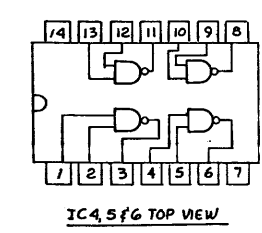
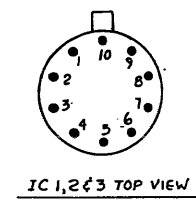
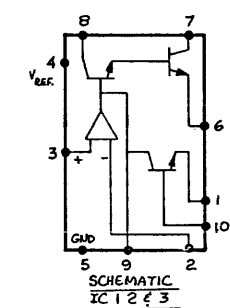
REV.	ECN.	DATE	DFTM	APPVD.
A	-	150.71	H.C.M.	



R4	R4
2.51	2.98
2.75	3.71

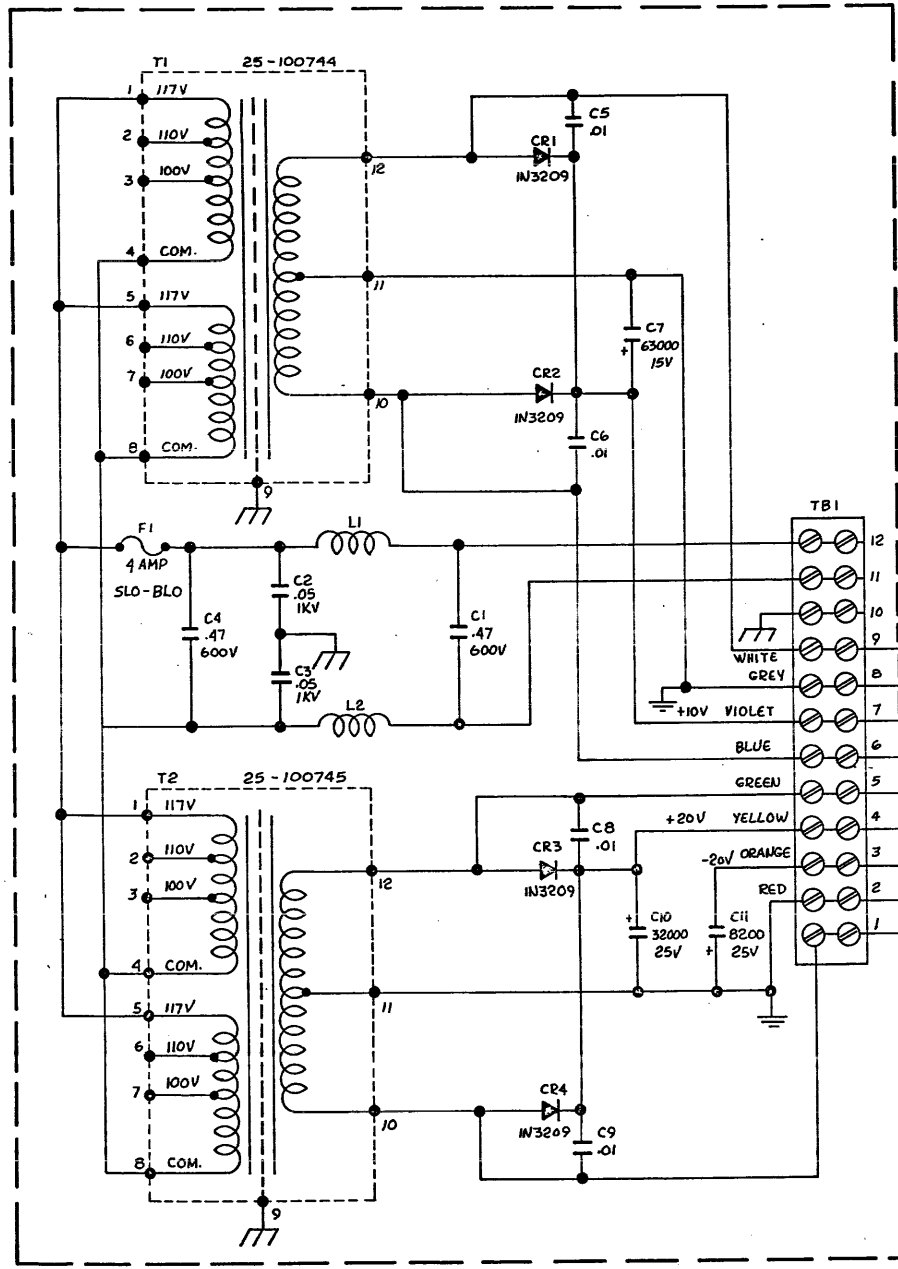
UNLESS OTHERWISE SPECIFIED:
RESISTANCE IN OHMS
CAPACITANCE IN MFDs.
RESISTORS 1/2W ±5%

SYMBOLS USED
IC1 - ICG SCR3 -
Q4 - Q18 CR5 - CR8
S1 - S2 C15, C16, C18 - C28
F2 R4 - R68

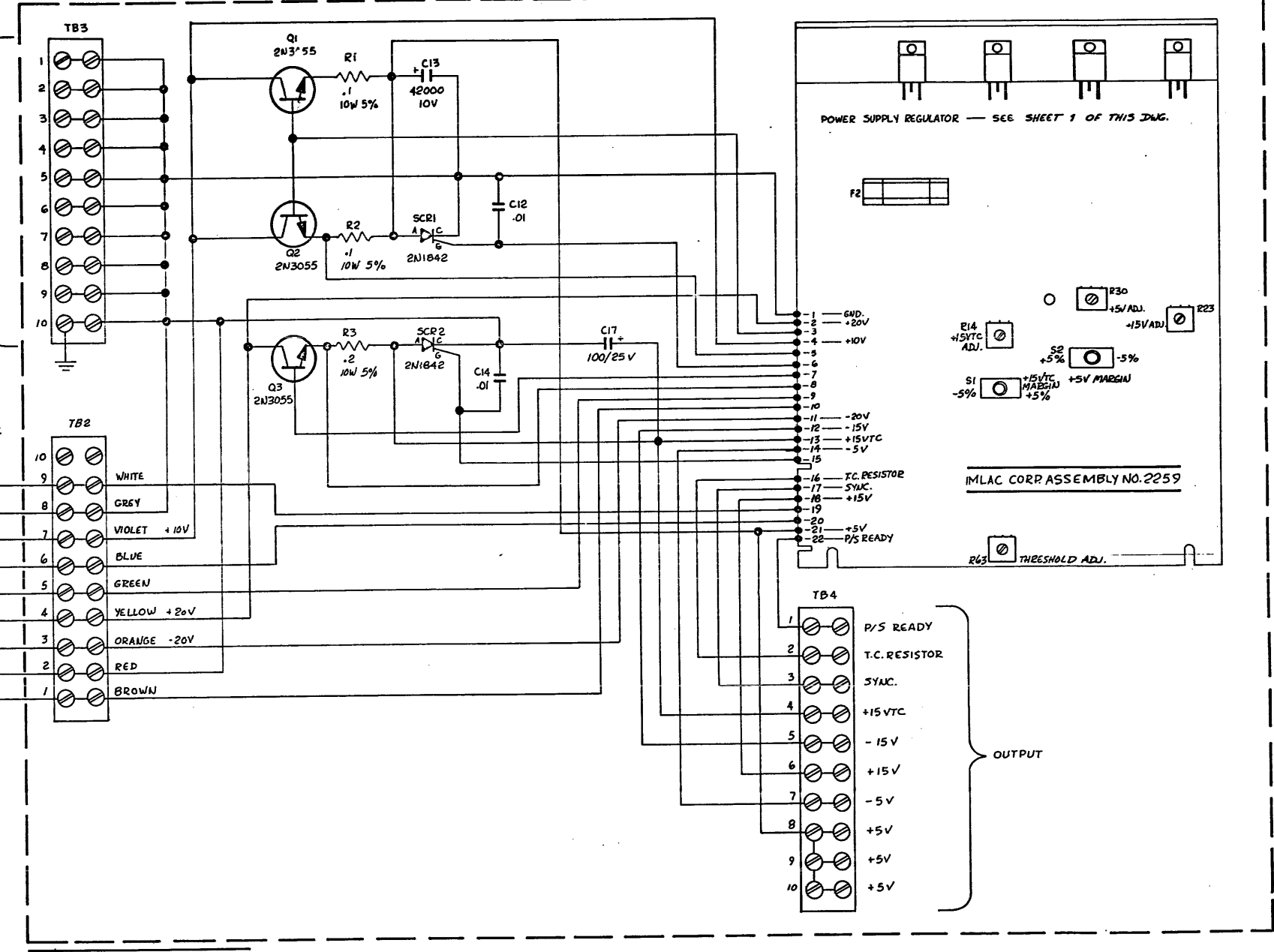


BY		DATE	TITLE												
LAYOUT	NJE	22SEP71		IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154											
DRAWN	NJE	22SEP71													
CHECKED															
APPROVED															
ISSUE															
COPIED															
MATERIAL			PROJECT												
			<table border="1"> <tr> <th>PREFIX</th> <th>SIZE</th> <th>DRAWING NUMBER</th> <th>REV.</th> </tr> <tr> <td>L</td> <td>D</td> <td>871</td> <td>A</td> </tr> <tr> <td colspan="3">Scale</td> <td>Sheet 1/2</td> </tr> </table>	PREFIX	SIZE	DRAWING NUMBER	REV.	L	D	871	A	Scale			Sheet 1/2
PREFIX	SIZE	DRAWING NUMBER	REV.												
L	D	871	A												
Scale			Sheet 1/2												

REV	ECN	DATE	DEFIN	APPR



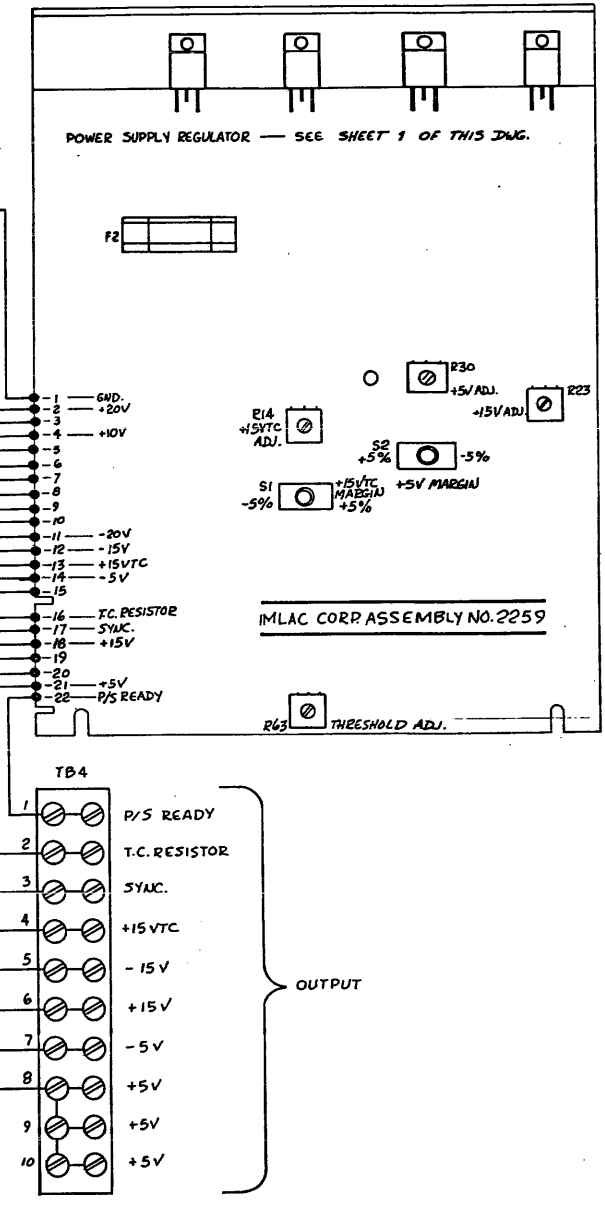
IMLAC CORP. ASSEMBLY NO. 2258



IMLAC CORP ASSEMBLY NO. 2257

RESISTANCE IN OHMS
CAPACITANCE IN MFDS

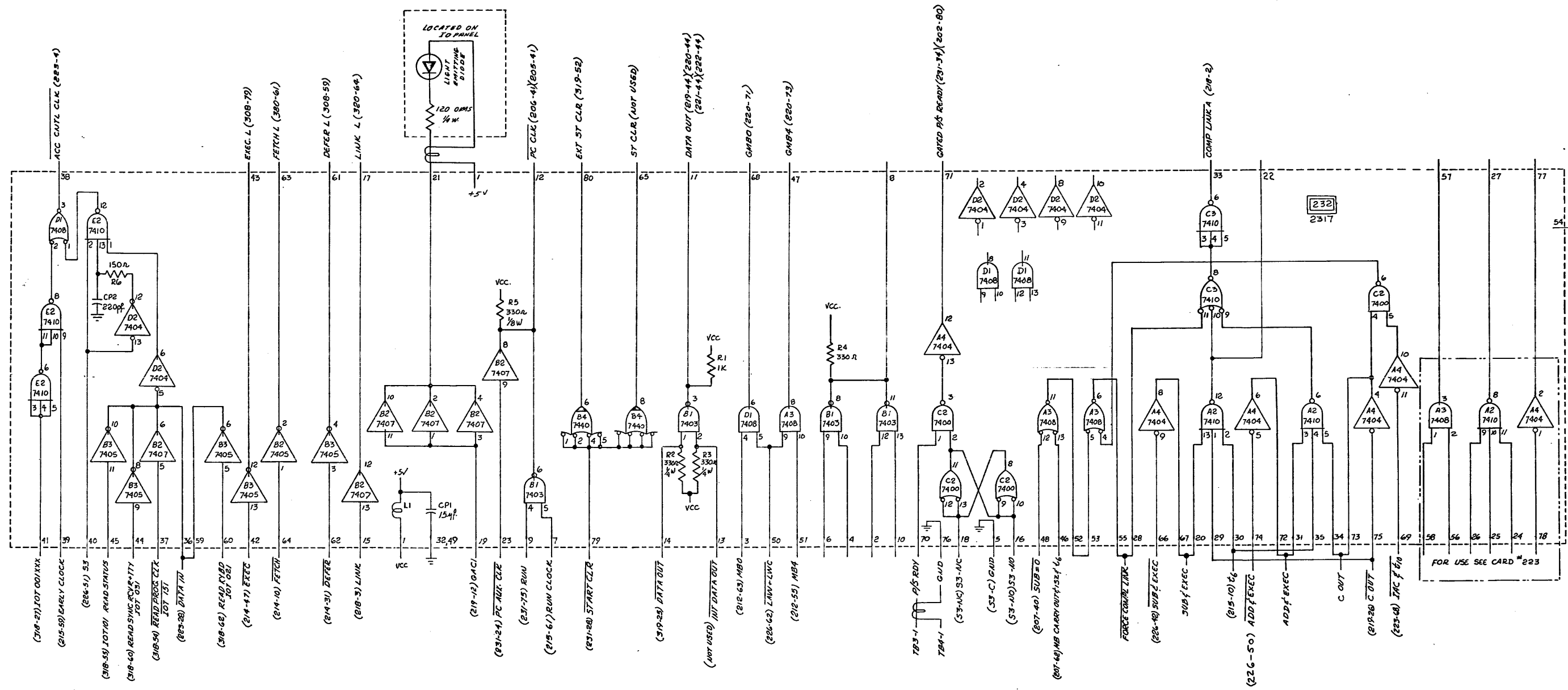
SYMBOLS USED
F1 - F1 TB1 - TB4 CR1 - CR4
T1 - T2 Q1 - Q3 C1 - C14, C17
L1 - L2 SCR1 - SCR2 R1 - R3




IMLAC CORP ASSEMBLY NO. 2259

LAYOUT		BY	DATE	IMLAC CORPORATION 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	
		NJF	23 SEP 71		POWER SUPPLY LOGIC	
		NJF	25 SEP 71		PREFIX	SIZE
					L	D
					DRAWING NUMBER	REV.
					871	
MATERIAL				PROJECT	Scale	Sheet 242

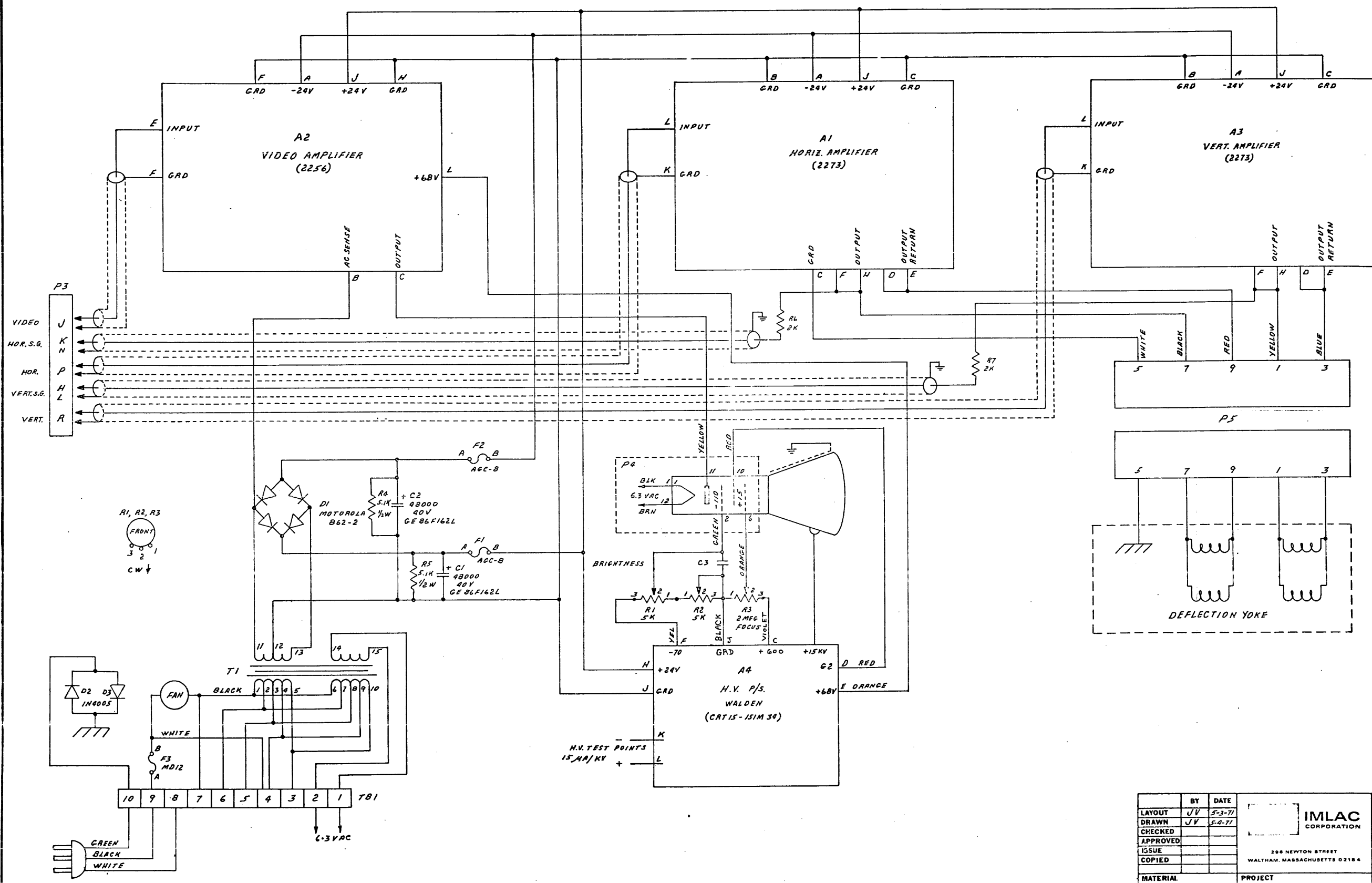
REV.	ECN.	DATE	DFTM.	APPD.
A	-	7 Jun 77	A.C.H.	
B	---	8-2-77	J.V.	



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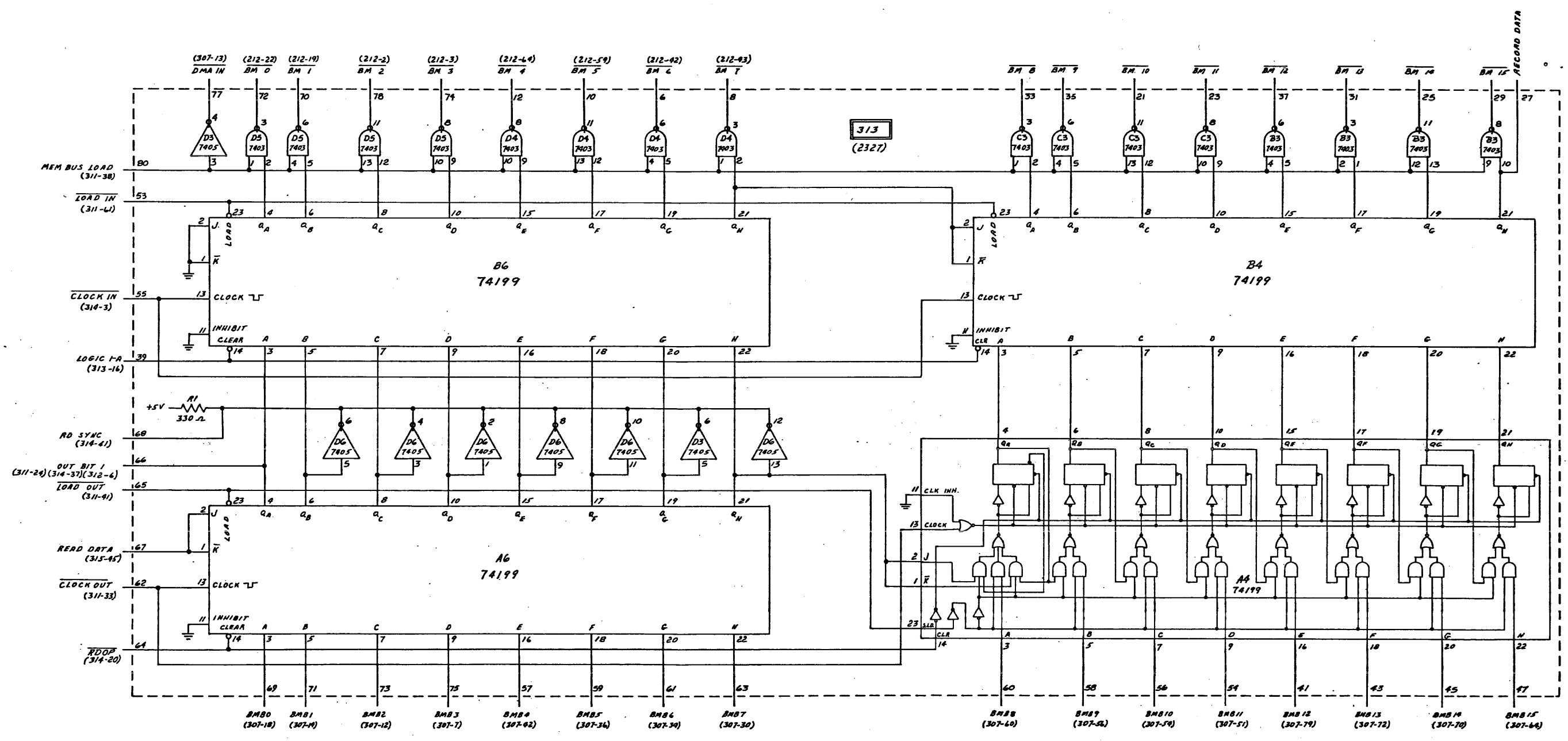
LAYOUT	BY	DATE	 IMLAC CORPORATION 286 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	ALJ	18 MAY 77		MISC. CONTROL		
CHECKED	G B	13 JUN 77		PREFIX	SIZE	DRAWING NUMBER
APPROVED				L	D	872
ISSUE				Scale		Sheet
COPIED			PROJECT	PROD	REV. 8	

REV	ECH	DATE	DFTM	APP'D
A	-	6-3-71	J.V.	
B	493	30 JUN 71	G.B.	J.P.B.



BY		DATE	IMLAC CORPORATION	TITLE			
LAYOUT	JV	5-3-71		 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	MONITOR		
DRAWN	JV	5-4-71	PREFIX		SIZE	DRAWING NUMBER	REV.
CHECKED			L		D	881	3
APPROVED			Scale				Sheet
ISSUE							
COPIED							
MATERIAL			PROJECT				

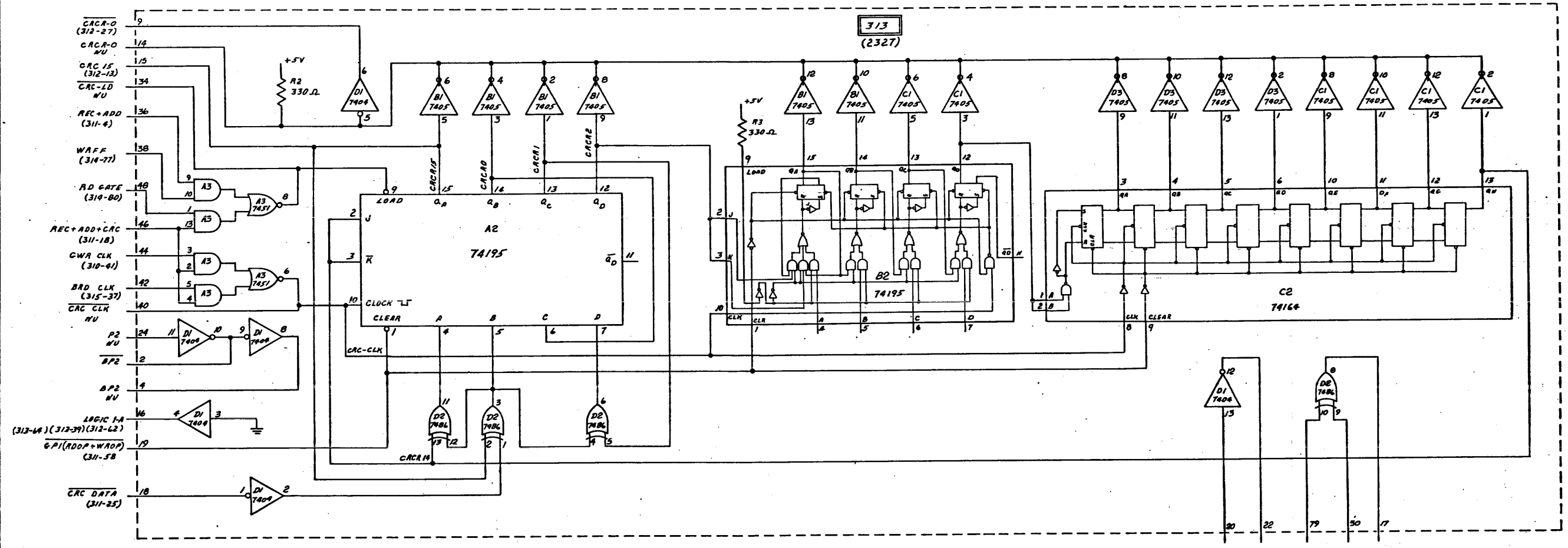
REV.	ECN.	DATE	DFTM.	BY
1	-	15-4-71	H.C.M.	
2	-	3-10-71	J.V.	



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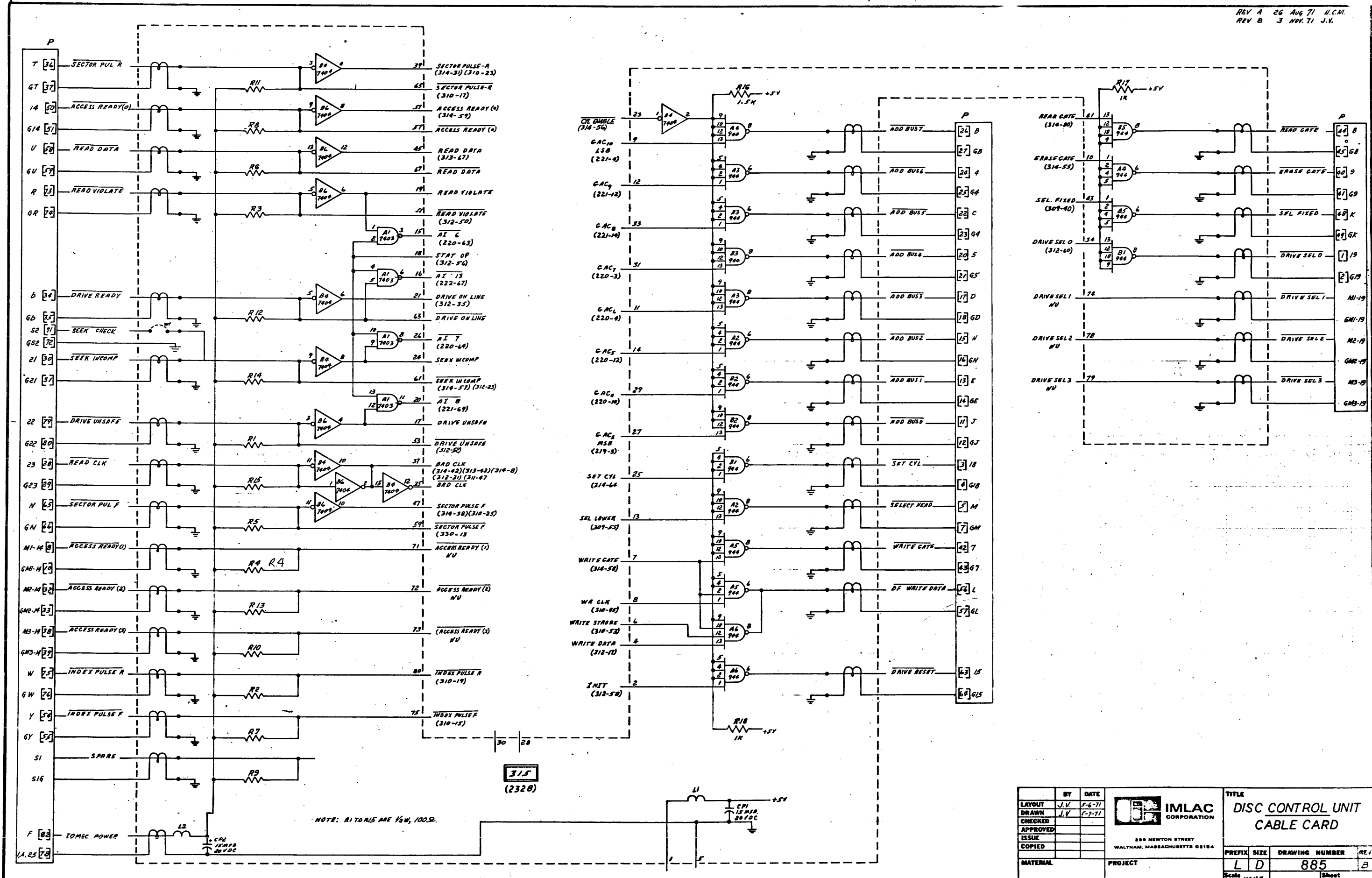
BY	DATE	TITLE								
LAYOUT	J.V. 5-4-71	IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154 DISC CONTROL UNIT DATA REGISTERS								
DRAWN	J.V. 5-5-71									
CHECKED										
APPROVED										
ISSUE										
COPIED		<table border="1"> <tr> <td>PREFIX</td> <td>SIZE</td> <td>DRAWING NUMBER</td> <td>REV.</td> </tr> <tr> <td>L</td> <td>D</td> <td>884</td> <td>5</td> </tr> </table>	PREFIX	SIZE	DRAWING NUMBER	REV.	L	D	884	5
PREFIX	SIZE	DRAWING NUMBER	REV.							
L	D	884	5							
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PROJECT	Scale	Sheet								
	NONE	1 of 2								

REV.	ECN	DATE	Q/TM	APP'D.

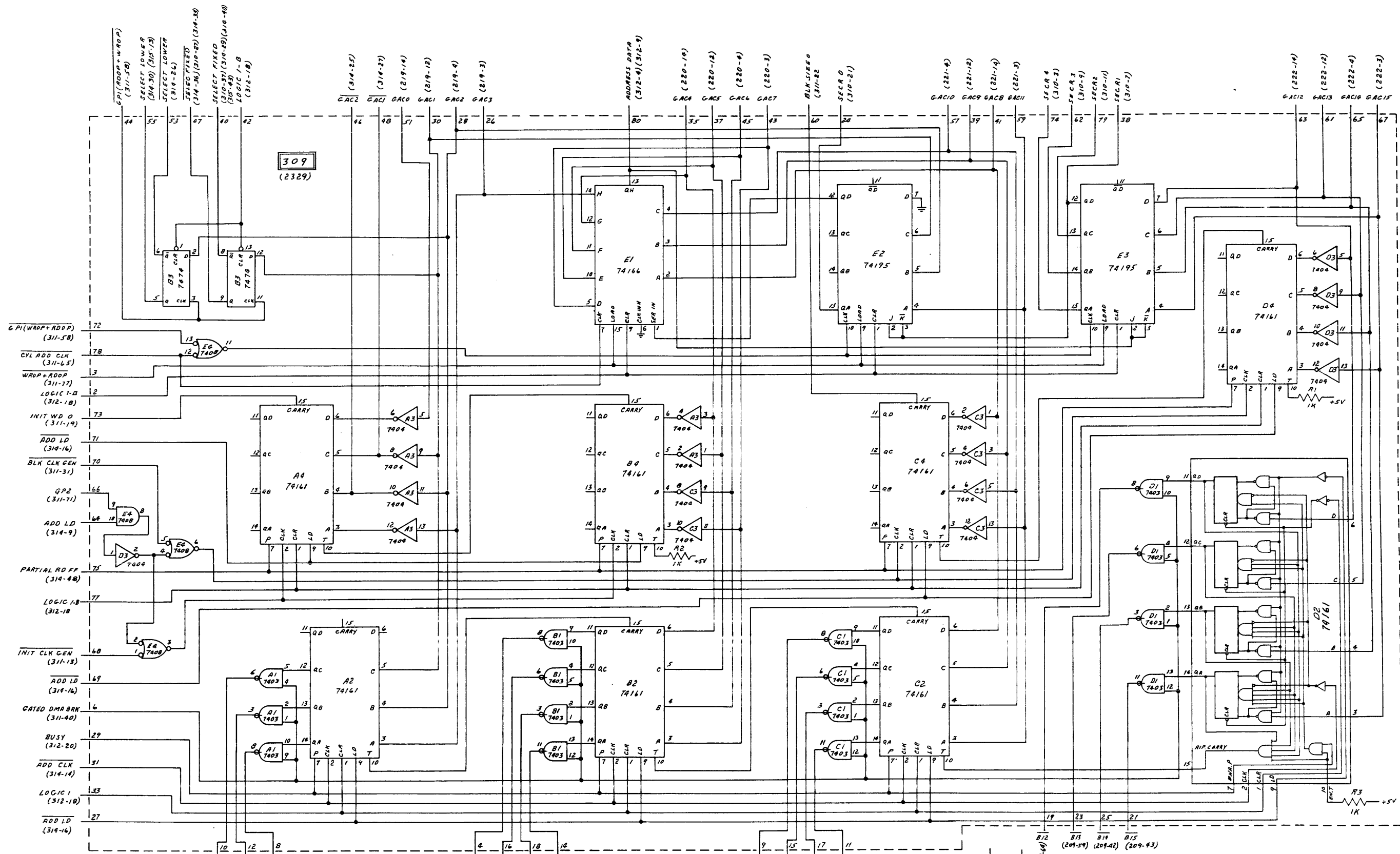


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LAYOUT	BY	DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE			
DRAWN	J.V.	5-5-77		DISC CONTROL UNIT DATA REGISTERS			
CHECKED	J.V.	5-5-77		PREFIX	SIZE	DRAWING NUMBER	REV.
APPROVED				L	D	884	0
ISSUE				Scale	NONE		Sheet 2 of 2
COPIED							
MATERIAL	PROJECT						



LAYOUT	BY	DATE		TITLE		
DRAWN	J.V.	5-6-71		DISC CONTROL UNIT		
CHECKED	J.V.	7-7-71	CABLE CARD			
APPROVED			200 NEWTON STREET			
ISSUE			WALTHAM, MASSACHUSETTS 02154			
COPIED			PREFIX	SIZE	DRAWING NUMBER	REV
MATERIAL			L	D	885	B
			Scale	NONE	Sheet	

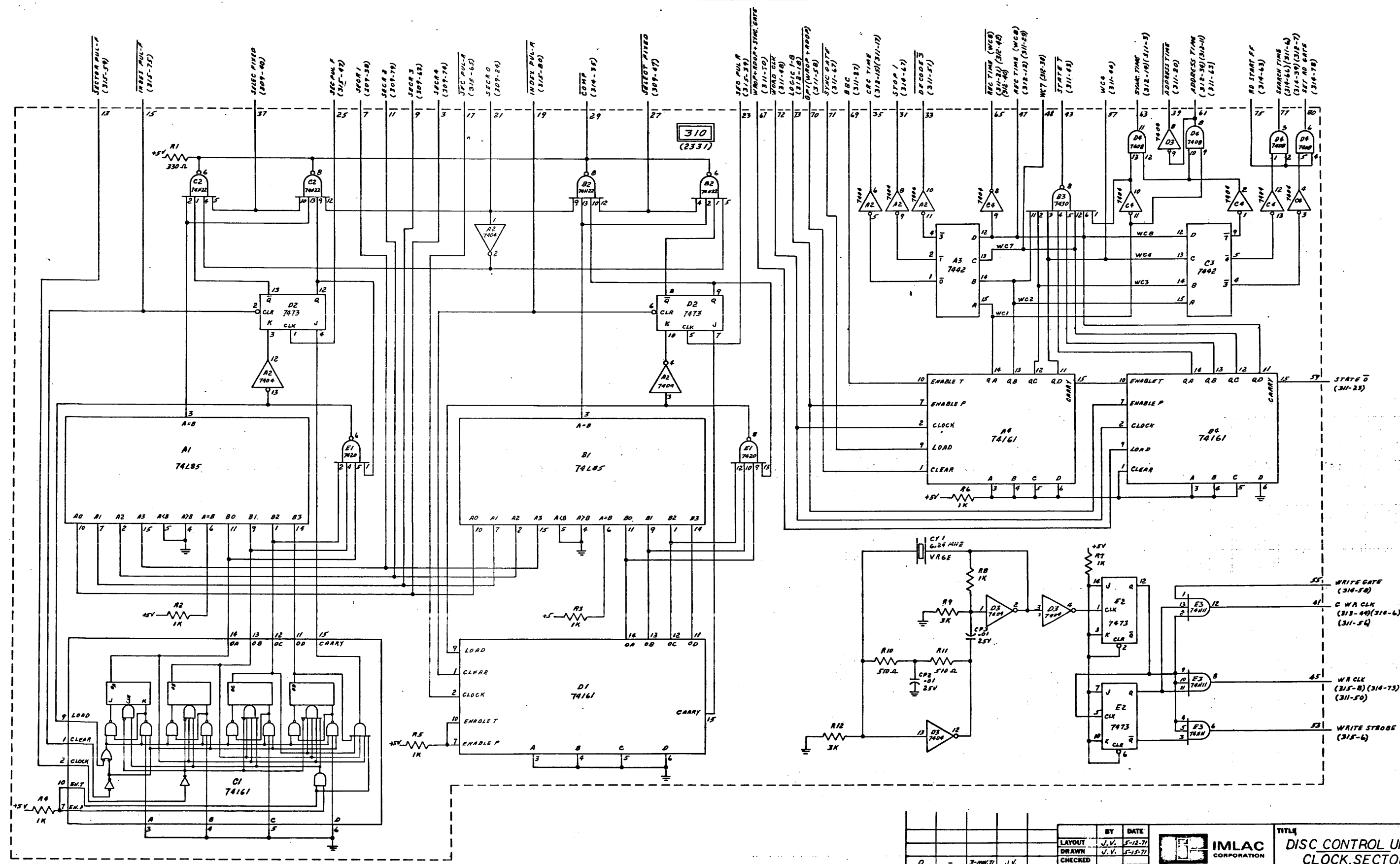


309
(2329)

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BY		DATE		TITLE	
LAYOUT	J.V.	5-10-71	DISC CONTROL UNIT		
DRAWN	J.V.	5-12-71	ADDRESS REGISTERS.		
CHECKED					
APPROVED					
ISS					
COPIED					
MATERIAL		PROFIT		PREFIX	SIZE
				L	D
				DRAWING NUMBER	
				886	
				Scale	NONE
				REV	B
				Sheet	

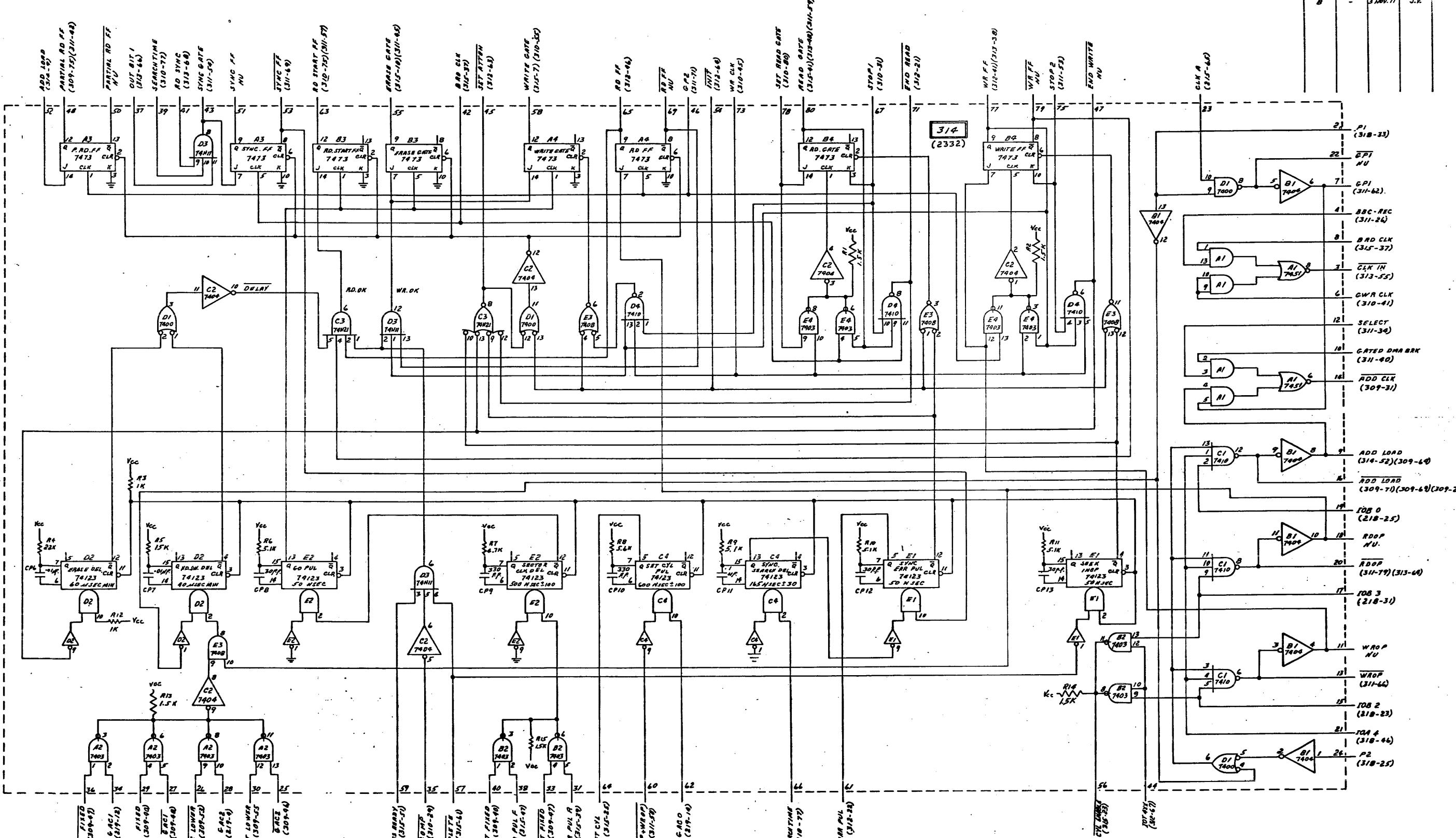
B	-	20MM72	R.T.M.	
A	-	750071	N.C.M.	
REV	ECN	DATE	DTM	APPD



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REV	ECN	DATE	DTM	APPD.	BY	DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE DISC CONTROL UNIT CLOCK, SECTOR, WORD LOGIC.											
D	-	3-MAY-71	J.V.	LAYOUT	J.V.	5-12-71													
C	-	8-SEP-71	H.C.M.	DRAWN	J.V.	5-15-71													
B	-	7-SEP-71	H.C.M.	CHECKED															
A	-	2-MAY-71	N.J.F.	APPROVED															
MATERIAL					PROJECT		<table border="1"> <tr> <td>PREFIX</td> <td>SIZE</td> <td>DRAWING NUMBER</td> <td>REV.</td> </tr> <tr> <td>L</td> <td>D</td> <td>887</td> <td>0</td> </tr> <tr> <td>Scale</td> <td>NONE</td> <td>Sheet</td> <td></td> </tr> </table>	PREFIX	SIZE	DRAWING NUMBER	REV.	L	D	887	0	Scale	NONE	Sheet	
PREFIX	SIZE	DRAWING NUMBER	REV.																
L	D	887	0																
Scale	NONE	Sheet																	

REV.	ECN	DATE	DFT.
A	-	7 SEP 71	H.C.M.
B	-	3 NOV 71	J.K.




LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE			
DRAWN	J.V.	5-17-71		DISC CONTROL UNIT			
CHECKED	J.V.	5-20-71		DRIVE INTERFACES			
APPROVED				SIGNALS			
ISSUE				PREFIX	SIZE	DRAWING NUMBER	REV.
COPIED			L D		889	B	
MATERIAL			PROJECT			Scale NONE	Sheet

CYCLE	COMMON TO ALL FETCH	OO OPR	O4 LAW (1)							JMP (2)	OPERATE BIT 5 = 0 BIT 6 = 0						IOT BIT 5 = 0 BIT 6 = 1						SKIP BIT 5 = 1 BIT 6 = 0						SHIFT ROTATE DISPLAY ON BIT 5 = 1 BIT 6 = 1 ROTATE IF BIT 10 = 0																								
			S ₀	S ₁	S ₂	S ₃	M	\bar{C}_{IN}	$\frac{C(NU)}{C(AC)}$ $\frac{C(MB)}{C(NU)}$		S ₀	S ₁	S ₂	S ₃	M	\bar{C}_{IN}	$\frac{C(NU)}{C(AC)}$ $\frac{C(MB)}{C(NU)}$	S ₀	S ₁	S ₂	S ₃	M	\bar{C}_{IN}	$\frac{C(NU)}{C(AC)}$ $\frac{C(MB)}{C(NU)}$	S ₀	S ₁	S ₂	S ₃	M	\bar{C}_{IN}	$\frac{C(NU)}{C(AC)}$ $\frac{C(MB)}{C(NU)}$																						
1	(842) C(PC ₅₋₁₅) → C(MA ₅₋₁₅) C(PC ₁₋₄) → C(MA ₁₋₄)																																																				
2	(842) C(PC+1) → C(PC)																																																				
3																																																					
4																																																					
5	(856) C(BMO ₁₋₄) → C(IR) C(BMO ₀) → C(ID) OCCURS EARLY IN T5																																																				
6	(842) C(MB) → C(B)								C(AC ₀₋₄) = 0 IF 1 HERE 1 IF 0 HERE 0 C(MB) → C(AC) (848) C(MB) → C(AC) (840)													MB ₁₄ = IOT P1 (847)																															
7									IF 1 ID 0 HERE 0 C(AC) + 1 → C(AC) (840)																																												
8																					IF MB ₁₃ = IOT P3 (847)																																
9																																																					
10	(772) IF (IR Z) ID SET IF (IR Z) ID SET OTHERWISE SET DETER EXECUTE SET FETCH								(842) C(MB ₅₋₁₅) → C(PC ₅₋₁₅) LOAD PC ₅₋₁₅												MB ₁₅ = IOT P2 (847)	(845) (842)																															

CYCLE	COMMON TO ALL DEFER	OO OPR	O4 LAW (1)							INDIRECT JMP (2)	OPERATE BIT 5 = 0 BIT 6 = 0						IOT BIT 5 = 0 BIT 6 = 1						SKIP BIT 5 = 1 BIT 6 = 0						SHIFT ROTATE DISPLAY ON BIT 5 = 1 BIT 6 = 1 ROTATE IF BIT 10 = 0																							
			S ₀	S ₁	S ₂	S ₃	M	\bar{C}_{IN}	$\frac{C(NU)}{C(AC)}$ $\frac{C(MB)}{C(NU)}$		S ₀	S ₁	S ₂	S ₃	M	\bar{C}_{IN}	$\frac{C(NU)}{C(AC)}$ $\frac{C(MB)}{C(NU)}$	S ₀	S ₁	S ₂	S ₃	M	\bar{C}_{IN}	$\frac{C(NU)}{C(AC)}$ $\frac{C(MB)}{C(NU)}$	S ₀	S ₁	S ₂	S ₃	M	\bar{C}_{IN}	$\frac{C(NU)}{C(AC)}$ $\frac{C(MB)}{C(NU)}$																					
1	(842) C(PC ₁₋₄) → C(MA ₁₋₄) C(B ₅₋₁₅) → C(MA ₅₋₁₅)																																																			
2																																																				
3																																																				
4																																																				
5																																																				
6	(842) IF IR Z OR MAR 10, C(MB+1) → C(MB)																																																			
7	(842) C(MB) → C(B)																																																			
8																																																				
9																																																				
10	(772) IF IR Z 4 OTHERWISE SET SET EXECUTE SET FETCH								(842) C(MB ₅₋₁₅) → C(PC ₅₋₁₅) C(MB ₁₋₄) → C(PC ₁₋₄)																																											

NOTE: THE NUMBERS IN PARENTHESES BESIDE A SIGNAL, E.G. (842), INDICATES THE LOGIC DWG ON WHICH THE SIGNAL ORIGINATES.


LAYOUT DRAWN CHECKED APPROVED ISSUE COPIED	BY	DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	
	MATERIAL	PROJECT		PREFIX SIZE	DRAWING NUMBER
				L D	890
				Scale	Sheet 1 of 4

THIS DWG FORMERLY # 892

	HLT		NOP		CLA				CMA				JAC				CLL		CML		ODA			
	OPERATE	AND	MBO=0	IXX	MBO=1	OOO	MBO=1	MB15=1	MBO=1	MB14=1	OO2	MBO=1	MB13=1	OO4	MBO=1	MB12=1	OIO	MBO=1	MB11=1	O20	MBO=1	MB10=1	O40	
1																								
2																								
3																								
4																								
5																								
6							0	1	0	1	1													
7																								
8											0	0	0	0	1									
9																								
10	(848)		RUN = 0											1	0	0	1	0	0	1				

	COMMON TO ALL CYCLES		INTERRUPT		HIGH LEVEL INTERRUPT		DMA WRITE		CONSOLE STORE		CONSOLE READ		DMA READ	
	LOAD	MA												
1			(820)	$0 \Rightarrow C(MA)$		$2 \Rightarrow C(MA)$	DISCONNECT B REGISTER $C(B) \Rightarrow C(MA)$ [HERE DMA ADDRESS $\Rightarrow C(MA)$]	(842)	$C(PC) \Rightarrow C(MA)$ PC HAS PREVIOUSLY BEEN LOADED WITH $C(AS)$	(842)	$C(PC) \Rightarrow C(MA)$ PC HAS PREVIOUSLY BEEN LOADED WITH $C(AS)$			DISCONNECT B REGISTER $C(B) \Rightarrow C(MA)$ [HERE DMA ADDRESS $\Rightarrow C(MA)$]
2								(842)	$C(PC+1) \Rightarrow C(PC)$	(842)	$C(PC+1) \Rightarrow C(PC)$			
3	READ		(849)											
4								0	1	0	1		$C(PS) \Rightarrow C(ALL)$ (840)	
5			$C(BMO) \Rightarrow C(MB)$ LOAD MB	(842)										
6			(842)	$C(PC) \Rightarrow C(MB)$ LOAD MB	(842)	$C(PC) \Rightarrow C(MB)$ LOAD MB	$C(BM) \Rightarrow C(MB)$ LOAD MB [HERE DMA WORD $\Rightarrow C(MB)$]	(842)	$C(CAC) \Rightarrow C(MB)$ LOAD MB					
7														
8	INHIBIT	WRITE	(849) (842)	LOAD PC $C(MB) \Rightarrow C(PC)$	(842)	LOAD PC $C(MB) \Rightarrow C(PC)$								
9														
10			(842)	$C(PC+1) \Rightarrow C(PC)$	(842)	$C(PC+1) \Rightarrow C(PC)$		(772)	CLEAR CONSOLE STORE				CLEAR CONSOLE READ	

NOTE: THE NUMBERS IN PARENTHESES BESIDE A SIGNAL, e.g (842), INDICATES LOGIC DNG ON WHICH SIGNAL ORIGINATES


LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02184	TITLE			
DRAWN	NJF	1/28/71		TIMING DIAGRAM			
CHECKED	NJF	1/28/71		FETCH & SPECIAL			
APPROVED				CYCLES			
ISSUE			PREFIX	SIZE	DRAWING NUMBER	REV.	
COPIED			L	D	890		
MATERIAL			Scale		Sheet	2	44

COMMON TO ALL EXECUTE	20 _B DAC (4)							24 _B XAM (5)							30 _B ISZ (6)							34 _B JMS (7)							44 _B AND (9)							50 _B IOR (10)								
	S ₀	S ₁	S ₂	S ₃	M	C ₁₀	C(AU) →C(K)	S ₀	S ₁	S ₂	S ₃	M	C ₁₀	C(AU) →C(K)	S ₀	S ₁	S ₂	S ₃	M	C ₁₀	C(AU) →C(K)	S ₀	S ₁	S ₂	S ₃	M	C ₁₀	C(AU) →C(K)	S ₀	S ₁	S ₂	S ₃	M	C ₁₀	C(AU) →C(K)									
1 (842) IF ID C(PC ₁₋₄) → C(MA ₁₋₄) C(B ₁₋₄) → C(MA ₁₋₄) C(B ₅₋₈) → C(MA ₃₋₅)																																												
2																																												
3																																												
4																																												
5																																												
6 (842) C(MB) → C(B)								0	1	0	1	1	1	(840)	C(MB) + 1 → C(MB) IF MB = 0 C(PC+1) → C(PC) & C(L) → C(L) (872)	(842)	C(PC) → C(MB) LOAD MB	(842)												1	1	0	1	1	1	(840)	0	1	1	1	1	1	(840)	
7																																												
8																																												
9																																												
10																																												

COMMON TO ALL EXECUTE	54 _B XOR (11)							60 _B LAC (12)							64 _B ADD (13)							70 _B SUB (14)							74 _B SAM (15)																			
	S ₀	S ₁	S ₂	S ₃	M	C ₁₀	C(AU) →C(K)	S ₀	S ₁	S ₂	S ₃	M	C ₁₀	C(AU) →C(K)	S ₀	S ₁	S ₂	S ₃	M	C ₁₀	C(AU) →C(K)	S ₀	S ₁	S ₂	S ₃	M	C ₁₀	C(AU) →C(K)	S ₀	S ₁	S ₂	S ₃	M	C ₁₀	C(AU) →C(K)													
1																																																
2																																																
3																																																
4																																																
5																																																
6								0	1	1	0	1	1	(840)	0	1	0	1	1	(840)	1	1	0	0	1	1	(840)	1	0	0	1	0	1	(840)	1	0	0	1	0	1	(840)	0	0	0	0	0	0	(840)
7																																																
8																																																
9																																																
10																																																

NOTE: THE NUMBERS IN PARENTHESES BESIDE A SIGNAL e.g. (842)
INDICATES LOGIC DWG ON WHICH SIGNAL ORIGINATES.


THIS DWE FORMERLY #91

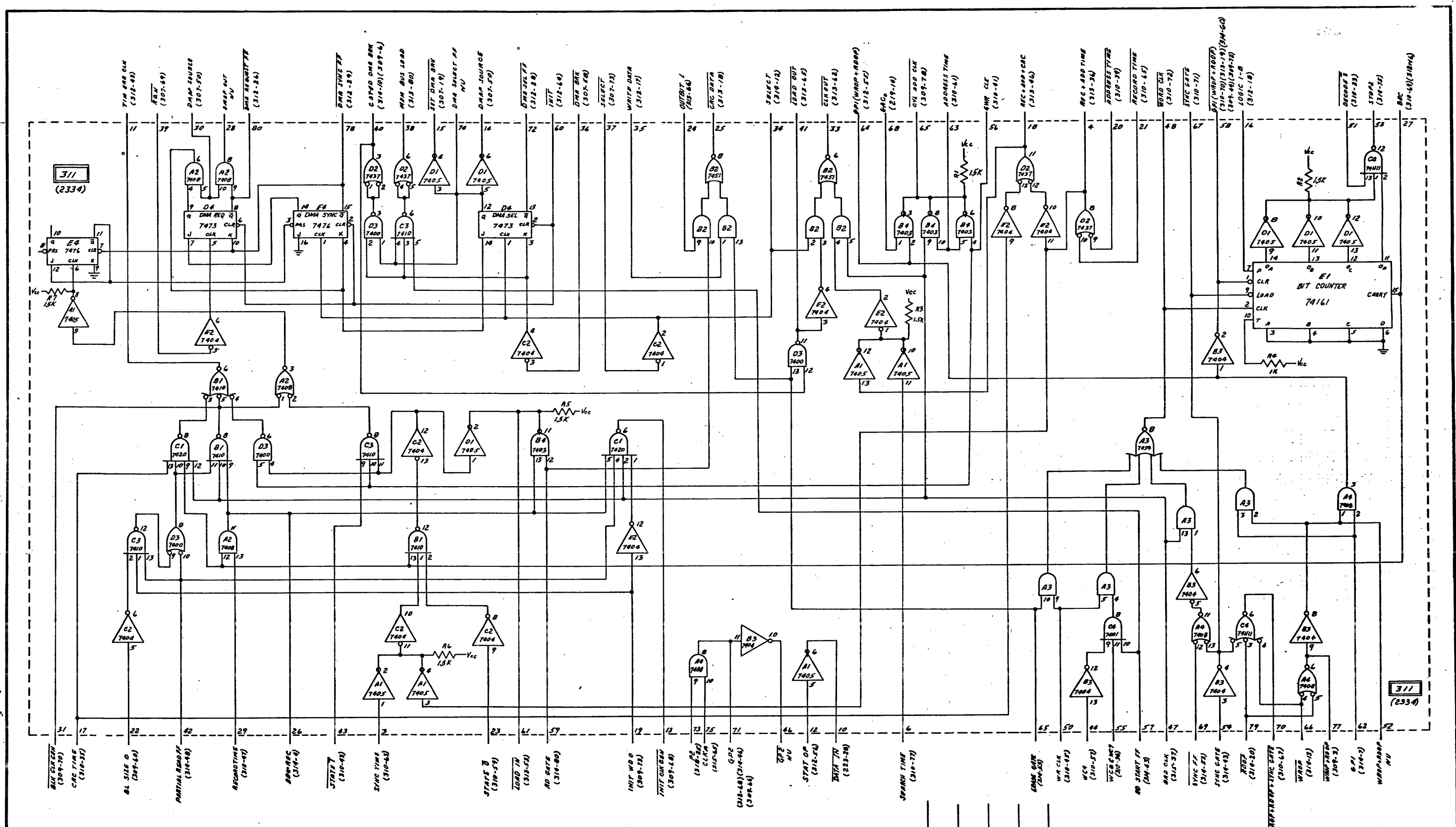
LAYOUT	BY	DATE	 IMLAC CORPORATION 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	ALL	1/30/71		TIMING DIAGRAM EXECUTE CYCLES		
CHECKED	ALL	2/20/71		PREFIX	SIZE	DRAWING NUMBER
APPROVED				L	D	890
ISSUE				Scale		Sheet 3 of 4
COPIED						
MATERIAL	PROJECT					

COMMON TO ALL CYCLES				DISPLAY BREAK	00 D OPR	01 D LXA N	02 D LYA N	03 D EIM
1	LOAD MA	(829)		C(DPC) → C(MA) (838)				
2								
3	READ	(849)		C(DPC) + 1 → C(DPC) (838)				
4								
5	C(BMO) → C(MB) LOAD MB	(842)		C(BMO) → C(DMB) C(BMO) → C(DIB) (838)				
6				IF \overline{INC} SL-8 HERE EQUIVALENT TO C(DMB) → C(IC) (838)				
7								
8	INHIBIT	WRITE (849)		IF $IC_{10} = 1$ C(DT) → C(DPC) LOAD DPC CLEAR IN DISPLAY IF $IC_4 = 0$ (798) IF $IC_{13} = 0, 1$ SET SCALE PER IC_{15} (838)				
9						C(IC) → C(XAC) (838)	C(IC) → C(YAC) (838)	
10				IF $(\overline{INC}) \neq (IN DISPLAY)$ SET DISPLAY BREAK (798)				SET INC SET STATE 0 SL-8 (798)

04	05 D JMS Q 0	06 D JMP Q	07	INC \neq \overline{IC}_0	INC \neq \overline{IC}_6
1					
2				IF IC_3 +1 TO XAC (838) IF IC_6 +1 TO YAC (838)	IF $IC_9 = 0$ → C(XAC) _{LSB} (838) IF $IC_7 = 0$ → C(YAC) _{LSB} (838) IF $IC_5 = 1$ TO XAC _{MSB} (838) IF $IC_6 = 1$ TO YAC _{MSB} (838)
3				IF $IC_5 \neq X_5$ = BE AM ON (798) ALL ELSE = BE AM OFF	
4					
5				IF IC_4 +1 TO XAC (838) IF IC_7 +1 TO YAC (838)	
6	C(DPC) → C(DT) (838)				
7					
8				IF IC_3 +1 TO XAC (838) IF IC_6 +1 TO YAC (838)	
9					
10	C(IC_{4-5}) → C(DPC) (838)	C(IC_{7-8}) → C(DPC) (838)		IF STATE 0 GO TO STATE 1 (798) IF STATE 1 GO TO STATE 0 IF SET DISP BRK (838) SL-8	IF IC_2 SET DISP BRK & CLEAR INC. (798) IF IC_2 C(DT) → C(DPC) (838) SL-8

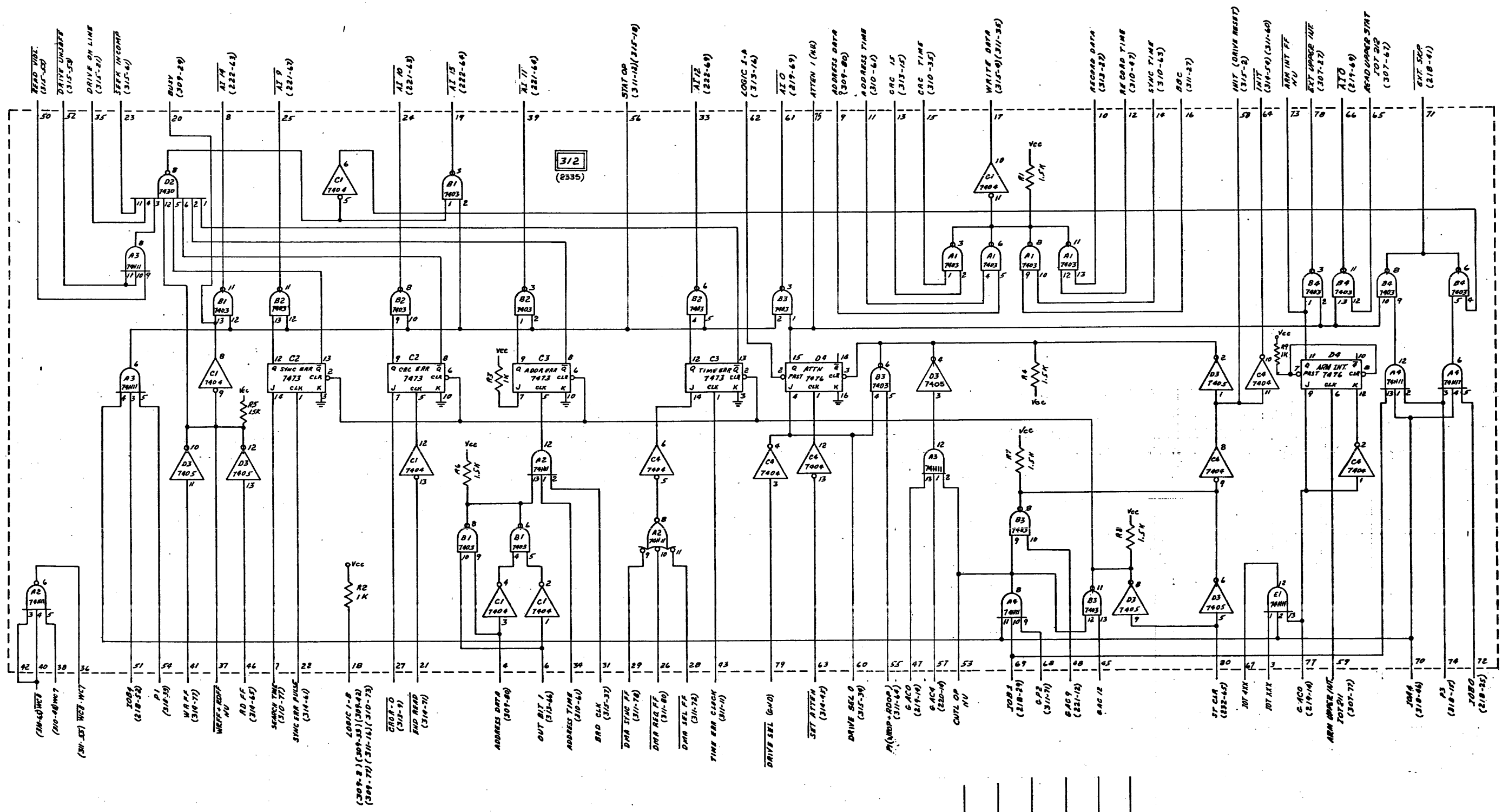
NOTE: THE NUMBERS IN PARENTHESES BESIDE A SIGNAL, e.g. (842), INDICATES LOGIC DNG ON WHICH SIGNAL ORIGINATES.

LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	
DRAWN	ALJF	14 SEP 71		TIMING DIAGRAM	
CHECKED	ALJF	14 SEP 71		DISPLAY CYCLES	
APPROVED				PREFIX	SIZE
ISSUE				L	D
COPIED			DRAWING NUMBER	REV.	
MATERIAL				890	
			PROJECT	Scale	
				Sheet 4 of 4	



SY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE DISC CONTROL UNIT MEMORY CONTROL, BIT COUNTER								
LAYOUT	J.V. F-22-71										
DRAWN	J.V. F-22-71										
CHECKED											
APPROVED											
ISSUE		<table border="1"> <tr> <th>PREFIX</th> <th>SIZE</th> <th>DRAWING NUMBER</th> <th>REV</th> </tr> <tr> <td>L</td> <td>D</td> <td>893</td> <td>B</td> </tr> </table>		PREFIX	SIZE	DRAWING NUMBER	REV	L	D	893	B
PREFIX	SIZE	DRAWING NUMBER	REV								
L	D	893	B								
COPIED		Scale NONE Sheet									
MATERIAL		PROJECT									

B 8 30 71
 A 7 50 71
 R.C.M.
 H.C.M.
 DATE DATM APR'D



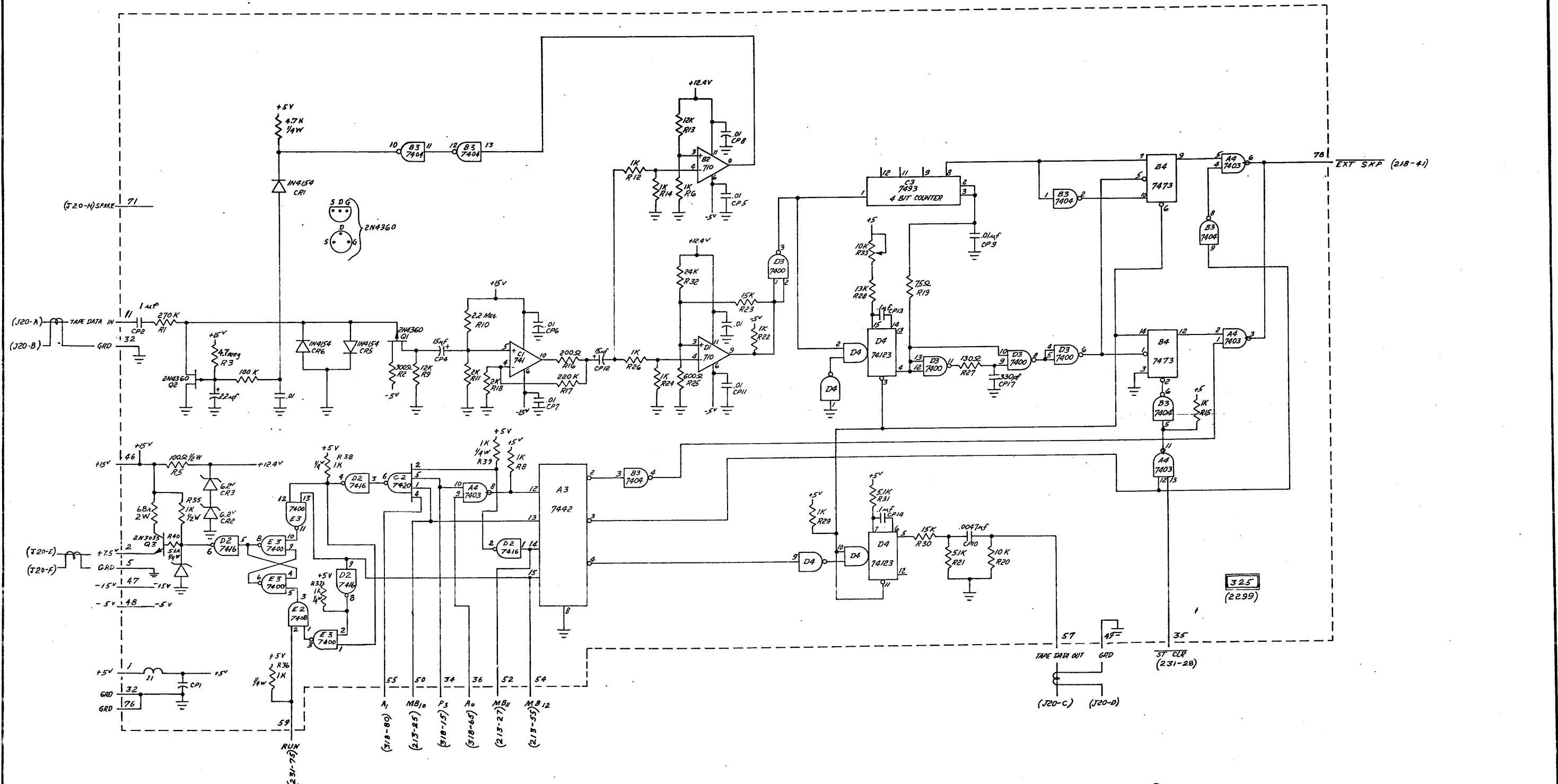
READ VOLT. (315-50) 50
 DRIVE UNDRFT (315-51) 52
 DRIVE ON LINE (315-52) 53
 SEEK INCOMP (315-53) 23
 BUSY (307-28) 20
 AT 14 (222-43) 8
 AT 9 (221-42) 25
 AT 10 (221-43) 24
 AT 15 (222-44) 19
 AT 17 (221-64) 39
 STATOR (311-12)(315-18) 56
 AT 12 (222-49) 33
 LOGIC I-A (315-16) 62
 AIO (219-69) 61
 ATTN I (NU) 75
 ADDRESS DATA (307-85) 9
 ADDRESS TIME (310-63) 11
 CRC 15 (313-15) 13
 CRC TIME (310-35) 15
 WRITE DATA (315-9)(311-35) 17
 RECORD DATA (313-22) 10
 RECORD TIME (310-67) 12
 SYNC TIME (310-65) 14
 BGC (311-27) 16
 INIT (DRIVE REEST) (315-2) 58
 INIT (314-54)(311-60) 64
 ARM INT FF (307-27) 73
 EXT UPPER INT (307-27) 78
 ATD (219-68) 66
 READ UPPER STAT TOT DIS (307-67) 65
 EXT STOP (218-41) 71

(311-57) WCB-NCT 34
 JOB 1 (218-24) 51
 P1 (310-33) 54
 WRP 1 (310-77) 41
 WRPFF-REFF (310-77) 37
 RD FF (310-45) 44
 SEARCH TIME (310-77) 7
 SYNC ERR PULSE (314-61) 22
 LOGIC I-B (309-2)(309-33)(305-42)(309-77)(311-11)(310-73) 18
 CRC 0 (313-1) 27
 END REAR (314-71) 21
 ADDRESS DATA (307-85) 4
 OUT BIT 1 (313-44) 6
 ADDRESS TIME (310-63) 39
 BPD CLK (315-37) 31
 DMA SYNC FF (311-78) 29
 DMA REFF (311-80) 26
 DMA SEL FF (311-72) 28
 TIME ERR CLOCK (311-11) 43
 DRIVE SEL (GND) 79
 SET ATTN (314-42) 63
 DRIVE SEL 0 (315-30) 60
 P(WRP-REFF) (314-64) 55
 G-AC 0 (219-14) 47
 G-AC 4 (220-4) 57
 CTRL OP (NU) 53
 JOB 1 (218-24) 69
 G-PC (311-71) 68
 G-AC 9 (221-12) 48
 G-AC 12 65
 ST CLR (222-67) 80
 JOB 4X 62
 RT 1X 3
 G-AC 0 (219-14) 77
 ARM UPPER INT TOT DIS (307-72) 59
 JOB 4 (318-66) 70
 ATD (219-68) 74
 JOB 0 (218-25) 72

C		---		3-NOV-71		J.V.			
B		408		5-27-71		N.J.F.			
A				7-26-71		H.C.M.		HAB	
REV.	ECN	DATE	DTM	APP'D.					

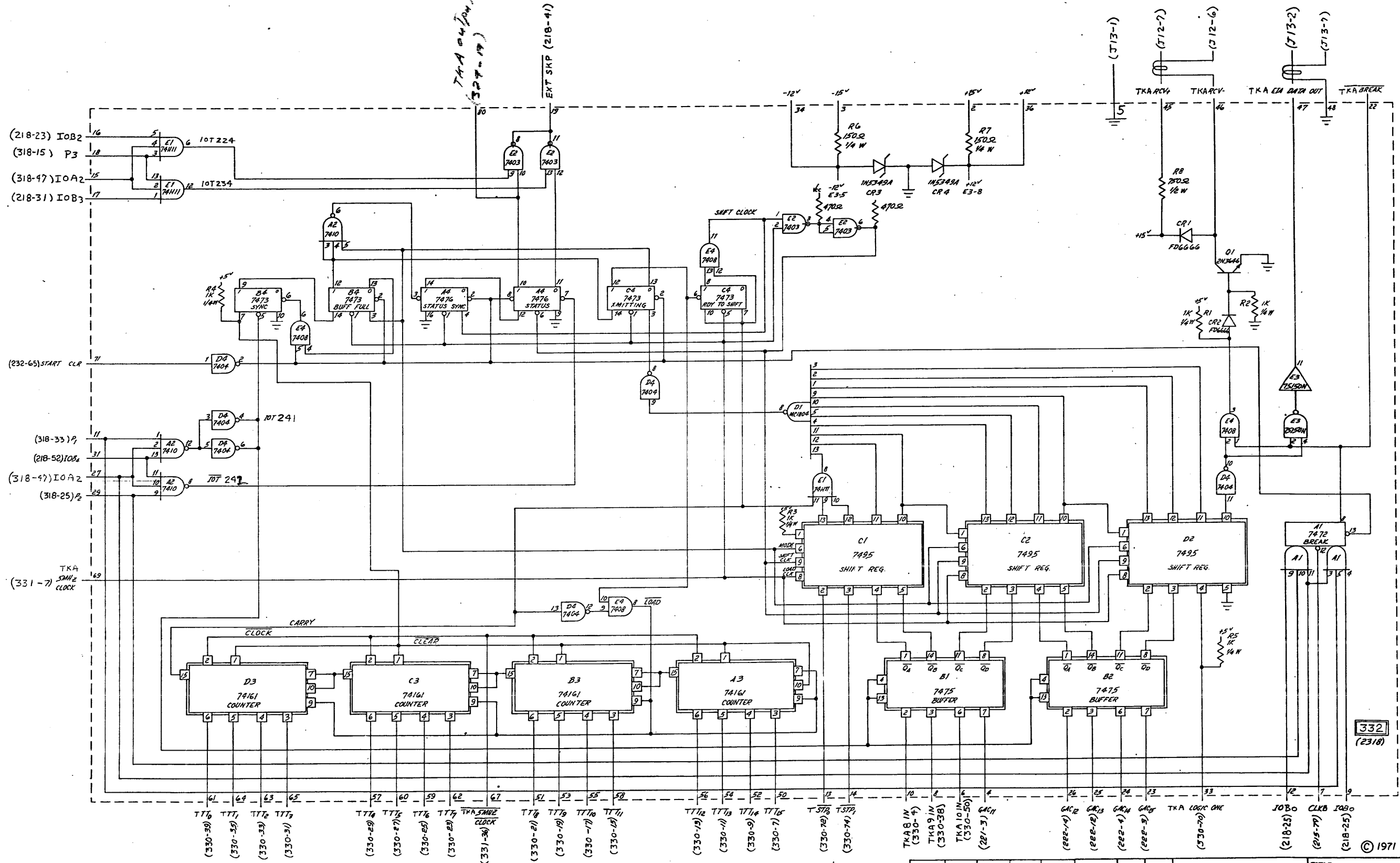
LAYOUT	J.V.	5-27-71	 208 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE DISC CONTROL UNIT STATUS LOGIC			
DRAWN	J.V.	7-26-71					
CHECKED							
APPROVED							
ISSUE							
MATERIAL			PROJECT	PREFIX	SIZE	DRAWING NUMBER	REV.
				L	D	896	C
				Scale	NONE	Sheet	

REV	ECN	DATE	DFTM	APPV
E		9-15-71	R.T.M.	
F		5-27-71		



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BY	DATE	IMLAC CORPORATION 298 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE			
LAYOUT	H.C.M. 2/14/71		SERIAL BIT LOADER CONTROL			
DRAWN	H.C.M. 3/14/71					
CHECKED						
APPROVED						
ISSUE						
COPIED						
MATERIAL		PROJECT	PROD	Scale		
		PREFIX	L D	DRAWING NUMBER	897	
		REV.	F	Sheet.		

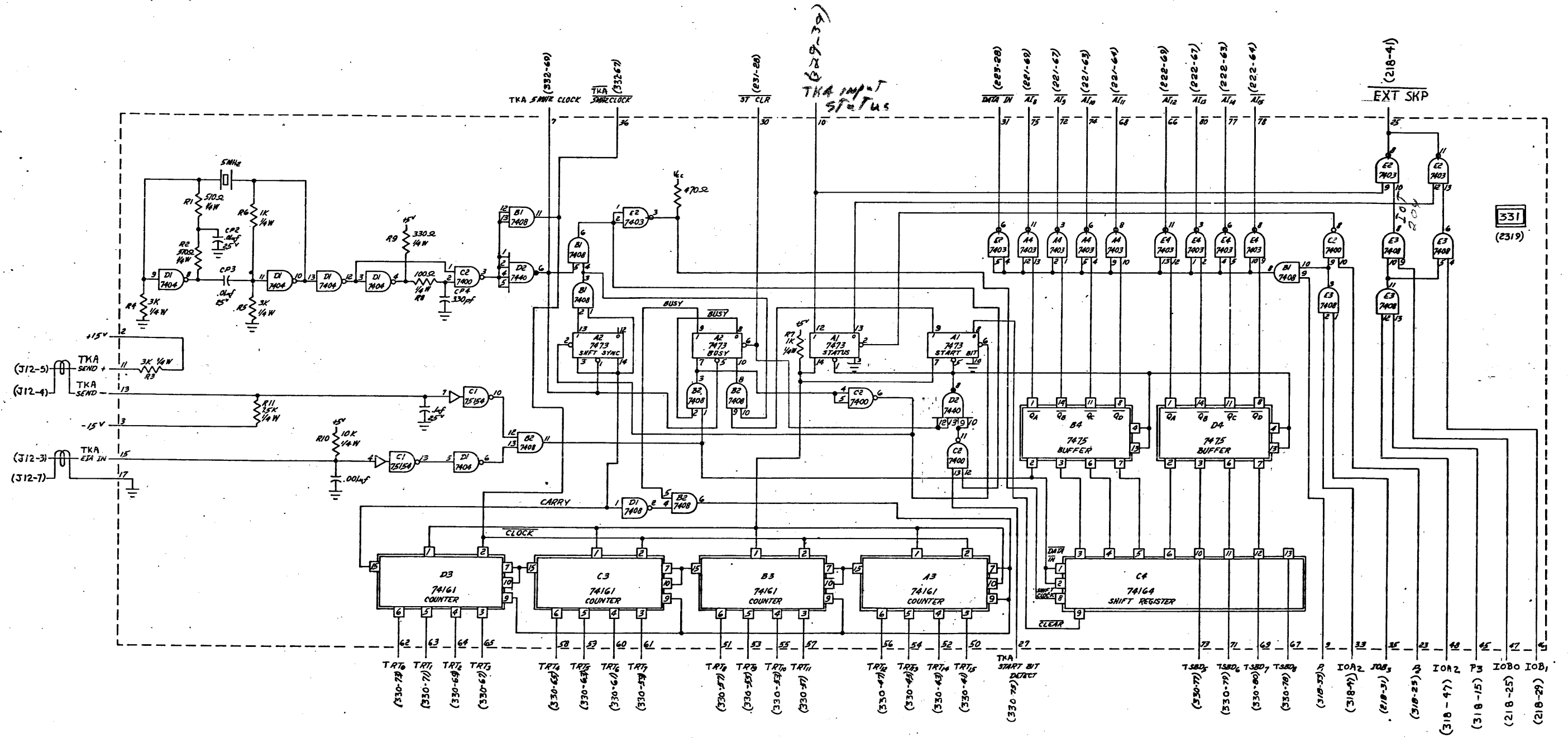


332
(2318)

© 1971

LAYOUT		BY	DATE	<p>IMLAC CORPORATION 250 NEWTON STREET WALTHAM, MASSACHUSETTS 02154</p>	TITLE		TKA ASYNCHRONOUS SERIAL TRANSMITTER	
DRAWN		H.C.M.	11/27/71		PREFIX	SIZE	DRAWING NUMBER	REV.
CHECKED		H.C.M.	12/21/71		L	D	898	C
APPROVED					PROJECT		PROD	
ISSUE					MATERIAL		Scale	
COPIED				PROJECT		Sheet		

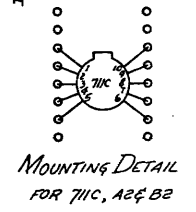
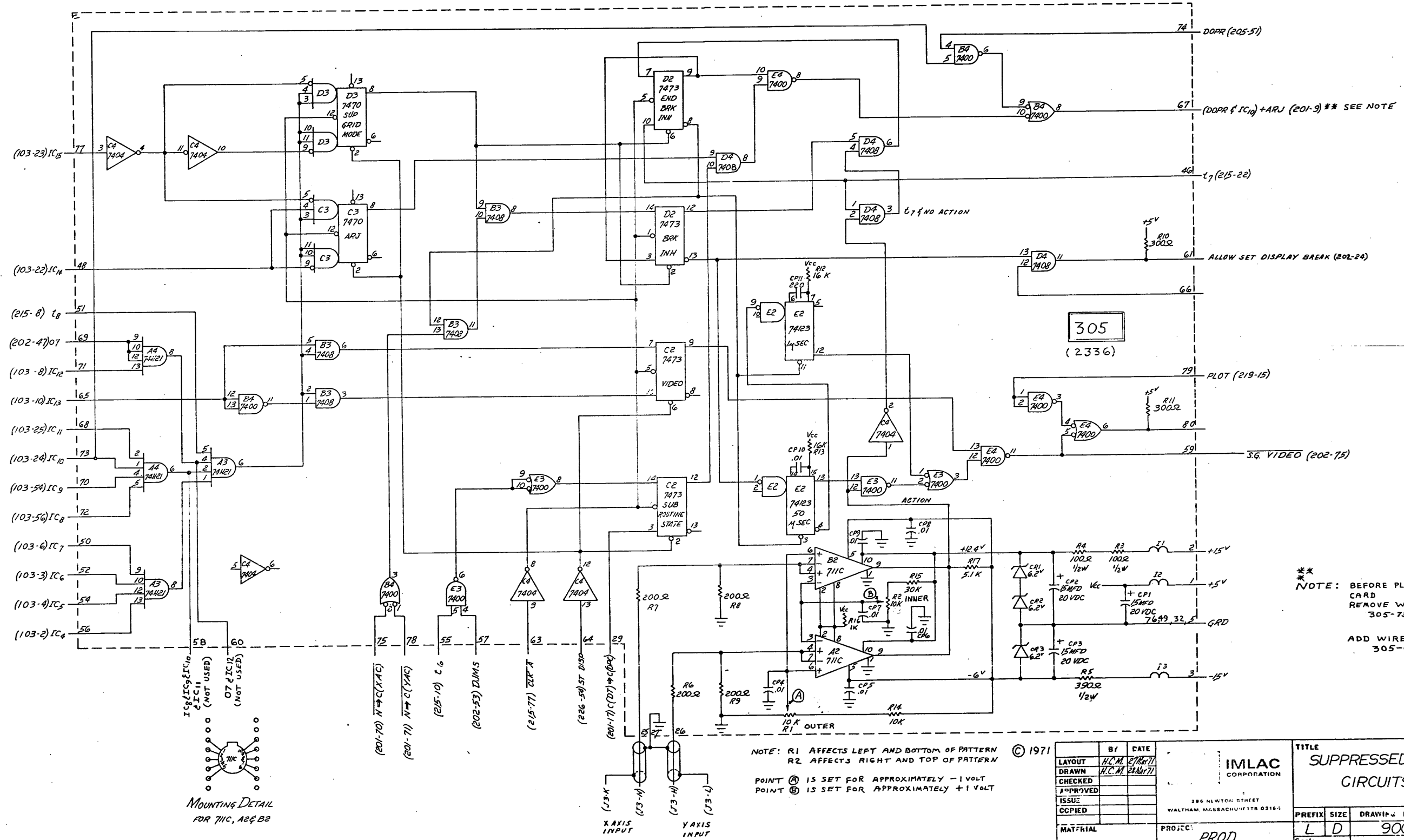
REV	ECN	DATE	DTM	APRV
B	-	1 Oct 71	GB	H.P.S.
C	-	10-27-71	J.V.	SPY
D	-	28 Oct 71	H.C.M.	



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LAYOUT	BY	DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		TKA ASYNCHRONOUS SERIAL RECEIVE	
DRAWN	H.C.M.	5/10/71		PREFIX	SIZE	DRAWING NUMBER	REV.
CHECKED	H.C.M.	5/10/71				899	D
APPROVED	B.3.	10/11/71		Scale			Sheet
ISSUE							
COPIED							
MATERIAL			PROJECT	PROD			

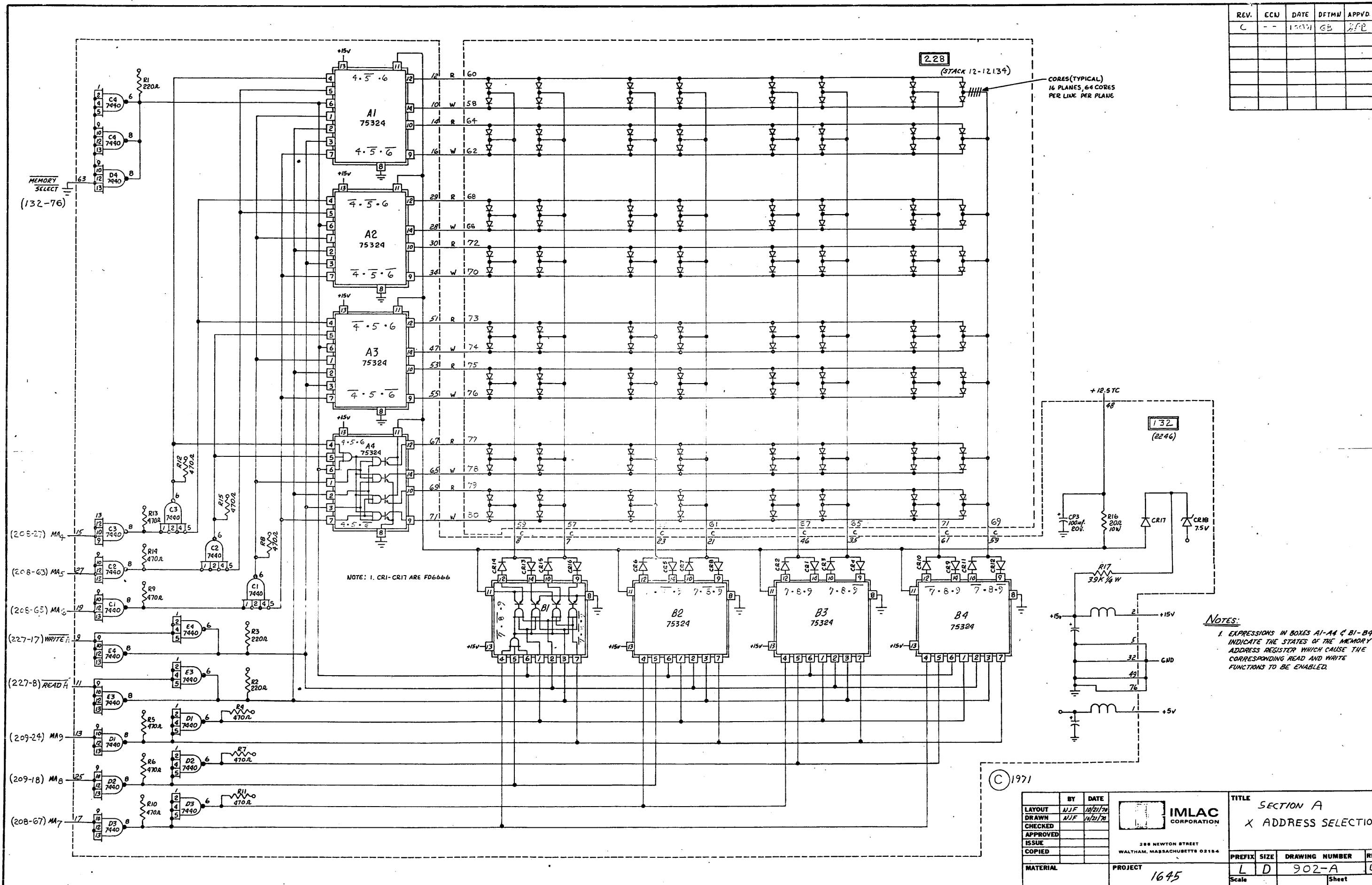
REV	ECN	DATE	DETMN	APRV
A	-	7 JUL 71	H.C.M.	
B	-	13 JUL 71	G.S.	
C	-	28 JUL 71	J.V.	
D	-	8-26-71	J.V.	
E	-	29 SEP 71	GB	J.P.B.



NOTE: BEFORE PLUGGING IN CARD REMOVE WIRE - 305-73 TO 201-9
ADD WIRE - 305-67 TO 201-9

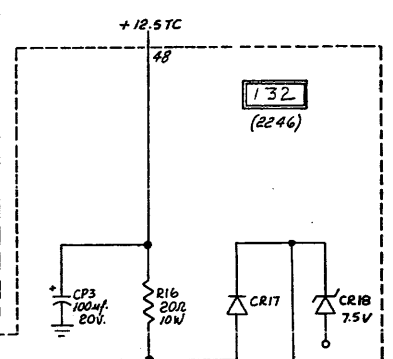
LAYOUT		B/I	DATE	TITLE								
DRAWN		H.C.M.	2/11/71		SUPPRESSED GRID CIRCUITS							
CHECKED		H.C.M.	2/11/71									
APPROVED				IMLAC CORPORATION 286 NEWTON STREET WALTHAM, MASSACHUSETTS 02154								
ISSUE												
COPIED				<table border="1"> <tr> <th>PREFIX</th> <th>SIZE</th> <th>DRAWING NUMBER</th> <th>R.V.</th> </tr> <tr> <td>L</td> <td>D</td> <td>900</td> <td>E</td> </tr> </table>	PREFIX	SIZE	DRAWING NUMBER	R.V.	L	D	900	E
PREFIX	SIZE	DRAWING NUMBER	R.V.									
L	D	900	E									
MATERIAL		PROJECT: PROD		Scale								

REV.	ECU	DATE	DFTM	APPVD.
C	-	10/21/70	EB	JFR



2.28
(STACK 12-12.134)

CORES (TYPICAL)
16 PLANES, 64 CORES
PER LINE PER PLANE

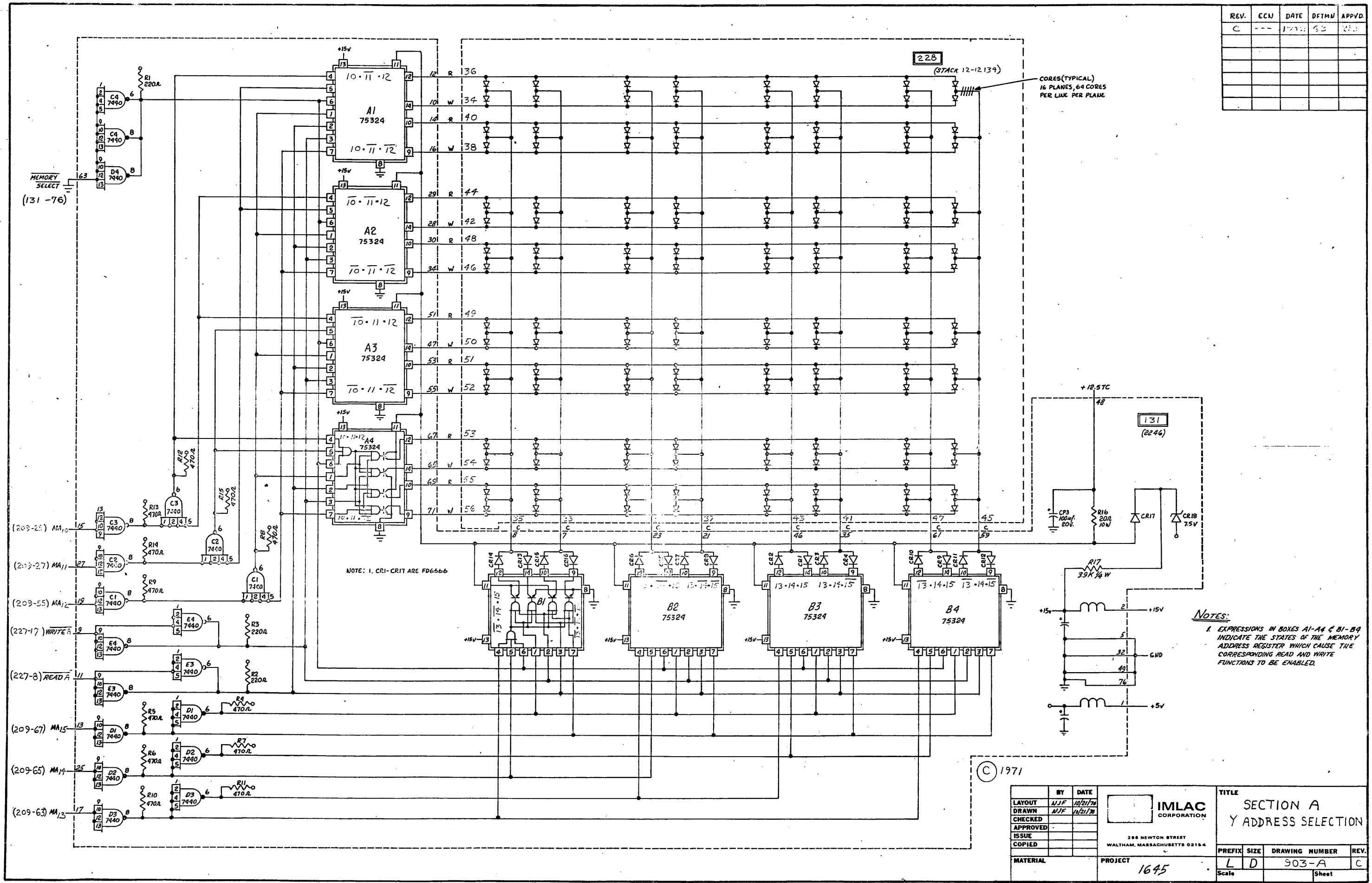


NOTES:
1. EXPRESSIONS IN BOXES A1-A4 & B1-B4
INDICATE THE STATES OF THE MEMORY
ADDRESS REGISTER WHICH CAUSE THE
CORRESPONDING READ AND WRITE
FUNCTIONS TO BE ENABLED.

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LAYOUT		BY	DATE	IMLAC CORPORATION 388 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE			
DRAWN	NJF		10/21/70		SECTION A			
CHECKED	NJF		10/21/70		X ADDRESS SELECTION			
APPROVED					PREFIX	SIZE	DRAWING NUMBER	REV.
ISSUE					L	D	902-A	C
COPIED					Scale		Sheet	
MATERIAL				PROJECT	1645			

REV.	ECN	DATE	DFTMU	APPVD.
C		10/21/70	GS	



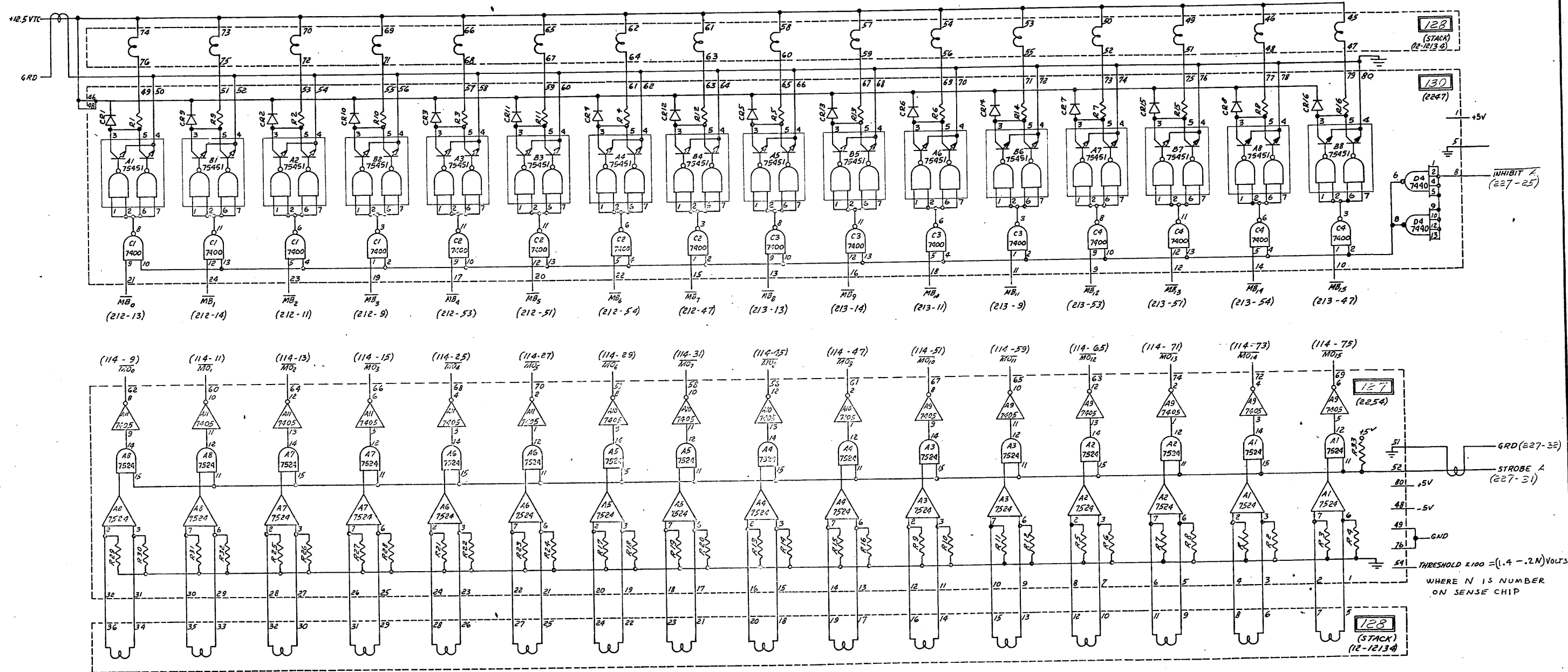
NOTES:
1. EXPRESSIONS IN BOXES A1-A4 & B1-B4 INDICATE THE STATES OF THE MEMORY ADDRESS REGISTER WHICH CAUSE THE CORRESPONDING READ AND WRITE FUNCTIONS TO BE ENABLED.

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BY	DATE	TITLE
LAYOUT	NJF 10/21/70	SECTION A Y ADDRESS SELECTION
DRAWN	NJF 10/21/70	
CHECKED		
APPROVED		
ISSUE		
COPIED		
MATERIAL		PREFIX SIZE DRAWING NUMBER REV.
PROJECT 1645		L D 903-A C
		Scale Sheet

IMLAC
CORPORATION
298 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

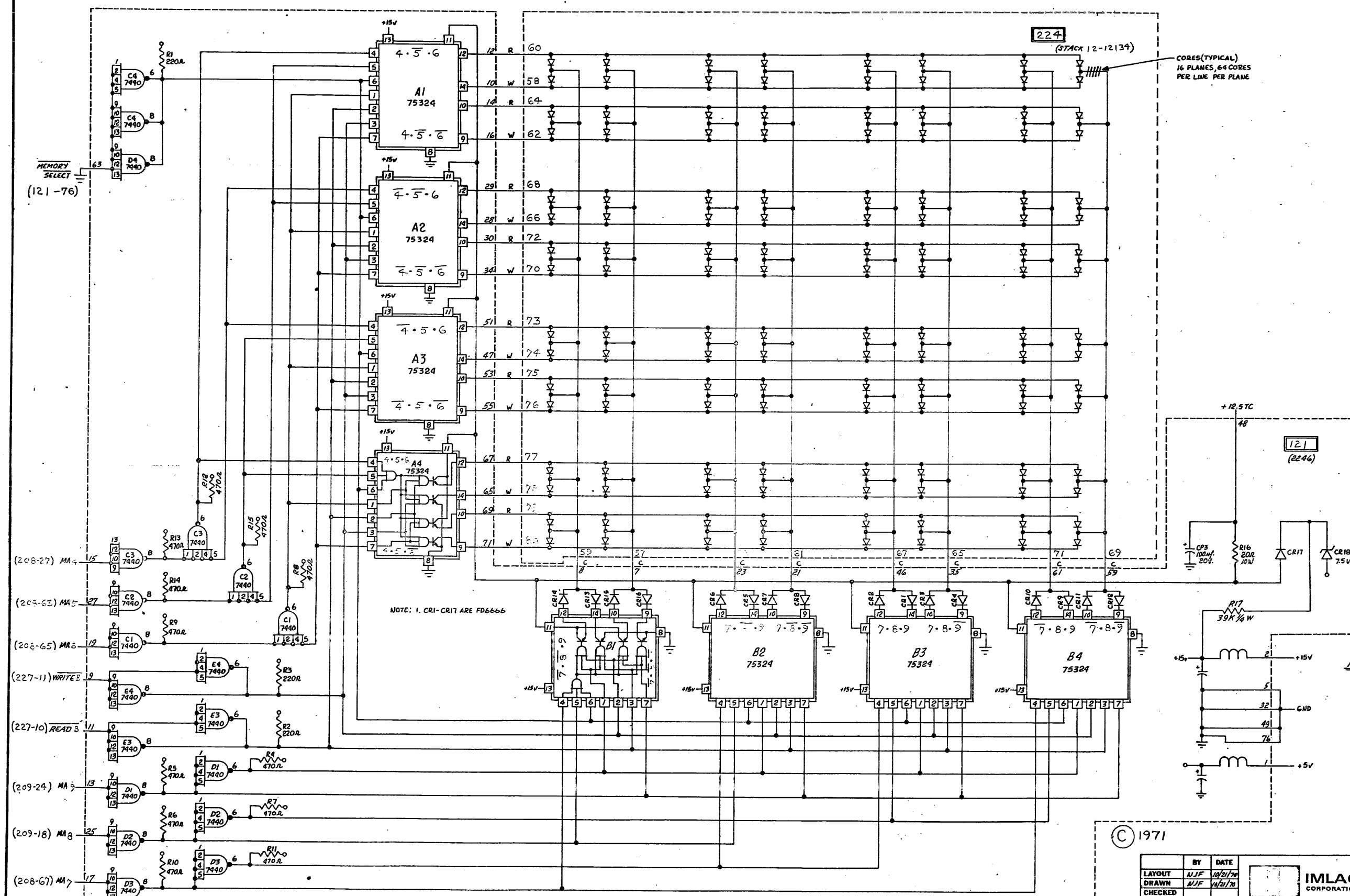
REV.	ECN	DATE	DFM	APPV.
A	---	E 26-71	J.V.	
B	---	28 SEP 71	G.B.	J.P.B.



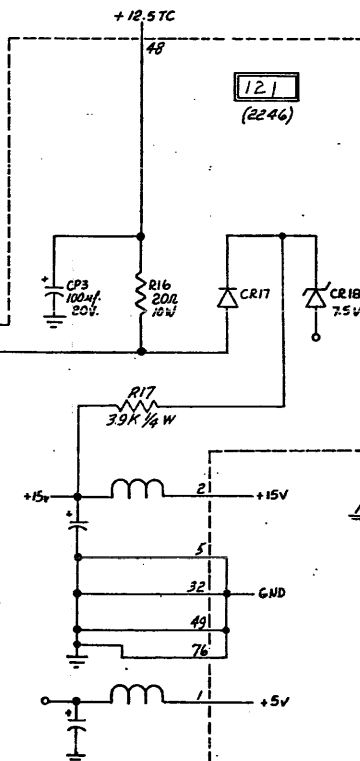
DWG. NO. WAS 904-16K.

LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE SECTION A INHIBIT & SENSE AMPLIFIERS 16 K CONFIGURATION			
DRAWN	NJF	8/24/70		PREFIX	SIZE	DRAWING NUMBER	REV.
CHECKED	NJF	11/26/70		L	D	604-A	B
APPROVED				Scale		Sheet	
ISSUE				PROJECT			
COPIED							

REV.	ECN	DATE	DFTM	APPVD.
C	-	10/21/70	GB	(S)



NOTE: 1. CR1-CR17 ARE FD6666



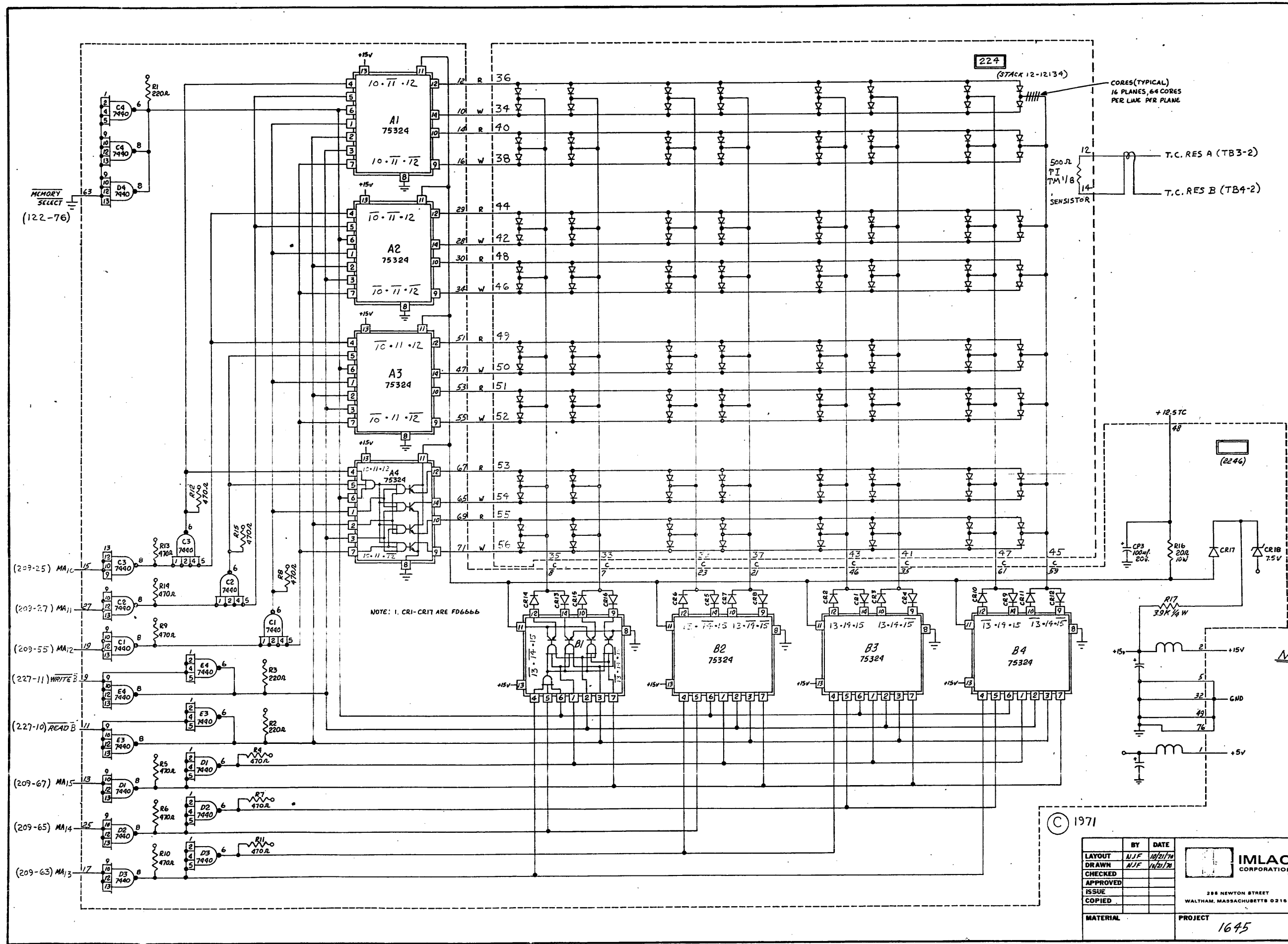
NOTES:
1. EXPRESSIONS IN BOXES A1-A4 & B1-B4 INDICATE THE STATES OF THE MEMORY ADDRESS REGISTER WHICH CAUSE THE CORRESPONDING READ AND WRITE FUNCTIONS TO BE ENABLED.

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LAYOUT		BY	DATE	 296 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE			
		NJF	10/21/70		SECTION B			
		NJF	10/21/70		X ADDRESS SELECTION			
					PREFIX	SIZE	DRAWING NUMBER	REV.
					L	D	905-A	C
					Scale			Sheet

PROJECT 1645

REV.	ECN	DATE	DFTMN	APPVD.
C	-	10/27/70	GB	1/2/73



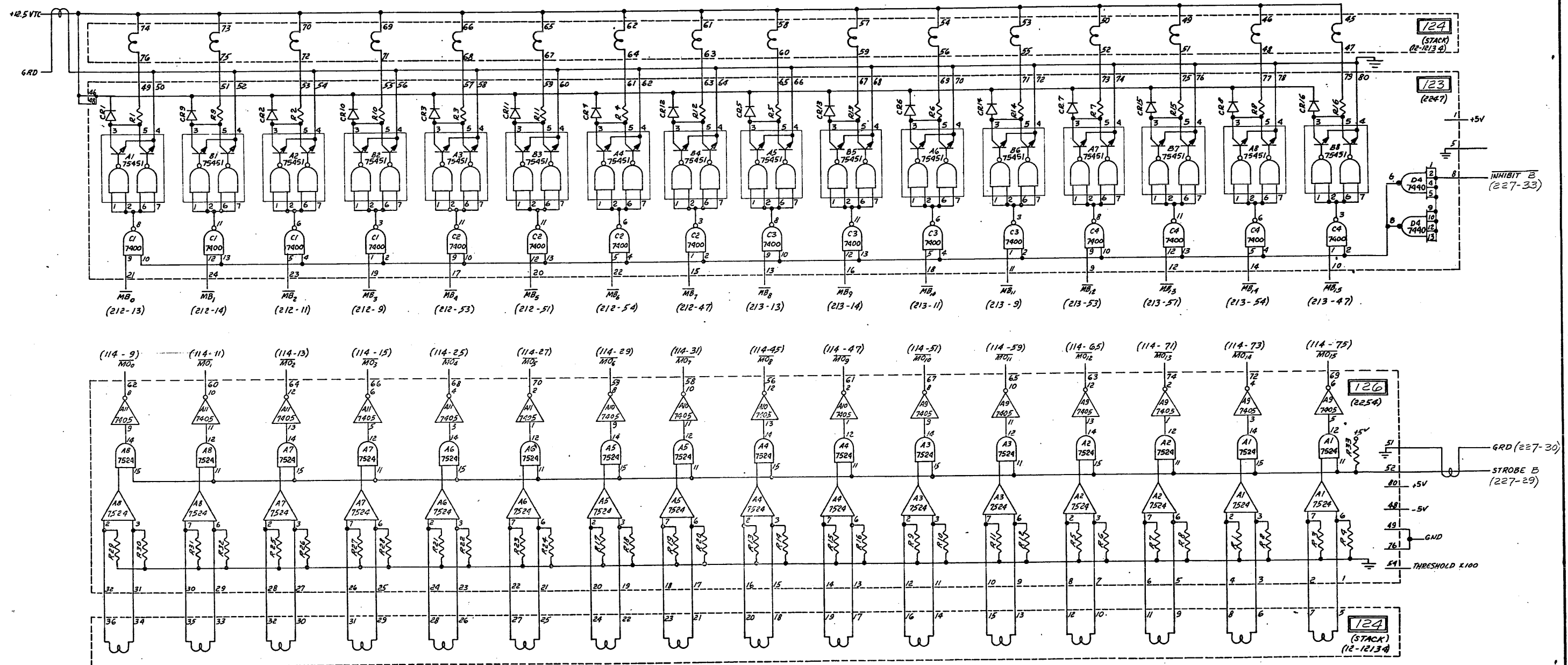
NOTE: 1. CR1-CR18 ARE FD6666

NOTES:
1. EXPRESSIONS IN BOXES A1-A4 & B1-B4 INDICATE THE STATES OF THE MEMORY ADDRESS REGISTER WHICH CAUSE THE CORRESPONDING READ AND WRITE FUNCTIONS TO BE ENABLED.

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LAYOUT	BY	DATE	IMLAC CORPORATION 298 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	NJF	10/21/70		SECTION B		
CHECKED	NJF	11/21/70		Y ADDRESS SELECTION		
APPROVED				PREFIX	SIZE	DRAWING NUMBER
ISSUE				L	D	906-A
COPIED				Scale		Sheet
MATERIAL			PROJECT	1645	REV. C	

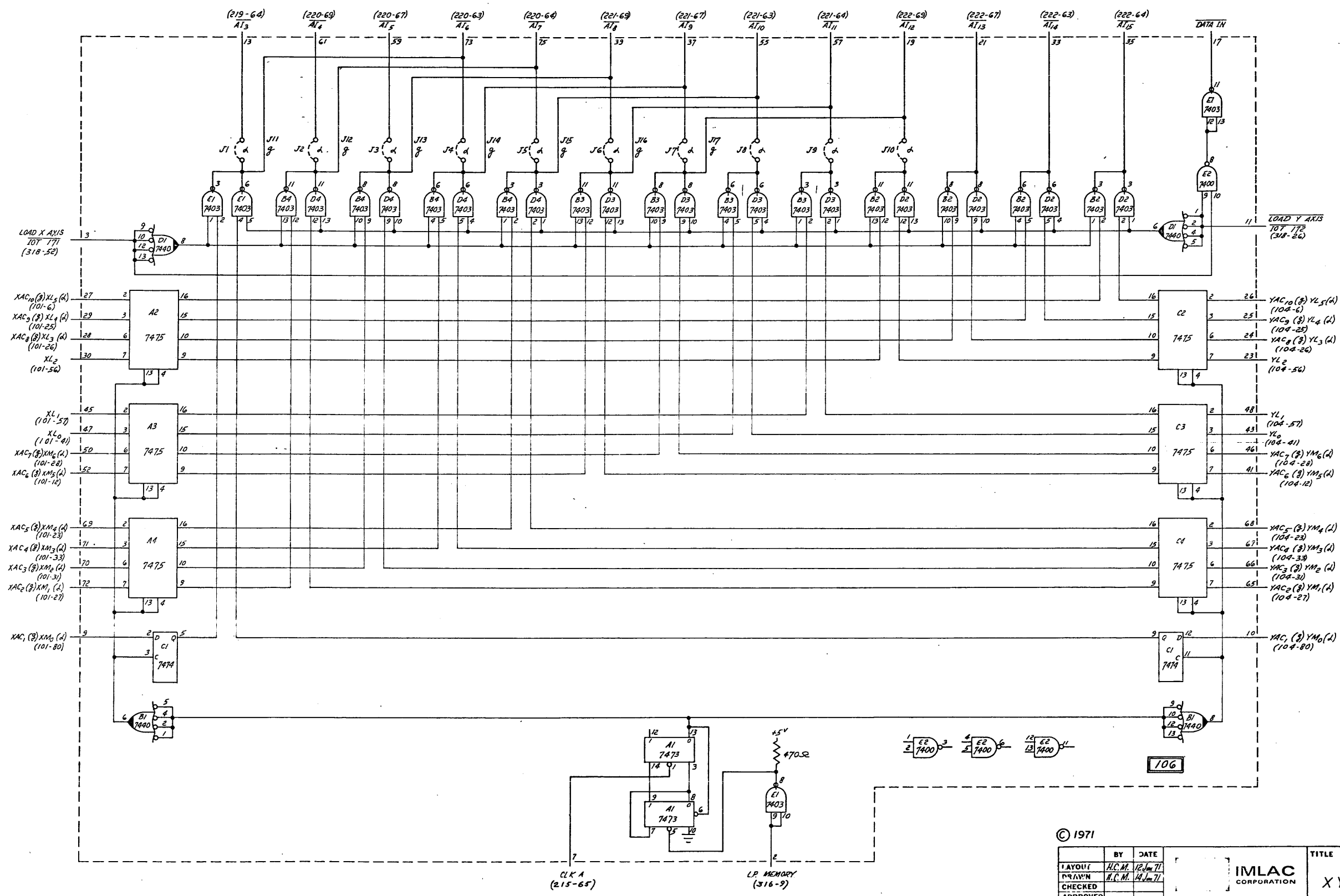
REV.	ECN	DATE	DFM	APPVD.
A	---	8-26-71	J.V.	J.V.



DWG. NO. WAS 907-16K

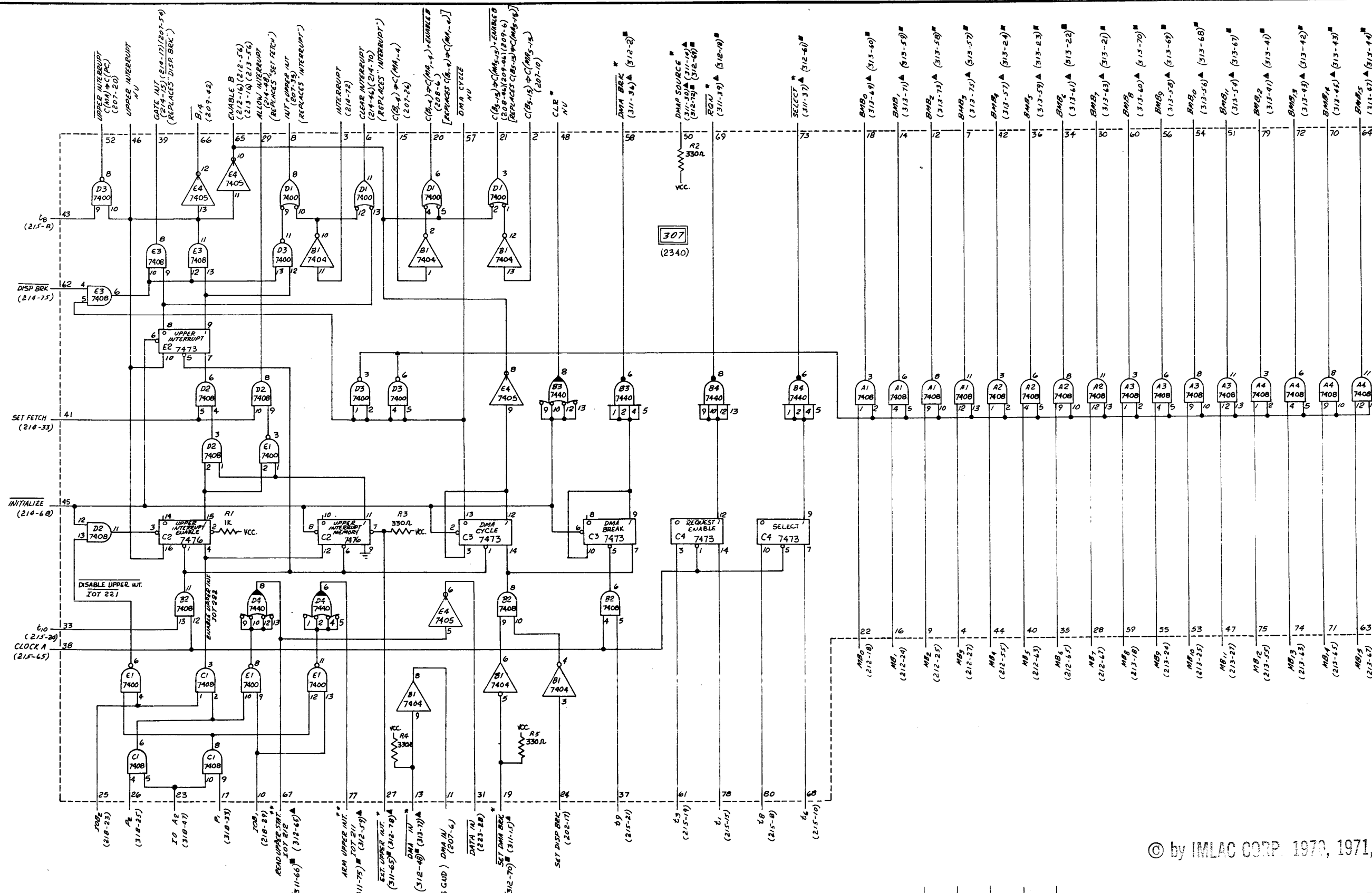
LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE SECTION B INHIBIT			
DRAWN	MJE	8/26/71		SENSE AMPLIFIERS			
CHECKED	MJE	8/26/71		16 K CONFIGURATION			
APPROVED				PREFIX	SIZE	DRAWING NUMBER	REV.
ISSUE				L	D	907-A	A
COPIED				Scale			Sheet
MATERIAL			PROJECT				

REV	ECN	DATE	DTM	APP'Y
A	-	15 Jun 71	H.C.M.	



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LAYOUT	BY	DATE	TITLE			
DRAWN	H.C.M.	12 Jun 71	IMLAC CORPORATION 288 NEWTON STREET WALTON, MASSACHUSETTS 02154			
CHECKED	H.C.M.	14 Jun 71				
APPROVED						
ISSUE						
COPIED						
MATERIAL	PROJECT		PREFIX	SIZE	DRAWING NUMBER	REV.
			L	D	915	A
			Scale			Sheet



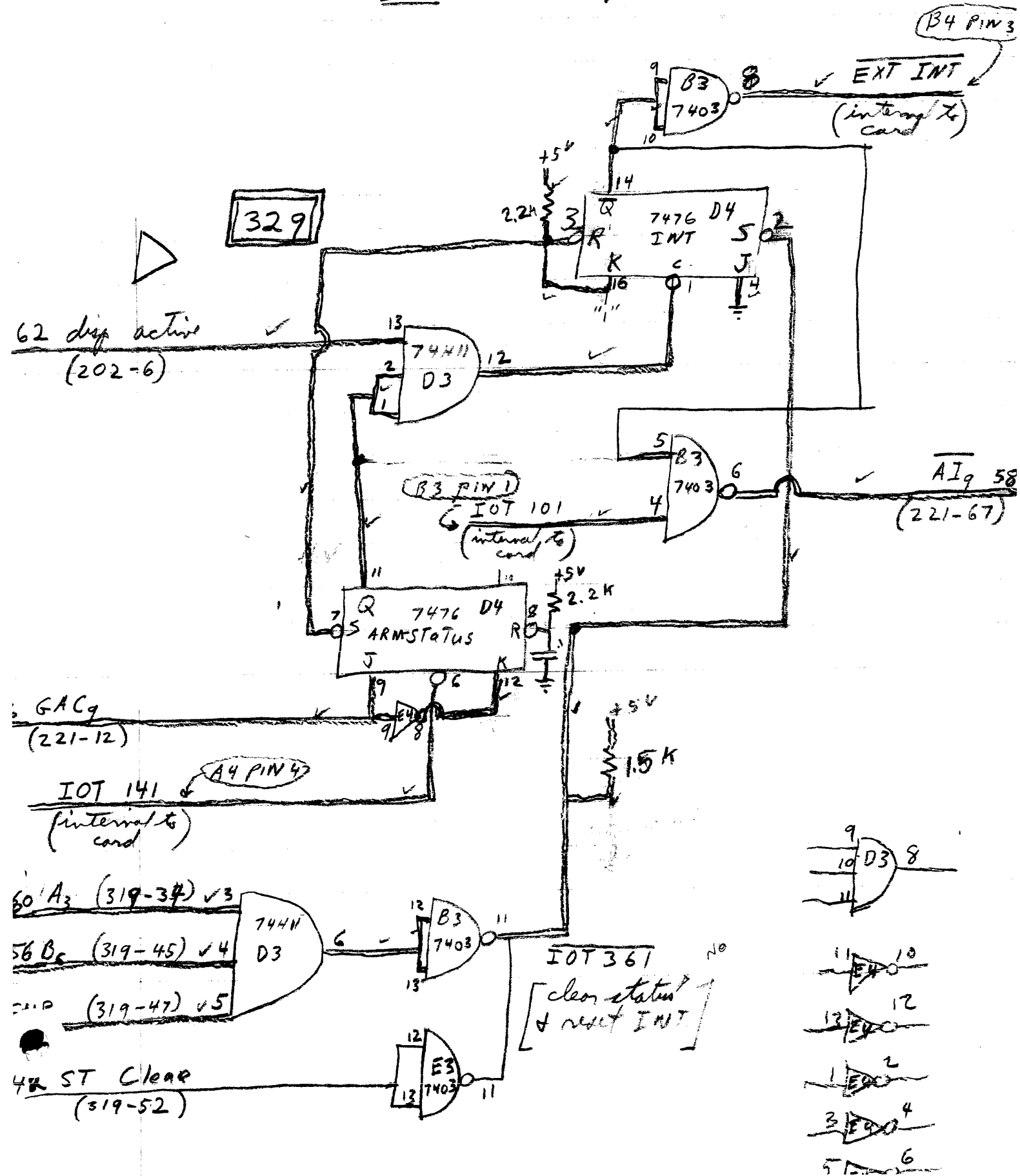
307
(2340)

© by IMLAC CORP. 1970, 1971, 1972

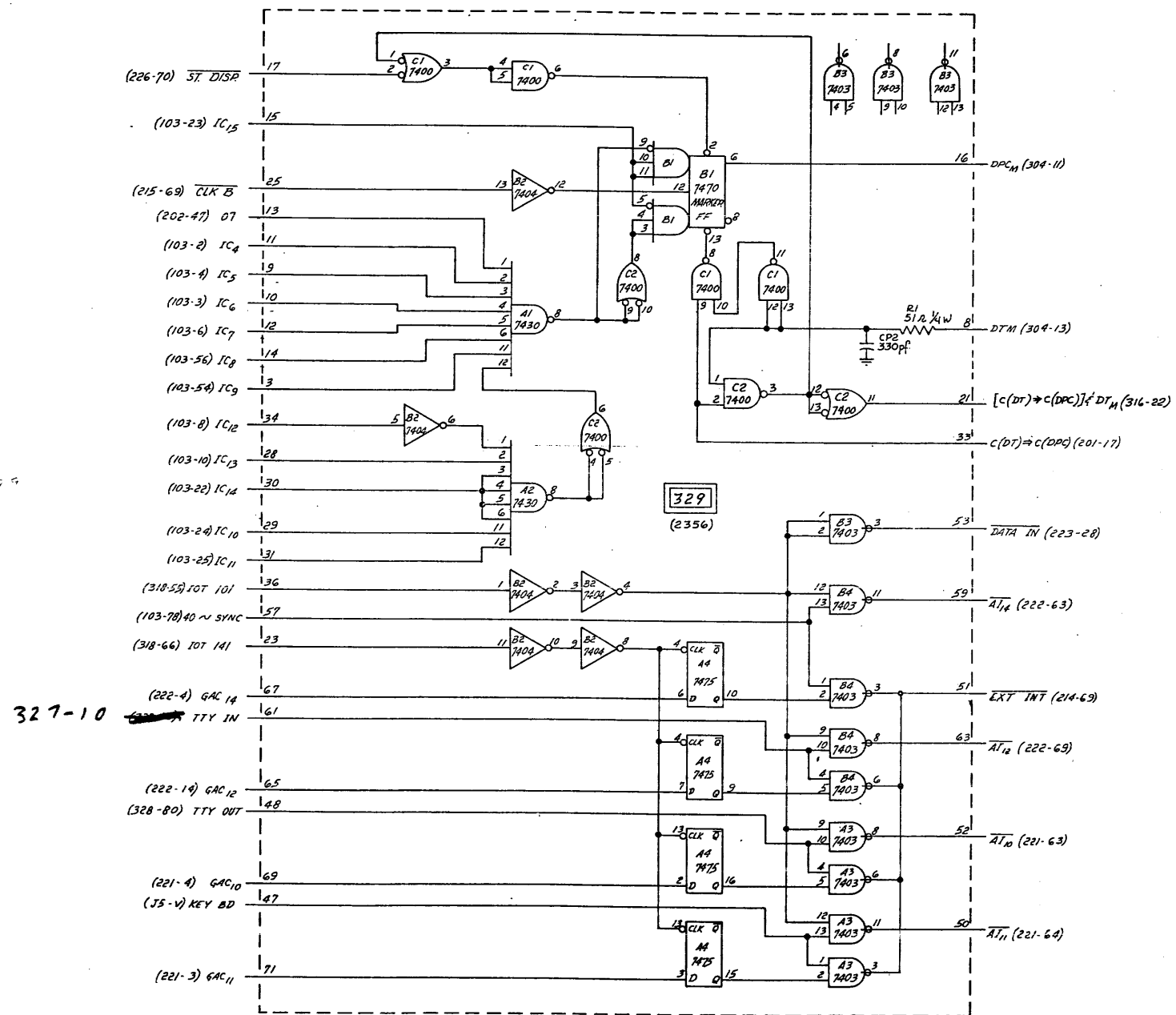
NOTE: * USED ON DMA CHANNEL
 ** USED FOR UPPER INTERRUPT CHANNEL
 ▲ DISC OPTION
 ■ MAG TAPE OPTION

				BY	DATE		TITLE DMA CHANNEL CONTROL
				LAYOUT	NJF 15JUN71		
				DRAWN	NJF 15JUN71		
				CHECKED			
				APPROVED			
				ISSUED			
				COPIED			
				MATERIAL			
				PROJECT			
REV.	ECN	DATE	DFNM	APPVD.	PREFIX SIZE DRAWING NUMBER REV. L D 916 A		
						Scale	Sheet

INT on Disp HLT



REV	ECN	DATE	DFTM	APPR
A	-	-	-	-
B	-	9-23-71	J.V.	-

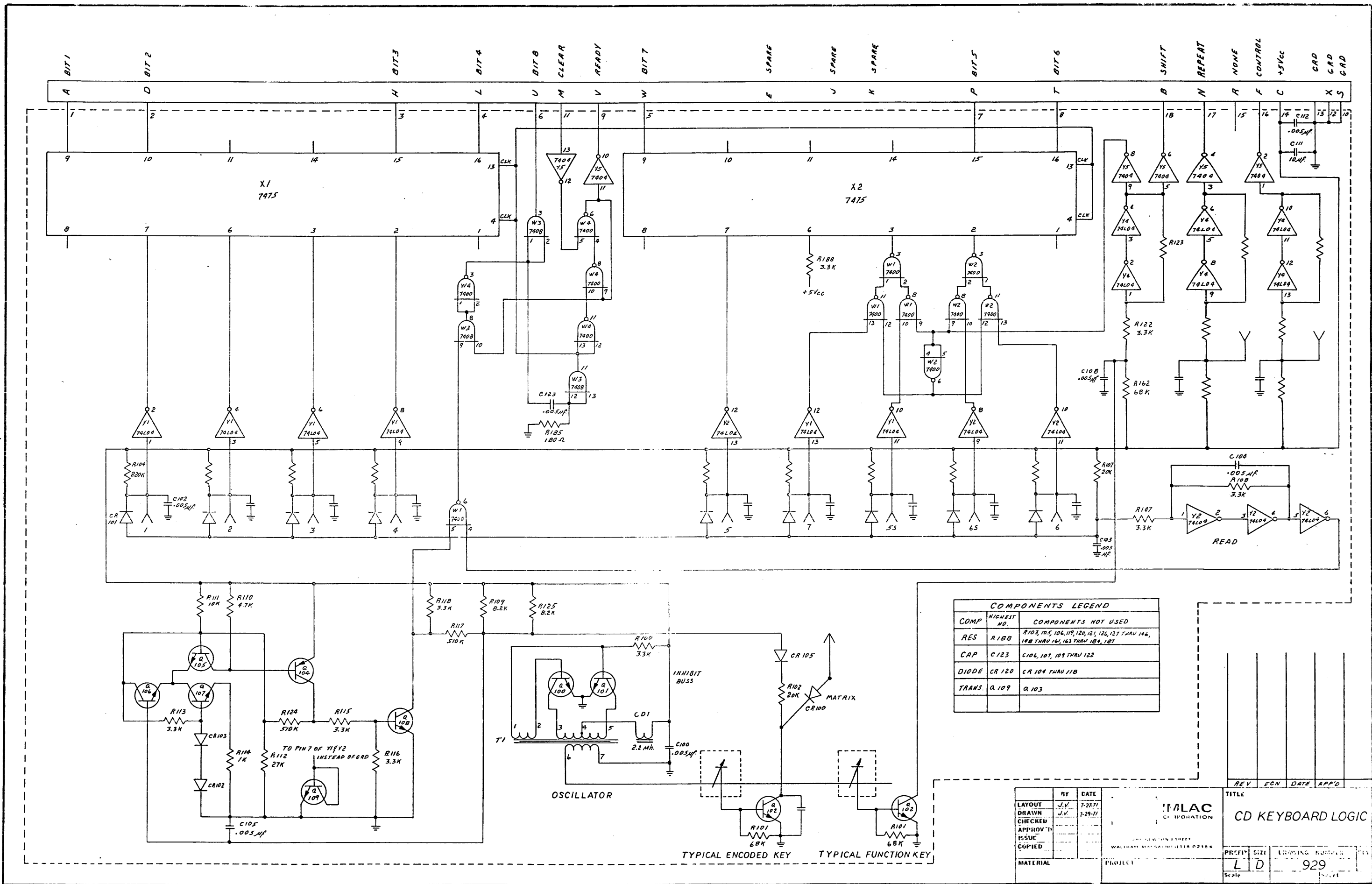


327-10

Note: See Yellow Sheet for Additions To This Card

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BY		DATE	TITLE
LAYOUT	H.C.M.	23/6/71	
DRAWN	H.C.M.	26/6/71	
CHECKED			
APPROVED			
ISSUE			
COPIED			
PREFIX			PREFIX
SIZE			SIZE
DRAWING NUMBER			DRAWING NUMBER
REV.			REV.
L D			L D
928			928
Sheet			Sheet



COMMENTS LEGEND

COMP	HIGHEST NO.	COMPONENTS NOT USED
RES	R108	R103, 105, 106, 119, 120, 121, 126, 127, 141, 146, 148 THRU 161, 163 THRU 184, 187
CAP	C123	C106, 107, 109 THRU 122
DIODE	CR120	CR104 THRU 118
TRANS.	Q109	Q103

LAYOUT	BY	DATE
DRAWN	J.V.	7-27-71
CHECKED	J.V.	7-29-71
APPROV'D		
ISSUC		
COPIED		

MLAC
 CORPORATION
 200 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

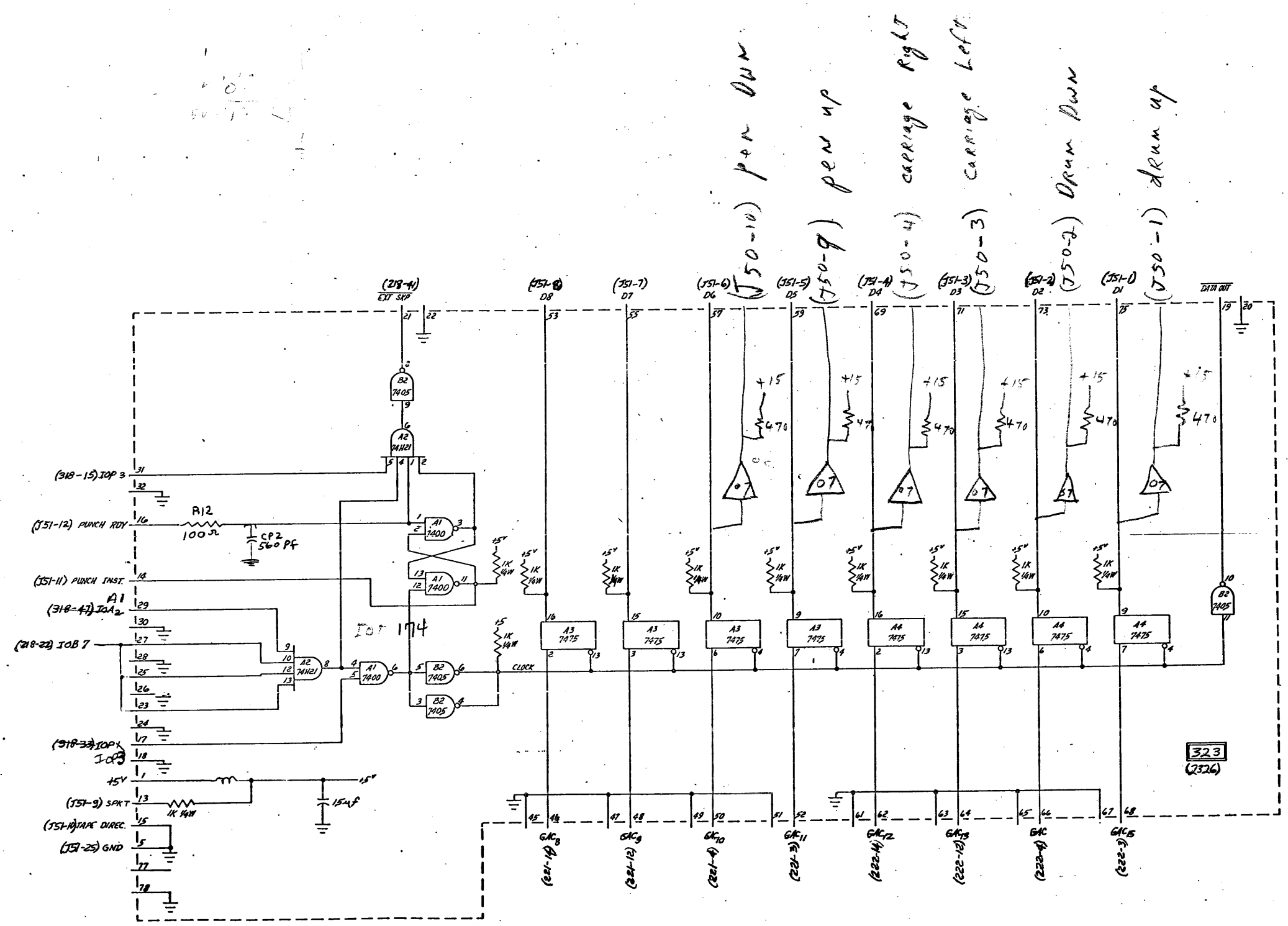
REV	ECN	DATE	APP'D

TITLE
CD KEYBOARD LOGIC

PROJECT
 929

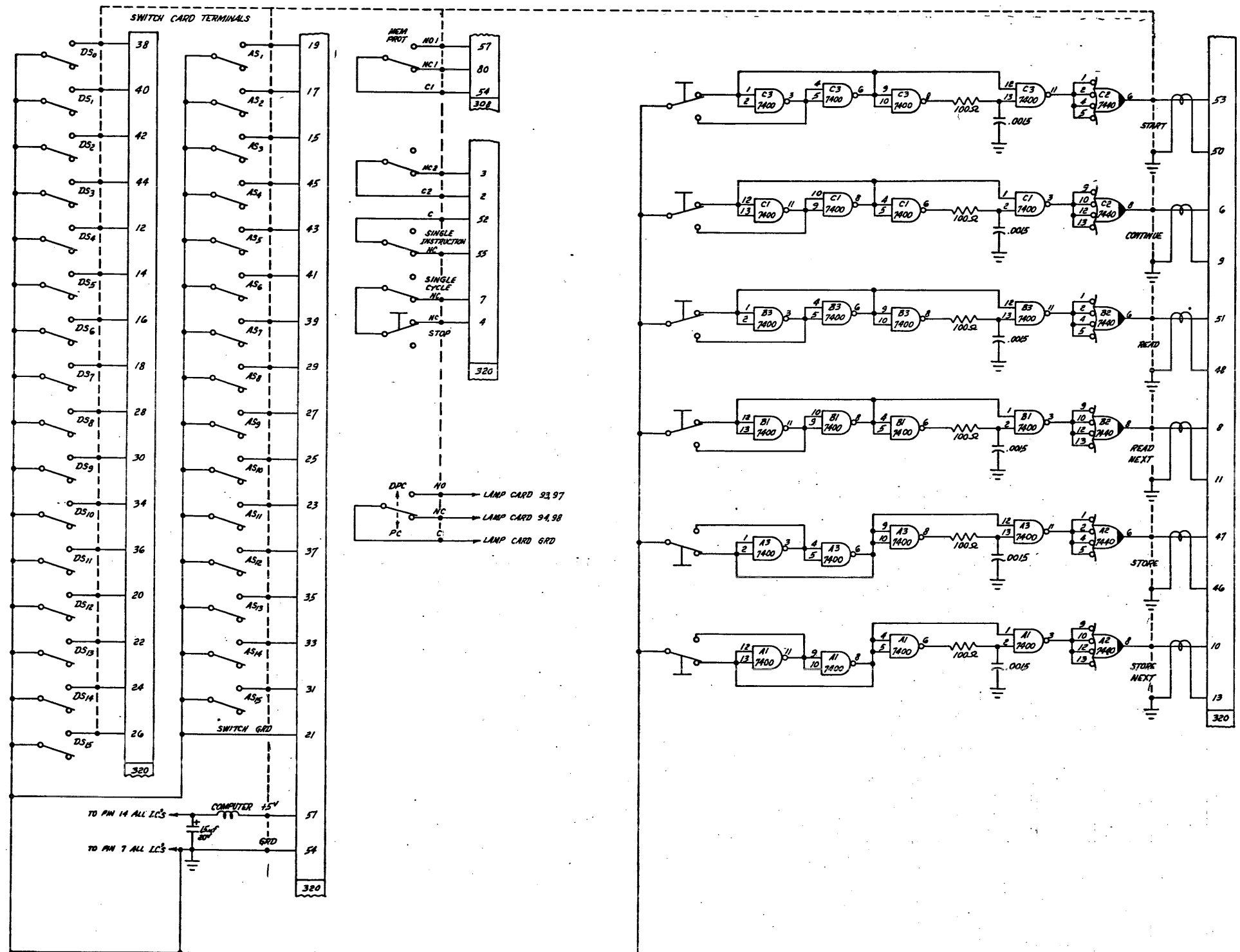
Scale


REV	ECN	DATE	DFTMM	APP'V
A	---	29Sep71	GB	218B



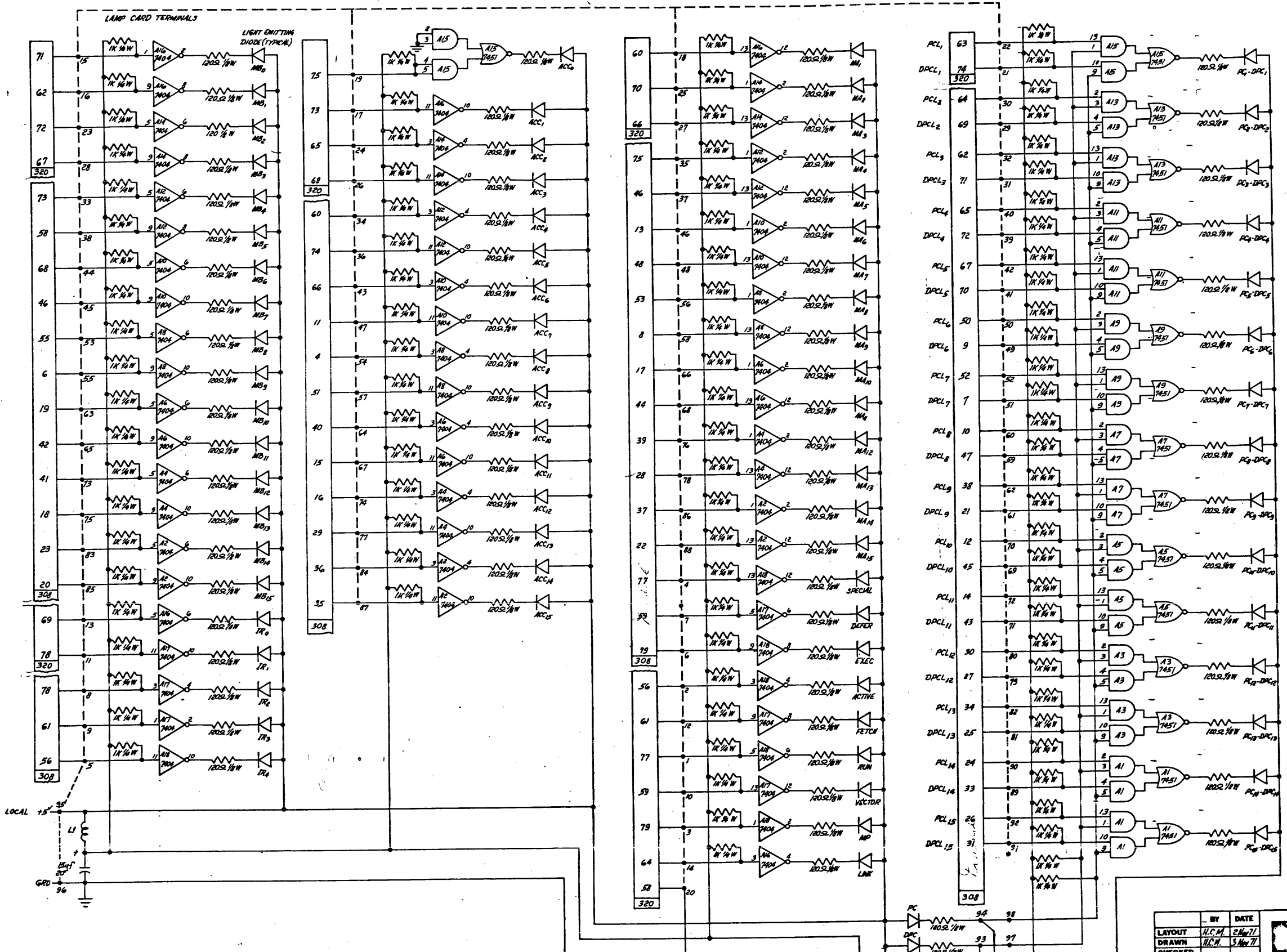
LAYOUT	BY	DATE	IMLAC CORPORATION 280 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE <i>Plotter FACIL TAPE PUNCH INTERFACE</i>			
DRAWN	<i>H.C.M.</i>	<i>29Sep71</i>		PREFIX	SIZE	DRAWING NUMBER	REV.
CHECKED	<i>H.C.M.</i>	<i>29Sep71</i>	<i>L</i>	<i>D</i>	<i>925</i>	<i>A</i>	
APPROVED			Scale		Sheet		
ISSUE			PROJECT				
COPIED							
MATERIAL							

REV	ECN	DATE	DFTHN	APPV



LAYOUT	BY	DATE	 IMLAC CORPORATION 255 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE			
DRAWN	H.C.M.	2/2/71		CONSOLE SWITCH CARD			
CHECKED	H.C.M.	2/2/71		PREFIX	SIZE	DRAWING NUMBER	REV.
APPROVED				L	D	962	
ISSUE				Scale			Sheet
COPIED							
MATERIAL	PROJECT						

REV	ECN	DATE	DFTM	APRV



LAYOUT	H.C.M.	2 Nov 77
DRAWN	H.C.M.	5 Nov 77
CHECKED		
APPROVED		
ISSUE		
COPIED		
MATERIAL		

BY DATE

TO DPC-PC SWITCH NO-
TO DPC-PC SWITCH NC
TO DPC-PC SWITCH COMMON

TO PIN 7, ALL I.C.'S

TO PIN 14, ALL I.C.'S

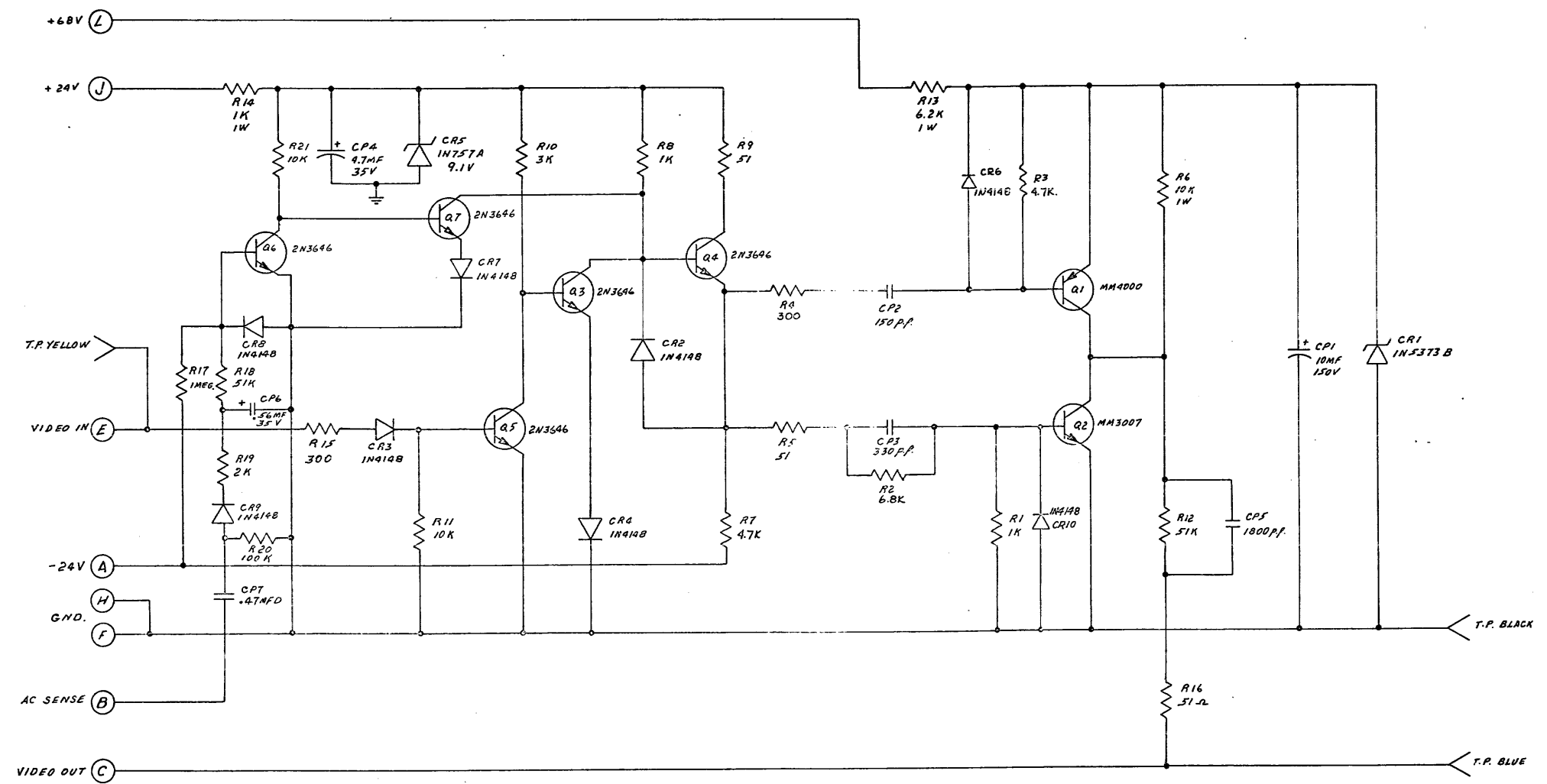
300 NEWTON STREET
WALTHAM, MASSACHUSETTS 02155

IMLAC CORPORATION

TITLE
CONSOLE LAMP CARD

PROJECT	
PRELIM	L D
SIZE	
DRAWING NUMBER	963
REV.	
Scale	
Sheet	

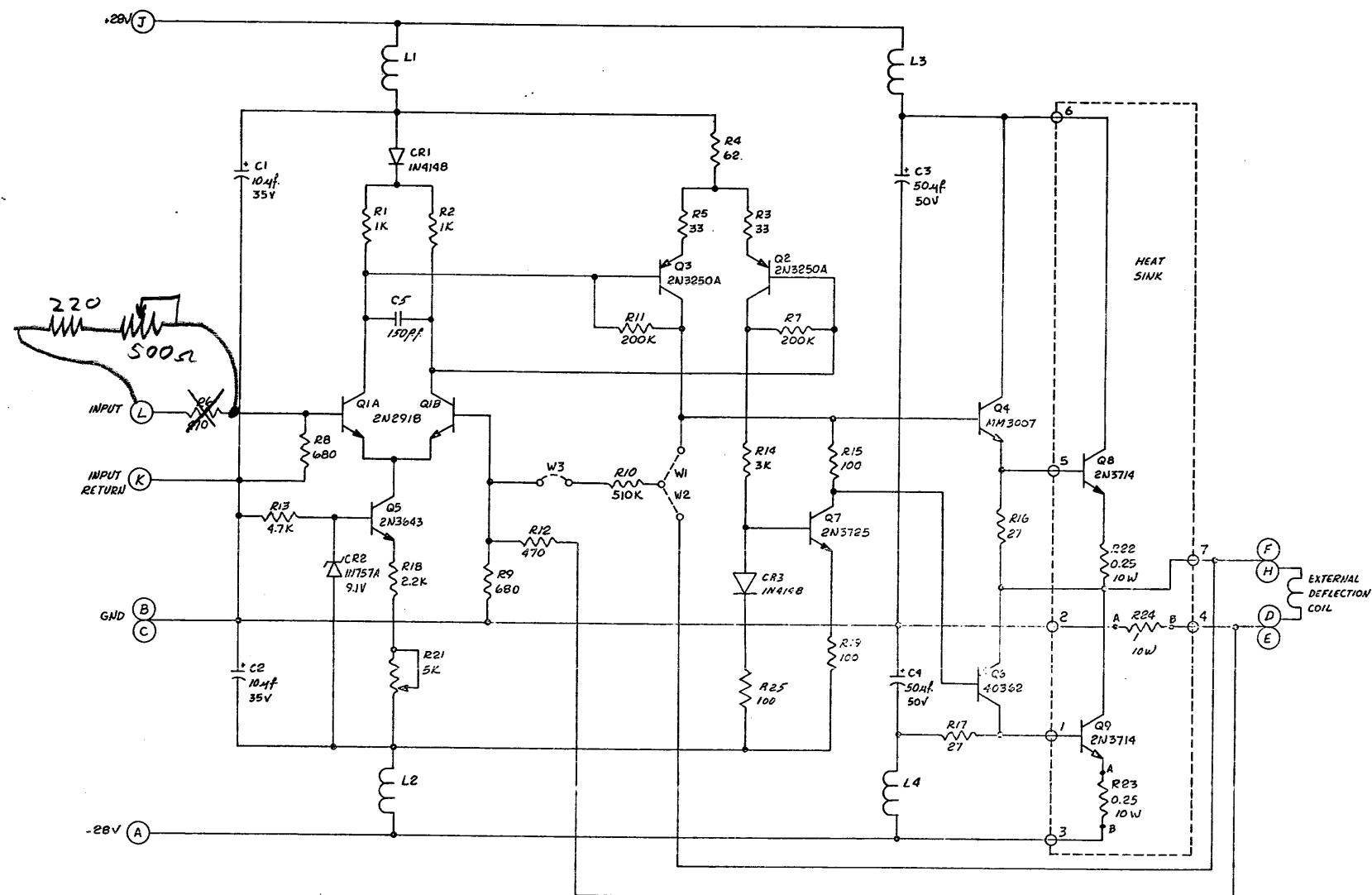
REV.	ECN	DATE	DTM	APP'D.
A	--	12-15-70	J.V.	
B	--	7-24-71	J.V.	
C	--	2-9-71	J.V.	
E	390	4-2-71	J.V.	
F	408	4-27-71	J.V.	
G	423	12-14-71	C.B.A.	



NOTES: 1. UNLESS OTHERWISE SPECIFIED,
ALL RESISTORS ARE 1/2 W, AND
RESISTANCE VALUES ARE IN
OHMS ± 5%.

BY	DATE	TITLE
L.V.	10-26-70	IMLAC CORPORATION 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154 VIDEO AMPLIFIER
J.V.	10-27-70	
PROJECT 1646		PREFIX SIZE DRAWING NUMBER REV
		S D 2256 6
		Scale Sheet 1022

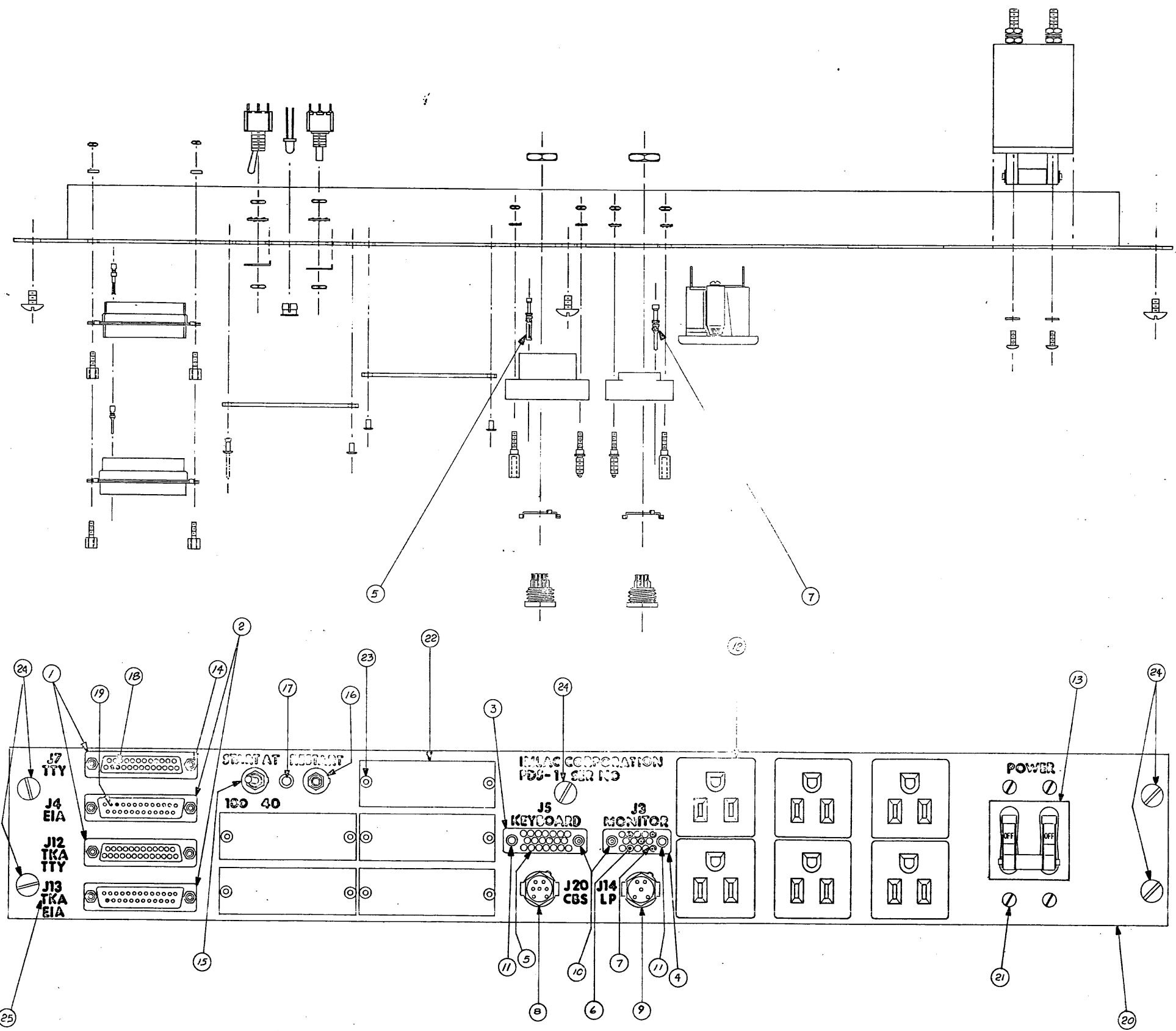
REV.	ECN	DATE	DTM	APP'D
A	-	1-5-71		
B	-	4-6-71	UJF	
D	477	1-2-71	UJF	




NOTE 1. ALL RESISTORS 1/2 W, 5%, OHMS UNLESS OTHERWISE NOTED

BY	DATE	IMLAC CORPORATION		TITLE			
LAYOUT	UJF 18 DEC 70	 388 NEWTON STREET WILMINGTON, MASSACHUSETTS 02154		DEFLECTION AMPLIFIER			
DRAWN	UJF 18 DEC 70			PREFIX	SIZE	DRAWING NUMBER	REV.
CHECKED				S	D	2273	2
APPROVED	UJF 11/14/71			Scale		Sheet	1 of 2
COPIED							
MATERIAL		PROJECT					

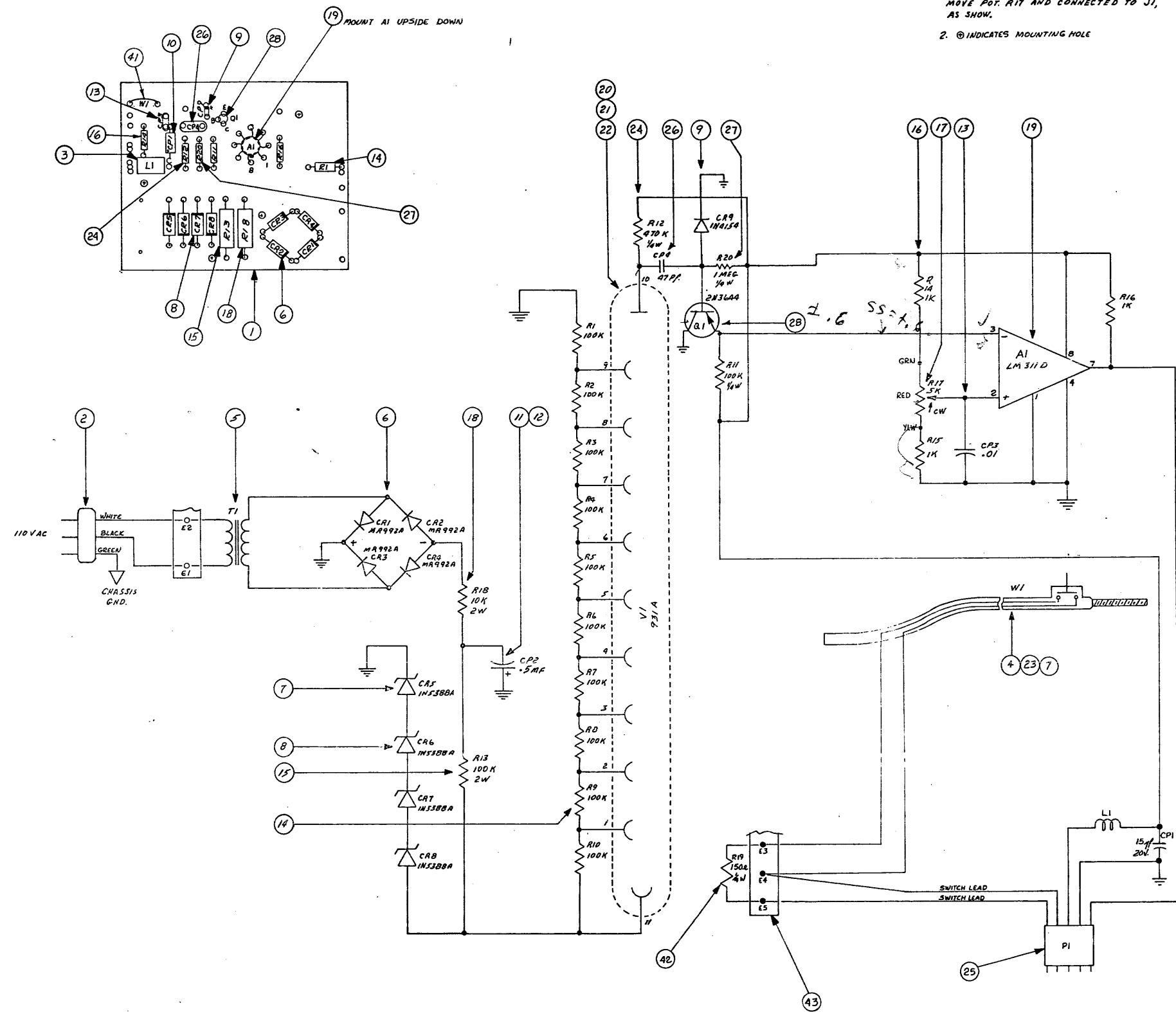
REV.	ECN.	DATE	DETAIN	APPVD.
A	-	13 SEP 71	AJF	



BY		DATE	TITLE			
LAYOUT	AJF	23 AUG 71	 IMLAC CORPORATION 208 NEWTON STREET WALTHAM, MASSACHUSETTS 02154			
DRAWN	AJF	23 AUG 71				
CHECKED						
APPROVED						
ISSUE						
MATERIAL		PROJECT	PREFIX	SIZE	DRAWING NUMBER	REV.
			A	D	2323	1
			Scale		Sheet	192

REV.	ECN	DATE	DFTM	APPD
A	325	11-5-70	J.V.	J.V.
B	334	11-17-70	J.V.	J.V.
C	349	12-16-70	J.V.	J.V.
D	358	1-6-71	J.V.	J.V.
E	409	28APR71	NJF	J.P.B.
F	414	11AUG71	NJF	J.P.B.
G	429	27MAY71	NJF	J.P.B.
H	431	6-4-71	J.V.	J.V.
I	442	6-30-71	NJF	H.G.M.
J		5-5-71	H.G.M.	

NOTE: FOR EXTERNAL SENSITIVITY ADJUSTMENT, MOVE POT. R17 AND CONNECTED TO J1, AS SHOWN.
 2. Ⓢ INDICATES MOUNTING HOLE



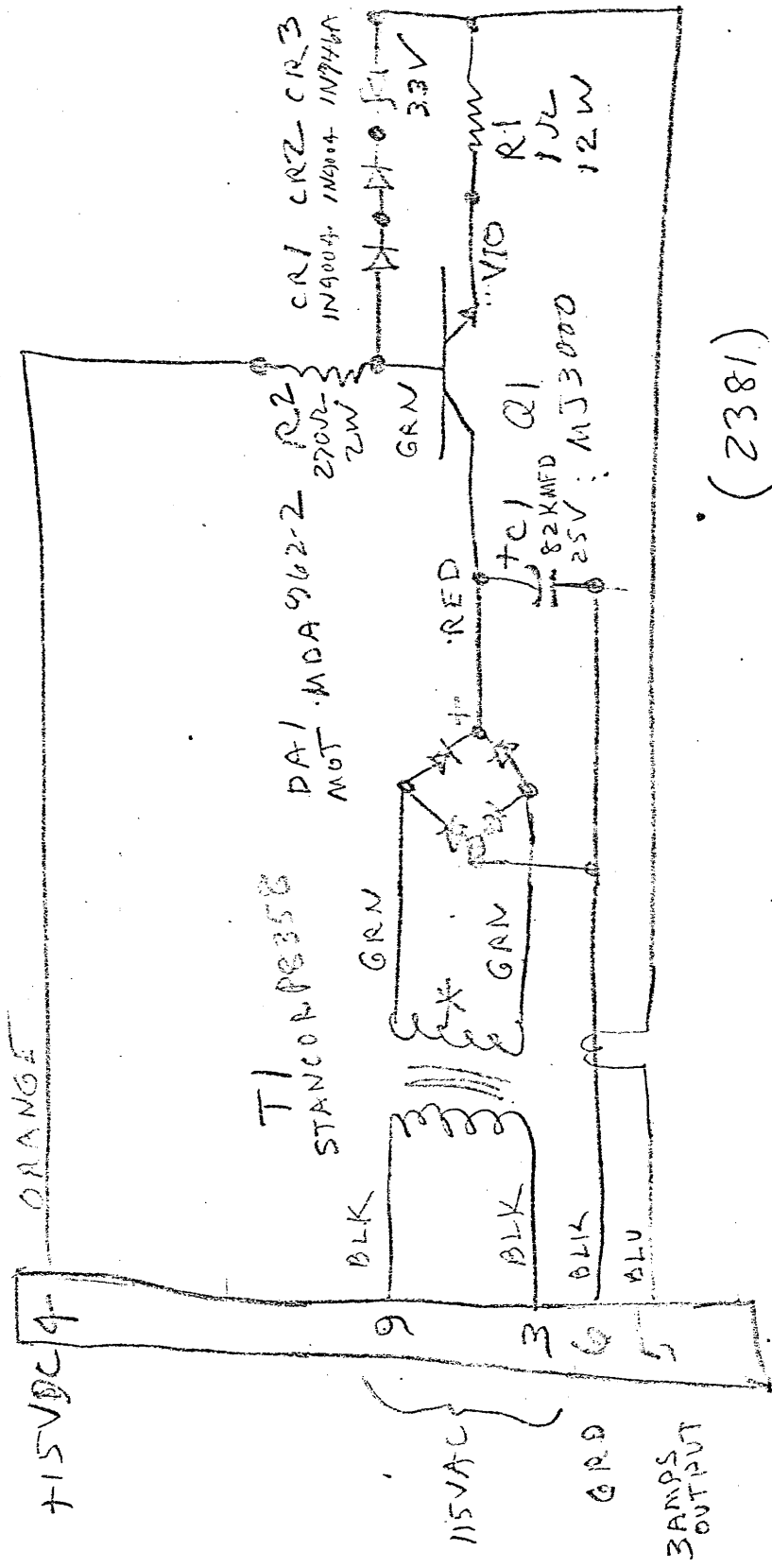
REV.	ECN	DATE	DFTM	APPD	DESCRIPTION	MFR.	MFR. NO.
					5 PIN TERMINAL STRIP	JONES	
					RESISTOR, 150R., 1/4 W	A.B.	
					JUMPER WIRE #22 TEFLON		
					WIRE, BLACK, STRANDED, 4 GA. TYPE 66		
					1/2" STRAIN RELIEF		
					#22 STRANDED WIRE 4 GA. W/FLEX-TUB.		
					1" STANDOFF 6-32 THD. 2 ENDS		
					SCREW, 6-32 x 1/2 W/WASHER		
					WOODSCREW		
					SCREW 4-40 x 1/2 W/WASHER		
					SCREW, 8-32 x 1/2 W/WASH. & NUT		
					SCREW, FLATHEAD, 6-32 x 1/2 W/WASH. & NUT		
					MOUNTING PANEL (EXTERNAL)		
					INSTRUMENT CASE		
					INST. CASE COVER		
					TRANSISTOR		2N3644
					RESISTOR, 1 MEG., 1/4 WATT, 5%	A.B.	RC07
					CAPACITOR, 47 PF.		
					CONNECTOR, PLUG, 5 PINS	AMPHENOL	126-217
					RES. FIXED COMP. 470K, 1/4 W, 5%	A.B.	RC07
					MOUNTING HUB	IMLAC	
					MOUNTING BRACKET FOR TUBE SOCKET		
					TUBE SOCKET, 11 PINS	AMPHENOL	77-MIP-11TH
					PHOTOMULTIPLIER TUBE	ACA	931-A
					VOLTAGE COMPARATOR	INT. SEM. CORR.	LM311D
					RES. FIXED COMP. 10 K, 2 W, 5%	A.B.	AC
					RES. VARIABLE, 5 K, PANEL MOUNT	BOURNS	30521-1-502M
					RES. FIXED COMP. 1 K, 1/4 W, 5%	A.B.	RC07
					RES. FIXED COMP. 100 K, 2 W, 5%	A.B.	AC
					RES. FIXED COMP. 100 K, 1/4 W, 5%	A.B.	RC07
					CAPACITOR, .01 MFD, 25V	SPRAGUE	NY-420
					CAPACITOR HOLDER	SPRAGUE	CP07FAS
					CAPACITOR, .5 MFD, 1500V	SPRAGUE	CP22E104KI
					CAPACITOR, 15 MFD, 20 VDC, 220%	SPRAGUE	CS13BE156K
					DIODE	MOTOROLA	1N4154
					DIODE, ZENER, 200 V, .5 W	MOTOROLA	1N5388A
					BUTTON CAP RED	GREYHILL	30BHV2-5
					RECTIFIER, P.I.X. 2000	MOTOROLA	HR992-A
					TRANSFORMER, 117V, 60 CY	STANCO	PM 8408
					FIBRE OPTICS CABLE, 58L x 1/8" D	DALAN JENNER	
					CHOKE 2 1/2 TURNS	FERROKUBE	VK-200-10/38
					LINE CORD, 8 FT, GROUNDED	BELEN	
					PRINTED CIRCUIT BOARD	IMLAC	

DWG. NO. 2261

LIGHT PEN

LAYOUT	BY	DATE	TITLE
DRAWN	J.V.	10-23-70	 IMLAC CORPORATION 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154
CHECKED	J.V.	10-23-70	
APPROVED			
ISSUE			
COPIED			

PREFIX	SIZE	DRAWING NUMBER	SHEET
S	D	2261	5
MATERIAL		PROJECT	Scale
			Sheet 1 of 2



(2381)

J1 1625-9P
WALDOM

Booster
3 AMP CURRENT SOURCE
REV B

APPLICATION

00	A5080	D5000	
GRP.	NEXT ASSY.	FINRL ASSY.	

Imlac failure

Log

<u>date</u>	<u>description</u>
① 9/71	Light per case loose @ caps - fix, glue
② 10/27/71	Noticed that hard interrupts for K ₀ B, TTY, and 40n sync didn't work - fix, wire back plane not done @ factory (position 329)
③ 10/27/71	coax connector on monitor plug ^{cord} pushed back into its housing - fix, glue
④ 10/71	interface chip on asynchronous serial interface card blew (our fault) however, it was noted that no protection was circuits were present to prevent such a failure (a hard-to-get \$7.10 chip) - suggest putting back-to-back zeners and a fuse or resistor in input lines (EIA and Current inputs)
⑤ 10/71	Cassettes of CBS option are deteriorating. (symbol form, and and debugger are dead) also writing on the tape was found to be very unreliable - suggest disabling external vol. controls and presetting @ factory - also find # 11 - # 11 marks Lab

Imlac failure
log

date:	description
⑥ 10/71	section V-4.20 of programmers supplement states that 40n sync. board interrupt should be wired in and usable on machines with board interrupt capabilities. Ours was not wired, but I was told that this wiring is an option which we didn't order. Which option? We see none on the option price list!
⑦ 10/71	drwg # 928 (329-61) should be connected to (327-10) not (328-10). I question also drwg # 869 (328- 4) check all wires coming from board 326 (drwg art-work #2338) they must be wrong.
⑧ 11/71	Burned bob in center of screen accidentally by starting program @ wrong location. This type of failure shouldn't be allowed to happen. Have way to limit intensity with extra hardware?
⑨ 11/20	Cassette will not write reliably

⑩ 6/27/72

Found wiring error on board 316 "Light pen"
- A1 pin 2 should be A1 pin 3 so that
can get light pen strike ~~without~~ without doing DMS
return.