

DRAWING LIST BY NUMBER

FOR

PDS-1D, SERIAL #251 AND HIGHER

<u>DRAWING NUMBER</u>	<u>TITLE</u>
5100	Block Diagram
2762	Function Location
652	Memory Timing
681	Keyboard Layout
749	High Voltage Power Supply
~772-B	Cycle Control
~798-B	Display Mode Control and Display Instruction Register
~812-B	Display Program Counter, Bits 1-7
~813	Display Program Counter, Bits 8-15
~814-B	Program Counter, Bits 1-7
~815-B	Program Counter, Bits 8-15
~816-B	Memory Address Register, Bits 1-7
~817-B	Memory Address Register, Bits 8-15
~818-B	Memory Buffer Register, Bits 0-7
~819-B	Memory Buffer Register, Bits 8-15
~820-A	Time Pulse Generator & Clock
~821-B	Accumulator & Input Mixer, Bits 0-3
~822-B	Accumulator & Input Mixer, Bits 4-7
~823-B	Accumulator & Input Mixer, Bits 8-11
~824-B	Accumulator & Input Mixer, Bits 12-15
~838	Display Control Card
~840-B	Accumulator Control
~842-B	PC, MB, MA Control
~843-B	Memory Output Buffer
~844	D-A Converter X-Axis
~845-B	Skip & Link
+846-B	Read Only Memory
~847-B	IOT Control
~848-B	Run Control
~850	Display Accumulator, X
~851	Display Accumulator, Y
~852	D-A Converter Y-Axis
853	Long Vector Controls

S/N 277

DRAWING NUMBERTITLE

854		Long Vector Controls
855-B		Cable Card Connections, 308 & 320
856-B		Inst. Reg. & Decoder
857-D		Paper Tape Reader Interface
858-B		8 Level Push Register
859		Programmable Addressable Clock
860		Synchronous Serial Receiver
861		Synchronous Serial Transmitter
862-B		Light Pen Card
863-B		I/O Connector
869-B		Asynchronous Serial Transmitter
870		Asynchronous Serial Receiver
872-B		Miscellaneous Control
884	SH 1	DCU Data Registers
884	SH 2	DCU Data Registers
885		DCU Cable Card
886		DCU Address Registers
887		DCU Clock, Sector, Word Logic
889		DCU Drive Interface Signals
890	SH 1	Timing Diagram
890-B	SH 2	Timing Diagram
890	SH 3	Timing Diagram
890-B	SH 4	Timing Diagram
893		DCU Memory Control, Bit Control
896		DCU Status Logic
897		Serial Bit Loader
898-B		TKA Transmit
899		TKA Receive
900		Suppressed Grid Circuits

DRAWING NUMBERTITLE

915		XYR Circuits
916		DMA Channel Control
929		CD Keyboard
930		HCY Control
935		Facit Punch Interface
944	SH 1	BRPE Punch Interface
944	SH 2	BRPE Punch Interface
944	SH 3	BRPE Punch Interface
953		ASG-1
954		TBI-1
956		PSA-1
962		Console Switch Card
963		Console Lamp Card
964		HCY-1 Dynamic Brightness
971		Gray Scale Circuits
974		DMA Address Register and Counter
975-B		Interrupts and Light Pen Adapter for MDS-2
982		Paper Tape Reader Cable Card
997-B		Display Memory Buffer, Incrm. Cont. Reg., 40 Cycle Sync. Display Incrm. Look-Ahead
998		Video Amplifier and Gray Scale DAC Circuit
1-000		Display Scissoring
1-005		GMI-1 Control
1-006		JST-1 & TBI-1 Control
1-012		Console Lamp Card
1-018		HDC-1
1-022		Console Switch Card
1-028		JST-1 & TBI-1 Counter
1-030	SH 1	Power Supply, 18 AMP
1-030	SH 2	Power Supply, 18 AMP
1-031		BEL-1

DRAWING NUMBER

TITLE

1-040		GMI-1 Counter
1-048		MCI-1
1-051		Line Printer Interface
1-054		Plotter Interface
1-078		50 HZ Power Source
1-081	SH 1	2700 Console
1-081	SH 2	2700 Console
1-082		FNT-1 Control
1-096		Memory Control and Cable
1-097		IMLAC keyboard
1-101		2657 Monitor
1-102	8 SH	Memory
1-209		Cherry Keyboard
1-210		Data Electronics Keyboard
2261	SH 1	Light Pen
2273	SH 1	Deflection Amplifier
2338		COMM SPEED SELECT <i>Size D drawing</i>
1-126		HSI-1 <i>HSI-1</i> " " "
1-120		HSI-1 <i>HSI-1</i> " " "
2762		Function Location " " "
2-078		Console Replace Card " " "

DRAWING LIST BY SUBJECT

GENERAL

Block Diagram	5100
Function Location	2605
Timing Diagram	890 SH 1
Timing Diagram	890-B SH 2
Timing Diagram	890 SH 3
Timing Diagram	890-B SH 4

CENTRAL PROCESSING UNIT

Accumulator and Mixer	821-B, 822-B, 823-B, 824-B
Accumulator Control	840-B
Console Connections	855-B
Cycle Control	772-B
Input-Output Timing	847-B
Instruction Register and Decoder	856-B
Interrupts	975-B
Memory Address Register	816-B, 817-B
Memory Buffer Register	818-B, 819-B
Miscellaneous Control	872-B
PC, MB, MA Control	842-B
Program Counter	814-B, 815-B
Run Control	848-B
Skip and Link	845-B
Time Pulse Gen and Clock	820-A

MEMORY

Memory Control	1-096
Memory Cable	1-102 (8 SH's)

DISPLAY

Digital to Analog Converters	844, 852
Display Accumulators	850, 851
Display Control	838
DMB, IC, 40 Cycle Sync, Deil	997-B
DMC and DIR	798-B
Display Program Counter	812-B, 813

MONITOR

Deflection Amplifier	2273	SH 1
High Voltage Power Supply	749	
Video Ampl & Gray Scale for 2601 Monitor	998	
Monitor, 2657 & 2717	1-101	

INPUT-OUTPUT

Asynchronous Input	870	
Asynchronous Output	869-B	
Keyboard Layout	681	
CD Keyboard	929	
IMLAC Keyboard	1-097	
Cherry Keyboard	1-209	
Data Electronics Keyboard	1-210	

POWER SUPPLY

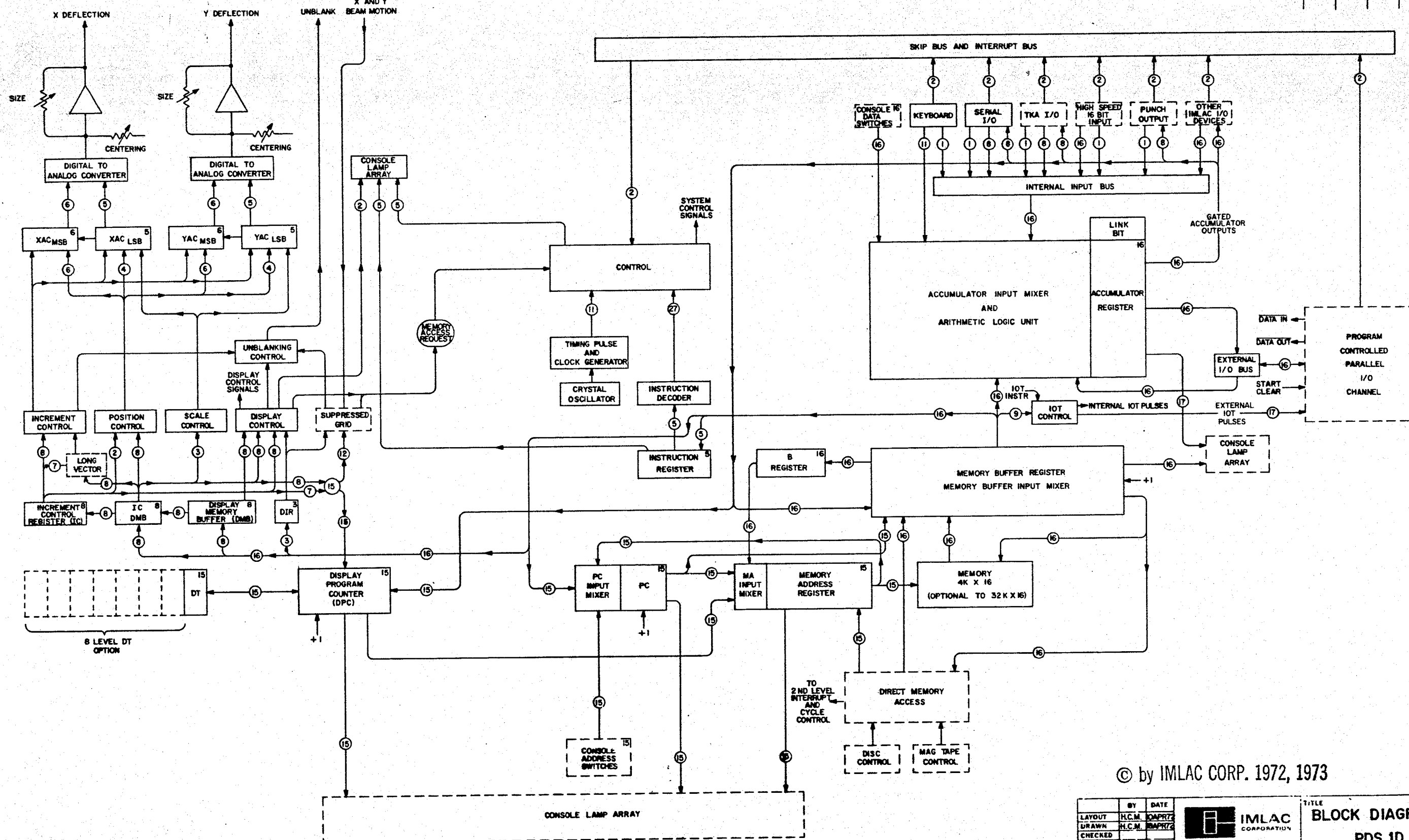
Power Supply, 18 amp	1-030	SH 1, 2
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OPTION LOGICS

<u>MNEMONIC</u>	<u>TITLE</u>	<u>DRAWING NO.</u>
ACI-1	Programmable Addressable Clock	859
ASG-1	Auto-Incrementing Sup. Grid	953
BEL-1	Bell Alarm	1-031
CBS-1	Serial Bit Loader	897
CON-1	Console Switch Card	962
CON-1	Console Lamp Card	963
CON-1	Console Lamp Card	1-012
CON-1	Console Switch Card	1-022
CON-1	2700 Console	1-081 Sh 1
CON-1	2700 Console	1-081 Sh 2
DIS-1	Display Scissoring	1-000
DMA-1	DMA Channel Control	916
DSC-1	DCU Data Registers	884 Sh 1
DSC-1	DCU Data Registers	884 Sh 2
DSC-1	DCU Cable Card	885
DSC-1	DCU Address Registers	886
DSC-1	DCU Clock, Sector, Word Logic	887
DSC-1	DCU Drive Interface Signals	889
DSC-1	DCU Memory Control, Bit Control	893
DSC-1	DCU Status Logic	896
FNT-1	Function Keyboard, 16 Keys	1-082
GMI-1	Graph Mouse Interface	1-005
GMI-1	Graphic Mouse Counter	1-040
HCY-1	Hard Copy Dynamic Brightness	964
HCY-1	HCY Control	930
HDC-1	Half Duplex Logic	1-018
IEI-1	I/O Connector	863-B
JST-1	Joystick Interface	1-006
JST-1	Joystick Interface	1-028
LPA-1	Light Pen Card	862-B
LPA-1	Light Pen	2261 Sh 1
LVH-1	Long Vector Controls	853
LVH-1	Long Vector Controls	854
MCI-1	Monitor Control Interface	1-048
MDS-1	8 Level Push Register	858-B
MTU-1	DMA Address Register and Counter	974
PL0-1	Plotter Interface	1-054
PRT-1	Line Printer Interface	1-051
PSA-1	Programmable Speed, Asynchronous	956
PTP-1	Facit Punch Interface	935
PTP-1	BRPE Punch Interface	944 Sh 1

<u>MNEMONIC</u>	<u>TITLE</u>	<u>DRAWING NO.</u>
PTP-1	BRPE Punch Interface	944 Sh 2
PTP-1	BRPE Punch Interface	944 Sh 3
PTR-1	Paper Tape Reader Interface	857-D
PTR-1	Paper Tape Reader Cable Card	982
ROM	Read Only Memory	846-B
SGR-1	Suppressed Grid Circuits	900
SYN-1,2	Synchronous Serial Receiver	860
SYN-1,2	Synchronous Serial Transmitter	861
TBI-1	Tablet Interface	954
TBL-1	Trackball Interface	1-006
TBL-1	Trackball Interface	1-028
TKA-1	TKA Transmit	898-B
TKA-1	TKA Receive	899
VIC-1	Gray Scale Circuits	971
XYR-1	XYR Circuits	915
50HZ	50 HZ Supply	1-078

REV	ECN	DATE	DFTMN	APRV



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LAYOUT	BY	DATE		TITLE BLOCK DIAGRAM PDS 1D
DRAWN	H.C.M.	04PRT7		
CHECKED	H.C.M.	04PRT7	200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	PR: SIZE: DRAWING NUMBER: REV:
APPROVED			PROJECT	A D 5100
ISSUE				Scale Sheet
COPIED				
MATERIAL				

REV	ECN	DATE	DFTM	APPV

POWER SUPPLY, INPUT SECTION 16A - 2369									
100			200			300			
32			MEMORY CABLE	20-22 68-70	(213) (1-096)	TKA SEND	18-20 58-60	(2318) (898-B)	32
31			RUN CONTROL	10-12 66-68	(2263-01) (848-B)	TKA RECEIVE	18-20 60-62	(2319) (898)	31
30			MISC CONTROL	18-20 56-68	(2317) (872)	TKA SPEED	20-22 70-72	(2342)	30
29						MDS - 2, INTERRUPTS	22-24 54-56	(2356-04) (975-B)	29
28						ASYNC SEND	18-20 58-60	(2318) (869-B)	28
27			MEMORY CONTROL	16-18 66-68	(2691) (1-096)	ASYNC REC	18-20 60-62	(2319) (870)	27
26			INST. REF. & DECODER	16-18 66-68	(2310) (856-B)	ASYNC HD DAUD - B-11	20-22 70-72	(2342)	26
25						CBS - 1	16-18 66-68	(2289) (897)	25
24									24
23			ACC CONTROL	20-22 60-62	(2303-01) (840-B)				23
22			ACC & ACI 12-15	14-16 54-56	(2287) (824-B)	PTR INTERFACE	16-18 68-70	(2311) (857-D)	22
21			ACC & ACI 8-11	14-16 54-56	(2287) (825-B)	PTR CABLE	16-18 62-64	(2583) (882)	21
20			ACC & ACI 4-7	14-16 54-56	(2287) (822-B)	CABLE, CONSOLE SWITCHES & MISC LAMP DRIVE	16-18 64-66	(855-B)	20
19			ACC & ACI 0-3	14-16 54-56	(2287) (821-B)	IEI - 1	16-18 62-64	(2586) (863-B)	19
18			SRIP & LNK	14-16 72-74	(2305) (845-B)	IOT CARD	12-14 58-60	(2272) (847-B)	18
17									17
16						LPA - 1	16-18 70-72	(2312) (862-B)	16
15			TP6 & CLOCK	10-12 72-74	(2265-01) (820-B)				15
14	MEMORY OUTPUT BUFFER	14-16 64-66	(2285) (843-B)	CYCLE CONTROL	12-14 64-68	(2278) (772-B)			14
13	READ ONLY MEMORY	30-32 -----	(2306) (846-B)	MB 8-15	12-14 70-72	(2285-00) or (2285-01) (819-B)			13
12				MB 0-7	12-14 70-70	(2285-00) or (2285-01) (818-B)			12
11									11
10									10
9				MA 8-15	12-14 70-72	(2285-00) or (2285-01) (817-B)			9
8				MA 1-7	12-14 70-72	(2285-00) or (2285-01) (816-B)	CABLE, LAMP DRIVE	16-18 64-66	(855-B)
7				B, MB, MA, PC CONTROL MA AUTO INDEX DET	14-16 68-70	(2302-01) (842-B)			7
6				PC 8-15	12-14 70-72	(2285-00) (815-B)			6
5	Y D/A	14-16 60-62	(2293) (852)	PC 1-7	12-14 70-72	(2285-00) (814-B)	3GR - 1	20-22 64-66	(2336) (900)
4	Y DISPLAY ACC.	16-18 58-60	(2308) (851)	DPC 8-15	12-14 70-72	(2285-00) or (2285-01) (813)	8 LEVEL DT	12-14 68-70	(2279) (858-B)
3	DMS & IC RES & 40 SYNC	12-14 64-66	(2275-01) (897-B)	DPC 1-7	12-14 70-72	(2285-00) or (2285-01) (812-B)	L.V. REGISTERS	12-14 56-58	(2270) (854)
2	X DISPLAY ACC.	14-18 58-60	(2309) (850)	DMC & DIR	12-14 72-74	(2286-02) (798-B)	L.V. STATE CONTROL	12-14 54-56	(2269) (853)
1	X D/A	14-16 60-62	(2293) (844)	DISPLAY CONTROL	14-16 62-64	(2292) (838)	L.V. TIMING CONTROL	12-14 58-60	(2271) (853)
0									0


use size D function location chart

SPECIAL DRAWINGS		
OPTION	DWG. No.	REMARKS

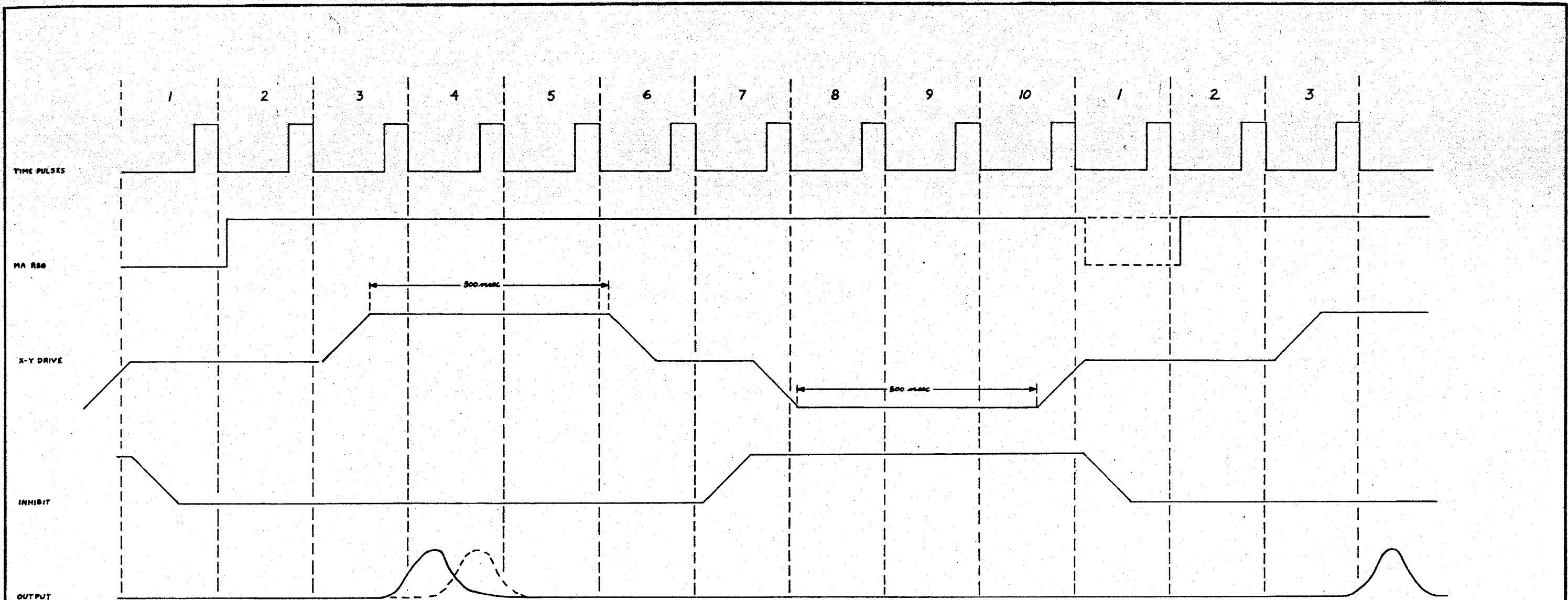
POWER SUPPLY, REGULATOR SECTION 16 AMP 2370 CHASSIS, 2259-1 REGULATOR CARD

(VIEW FROM WIRING SIDE)

- NOTES: 1.-THE SET OF NUMBERS BEFORE THE PARENTHESIS ARE THE KEYING SLOTS FOR THE CARD.
 2.-THE FIRST NUMBER IN PARENTHESIS IS THE ASSEMBLY DRAWING NUMBER OF THE CARD.
 3.-THE SECOND NUMBER IS THE NUMBER OF THE LOGIC DRAWING, AND SHOWS THE SCHEMATIC OF THE CARD AND THE BACKPLANE WIRING.


LAYOUT	BY	DATE	 IMLAC CORPORATION 150 A. STREET NEW ENGLAND INDUSTRIAL CENTER NEEDHAM, MASSACHUSETTS 02194	TITLE	SERIAL NO.
DRAWN	A.E.A.	5/3/73		STANDARD	
CHECKED	A.E.A.	5/3/73		FUNCTION	LOCATION
APPROVED					
ISSUE				PREFIX	SIZE
COPIED				D	2762-
MATERIAL				DRAWING NUMBER	
				Scale	Sheet

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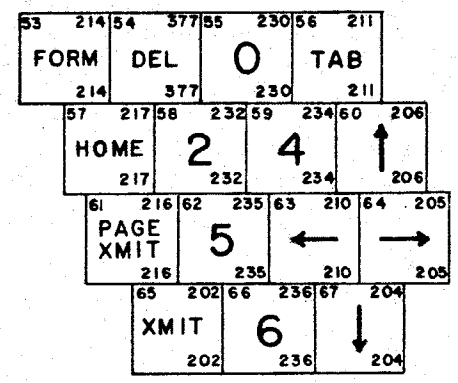
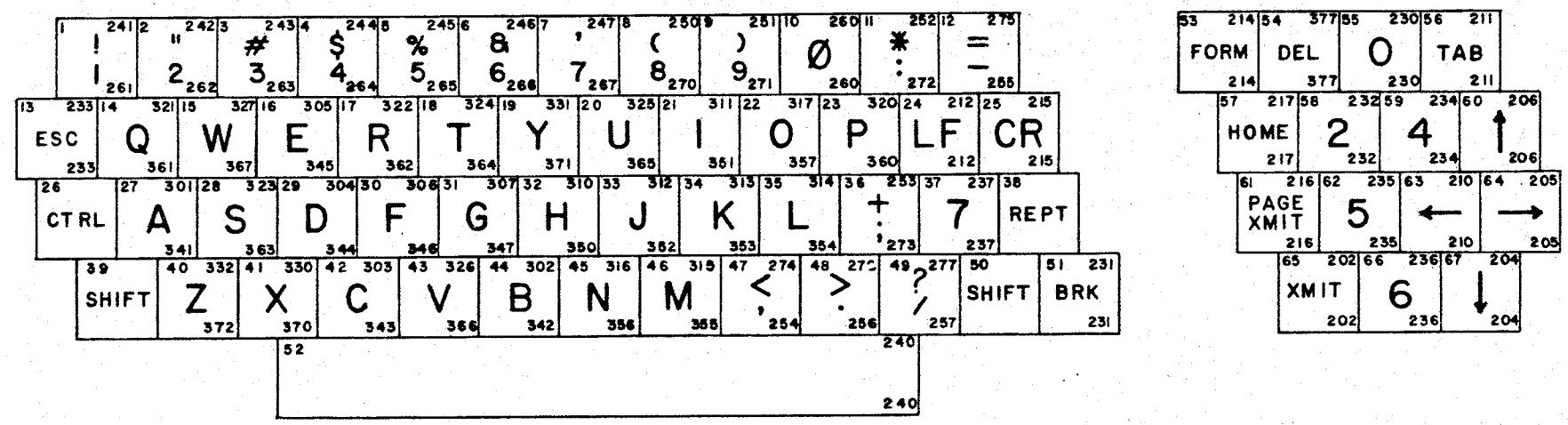
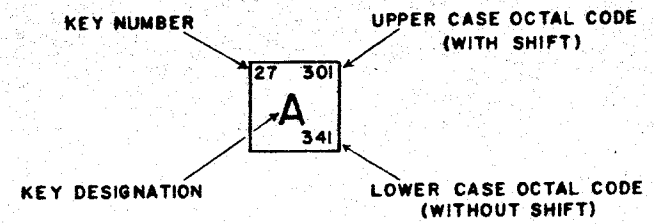


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3

BY		DATE	 IMLAC CORPORATION 234 NEWTON STREET WELTHAM, MASSACHUSETTS 02154	TITLE	
LAYOUT	NJF	8-28-65		MEMORY TIMING	
DRAWN	NJF	8-28-65	PREFIX		SIZE
CHECKED			DRAWING NUMBER		REV.
APPROVED			L		652
ISSUE			Scale		Sheet
COPIES					
MATERIAL	PROJECT				

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
B		REDRAWN (WAS C SIZE)	R.T.M. 11-20-72	36



- NOTES: CHARACTER HEIGHTS ARE IN INCHES.
- ALL CHARACTERS ON A KEY WITH A SINGLE LINE:
 - if one or two characters, .250
 - if three or more characters, .125
 - ALL CHARACTERS ON A KEY WITH TWO LINES:
 - if one or two per line, .187
 - if three or more per line, .125

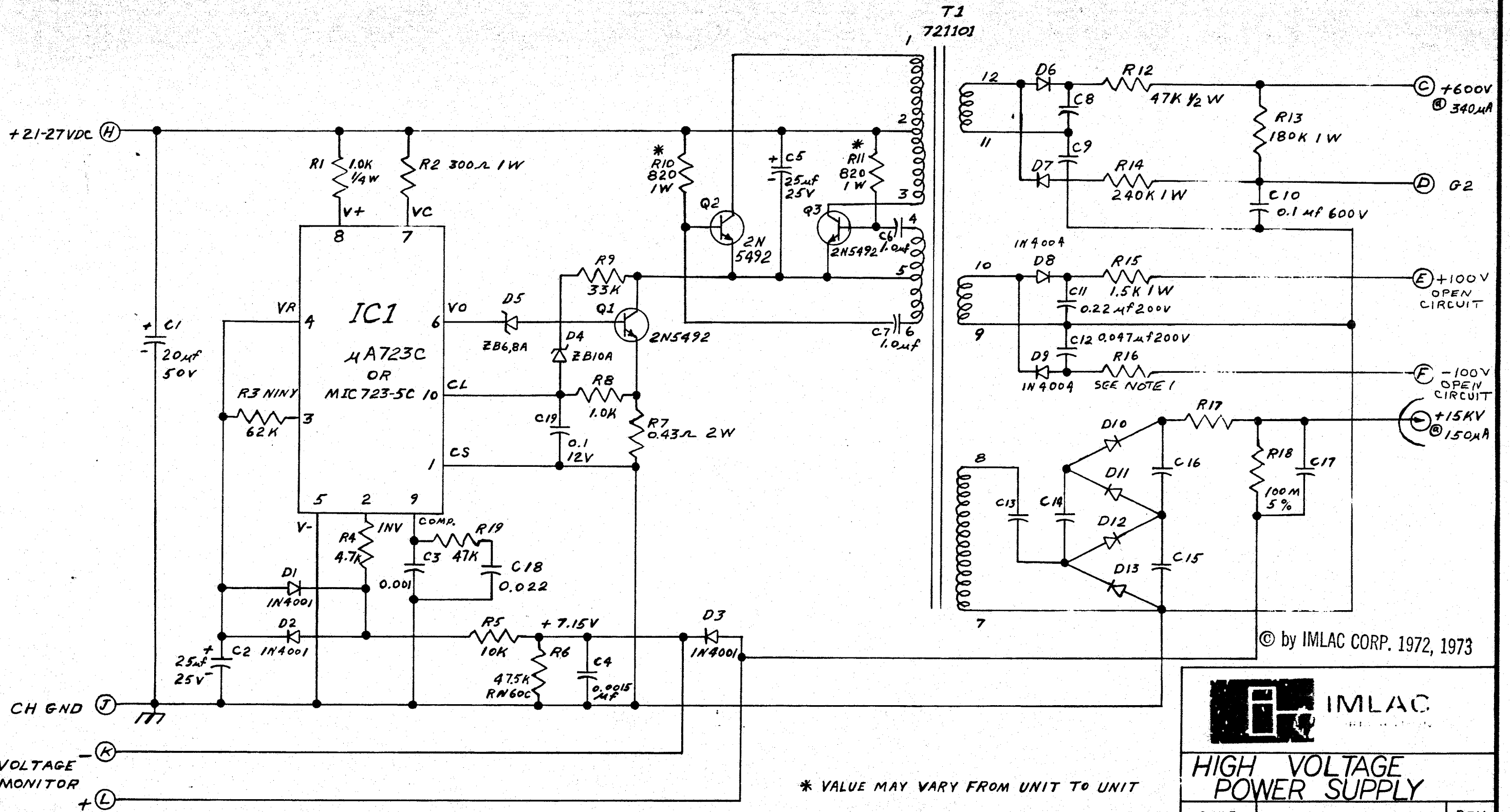
IMLAC PART NUMBER 15-12849 IS A SET OF 67 KEYS SPECIFIED HERE ON.

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Q3	Q7	Q4	Q3	Q4	Q3	Q2	Q1	Q0	FIND NO	SYM	PART NUMBER	DESCRIPTION	MANUFACTURER	MANUFACTURER'S NUMBER
QUANTITY REQUIRED												BILL OF MATERIALS		
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES												DRAFTSMAN RALPH MURPHY		
TOLERANCES												DATE 11-22-72		
ANGLES												CHECKED		
DECIMALS X.X												ENGINEER		
X.X X.X												ENGINEERING APPROVAL		
X.X X.X												CONTRACT NUMBER		
DO NOT SCALE DRAWING												PROJECT NUMBER		
MATERIAL												TITLE		
FINISH												KEYBOARD LAYOUT		
PART ASSEMBLY												PART CODE IDENT NO		
APPLICATION												SIZE D		
												DRAWING NUMBER 681		
												REV		
												SCALE		
												SHEET 01		

NOTE 1. R16 MAY BE 5.6K, 1/2W OR 2.2K, 1W FOR USE IN 2298 OR CONRAC MONITORS.
 R16 MUST BE 2.2K, 1W // 6800HM, 2W FOR USE IN 2601 AND LATER MONITORS.

E 16 MAY 72 RDD
 F 29 NOV 72 R.T.M.



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HIGH VOLTAGE
 POWER SUPPLY

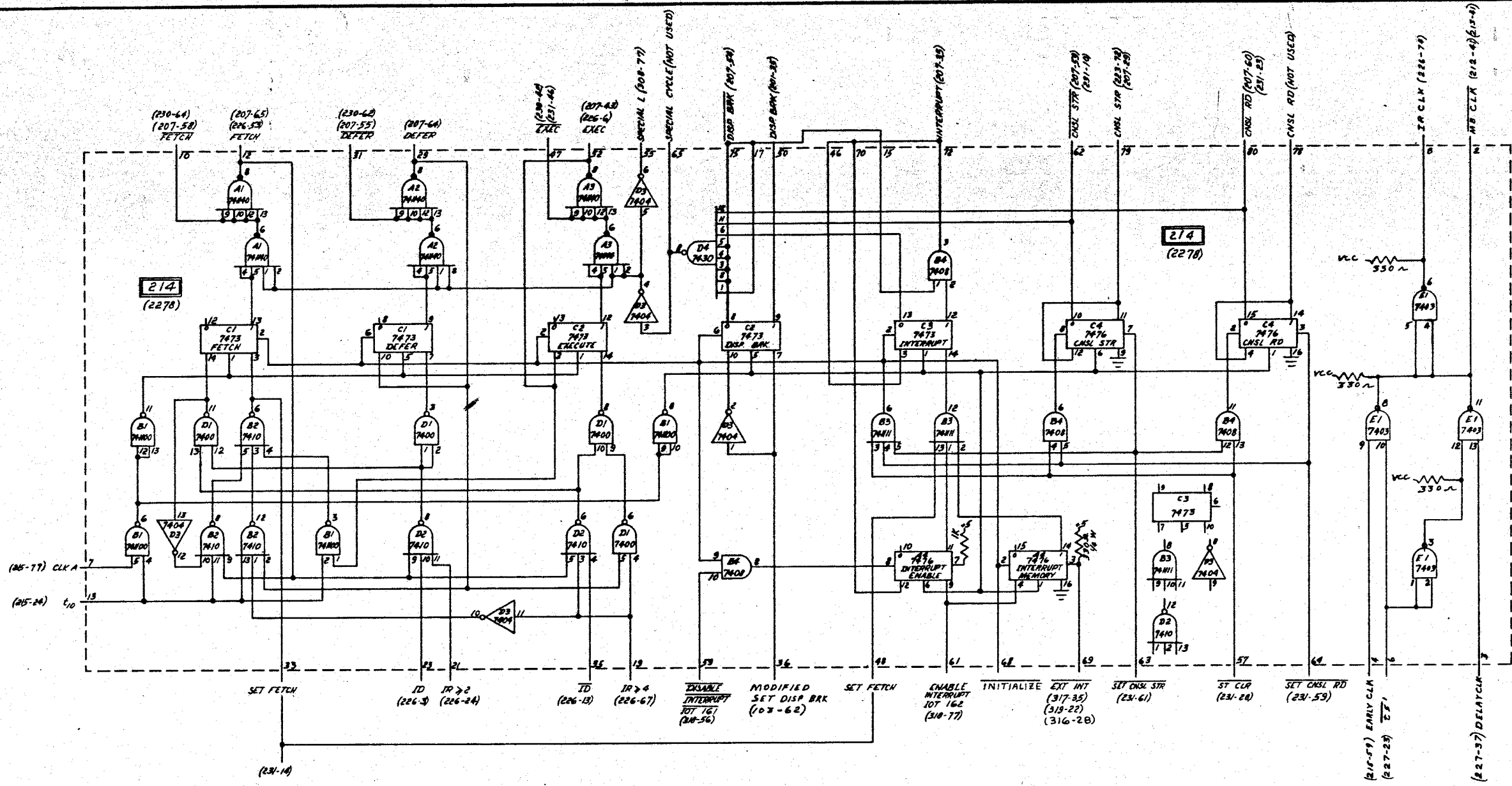
DATE 21OCT 70	749	REV F
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* VALUE MAY VARY FROM UNIT TO UNIT

NOTE: DWG WAS WALDEN B1119

CH GND (J)
 VOLTAGE MONITOR (K)
 (L)

REV	ECN	DATE	DETMN	APPV
1		10 Mar 71	H.C.M.	C.B.R.
2		17 Mar 71	H.C.M.	C.B.R.
3		22 Mar 71	H.C.M.	C.B.R.
4		23 Mar 71	H.C.M.	C.B.R.
5		25 Mar 71	H.C.M.	C.B.R.
6		1 Apr 71	H.C.M.	C.B.R.
7		1 Apr 71	H.C.M.	C.B.R.
8		20 Apr 71	H.C.M.	C.B.R.
9		7 Jun 71	H.C.M.	C.B.R.
10		22 Jun 71	H.C.M.	C.B.R.
11		12 Jul 71	H.C.M.	C.B.R.
12		13 Jun 73	H.C.M.	C.B.R.



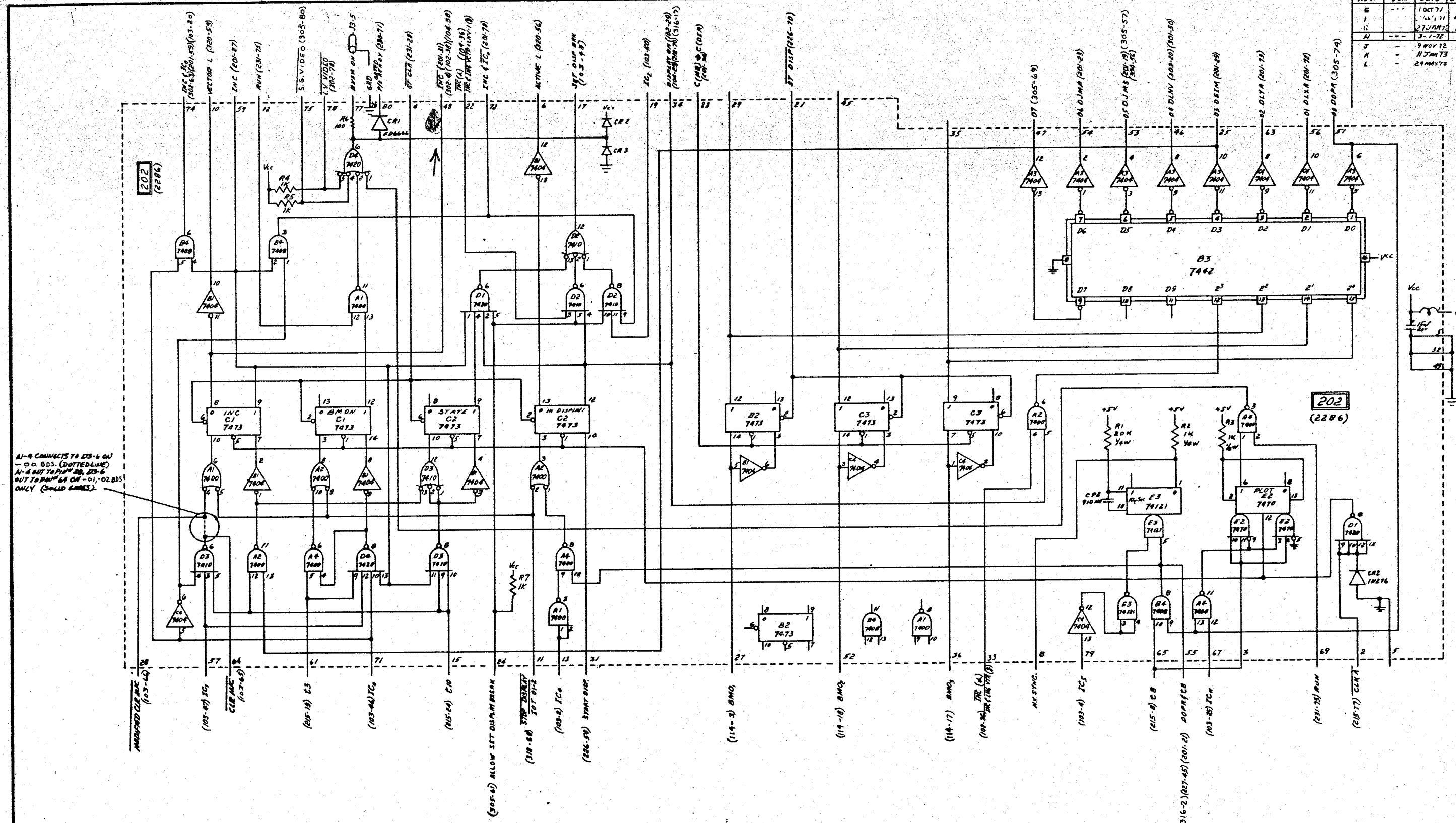
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LAYOUT	BY	DATE
DRAWN	A.C.M.	29 Mar 73
CHECKED	P.C.M.	29 Mar 73
APPROVED		
ISSUE		
COPIED		
MATERIAL		

IMLAC
CORPORATION
288 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

TITLE			
CYCLE CONTROL			
PREFIX	SIZE	DRAWING NUMBER	REV
L	D	772-B	M
PROJECT			
PROD			

REV.	ECN	DATE	BY	APP'D
6		10/27/71	CB	KPB
1		11/12/71	AJF	JPP
2		2/22/72	RTM	MA
3		3-1-72	J.V.	J.V.
4		9/24/72	RTM	RTM
5		11/24/73	RTM	RTM
7		2/24/77	RTM	RTM



A1-A4 CONNECTS TO DS-6 AND
 -00 BDS. (DOTTED LINE)
 A1-A4 OUT TO PIN# 20, 22, 6
 OUT TO PIN# 01, 02, 03
 ONLY (SOLID LINES).

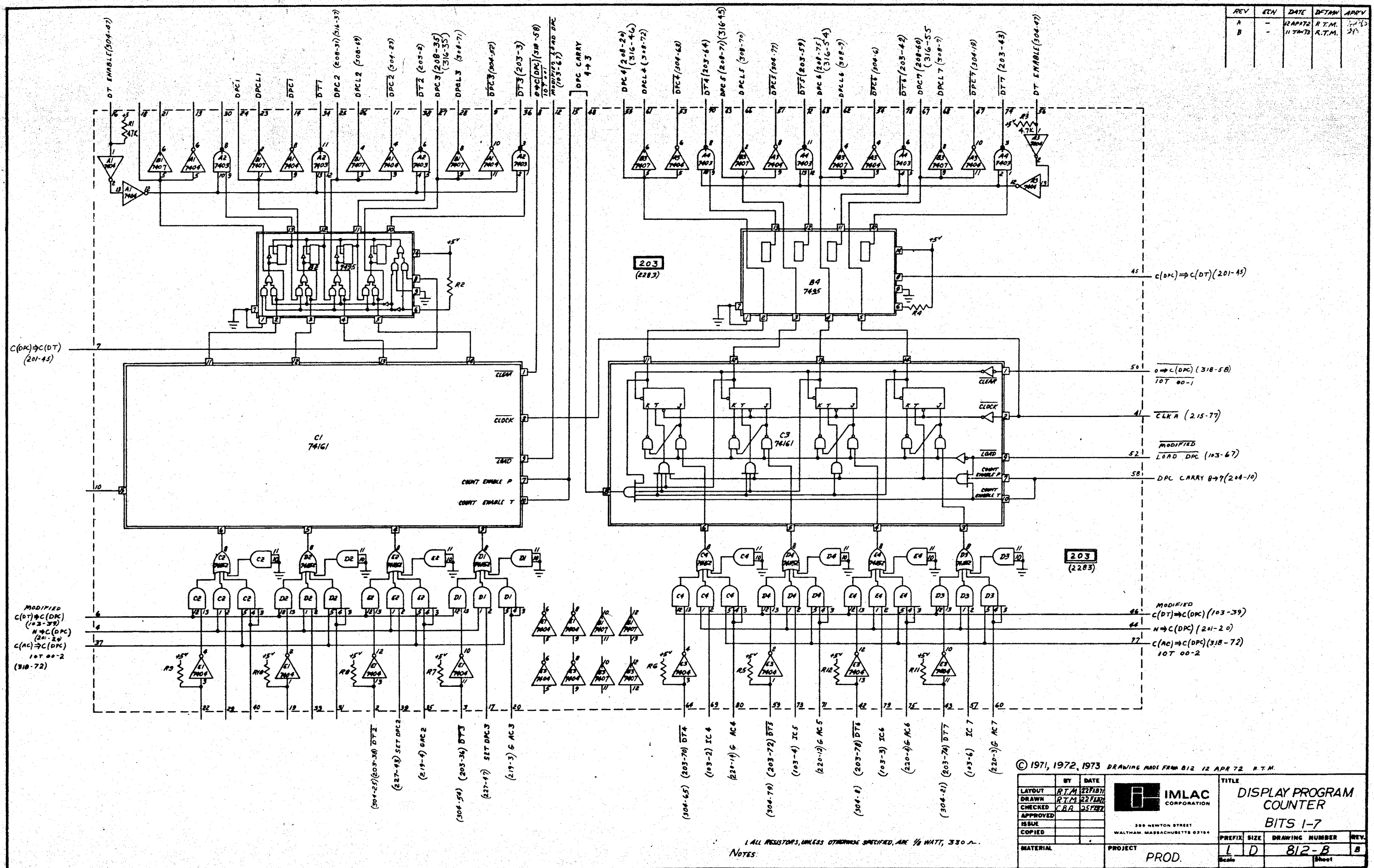
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	BY	DATE
LAYOUT	J.V.	2-4-71
DRAWN	J.V.	2-4-71
CHECKED		
APPROVED		
ISSUE		
COPIED		

IMLAC CORPORATION
 228 NEWTON STREET
 LYNN, MASSACHUSETTS 02124

TITLE		DRAWING NUMBER		REV.
DISPLAY MODE CONTROL & DISPLAY INSTRUCTION REG		798-B		L
PREFIX	SIZE	DRAWING NUMBER	REV.	
L	D	798-B	L	
PROJECT		Scale		
PROD		Sheet		

REV	ECN	DATE	BY/TM	APPV
A	-	12 APR 72	R.T.M.	J.P.S.
B	-	11 JAN 73	R.T.M.	J.P.S.



C(DP) → C(DT) (201-45)

MODIFIED
C(DT) → C(DP) (103-39)
N → C(DP) (201-20)
C(AC) → C(DP) (318-72)
10T 00-2
(318-72)

45 C(DP) → C(DT) (201-45)

50 0 → C(DP) (318-58)
10T 00-1

41 CLK A (215-77)

52 MODIFIED
LOAD DPC (103-67)

58 DPC CARRY 8 → 7 (204-10)

46 MODIFIED
C(DT) → C(DP) (103-39)
N → C(DP) (201-20)
C(AC) → C(DP) (318-72)
10T 00-2

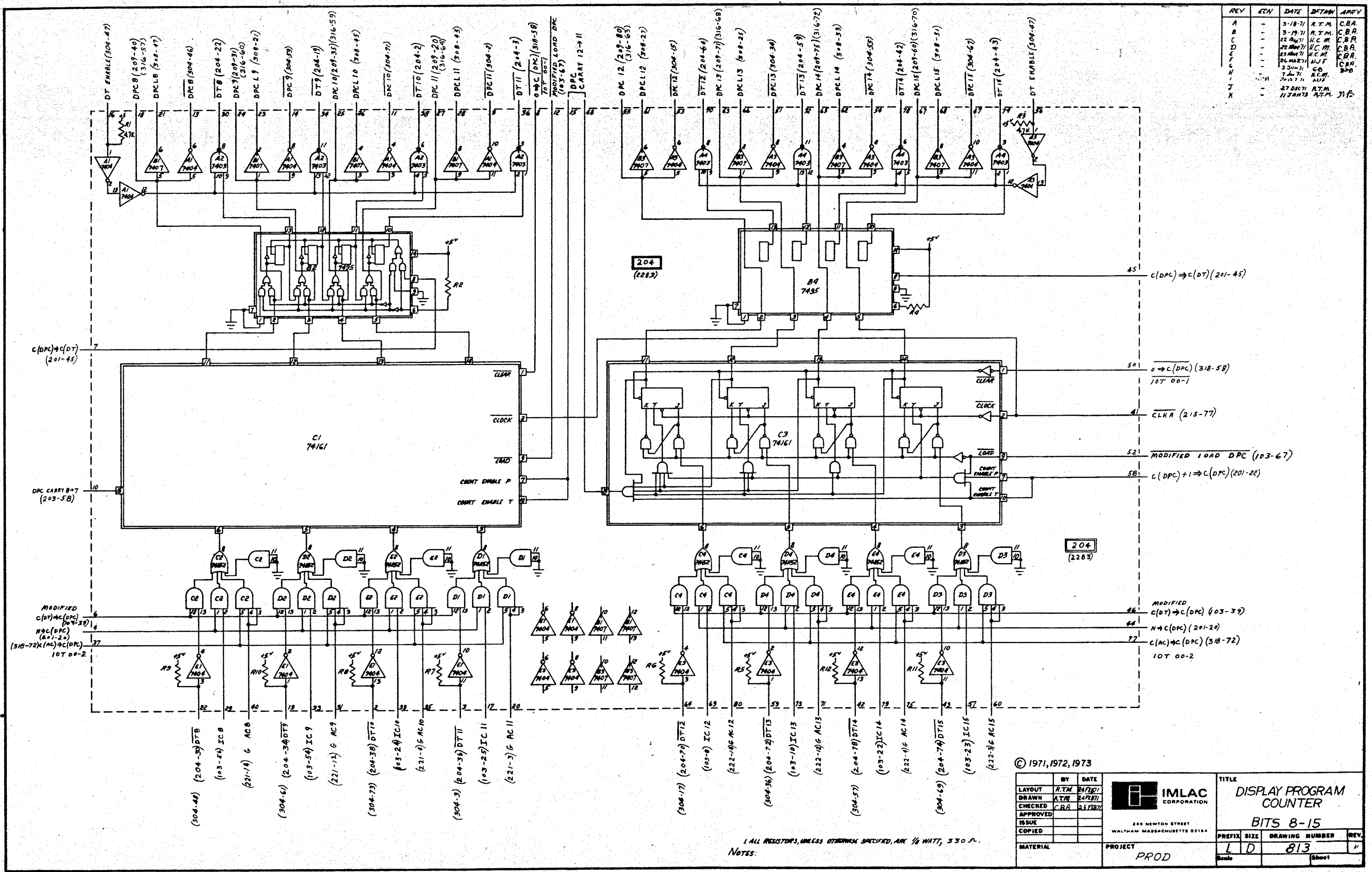
© 1971, 1972, 1973 DRAWING MADE FROM B12 12 APR 72 R.T.M.

BY	DATE	 280 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE
LAYOUT	R.T.M. 22 FEB 72		DISPLAY PROGRAM COUNTER
DRAWN	R.T.M. 22 FEB 72		BITS 1-7
CHECKED	C.B.R. 25 FEB 72		PREFIX SIZE
APPROVED			DRAWING NUMBER
ISSUE		Scale	REV.
COPIED			
MATERIAL		PROJECT	
		PROD.	

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

NOTES:

REV	EDN	DATE	BY	APPV
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	-	22 MAR 71	H.C.M.	C.B.A.
F	-	23 MAR 71	H.C.M.	C.B.A.
G	-	30 MAR 71	H.C.M.	C.B.A.
H	-	7 JUL 71	GG	H.C.M.
I	-	7 JUL 71	AUX	H.C.M.
J	-	27 DEC 71	R.T.M.	J.F.
K	-	11 JAN 72	R.T.M.	J.F.



C(DPC) → C(DT) (201-45)

DPC CARRY 8-7 (203-58)

MODIFIED C(DT) → C(DPC) (203-39)
 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)

MODIFIED LOAD DPC (103-67)

C(DPC) + 1 → C(DPC) (201-22)

MODIFIED C(DT) → C(DPC) (103-39)

N → C(DPC) (201-20)

C(AC) → C(DPC) (318-72)
 10T 00-2

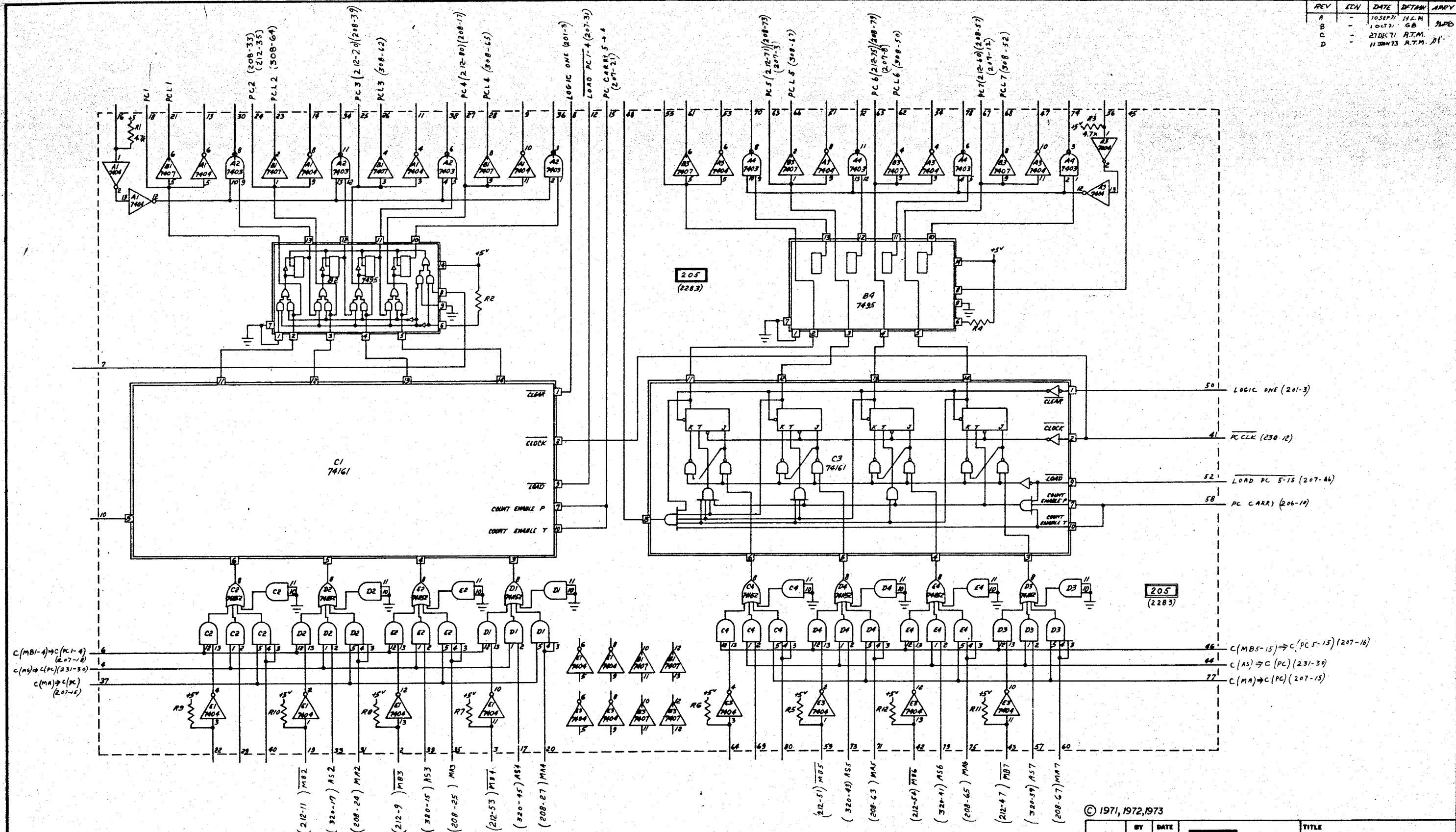
© 1971, 1972, 1973

BY	DATE
LAYOUT	R.T.M. 24 FEB 71
DRAWN	R.T.M. 24 FEB 71
CHECKED	C.B.A. 25 FEB 71
APPROVED	
ISSUE	
COPIED	
MATERIAL	

TITLE		REV	
DISPLAY PROGRAM COUNTER		1	
BITS 8-15		1	
PREFIX	SIZE	DRAWING NUMBER	REV
L D		813	1
Scale			Sheet

1 ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT, 530 Ω.
 NOTES:

REV	EDA	DATE	BY	APPV
A	-	10 SEP 71	H.C.M.	S.P.D.
B	-	1 OCT 71	G.B.	
C	-	27 DEC 71	R.T.M.	
D	-	11 JAN 73	A.T.M.	



C(MB1-4) → C(PC1-4) (207-18)
 C(M5) → C(PC231-30)
 C(MA) → C(PC) (207-15)

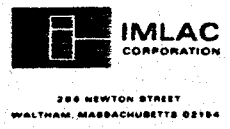
50 LOGIC ONE (201-3)
 41 PC CLK (230-12)
 52 LOAD PL 5-15 (207-46)
 58 PC CARRY (206-10)

66 C(MB5-15) → C(PC5-15) (207-16)
 64 C(M5) → C(PC) (231-30)
 77 C(MA) → C(PC) (207-15)

(212-11) MB1
 (320-17) AS2
 (208-24) MB2
 (212-9) MB3
 (320-15) AS3
 (208-25) MB3
 (212-53) MB4
 (320-45) AS4
 (208-27) MB4
 (212-51) MB5
 (320-43) AS5
 (208-43) MB5
 (212-54) MB6
 (320-41) AS6
 (208-65) MB6
 (212-47) MB7
 (320-39) AS7
 (208-67) MB7

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LAYOUT	BY	DATE
DRAWN	R.T.M.	24 FEB 72
CHECKED	C.B.A.	24 FEB 72
APPROVED		
ISSUE		
COPIED		
MATERIAL		

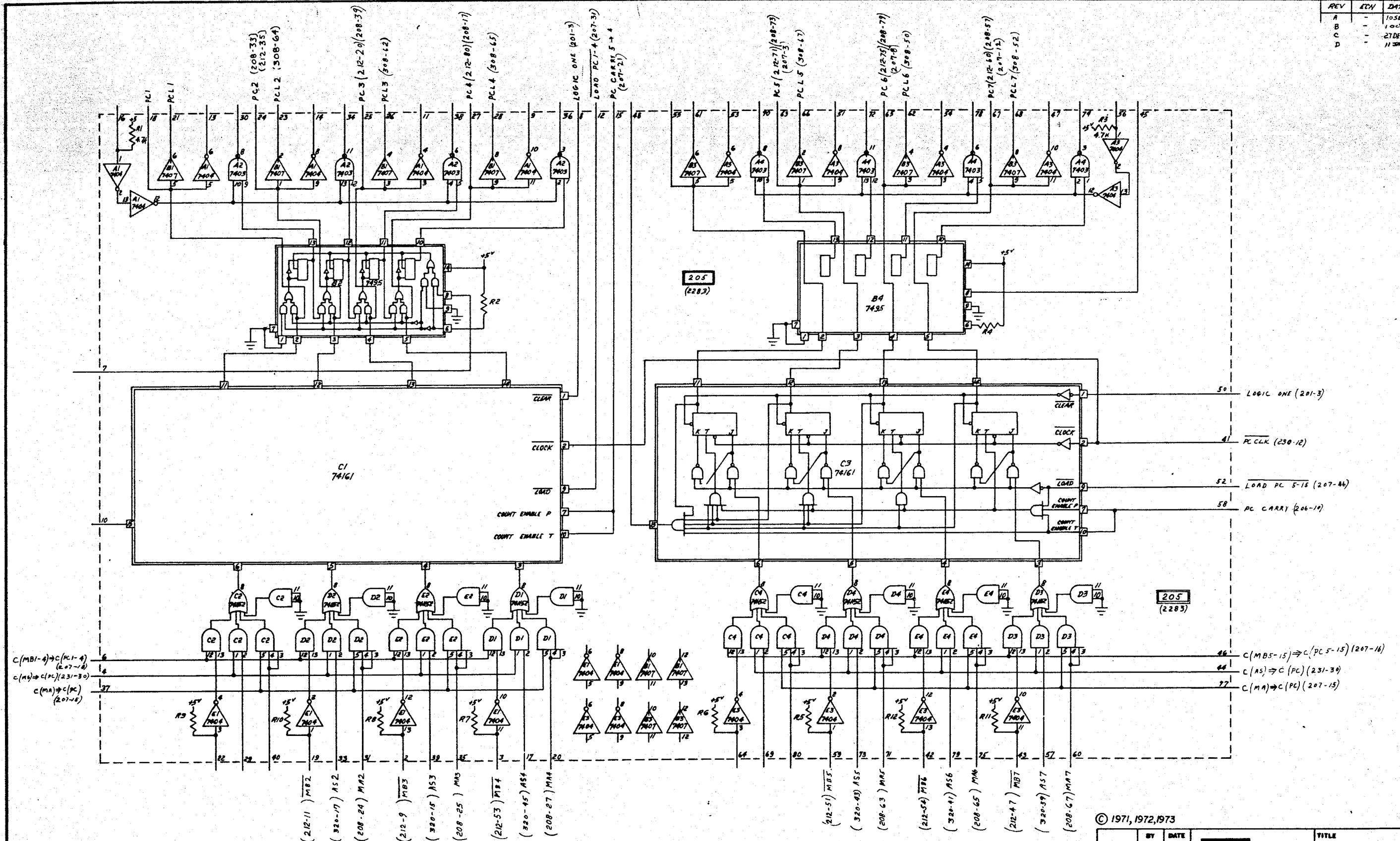


TITLE			
PROGRAM COUNTER			
BITS 1-7			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	814-B	D
PROJECT			Sheet
PROD			Sheet

ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/4 WATT, 330-Ω.

NOTES:

REV	EDN	DATE	BY	APPV
A	-	10 SEP 71	R.T.M.	R.M.P.
B	-	1 OCT 71	G.B.	R.M.P.
C	-	27 DEC 71	R.T.M.	R.M.P.
D	-	11 JAN 73	R.T.M.	R.M.P.



C(MB1-4) → C(PC1-4) (207-16)
 C(M3) → C(PC231-30)
 C(MA) → C(PC) (207-16)

50 LOGIC ONE (201-3)
 41 PC CLK (230-12)
 52 LOAD PC 5-15 (207-44)
 58 PC CARRY (206-19)

46 C(MB5-15) → C(PC5-15) (207-16)
 44 C(M5) → C(PC) (231-39)
 27 C(MA) → C(PC) (207-15)

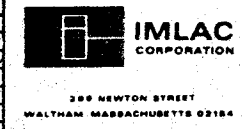
- (212-11) MB2
- (320-17) AS2
- (208-24) MA2
- (212-9) MB3
- (320-15) AS3
- (208-25) MA3
- (212-53) MB4
- (320-45) AS4
- (208-27) MA4
- (212-51) MB5
- (320-43) AS5
- (208-63) MA5
- (212-54) MB6
- (320-41) AS6
- (208-65) MA6
- (212-47) MB7
- (320-39) AS7
- (208-67) MA7

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

NOTES:

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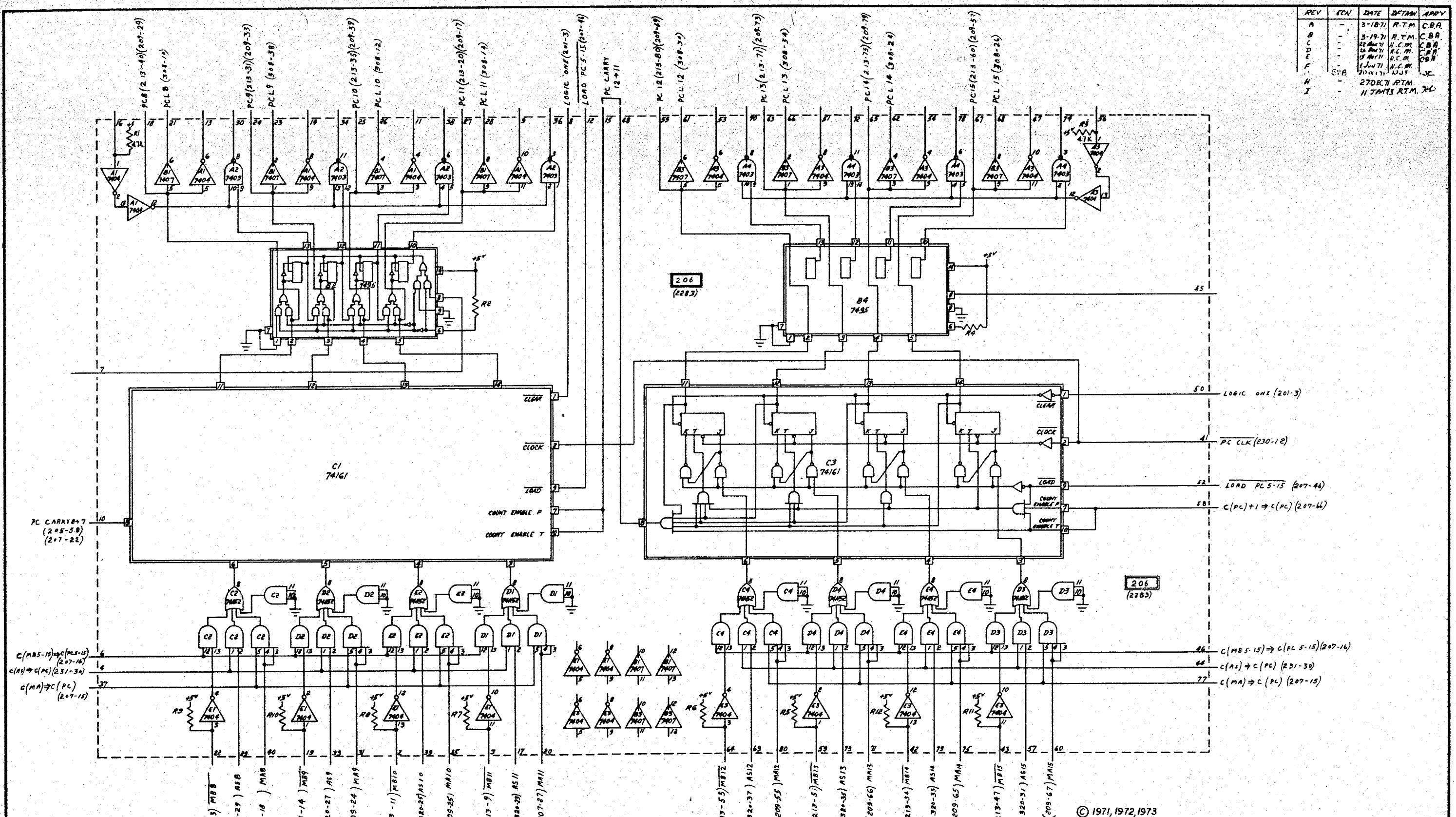
	BY	DATE
LAYOUT	R.T.M.	26 FEB 72
DRAWN	R.T.M.	26 FEB 72
CHECKED	C.B.B.	26 FEB 72
APPROVED		
ISSUE		
COPIED		
MATERIAL		



300 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

TITLE			
PROGRAM COUNTER			
BITS 1-7			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	814-B	D
PROJECT			Sheet
PROD			

REV	EDN	DATE	BY	APPV
A	-	3-18-71	R.T.M.	C.B.A.
B	-	3-19-71	R.T.M.	C.B.A.
C	-	22-2-71	H.C.M.	C.B.A.
D	-	15-2-71	H.C.M.	C.B.A.
E	-	1-1-71	H.C.M.	C.B.A.
F	-	10-1-71	H.C.M.	C.B.A.
G	-	10-1-71	H.C.M.	C.B.A.
H	-	27-0-71	R.T.M.	C.B.A.
I	-	11-1-71	R.T.M.	C.B.A.



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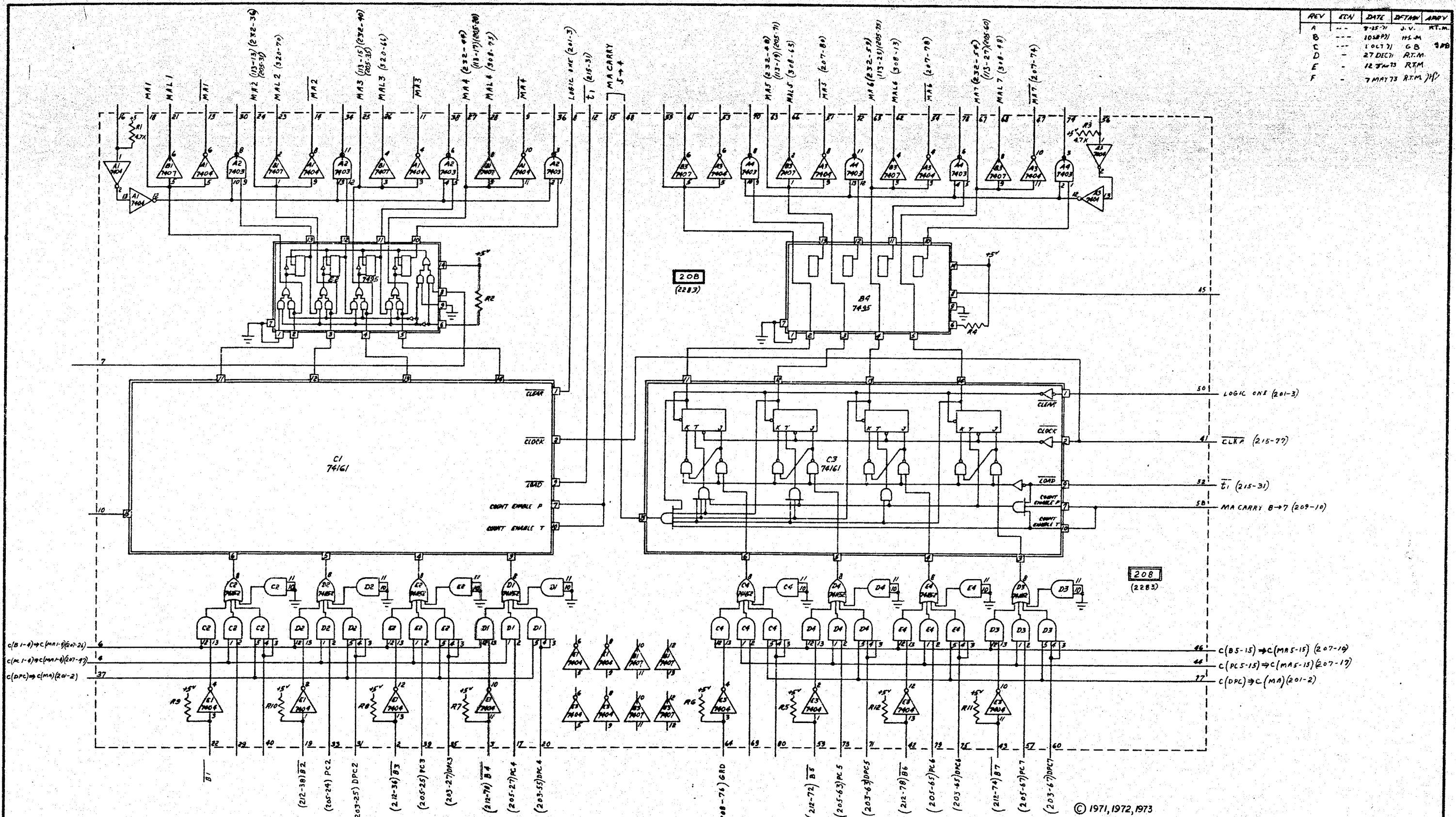
LAYOUT	BY	DATE	 328 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE
DRAWN	R.T.M.	20-2-71		PROGRAM COUNTER
CHECKED	R.T.M.	21-2-71		BITS 8-15
APPROVED	C.B.A.	21-2-71		PREFIX
ISSUE				SIZE
COPIED				DRAWING NUMBER

MATERIAL

PROJECT	PROD	Sheet	I
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NOTES:
1. ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT, 530 Ω.

REV	EDN	DATE	BY	APPV
A	---	9-15-71	J.V.	R.T.M.
B	---	10-18-71	H.S.M.	
C	---	1-0-72	G.B.	3PB
D	---	27 DEC 71	R.T.M.	
E	---	12 JAN 72	R.T.M.	
F	---	7 MAY 73	R.T.M.	



c(B1-4) → c(MA1-4)(201-2)
 c(M1-4) → c(MA1-4)(201-17)
 c(DPC) → c(MA)(201-2)

50 LOGIC ONE (201-3)
 4 CLK (215-77)
 52 \bar{t}_1 (215-31)
 50 MA CARRY B → 7 (209-10)

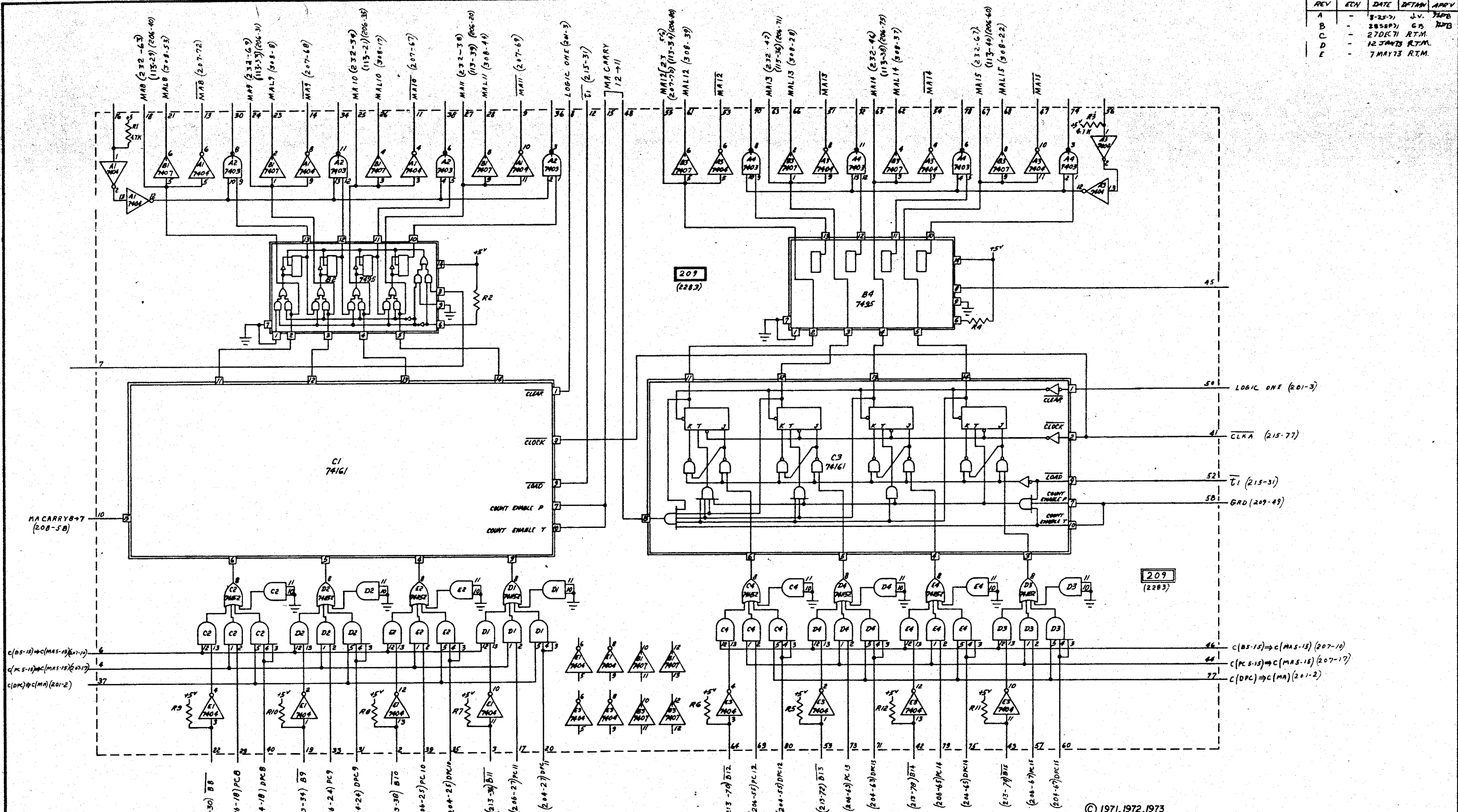
46 c(B5-15) → c(MA5-15) (207-10)
 44 c(PC5-15) → c(MA5-15) (207-17)
 77 c(DPC) → c(MA) (201-2)

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

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BY	DATE	 IMLAC CORPORATION 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	
LAYOUT	R.T.M. (MART)		MEMORY ADDRESS REGISTER	
DRAWN	R.T.M. (MFD)		BITS 1-7	
CHECKED	C.B.R. (MART)		PREFIX	SIZE
APPROVED			D	816-B
ISSUE			Sheet	F
COPIED		DRAWING NUMBER		
MATERIAL		PROJECT		
		PROD		

REV	BY	DATE	BY	APPV
A	-	8-25-71	J.V.	JAPB
B	-	28 SEP 71	C.S.	RMB
C	-	27 DEC 71	R.T.M.	
D	-	12 JAN 73	R.T.M.	
E	-	7 MAY 73	R.T.M.	



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LAYOUT	R.T.M.	3/24/71
DRAWN	R.T.M.	3/24/71
CHECKED	C.B.A.	3/24/71
APPROVED		
ISSUED		
COPIED		

IMLAC CORPORATION
 300 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

TITLE
 MEMORY ADDRESS REGISTER
 BITS 8-15

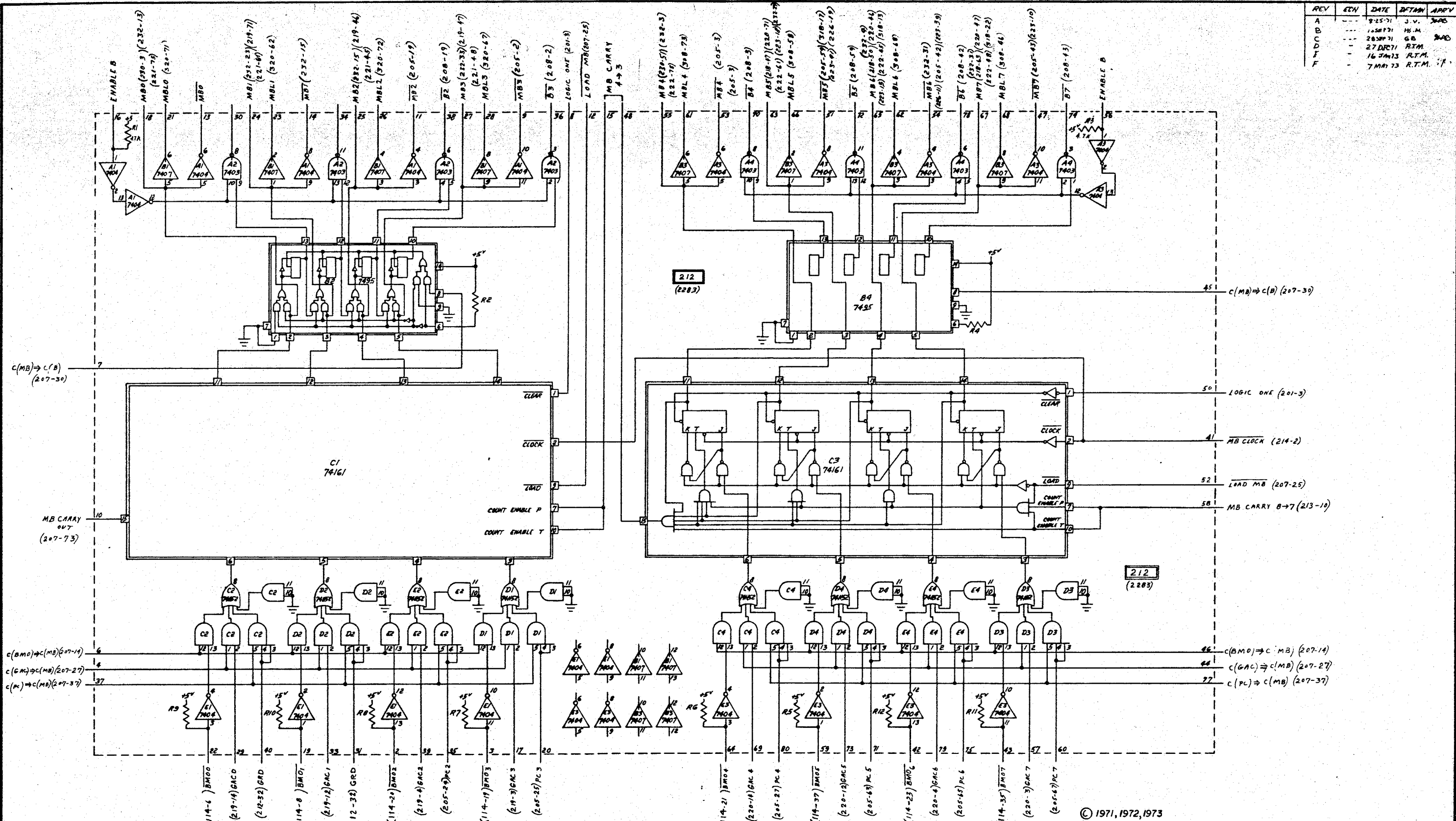
PREFIX	SIZE	DRAWING NUMBER	REV.
L D		817-B	E

PROJECT: PROD

Scale: _____ Sheet: _____

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

REV	ENH	DATE	BY	APPV
A		8-25-71	J.V.	WAC
B		1-28-72	H.M.	WAC
C		2-8-72	G.B.	WAC
D		27 DEC 71	R.T.M.	
F		16 JAN 73	R.T.M.	



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BY	DATE
LAYOUT	R.T.M. 3 MAR 72
DRAWN	R.T.M. 3 MAR 72
CHECKED	C.B. 5 MAR 72
APPROVED	
ISSUE	
COPIED	
MATERIAL	

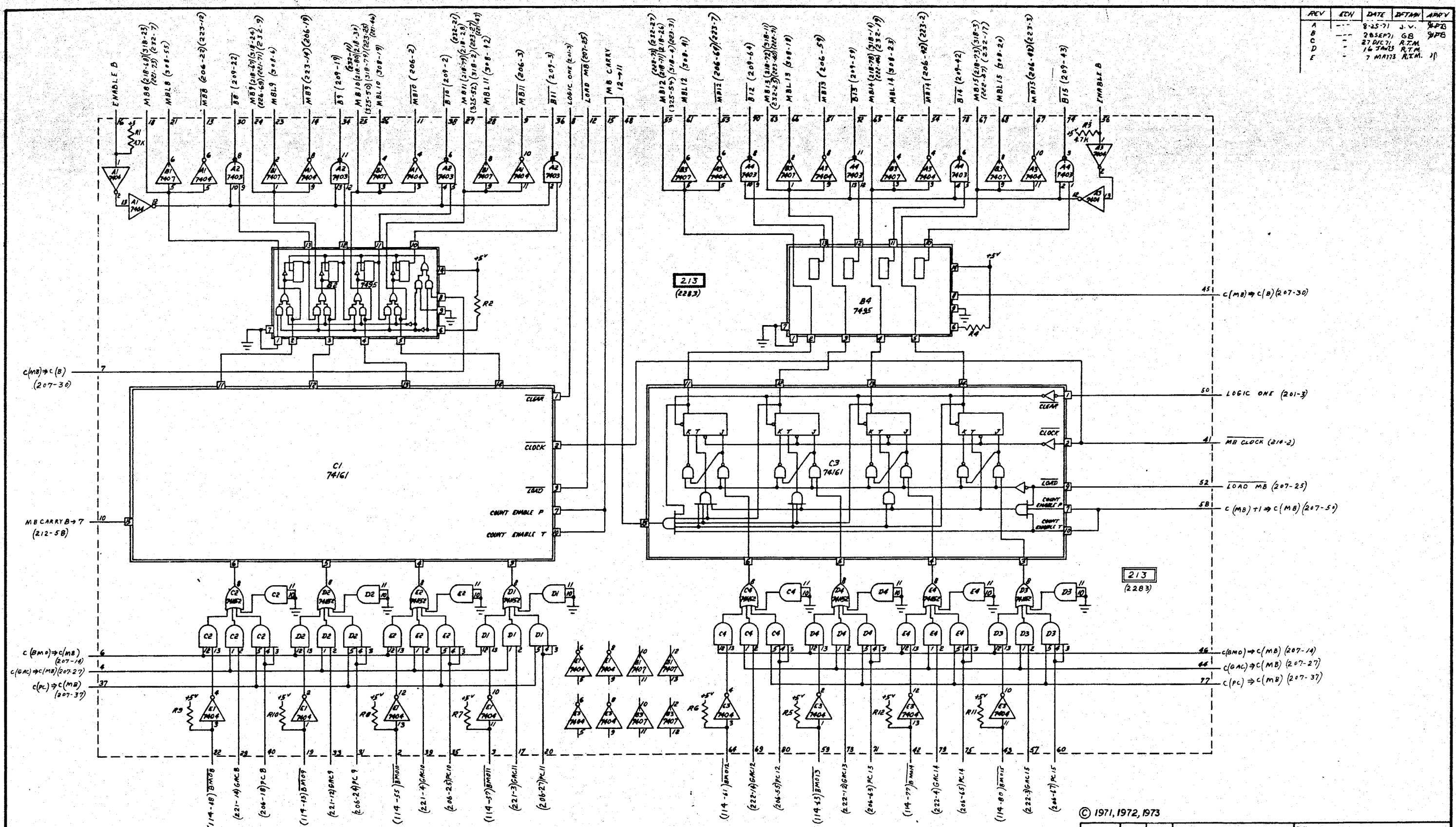
IMLAC CORPORATION
 200 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

TITLE			
MEMORY BUFFER			
BITS 0-7			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	818-B	F
Scale		Sheet	

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

PROJECT PROD

REV	EDN	DATE	DEFN	APPV
A	---	8-25-71	J.V.	4/23
B	---	28 SEP 71	GB	9/25
C	---	27 DEC 71	R.T.M.	
D	---	16 JAN 73	R.T.M.	
E	---	7 MAR 73	R.T.M.	1/1

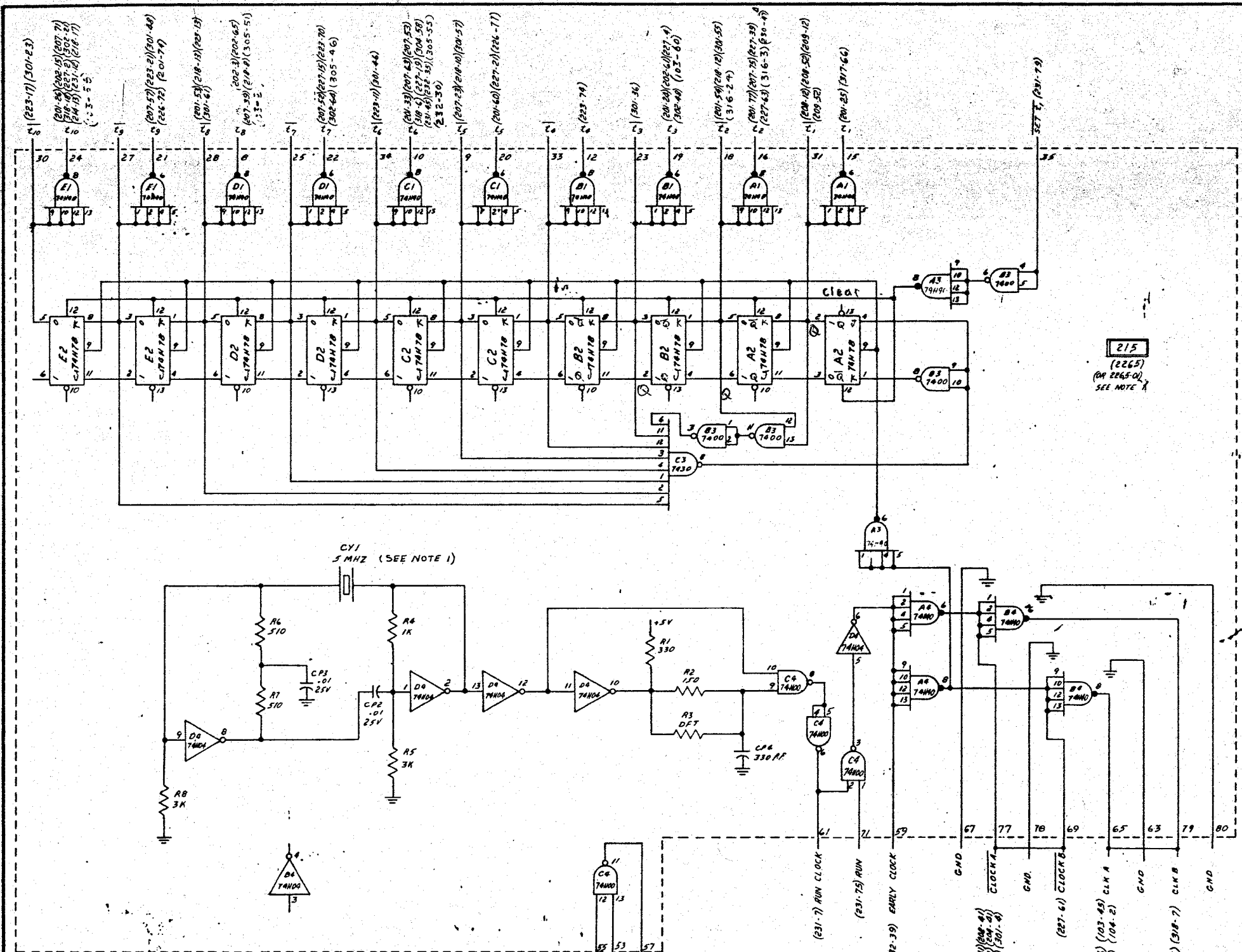


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BY	DATE	TITLE
LAYOUT	R.T.M. 4 MAR 71	MEMORY BUFFER
DRAWN	R.T.M. 4 MAR 71	BITS 8-15
CHECKED	C.B.A. 4 MAR 71	
APPROVED		
ISSUE		
COPIED		
MATERIAL		
PROJECT	PROD	
PREFIX	L D	DRAWING NUMBER
SIZE	8 1/2 x 11	819-B
REV	E	REV
Sheet		Sheet

ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 WATT, 350 Ω.
NOTES:

REV	ECN	DATE	DEFN	APPD
A	-	12 APR 72	R.T.M.	J.P.
B	-	13 JAN 73	R.T.M.	J.P.
C	-	23 JAN 73	6B	J.P.
D	-	29 JUN 73	R.T.M.	J.P.



215
(2265)
(BY 2265-0)
SEE NOTE A

2 & USED ON 16K ONLY
1 ON ASSY 2265-0, CY1 IS 5.5 MHz
NOTES:

"Sepia made 9 Jan 1973"

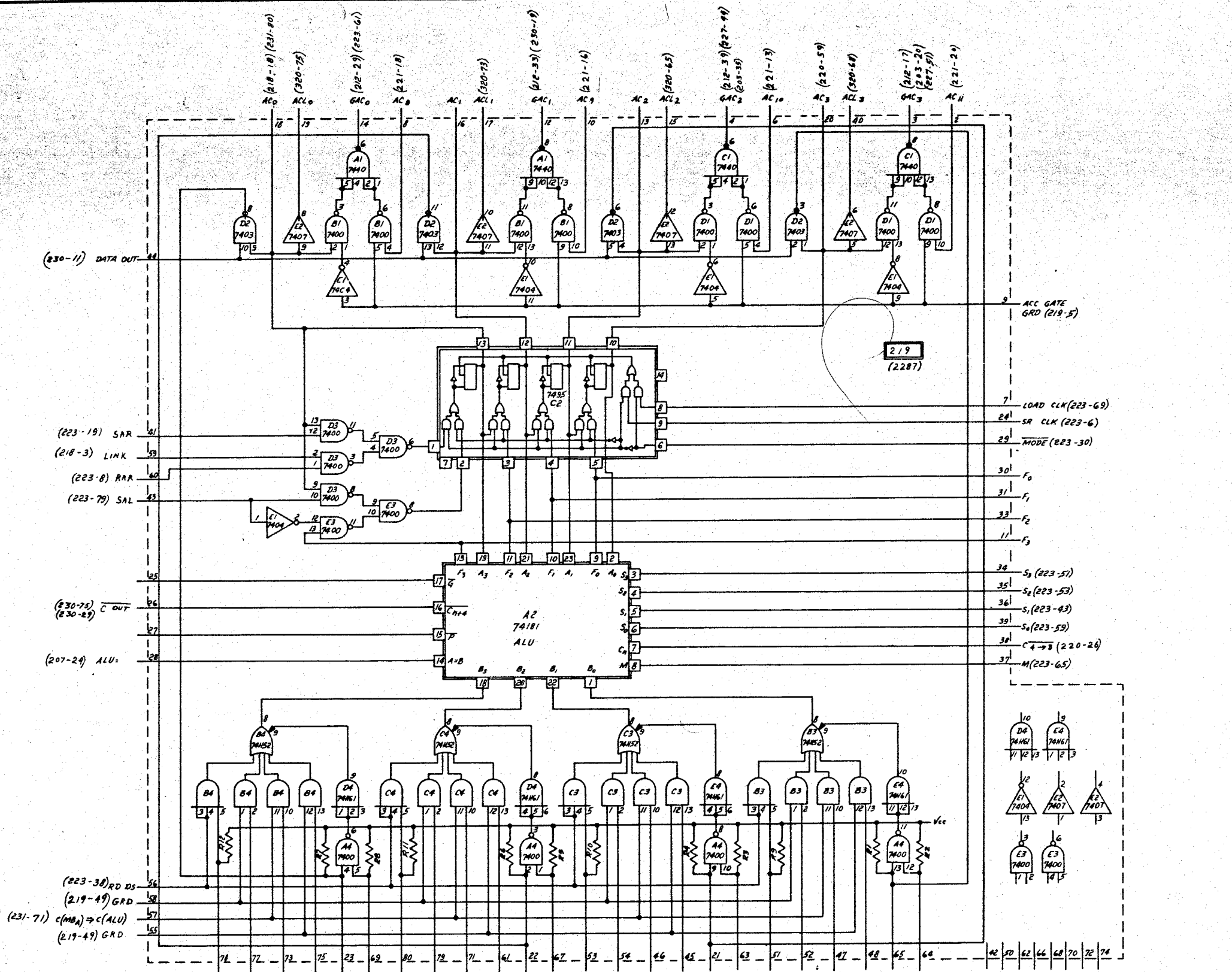
© 1971, 1972

DRAWING MADE FROM 820 12 APR 72 R.T.M.

BY		DATE	TITLE	
LAYOUT	J.V.	11-11-70	TIME PULSE GENERATOR AND CLOCK	
DRAWN	J.V.	11-11-70		
CHECKED	CBA	3-12-72		
APPROVED				
ISSUE				
COPIED				
MATERIAL			PREFIX	SIZE
PROJECT			D	DRAWING NUMBER
PROD				820-A
			Scale	Sheet
				D



REV	ECN	DATE	DETERM	APP'V
A	-	12 APR 72	R.T.M.	R.T.M.
B	-	16 JUN 72	A.T.M.	R.T.M.



- 25 - E10 (319-6)
- 26 - E10 (319-7)
- 27 - E10 (319-8)
- 65 - E10 (319-9)
- 69 - A10 (322-16)
- 67 - A1 (322-10)(316-39)
- 63 - A2 (322-20)(316-58)
- 64 - A3 (322-22)(316-43)

DETAIL A-A

(230-11) DATA OUT
 (223-19) SAR
 (218-3) LINK
 (223-8) RAR
 (223-79) SAL
 (230-75) C OUT
 (230-29)
 (207-24) ALU
 (223-38) RD DS
 (219-49) GRD
 (231-71) c(MBA) → c(ALU)
 (219-49) GRD

AC0 (218-18) (231-80)
 ACL0 (220-75)
 GAC0 (212-27) (223-61)
 AC1 (221-18)
 ACL1 (220-73)
 GAC1 (212-33) (220-18)
 AC2 (221-16)
 ACL2 (220-65)
 GAC2 (212-39) (227-44)
 AC3 (221-13)
 ACL3 (220-59)
 GAC3 (212-17) (223-20) (227-57)
 AC4 (221-24)

219 (2287)

LOAD CLK (223-69)
 SR CLK (223-6)
 MODE (223-30)
 F0
 F1
 F2
 F3
 S3 (223-57)
 S4 (223-53)
 S5 (223-43)
 S6 (223-59)
 C → S (220-28)
 M (223-65)

(320-38) DS0
 (320-68) G MB0
 (320-40) DS1
 (212-24) MB1
 (320-42) DS2
 (212-25) MB2
 (320-44) DS3
 (212-27) MB3

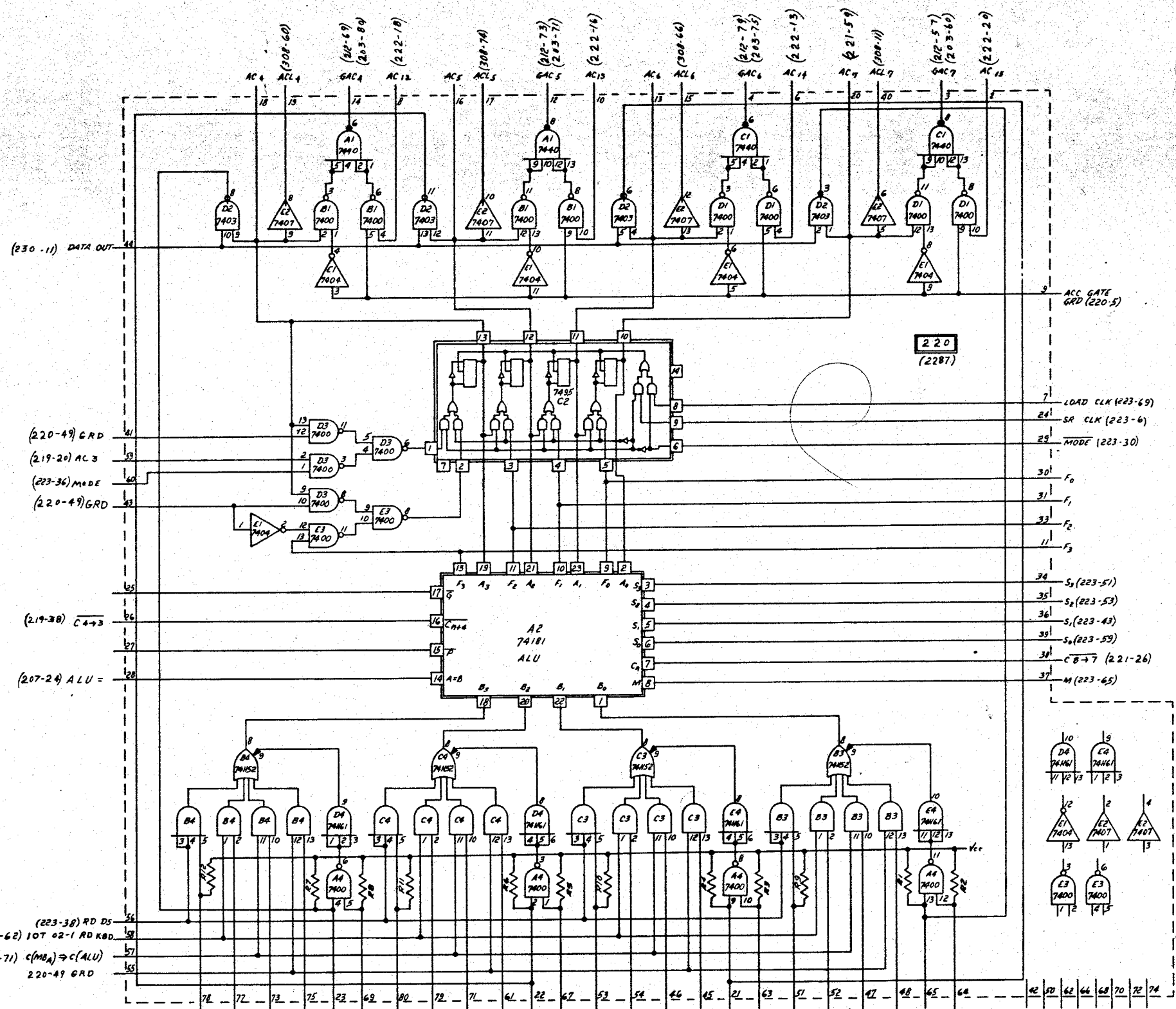
ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 W 330-Ω
 NOTES:

© 1971, 1972, 1973 DRAWING MADE FROM 821 12 APR 72 R.T.M.

LAYOUT	BY	DATE	 300 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-B
APPROVED				DRAWING NUMBER	B
ISSUE				REV.	
COPIED				Scale	Sheet

MATERIAL PROJECT PROD

REV	ECN	DATE	DTFM	APRV
A	-	17 MAR 71	H.C.M.	C.B.A.
B	-	15 MAR 71	H.C.M.	C.B.A.
C	-	15 MAR 71	H.C.M.	C.B.A.
D	-	15 MAR 71	H.C.M.	C.B.A.
E	-	15 MAR 71	H.C.M.	C.B.A.
F	-	15 MAR 71	H.C.M.	C.B.A.
G	-	15 MAR 71	H.C.M.	C.B.A.
H	-	15 MAR 71	H.C.M.	C.B.A.
I	-	17 MAR 71	R.T.M.	P.L.



- 23 - E10₄ (319-10)
- 22 - E10₅ (319-11)
- 21 - E10₆ (319-12)
- 65 - E10₇ (319-13)
- 69 - AT₄ (322-24) (316-48)
- 67 - AT₅ (322-26) (316-47)
- 63 - AT₆ (322-28) (316-52)
- 64 - AT₇ (322-30) (316-53)

DETAIL "A-A"

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

(380-12) DS4
(220-78) GRD
(230-47) GMB4
SEE DETAIL "A-A"
(320-14) DS5
(38-4) KBD RPT
(212-63) MB5
SEE DETAIL "A-A"
(320-16) DS6
(38-7) KBD CTRL
(212-65) MB6
SEE DETAIL "A-A"
(380-18) DS7
(55-8) KBD SHFT
(212-67) MB7
SEE DETAIL "A-A"

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

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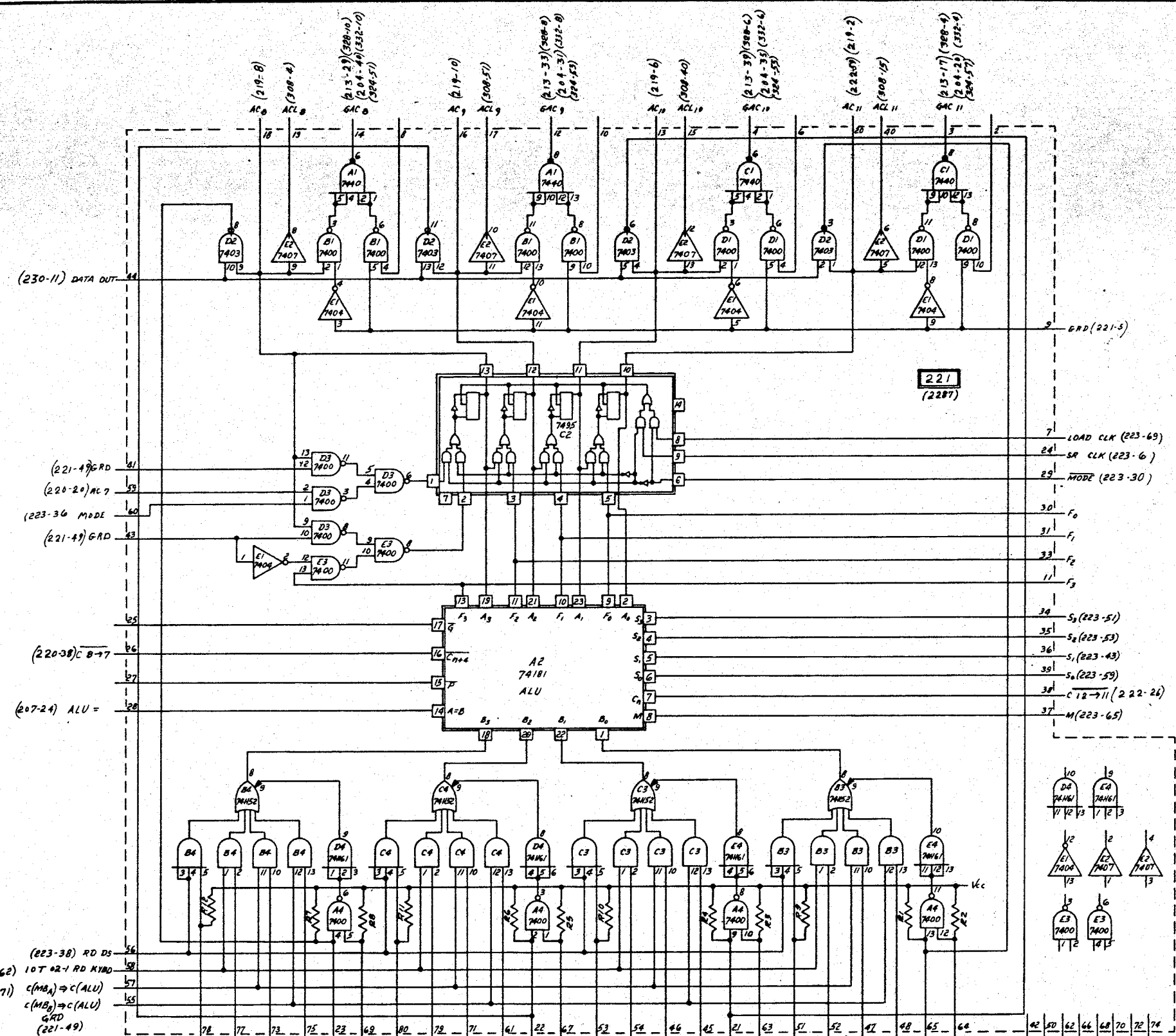
LAYOUT	BY	DATE
DRAWN	RTM	3-17-71
CHECKED	RTM	3-17-71
APPROVED	CBA	17 MAR 71
ISSUE		
COPIED		



200 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

TITLE			
ACCUMULATOR & INPUT MIXER BITS 4-7			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	822-B	I
MATERIAL		PROJECT	Scale
		PROD	Sheet

REV	ECN	DATE	BY	CHKD	APP'V
A	-	19 MAR 71	H.C.M.	C.B.A.	C.B.A.
B	-	20 MAR 71	H.C.M.	C.B.A.	C.B.A.
C	-	23 MAR 71	H.C.M.	C.B.A.	C.B.A.
D	-	26 MAR 71	H.C.M.	C.B.A.	C.B.A.
E	-	1 APR 71	H.C.M.	C.B.A.	C.B.A.
F	-	2 APR 71	H.C.M.	C.B.A.	C.B.A.
G	-	1 JUN 71	H.C.M.	C.B.A.	C.B.A.
H	-	9 JUL 71	H.C.M.	C.B.A.	C.B.A.
I	-	8 SEP 71	H.C.M.	C.B.A.	C.B.A.
J	-	17 JAN 72	R.T.M.	C.B.A.	C.B.A.



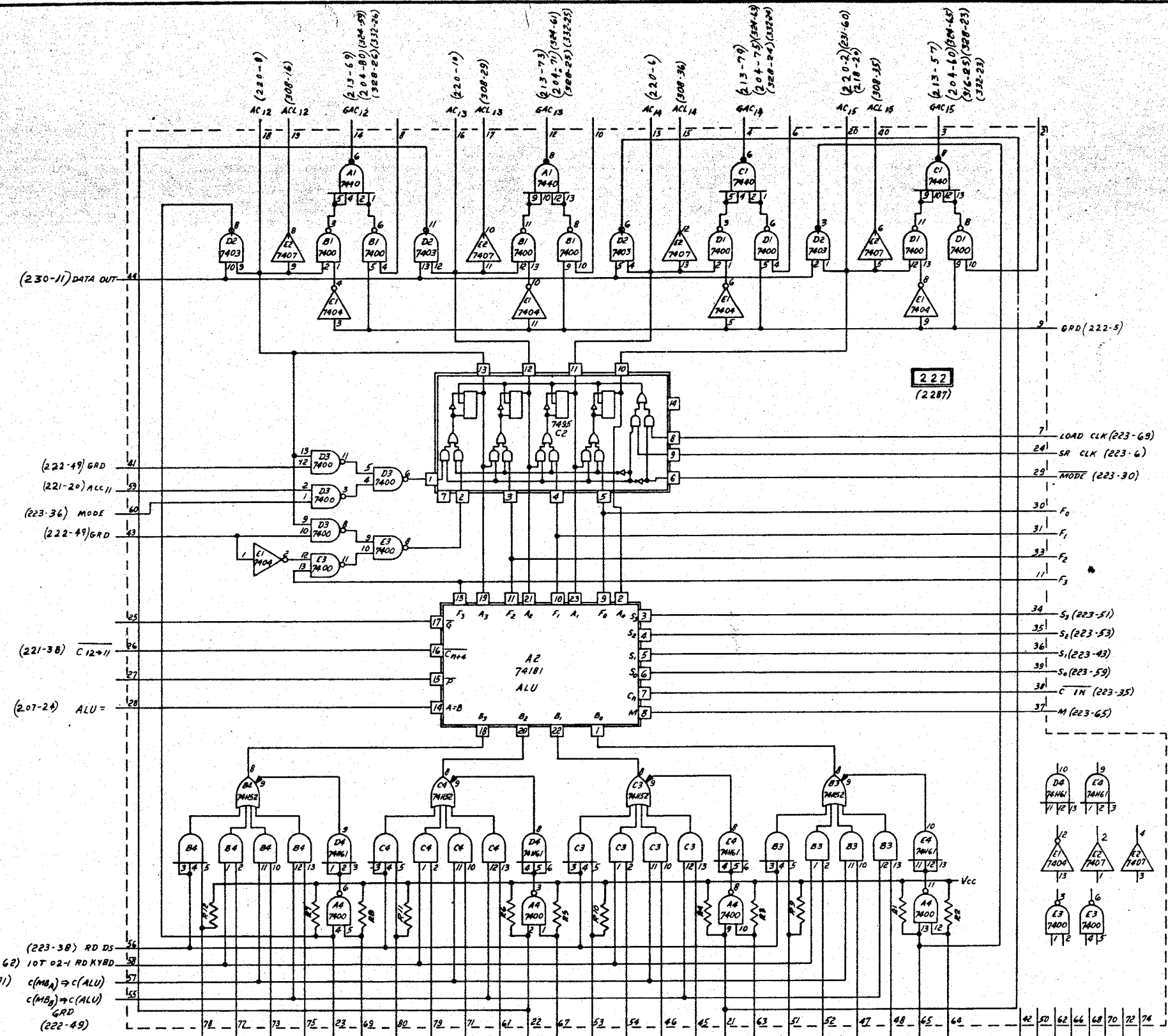
- 21 - ETO 8 (319-14)
 - 21 - ETO 9 (319-15)
 - 21 - ETO 10 (319-16)
 - 65 - ETO 11 (319-17)
 - 69 - AT 8 (322-60) (323-51)(314-71)(328-75)
 - 67 - AT 9 (322-62) (323-53)(314-62)(328-78)
 - 63 - AT 10 (322-64) (323-55)(316-61)(328-74)
 - 64 - AT 11 (322-66) (323-57)(316-73)(328-68)
- DETAIL A-A

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LAYOUT	BY	DATE	 208 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE	ACCUMULATOR & INPUT MIXER BITS 8-11
DRAWN	R.T.M.	5-17-71		PREFIX	L/D
CHECKED	C.B.A.	5-17-71		SIZE	823-B
APPROVED				DRAWING NUMBER	823-B
ISSUE				REV.	J
COPIED			PROJECT	PROD	Sheet

ALL RESISTORS, UNLESS OTHERWISE SPECIFIED, ARE 1/8 W 350Ω.
NOTES:

REV	ECN	DATE	DESIGN	APPV
A	-	19 MAR 71	H.C.M.	C.B.R.
B	-	20 MAR 71	H.C.M.	C.B.R.
C	-	23 MAR 71	H.C.M.	C.B.R.
D	-	26 MAR 71	H.C.M.	C.B.R.
E	-	26 MAR 71	H.C.M.	C.B.R.
F	-	26 MAR 71	H.C.M.	C.B.R.
G	-	1 JUN 71	H.C.M.	C.B.R.
H	-	9 JUL 71	H.C.M.	C.B.R.
I	-	8-26-71	J.V.	R.T.M.
J	-	17 MAY 73	R.T.M.	R.T.M.
K	-	7 MAY 73	R.T.M.	R.T.M.



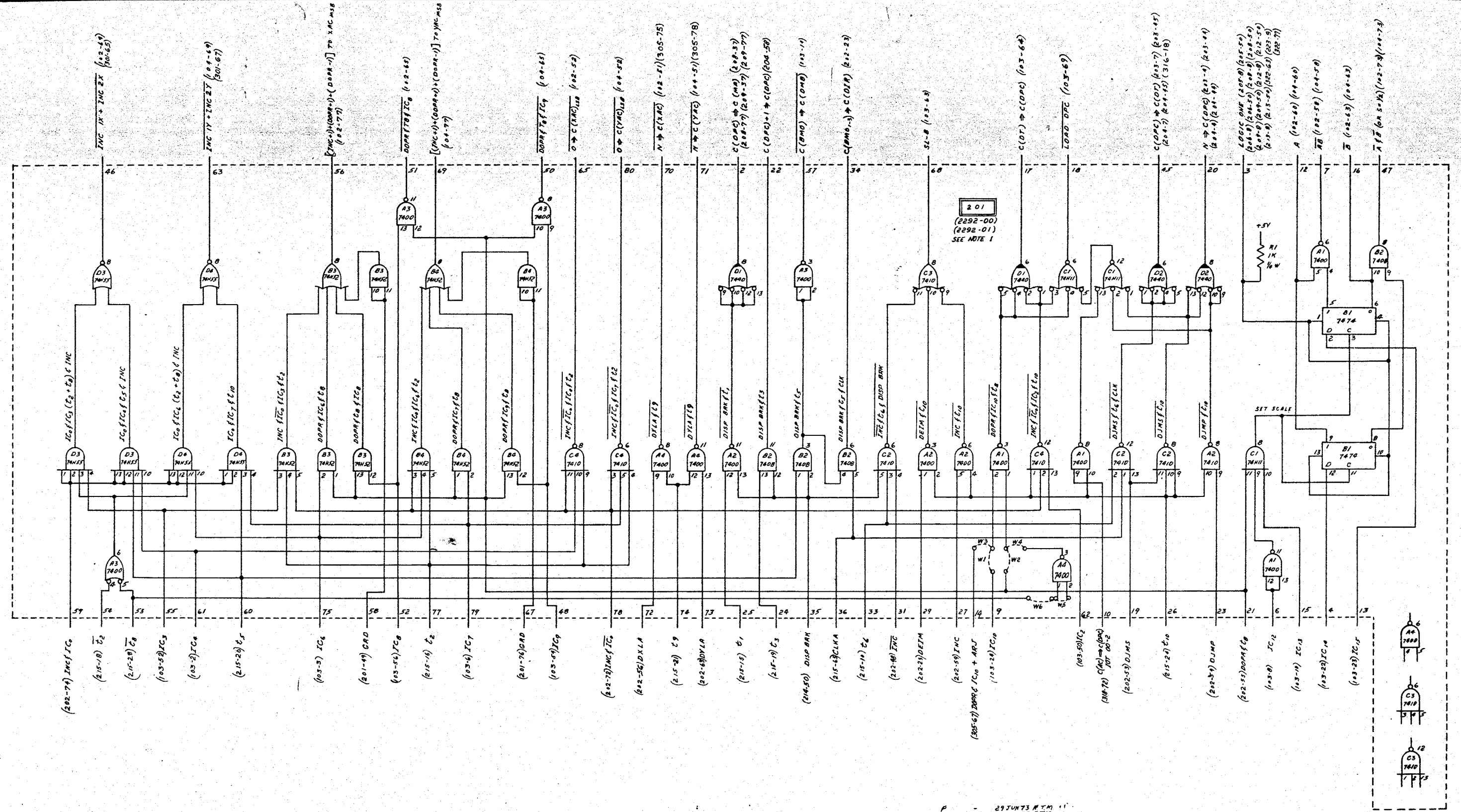
- 23 - E10 12 (319-11)
- 22 - E10 13 (319-19)
- 21 - E10 14 (319-20)
- 65 - E10 15 (319-21)
- 69 - A1 12 (322-68) (323-59)(316-65)(327-66)
- 67 - A1 13 (322-70) (323-61)(316-67)(327-80)
- 63 - A1 14 (322-72) (323-63)(316-74)(327-77)
- 64 - A1 15 (322-74) (323-65)(316-69)(316-31)(327-78)

DETAIL A-A"

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LAYOUT	BY	DATE	TITLE
DRAWN	R.T.M.	5-17-71	
CHECKED	R.T.M.	5-17-71	DRAWING NUMBER
APPROVED	R.B.A.	17 MAR 71	
ISSUE			REV.
COPIED			
MATERIAL			PROJECT
			Scale

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



201
(2292-00)
(2292-01)
SEE NOTE 1

NOTES:
1. W1 & W2 USED FOR 2292-00.
W3, W4, W5, & W6 USED FOR 2292-01.
(USED WITH SUPP GRID OPTION)

P	29 JUN 73	R.T.M.		
M	17 JAN 73	R.T.M.		
L	25 MAR 72	H.C.M.		
K	18 DEC 71	H.C.M.		
J	10 OCT 71	H.C.M.		
I	9-28-71	R.T.M.		
H	7 JUN 71	H.C.M.		
G	3 JUN 71	G.D.		
F	19 MAR 71	R.T.M.		
E	15 MAR 71	H.C.M.		
D	12 APR 71	J.V.		
C	26 MAR 71	H.C.M.		
B	20 MAR 71	H.C.M.		
A	3-19-71	R.T.M.		
REV	ECN	DATE	DETM	APP'D.

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LAYOUT	J.V.	3-5-71
PRW'D	J.V.	3-8-71
CHECKED	C.B.A.	3-15-71
APPROVED		
ISSUE		
COPIES		

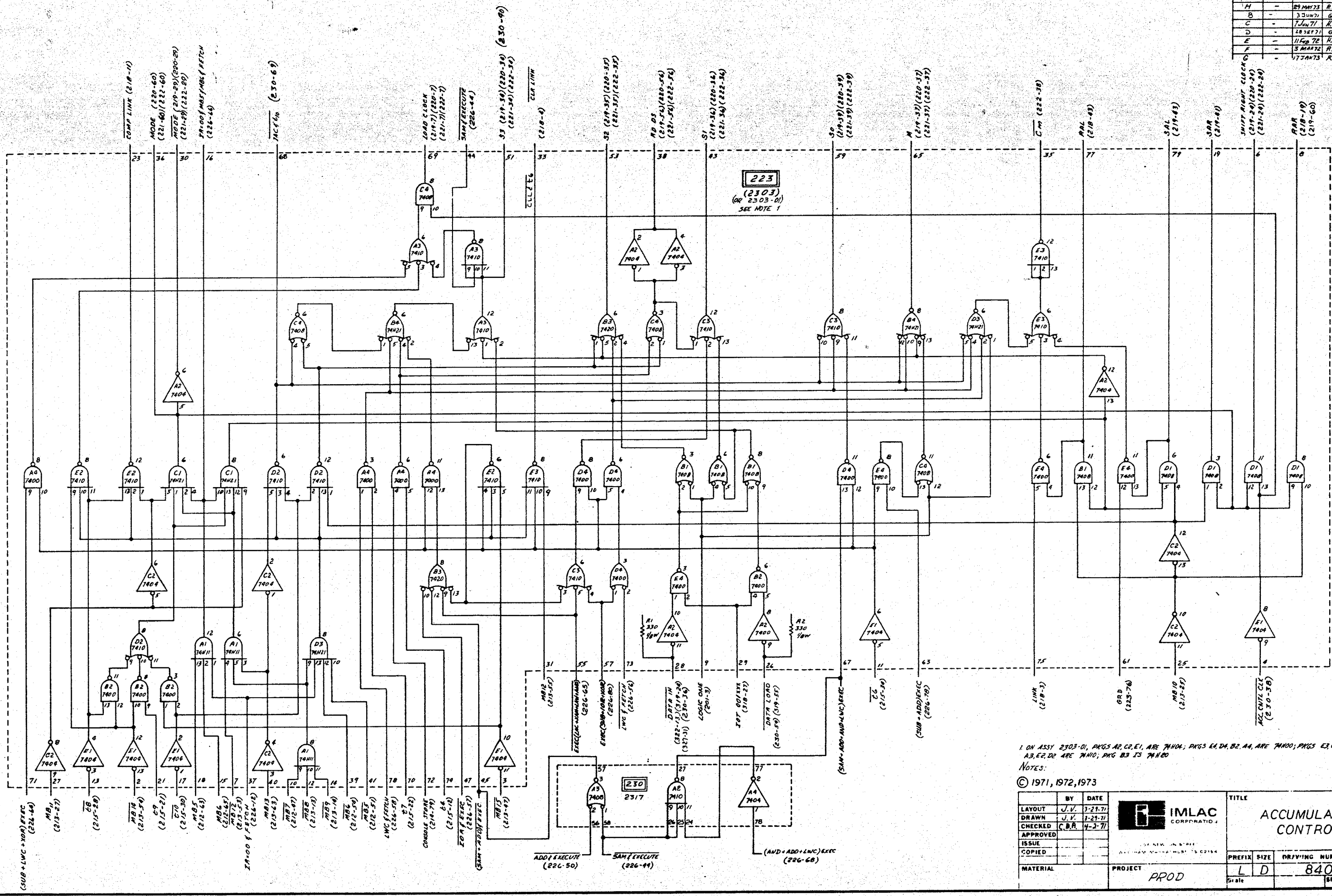


DISPLAY CONTROL CARD

SCALE	SIZE	DRAWING NUMBER	REV.
L	D	838	F

PROD

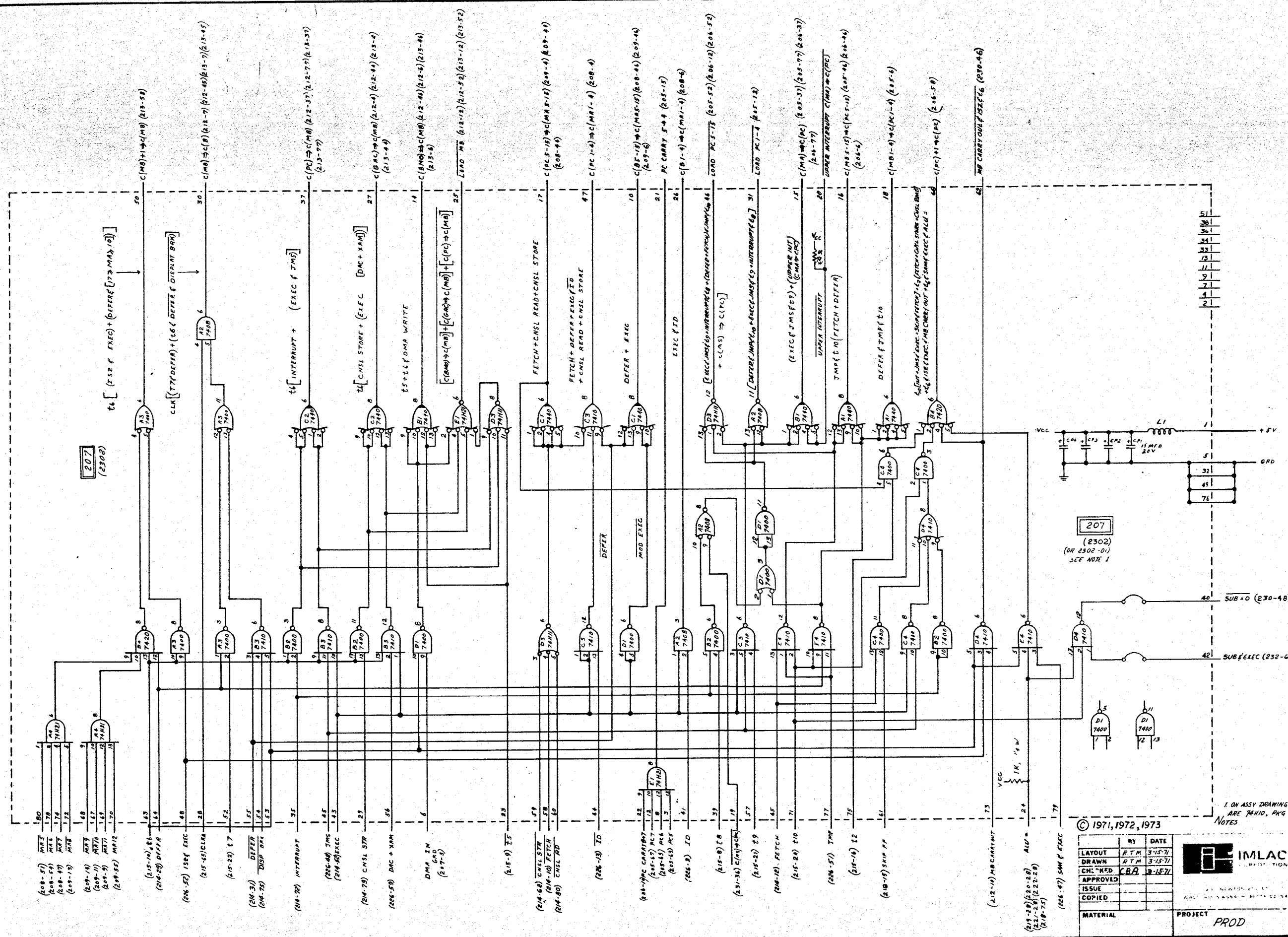
REV	ECN	DATE	DFMA	APPVD
H	-	29 MAR 73	R.T.M.	
B	-	3 JUN 72	G.E.	HDB
C	-	7 JUN 71	R.C.M.	
D	-	18 SEP 71	G.G.	HDB
E	-	11 FEB 72	R.C.M.	
F	-	3 MAR 72	R.T.M.	
G	-	17 JAN 73	R.T.M.	



1. ON ASSY 2303-01, PKGS A2, C2, E1, ARE 7404; PKGS E4, D4, B2, A4, ARE 7400; PKGS E3, C3, A3, E2, D2 ARE 7410; PKG B3 IS 74120
 NOTES:
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BY	DATE	TITLE
LAYOUT	J.V. 3-21-71	IMLAC CORPORATION ACCUMULATOR CONTROL
DRAWN	J.V. 3-21-71	
CHECKED	C.D.R. 4-2-71	
APPROVED		
ISSUE		
COPIED		PREFIX SIZE DRAWING NUMBER REV.
MATERIAL	PROJECT	L D 840-B H
	PROD	Sheet

REV	ECN	DATE	DFTM	APR'V
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	A.J.F.	
F	-	19 MAY 71	R.T.M.	
G	-	2 JUN 71	G.B.	
H	-	7 JUN 71	H.C.M.	
J	-	22 JUN 71	G.B.	
K	-	12 JUL 71	H.C.M.	
L	-	2 DEC 71	H.C.M.	
M	-	11 FEB 72	H.C.M.	
N	-	2-28-72	J.V.	
O	-	17 JAN 73	R.T.M.	



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LAYOUT	BY	DATE
DRAWN	R.T.M.	3-15-71
CHEK'D	R.T.M.	3-15-71
APPROVED	C.B.A.	3-15-71
ISSUE		
COPIED		
MATERIAL		

PROJECT PROD

IMLAC
INTEGRATED MICROLOGIC ASSOCIATION

TITLE: PC, MB, & MA CNTL

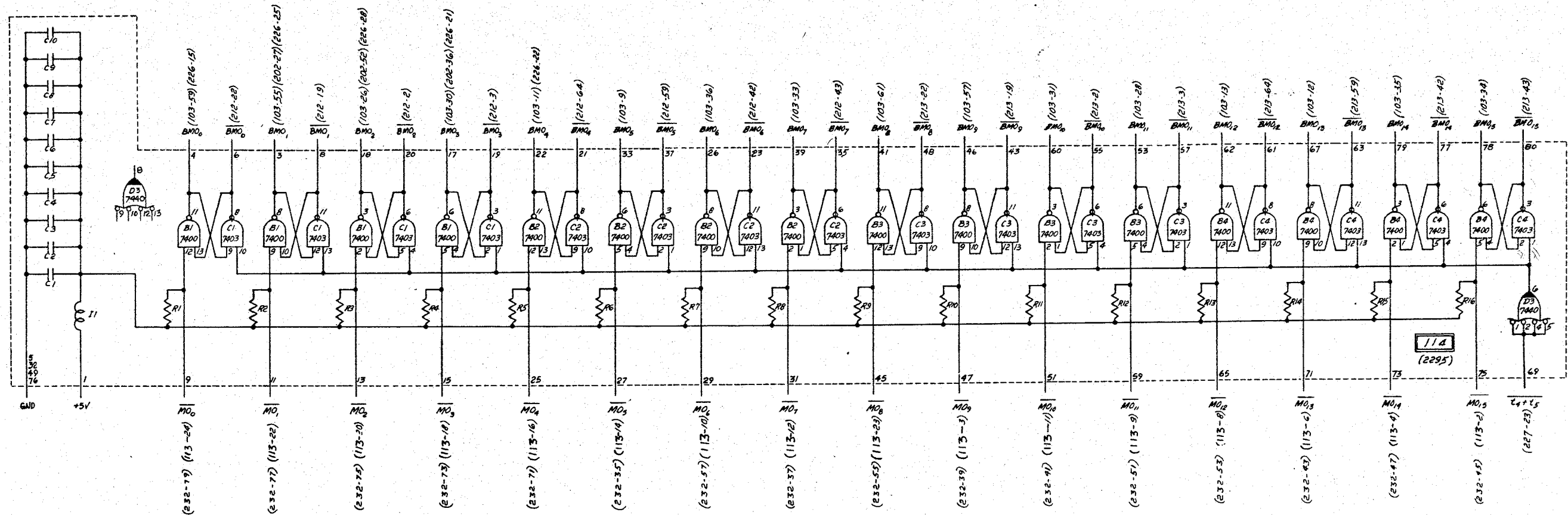
PREFIX	SIZE	DRAWING NUMBER	REV.
L		842-B	0

Scale: Sheet

1. ON ASSY DRAWING 2302-01, PKG A3 IS 74100, PKGS D4, E4, ARE 74110, PKG D4 IS A 74120

NOTES

REV	ECN	DATE	DFTM	APPV
A	---	8-25-71	J.V.	J.P.S.
B	---	28 SEP 71	G.B.	J.P.S.
C	---	12 OCT 71	R.M.	J.P.S.
D	---	10-20-72	J.V.	J.P.S.
E	---	17 JAN 73	R.T.M.	J.P.S.
F	---	29 APR 73	R.T.M.	J.P.S.

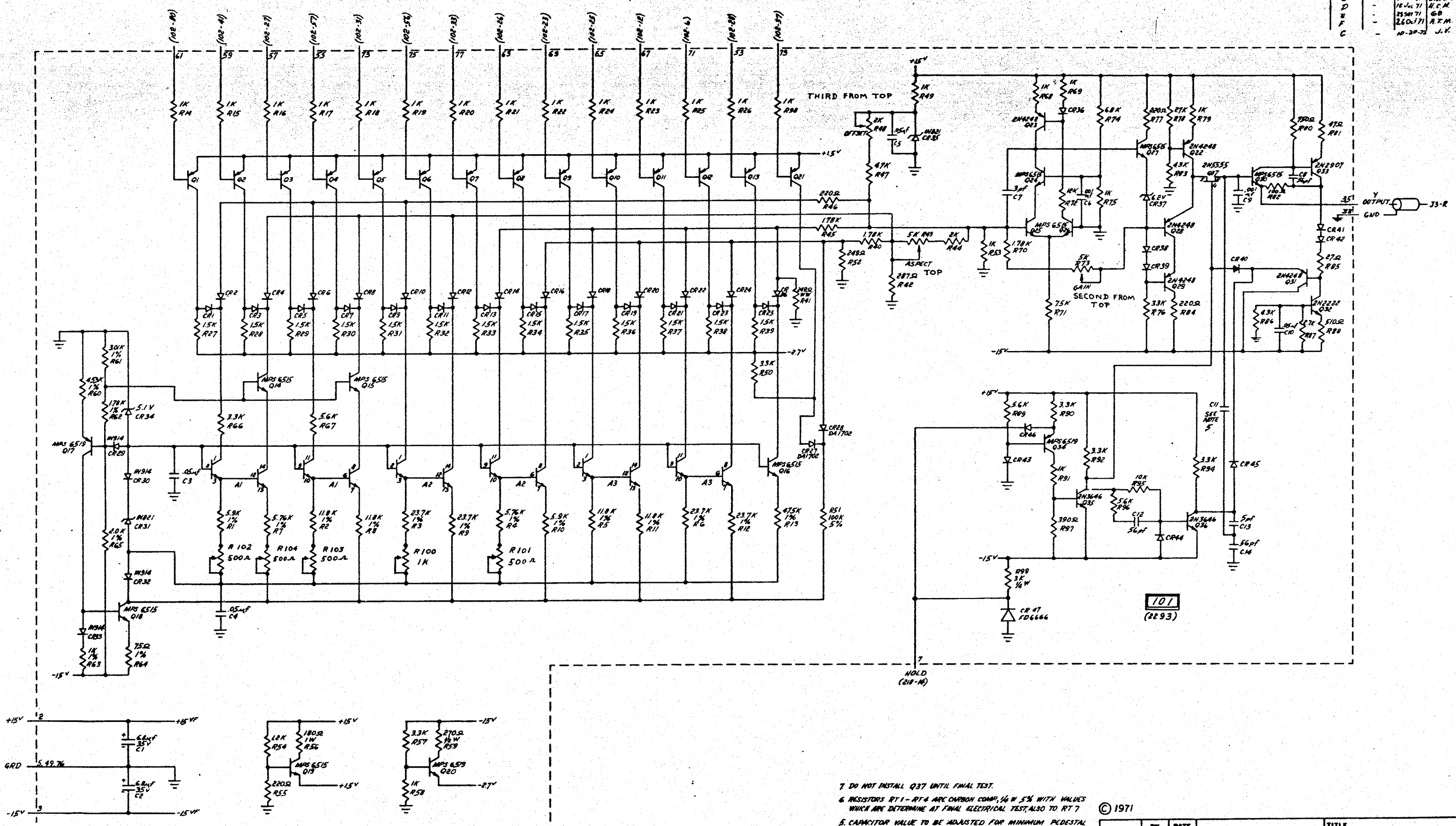


NOTES
 1 RESISTORS R1 - R16 ARE 1K 1/8 W.

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LAYOUT	BY	DATE	 287 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE
DRAWN	U.C.M.	5 Mar 71		MEMORY OUTPUT BUFFER
CHECKED	C.B.A.	3-17-71		
APPROVED				
ISSUE				
COPIED				
MATERIAL				
PROJECT			PROD	
PRELIM	SIZE	DRAWING NUMBER	L D	843-B
Scale		Sheet		F

REV	ECN	DATE	DTN	APPV
A	-	5/24/71	MSJ	CBA
B	-	20/04/71	A.T.M.	B.P.O.
C	-	18/01/71	H.C.M.	
D	-	25/01/71	G.B.	MPB
E	-	26/01/71	A.T.M.	
F	-	10-20-72	J.K.	30



107
(2293)

- 7 DO NOT INSTALL Q37 UNTIL FINAL TEST.
- 6 RESISTORS RT1 - RT4 ARE CARBON COMP, 1/4 W 5% WITH VALUES WHICH ARE DETERMINED 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 2N5255.

NOTES:

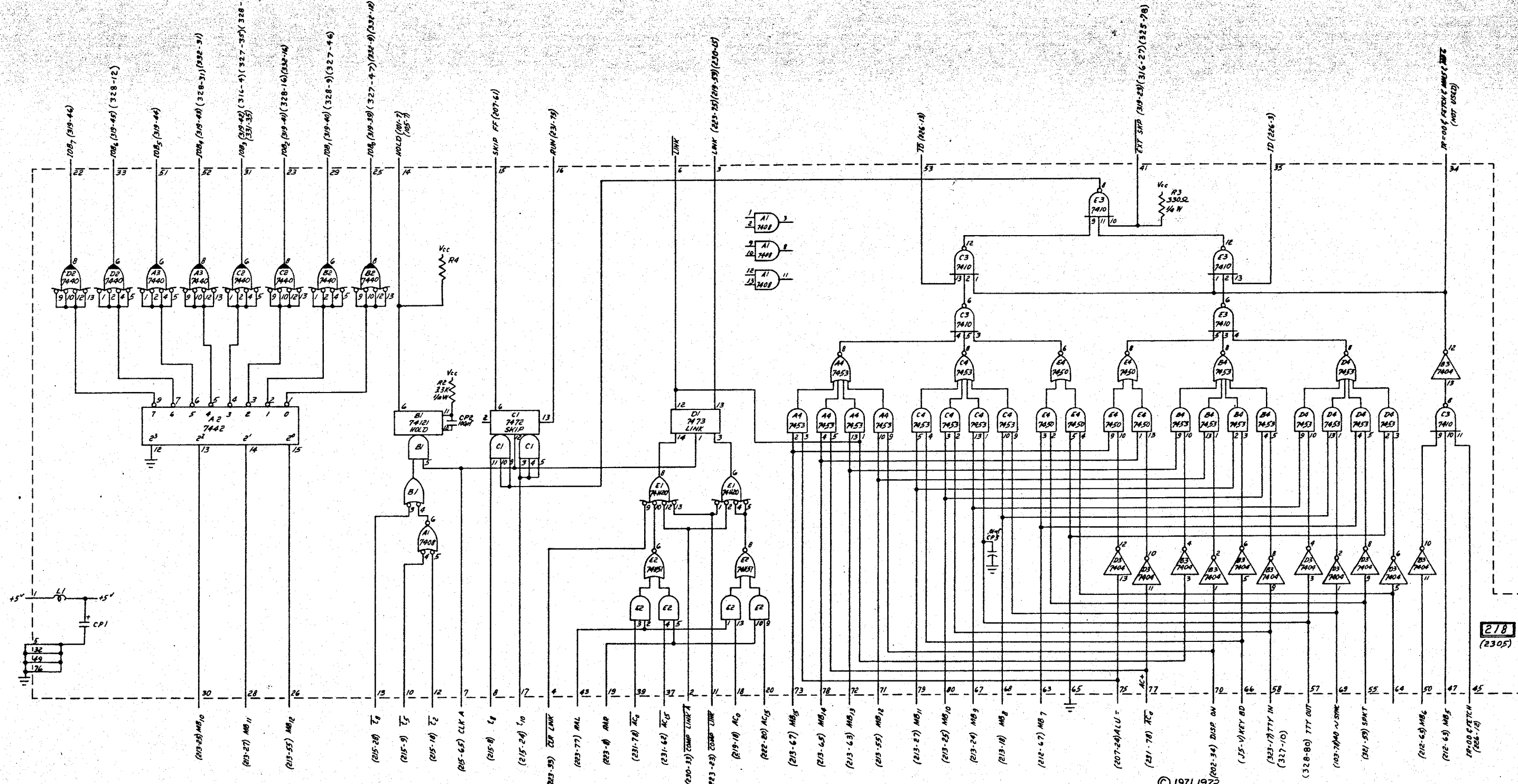
© 1971

LAYOUT	BY	DATE
DRAWN	H.C.M.	18/04/71
CHECKED	H.C.M.	22/04/71
APPROVED	C.B.A.	23/04/71
ISSUE		
COPIED		
MATERIAL		

IMLAC
CORPORATION
226 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

TITLE		PREFIX	SIZE	DRAWING NUMBER	REV.
D TO A CONVERTER X AXIS				844	6
PROJECT		PROD		Sheet	

REV	ECN	DATE	DTM	APP'Y
A	-	11 May 71	H.C.M.	
B	-	14 Jun 71	H.C.M.	C.B.R.
C	-	23 Jun 71	G.B.	R.D.B.
D	-	7 Jul 71	H.C.M.	
E	-	12 Jul 71	H.C.M.	
F	-	11 Aug 71	H.C.M.	
G	-	14 Aug 71	H.C.M.	
H	-	17 Jan 72	R.T.M.	



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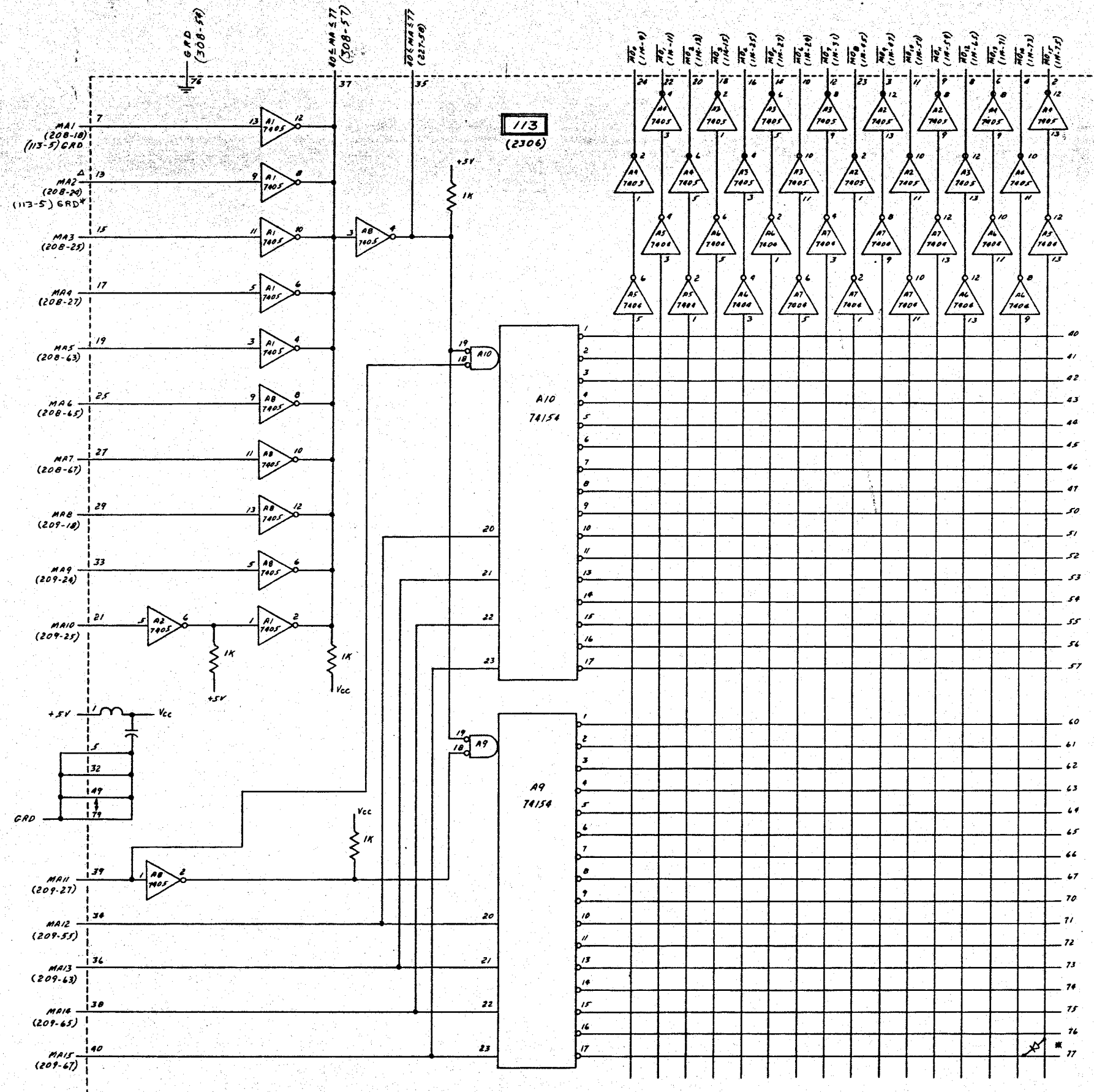
BY	DATE
LAYOUT	H.C.M. 2 Aug 71
DRAWN	H.C.M. 2 Aug 71
CHECKED	
APPROVED	
ISSUE	
COPIED	
MATERIAL	

IMLAC CORPORATION
 228 NEWTON STREET
 WALTHAM MASSACHUSETTS 02154

TITLE		PREFIX		SIZE		DRAWING NUMBER		REV.	
SKIP & LINK		L		D		845-B		H	
PROJECT		PROD		Scale		Sheet			

218
(2305)

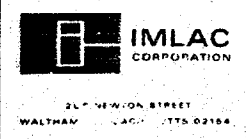
REV	E.C.N.	DATE	DFTM	APPD
1		8-26-71	J.V.	J.P.S.
B		10-28-71	H.C.M.	
C		2-25-72	G.B.	
D		1-7-73	R.T.M.	



NOTE: * DIODE, IN 15'S, SHOW IN A TYPICAL LOCATION TO PROGRAM UP TO 32 ADDRESSES. A DIODE IS USE TO GENERATE A "ONE" IN THE OUTPUT WORD.

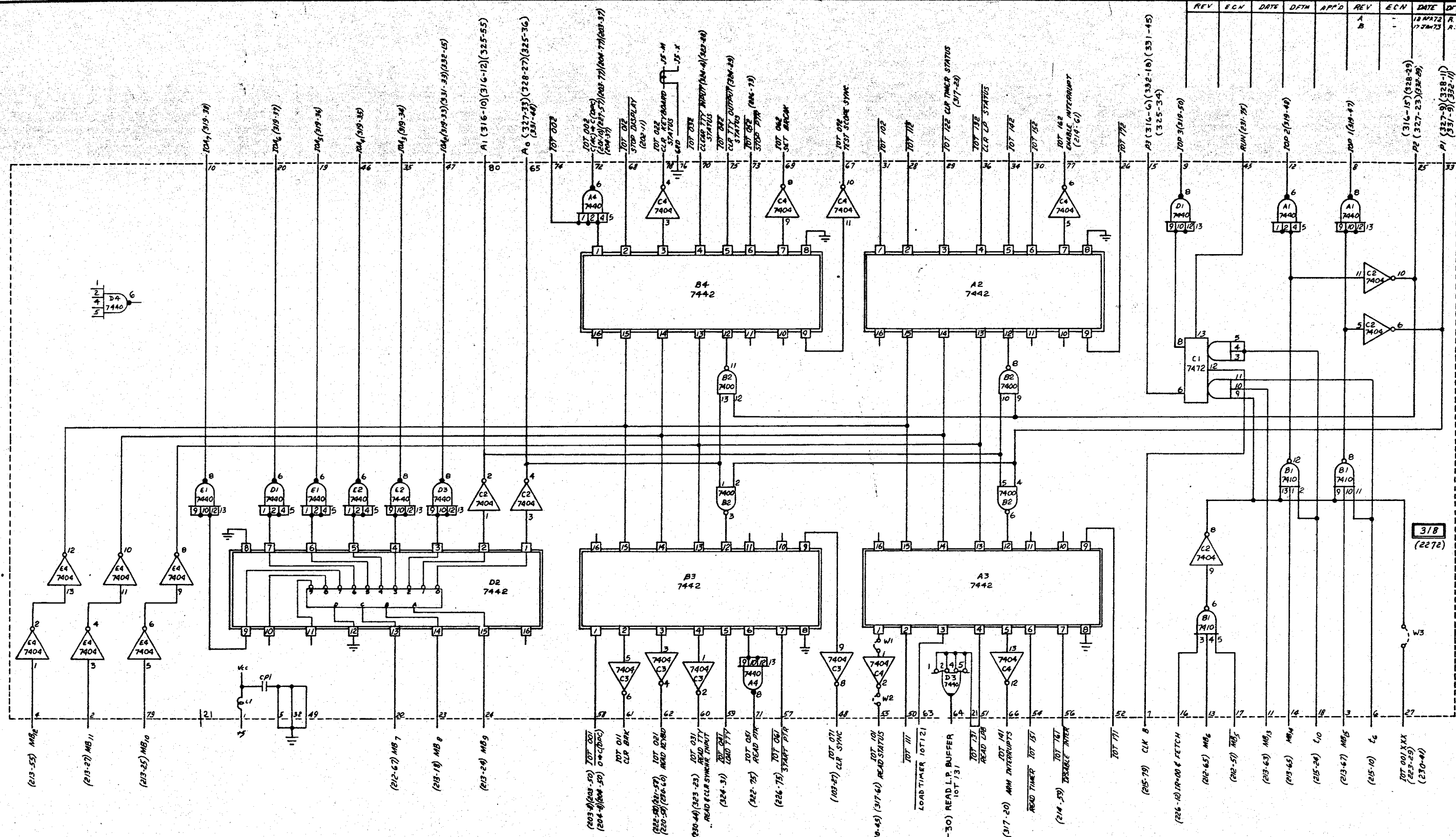
© 1971, 1972, 1973

LAYOUT	BY	DATE
	JY	8-3-71
DRAWN	JY	4-2-71
CHECKED	CBA	4-7-71
APPROVED		
ISSUE		
COPYED		



TITLE		DRAWING NUMBER		REV.
READ ONLY MEMORY		L	D	846-B
PREFIX	SIZE	DRAWING NUMBER	REV.	
		846-B	D	
MATERIAL	PROJECT	Scale	Sheet	
	PROD			

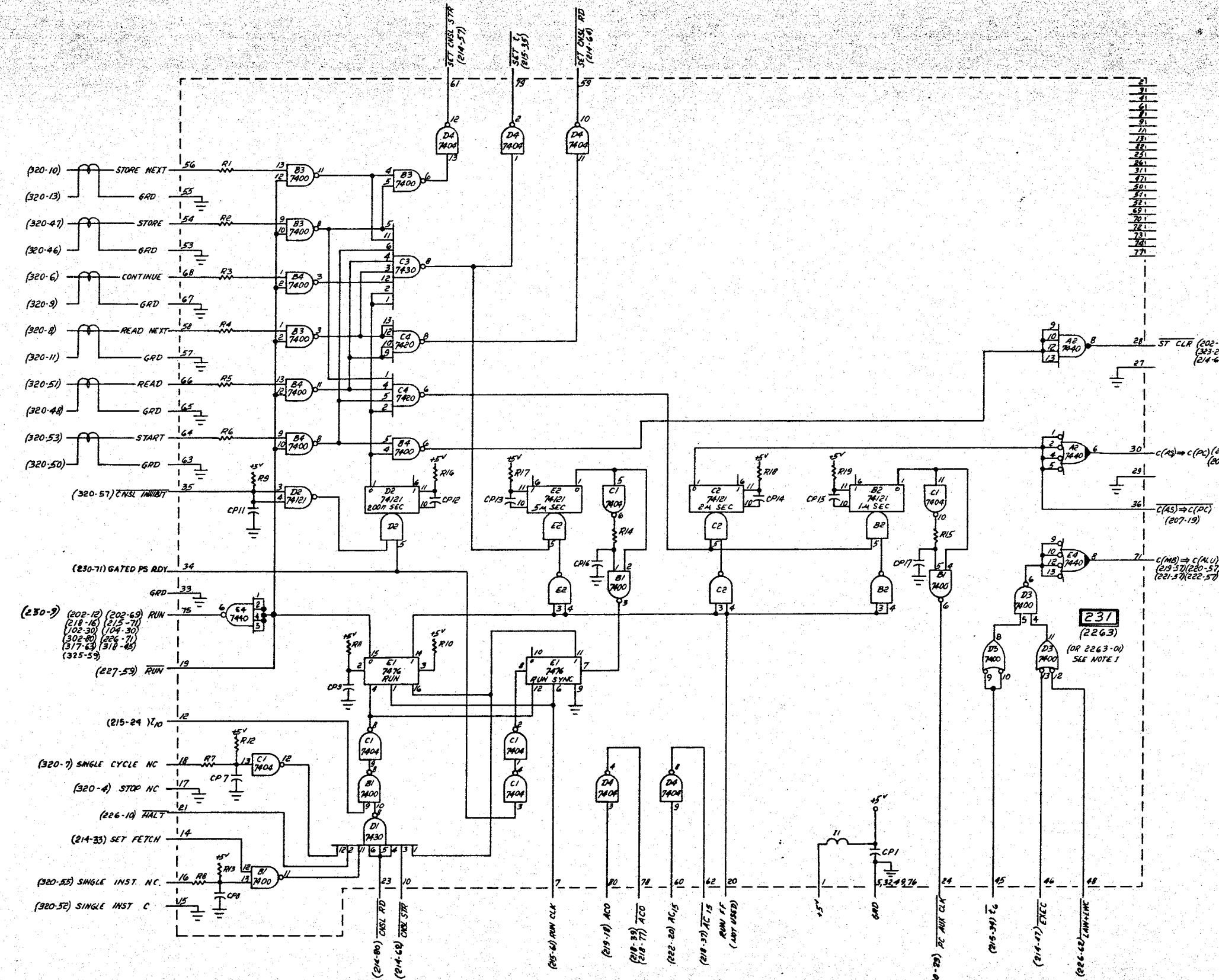
REV	ECN	DATE	DTM	APP'D	REV	ECN	DATE	DTM	APP'D
A		13 APR 72	R.T.M.						
B		17 JAN 73	R.T.M.						



© 1971, 1972, 1973 DRAWING MADE FROM B47 12 APR 72 R.T.M.

BY DATE		DATE		TITLE	
LAYOUT	H.C.M. 12/1/71	BY	12/1/71	IOT CONTROL	
DRAWN	H.C.M. 12/1/71	DATE	12/1/71	IMLAC CORPORATION	
CHECKED	C.B.R. 3-19-71			100 NEWTON STREET WALTHAM MASSACHUSETTS 02154	
APPROVED				PREFIX	SIZE
ISSUE				L	D
COPIED				DRAWING NUMBER	847-B
MATERIAL		PROJECT		Scale	Sheet
		PROD			8

REV	ECN	DATE	DFTN	APPV
A		MAR 71	AJF	J.F.
B		23 JUN 71	G.B.	W.P.B.
C		7 JUL 71	H.C.R.	
D		8-26-71	J.V.	A.T.M.
E		11 Feb 72	H.C.M.	
F		17 JAN 73	A.T.M.	

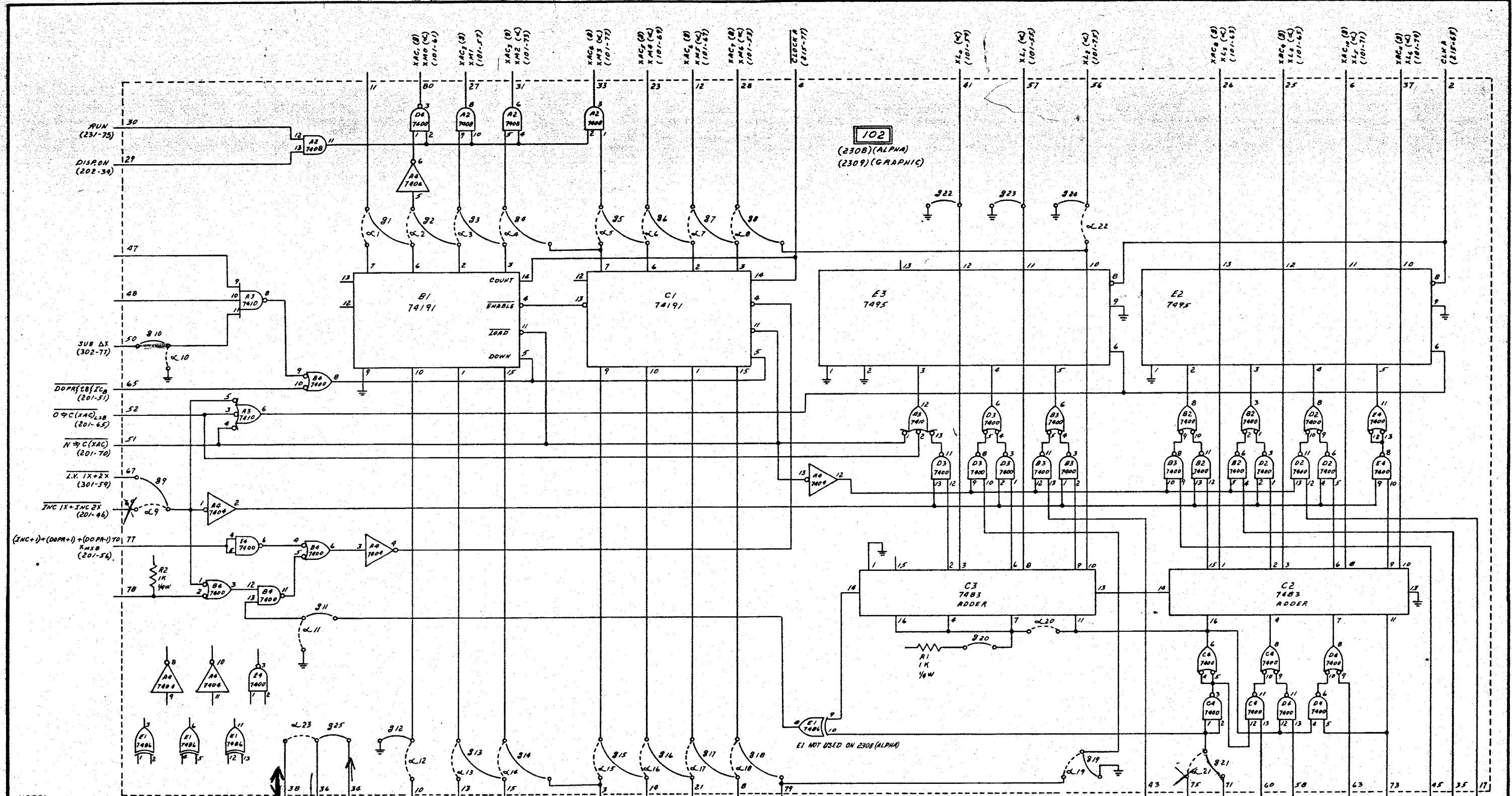


1. ON ASSY DWG 2263-01, PKG D3 IS A 7400, PKG E4 IS A 7404
 Notes:

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LAYOUT	BY	DATE	TITLE
DRAWN	A.C.M.	26 MAR 71	RUN CONTROL
CHECKED	H.C.M.	23 JUN 71	
APPROVED	C.B.H.	27 JUN 71	
ISSUE			
COPIED			
MATERIAL			

		280 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	
PROJECT	PROD	PREFIX	LD
SIZE		DRAWING NUMBER	848-B
REV.	F	SHEET	



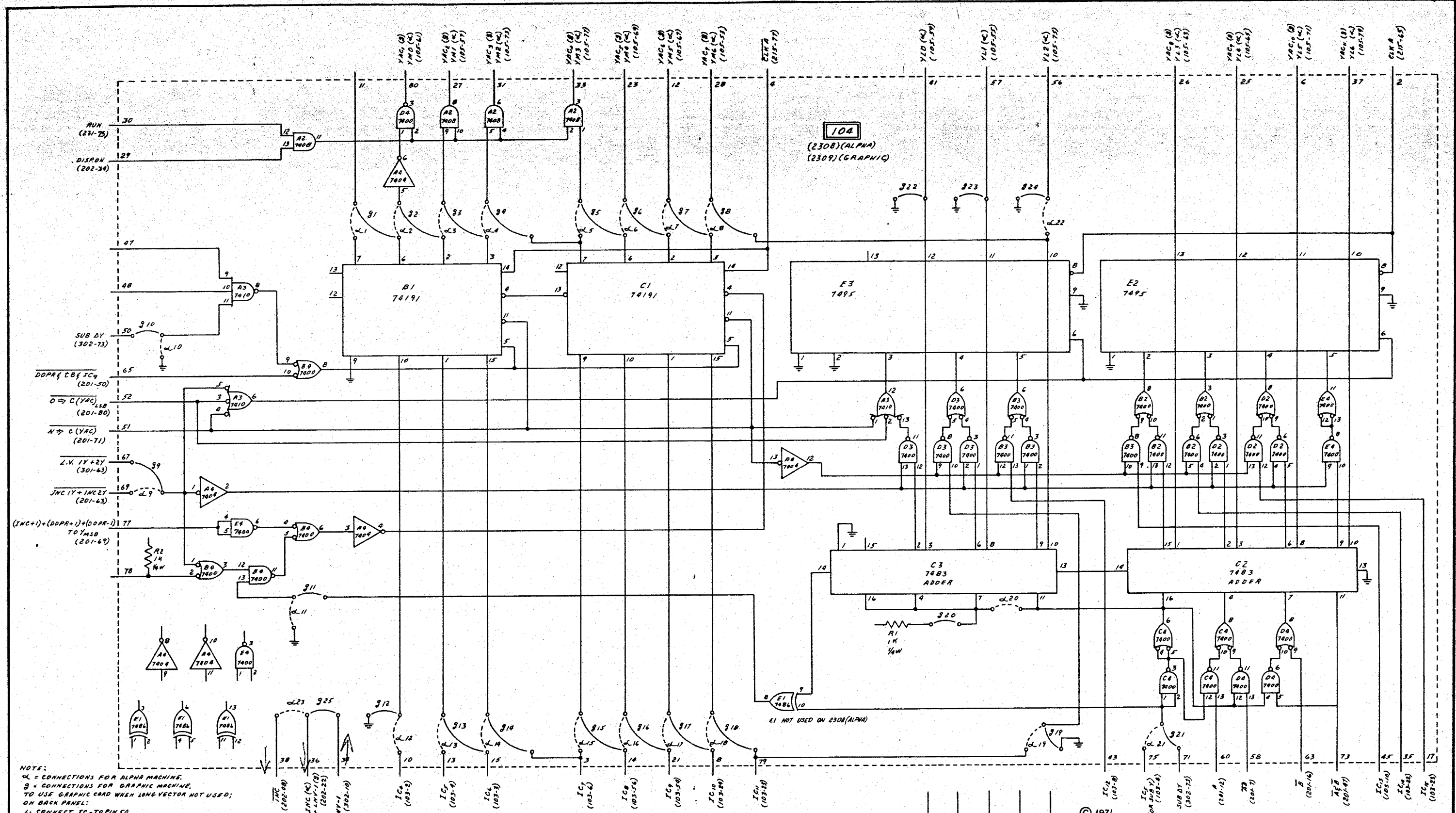
NOTE:
 TO USE GRAPHIC CARD WHEN LONG VECTOR NOT USED;
 ON BACK PLANE:
 1. CONNECT IC2 TO PIN 50.
 2. CONNECT INC (IC2) TO PIN 4B.
 3. CONNECT PIN 36 TO PIN 8B.
 4. CONNECT PIN 67 TO PIN 69.
 5. CONNECT PIN 71 TO PIN 75.
 MACHINE CAN THEN BE USED WITH % CARD ALSO.

REV	ECN	DATE	DESN.	APP'D.
F	-	29 Dec 71	H.C.M.	
E	-	9-13-71	J.V.	
D	-	8-26-71	J.V.	
C	-	1 Jun 71	H.C.M.	
B	-	2 MAY 71	R.T.M.	
A	-	1-22-71	A.I.F.	

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

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 IMLAC CORPORATION
 288 NEWTON STREET
 WALTHAM, MASSACHUSETTS 01984

TITLE		PREFIX	SIZE	DRAWING NUMBER	REV.
X DISPLAY ACCUMULATOR		L	D	850	F
PROJECT		PROD		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 IC₅ TO PIN 50.
 2. CONNECT INC IC₆ 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.

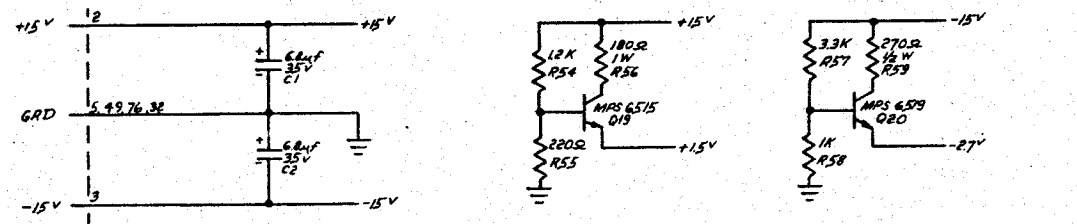
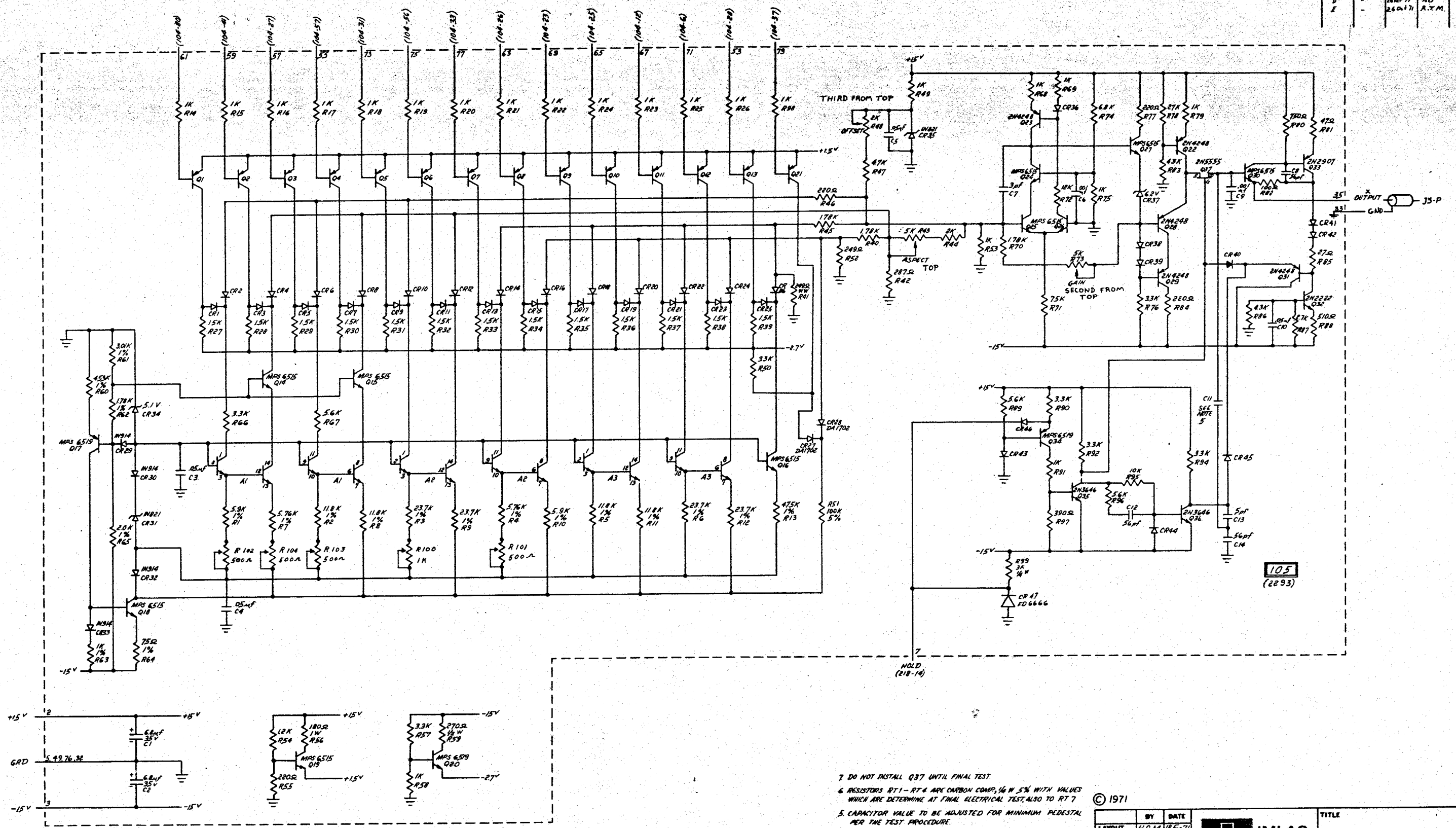
REV	ECN	DATE	BY	APP'D.
G	-	10 JAN 72	R.T.M.	J.J.
F	-	09 Dec 71	H.C.M.	J.J.
E	---	9-13-71	J.V.	
D	---	8-26-71	J.V.	
C	-	1 Jun 71	H.C.M.	
B	-	28 MAY 71	R.T.M.	
A	-	5 MAY 71	H.C.M.	

LAYOUT	BY	DATE
DRAWN	J.V.	3-22-71
CHECKED	J.V.	3-22-71
APPROVED	C.B.A.	4-7-71
DES'G		
CRT'ED		
MATERIAL		

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IMLAC
 CORPORATION
 205 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154
 PRL: T
 PROD

TITLE		DRAWING NUMBER		REV.
Y DISPLAY ACCUMULATOR		851		G
PREFIX	SIZE	DRAWING NUMBER	REV.	
L	D	851	G	
Scale		Sheet		

REV	ECN	DATE	DTN	APPV
A		17 MAY 71	H.C.M.	C.B.P.
B		18 JUN 71	H.C.M.	TESTS
C		20 SEP 71	NO	4 P.B.
D		24 OCT 71	A.T.M.	

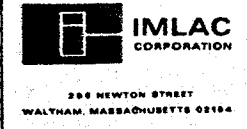


- 7 DO NOT INSTALL Q37 UNTIL FINAL TEST.
- 6 RESISTORS RT1 - RT4 ARE CARBON COMP, 1/4 W 5% WITH VALUES WHICH ARE DETERMINE AT FINAL ELECTRICAL TEST, ALSO TO RT 7
5. CAPACITOR VALUE TO BE ADJUSTED FOR MINIMUM PEDESTAL PER THE TEST PROCEDURE.
4. ALL RESISTORS ARE 1/4 W CARBON COMP, UNLESS OTHERWISE SPECIFIED
3. A1, A2, A3 ARE RCA CA3046 TRANSISTOR ARRAYS
2. ALL DIODES ARE DA 1702, UNLESS OTHERWISE SPECIFIED.
1. Q1 - Q13, Q22 ARE 2N5255.

NOTES:

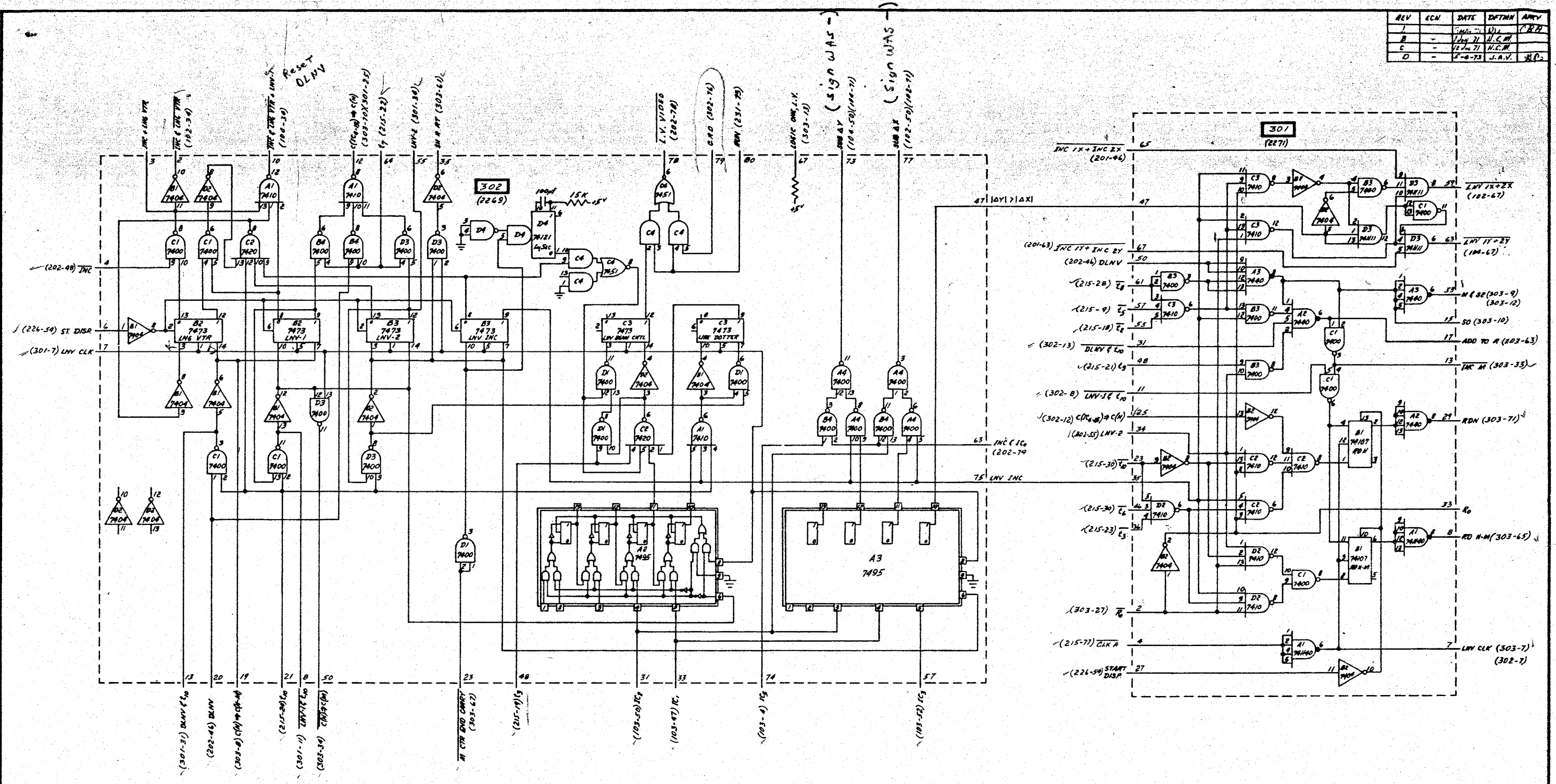
© 1971

	BY	DATE
LAYOUT	H.C.M.	18 FEB 71
DRAWN	H.C.M.	22 FEB 71
CHECKED	C.R.A.	22 FEB 71
APPROVED		
ISSUE		
COPIED		
MATERIAL		



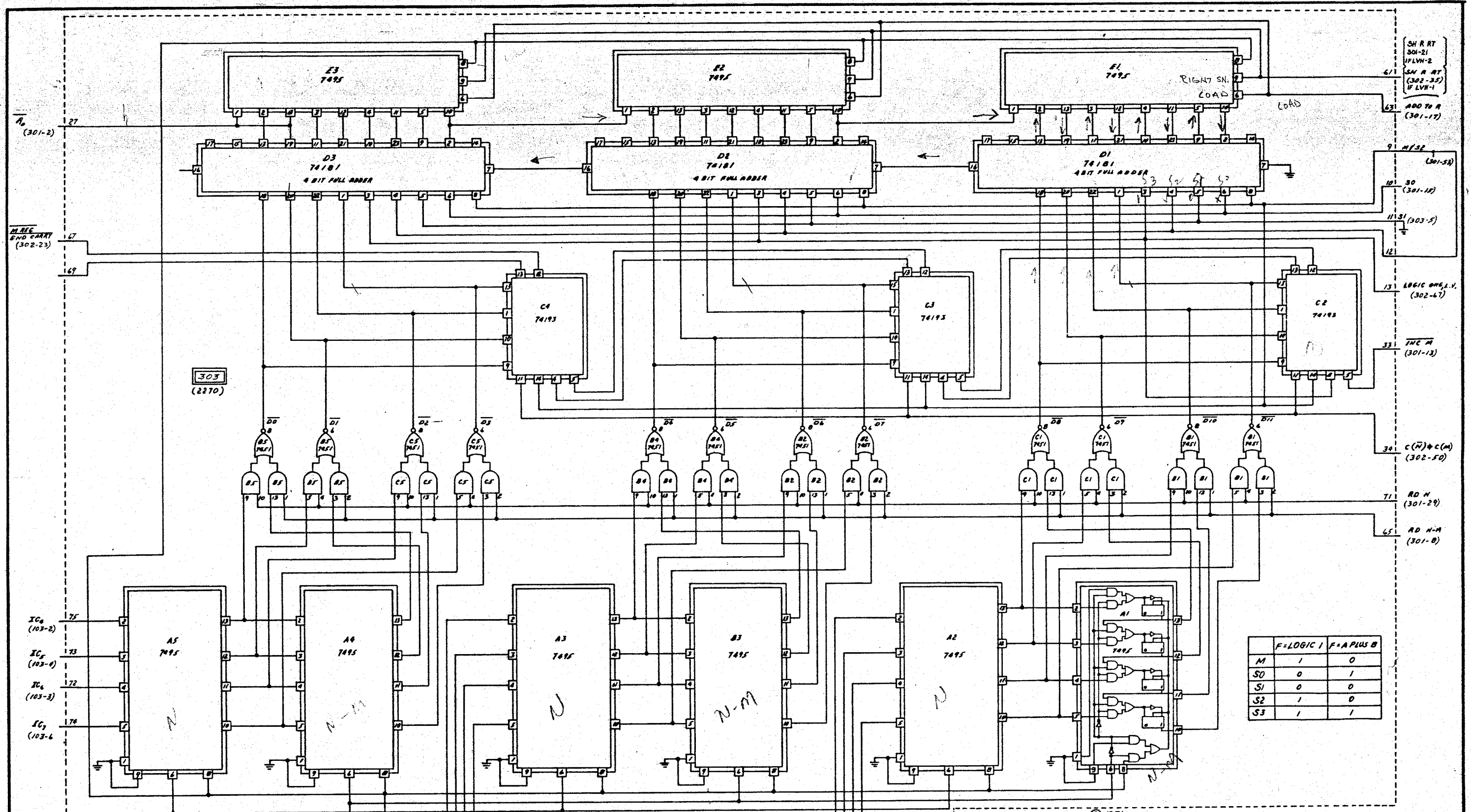
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D TO A CONVERTER						852		E	
Y AXIS									
Scale									
Sheet									

REV	ECN	DATE	EXTN	APPV
1		1/14/71	1	H.C.M.
2		1/14/71		H.C.M.
3		1/14/71		H.C.M.
4		1/14/71		H.C.M.



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LAYOUT	BY	DATE	 IMLAC CORPORATION 300 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE
DRAWN	J.V.	8-9-71		LONG VECTOR CONTROLS
CHECKED	J.V.	8-9-71		
APPROVED				
ISSUE				
COPIED				
MATERIAL			PROJECT	PROD
			PREFIX SIZE	L D
			DRAWING NUMBER	853
			REV.	0
			Scale	Sheet



SH R RT
301-21
IFLVN-2
SN R RT
(302-35)
IFLVN-1
61
62
ADD TO A
(301-17)

91 M/SE
(301-53)
101 30
(301-18)
111 S1
(303-5)
121

131 LOGIC ONE, L.V.
(302-67)
331 INC M
(301-13)

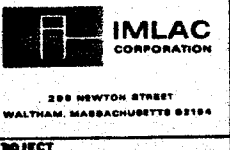
341 $C(N) \oplus C(M)$
(302-50)

711 RD N
(301-29)
451 AD N-M
(301-8)

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

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BY	DATE
JY	8-9-71
JY	8-9-71
CBA	4-12-71



TITLE
**LONG VECTOR
REGISTERS**

REV	ECN	DATE	DIFF	APP'D
A	-	1 Jun 71	H.C.M.	
B	-	8 May 71	A.T.M.	
C	-	10 Jul 71	H.C.M.	

PROJECT
PROD

PREFIX	SIZE	DRAWING NUMBER	REV
L D		854	D

27
(301-2)

67
M REC
END CARRY
(302-23)

303
(2270)

75
IC₀
(103-2)

73
IC₁
(103-0)

72
IC₂
(103-3)

74
IC₃
(103-6)

70
 $C(N) \oplus C(M)$
(302-50)

8
 $C(N) \oplus C(M)$
(302-17)

7
L.V.V. CLK
(301-7)

29
IC₀
(103-5)

27
IC₁
(103-5)

25
IC₂
(103-24)

23
IC₃
(103-25)

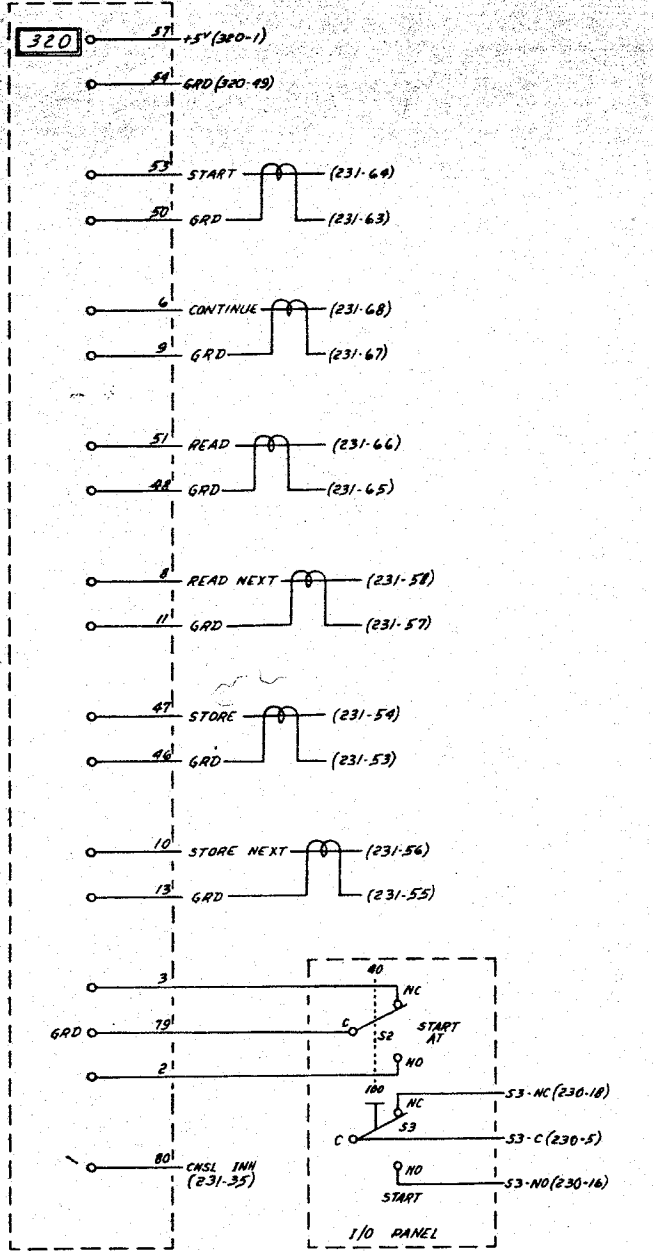
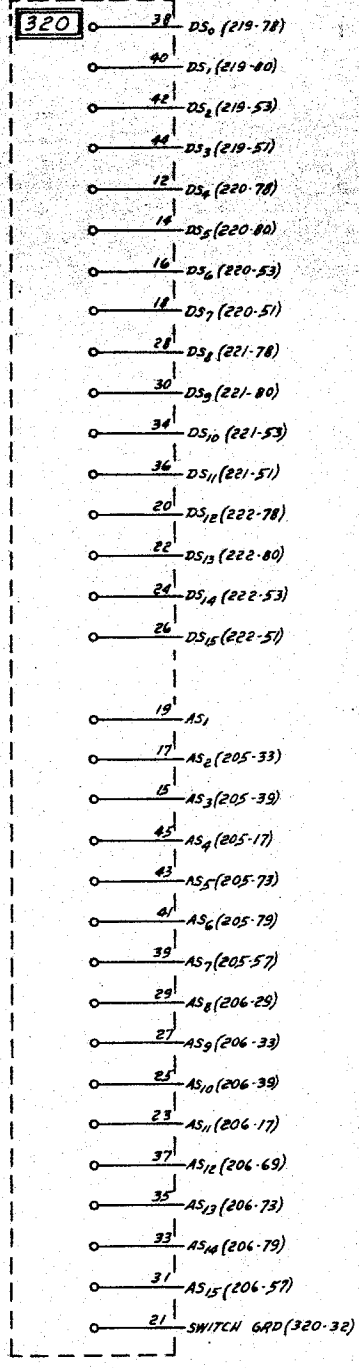
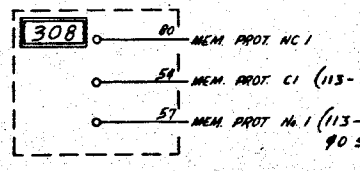
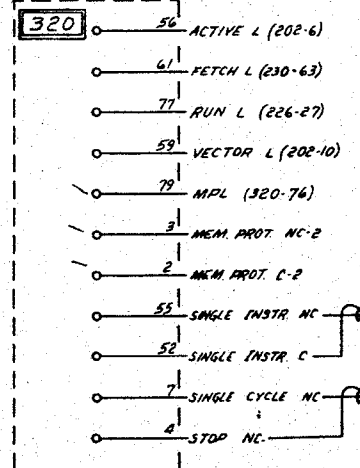
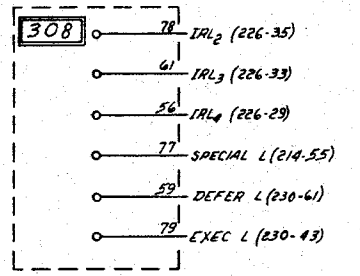
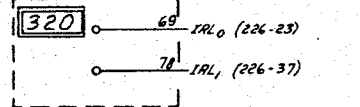
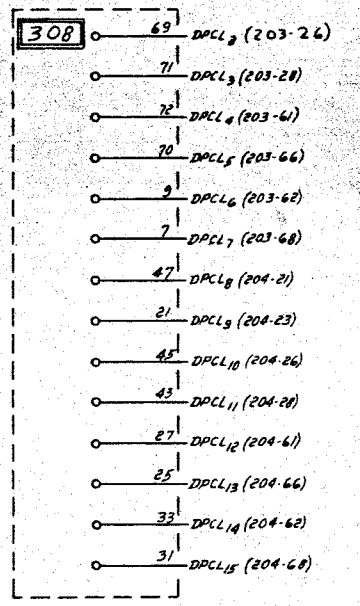
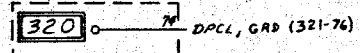
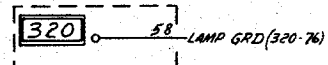
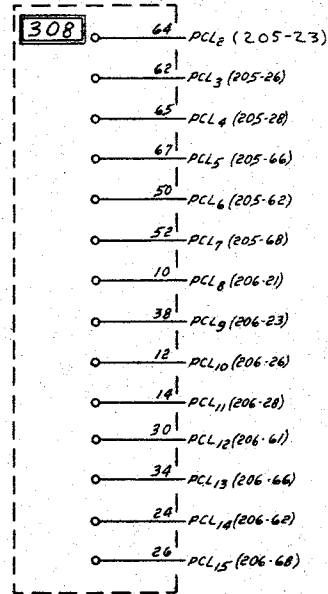
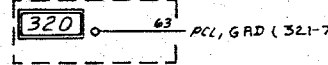
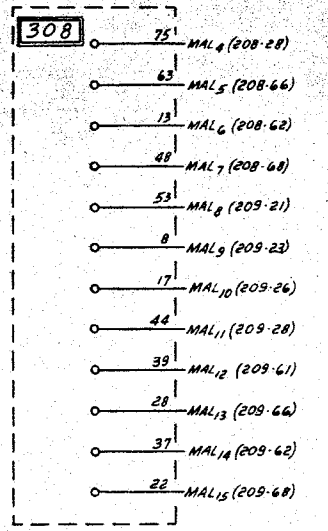
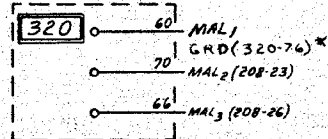
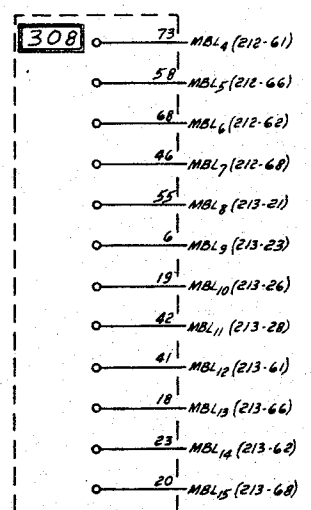
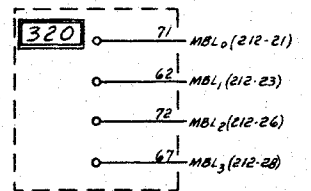
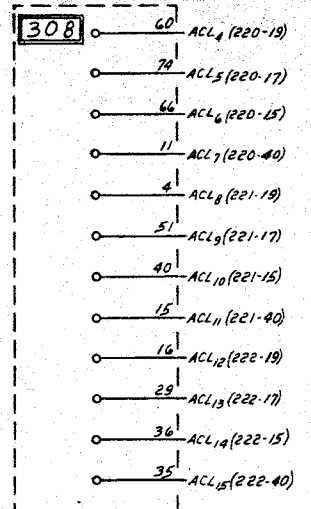
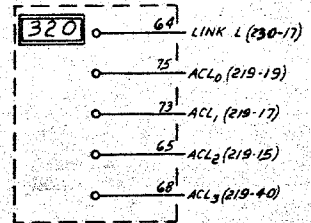
25
IC₁₂
(103-8)

22
IC₁₃
(103-10)


24
IC₁₄
(103-22)

24
IC₁₅
(103-23)

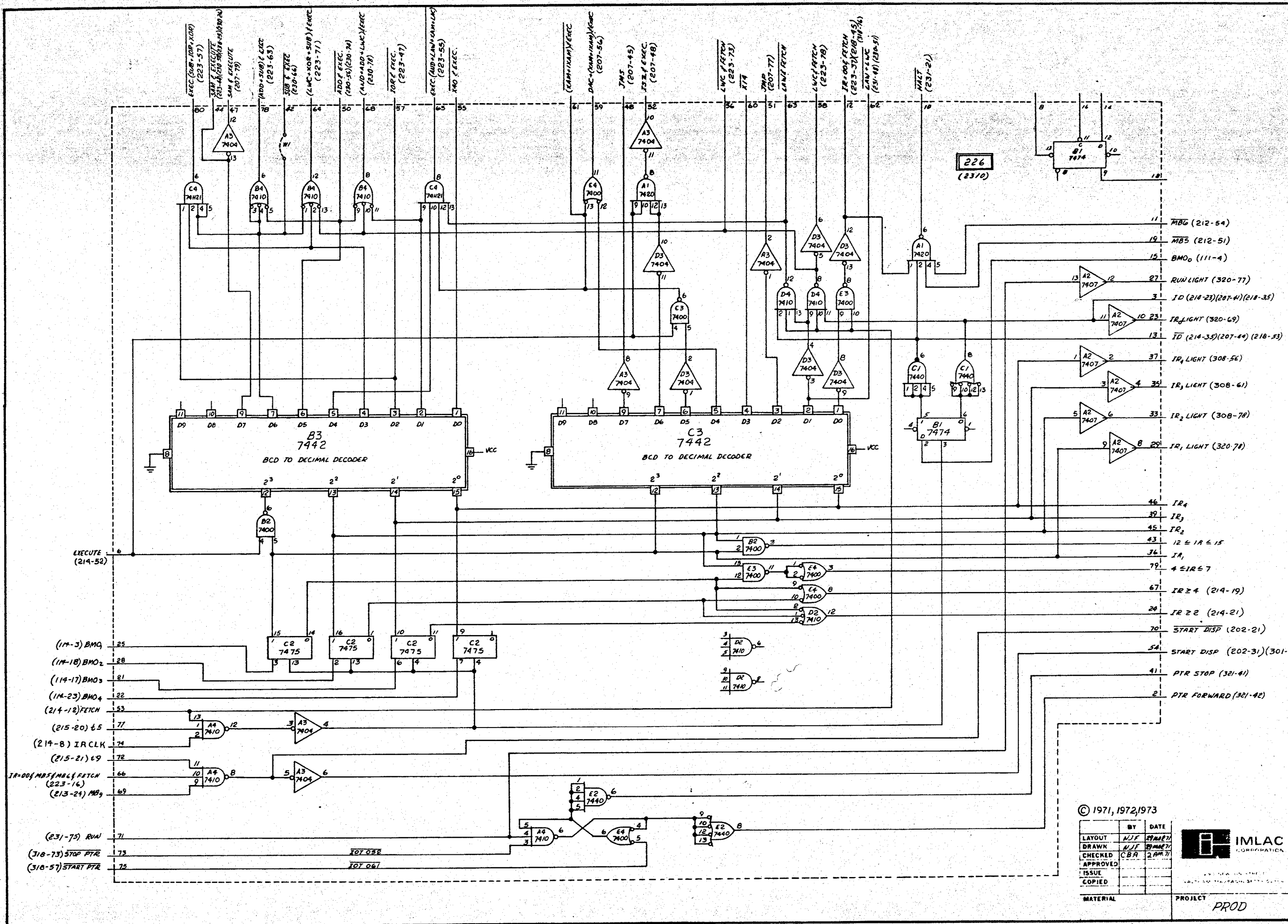
REV	ECN	DATE	DFTN	APPV
A	-	1/25/73	R.T.M.	



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LAYOUT	BY	DATE	 IMLAC CORPORATION 26 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-B	A
ISSUE				Scale		Sheet	
COPIED				PROJECT	PROD		

REV.	ECN.	DATE	DTN	APP'D.
A	-	8-25-71	J. V.	R.T.M.
B	-	28 SEP 71	G.B.	V.P.S.
C	-	6 MAR 72	H.C.M.	
D	-	17 MAR 73	R.T.M.	



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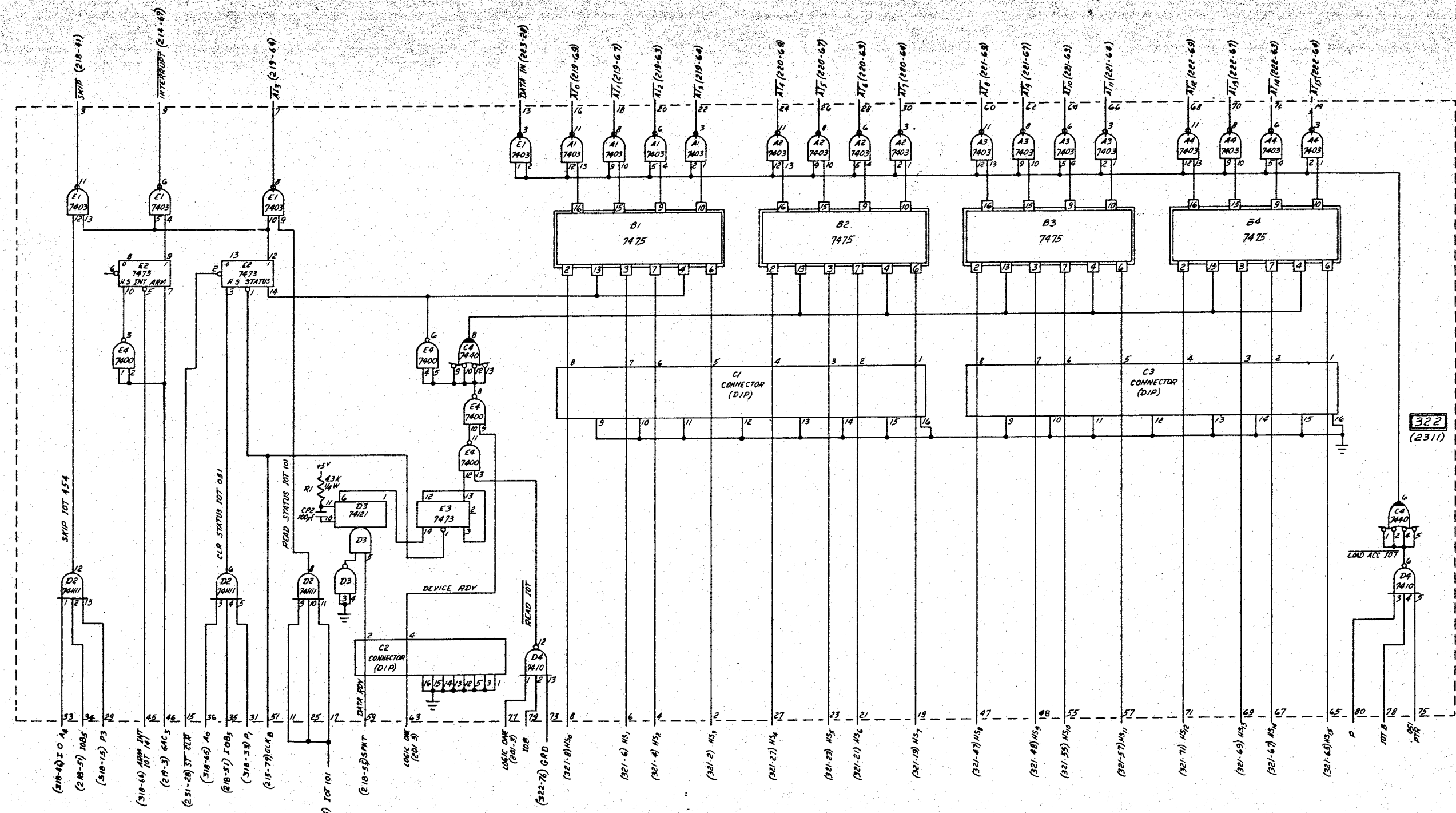
LAYOUT	BY	DATE
DRAWN	H.J.F.	2/28/71
CHECKED	C.B.A.	2/28/71
APPROVED		
ISSUE		
COPIED		



TITLE
INSTR. REG. &
DECODER

MATERIAL	PROJECT	SIZE	DRAWING NUMBER	REV
	PROD	L D	856-B	D

REV	ECN	DATE	DTM	APPV
A		16 APR 71	G.B.	J.D.P.
B		6 MAY 71	N.J.T.	C.B.A.
C		17 MAY 71	H.C.M.	C.B.A.
D		1 JUN 71	H.C.M.	
E		1 FEB 72	R.T.M.	

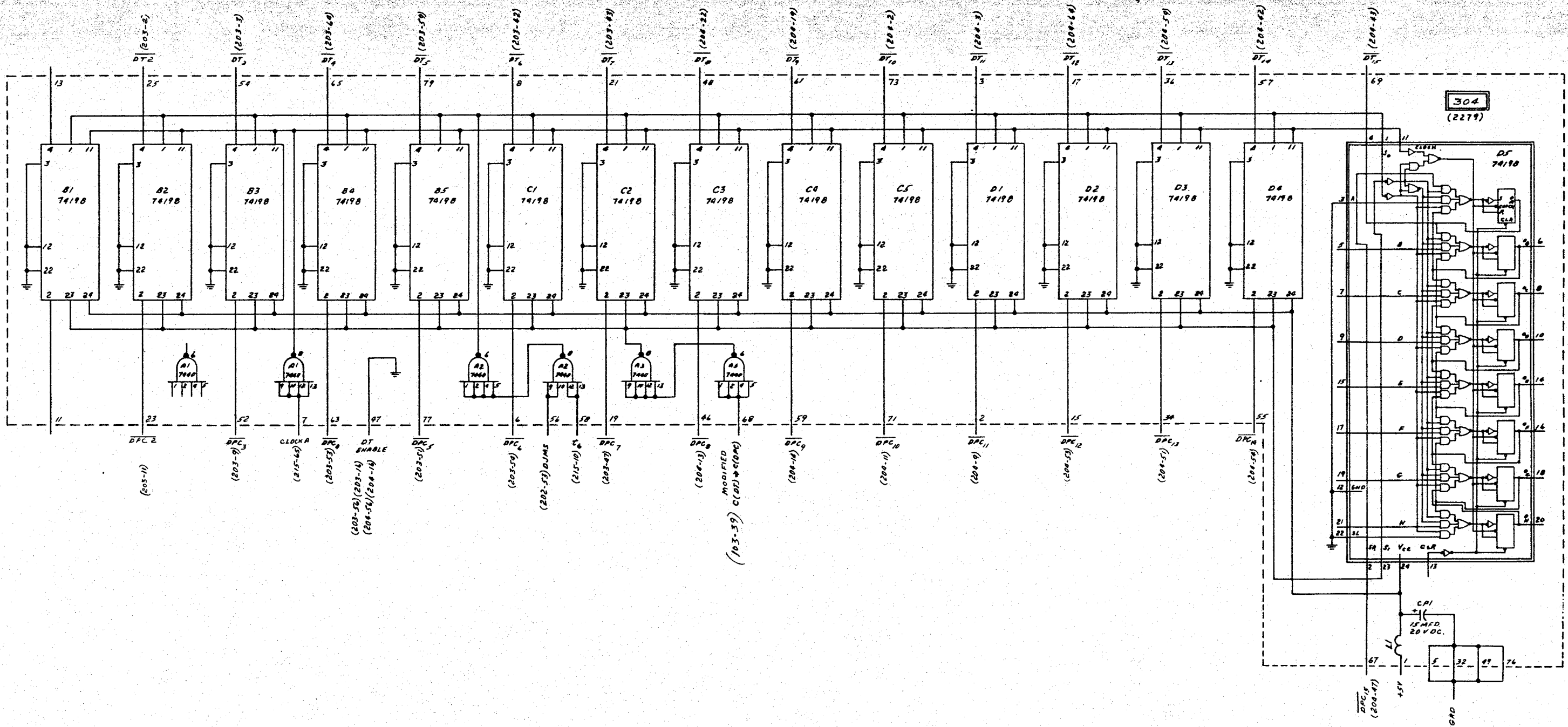


322
(2311)

© 1971

LAYOUT	BY	DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
DRAWN	H.C.M.	29 MAR 71		16 BIT HIGH SPEED INPUT D PACKAGE		
CHECKED	C.B.A.	17 APR 71		PREFIX	SIZE	DRAWING NUMBER
APPROVED				L	D	857-D
ISSUE				Scale		Sheet
COPIED			PROJECT	PROD		
MATERIAL						

REV	ECN	DATE	BY	APP'D
A		11 APR 72	R.T.M.	
B		17 APR 73	R.T.M.	



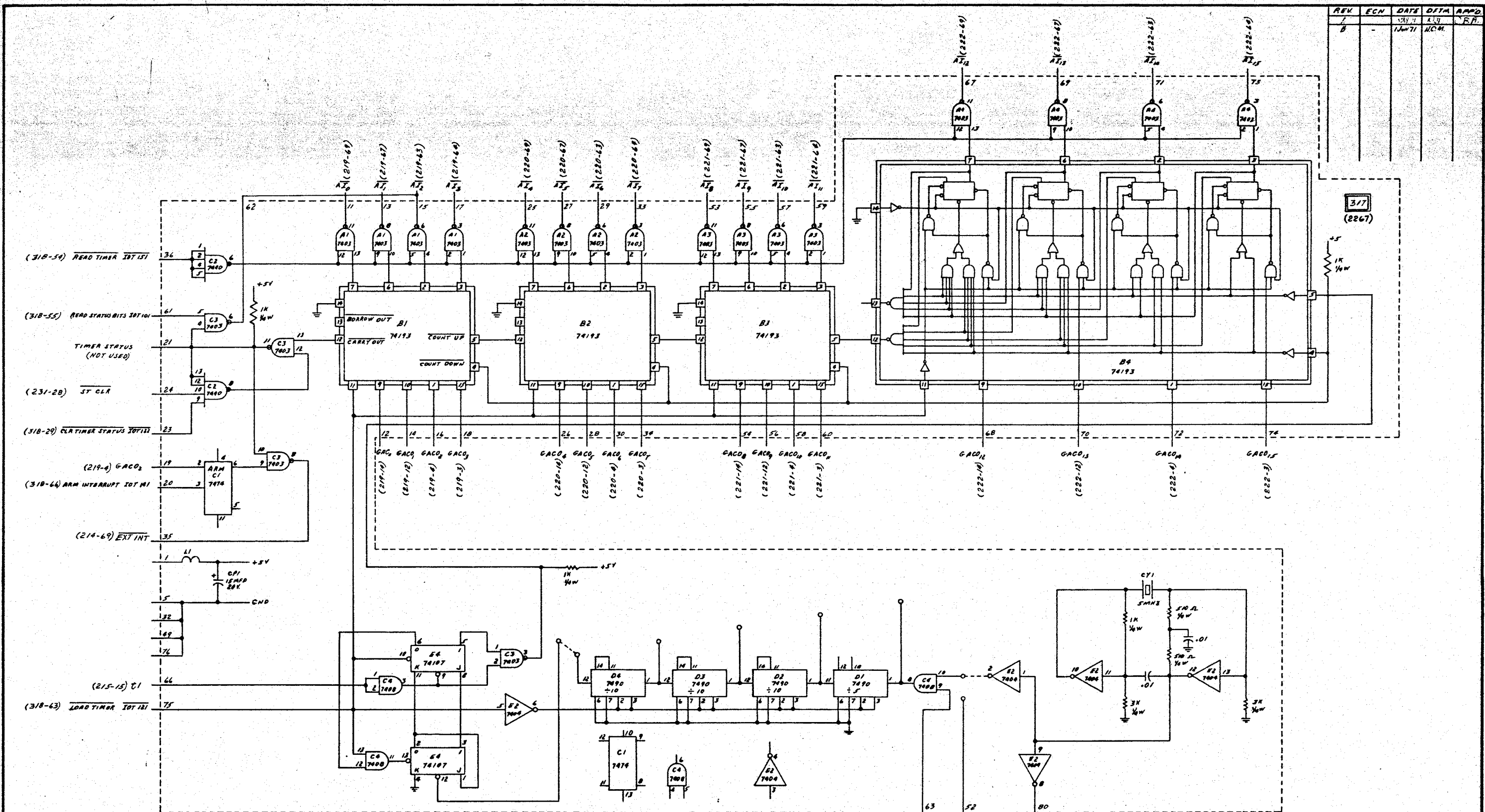
© 1971, 1972, 1973 DRAWING MADE FROM 858 11 APR 72 R.T.M.

BY	DATE	TITLE
LAYOUT	J.V. 4-9-71	8 LEVEL PUSH REGISTER
DRAWN	J.V. 4-9-71	
CHECKED	C.B.P. 4-18-71	
APPROVED		
ISSUE		
COPIED		PREFIX SIZE DRAWING NUMBER REV.
MATERIAL		S D 858-B B
		Scale Sheet



PROJECT
PROD

REV	ECN	DATE	DTM	APPD.
1		5/21/71	A. J.	R.P.
2		1/14/71	U.C.M.	



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BY	DATE
L.V.	4-12-71
L.V.	4-12-71
C.B.A.	5-12-71
ISSUE	
COPIED	

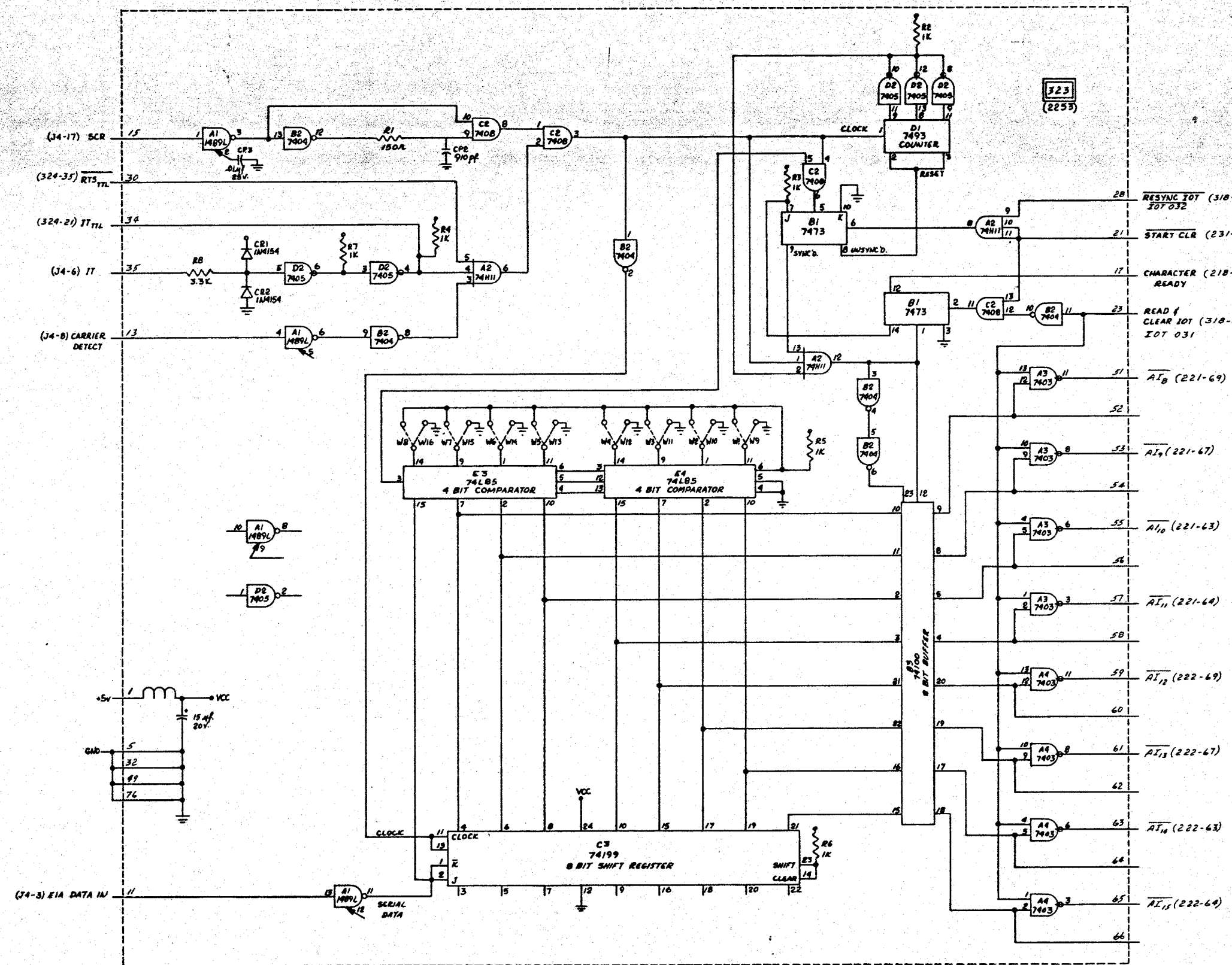


300 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

TITLE		
PROGRAMMABLE ADDRESSABLE CLOCK		
PREFIX	SIZE	DRAWING NUMBER
L	D	859
REV		
B	Sheet	

PROJECT
PROD

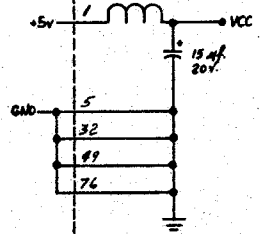
REV.	ECN.	DATE	DTM	APPV
A	-	1 Jun 71	H.C.M.	



TO SELECT SYNC IDLE CHARACTER

ASCII BIT	ONE	ZERO
8	W8	W16
7	W7	W15
6	W6	W14
5	W5	W13
4	W4	W12
3	W3	W11
2	W2	W10
1	W1	W9

GROUP	SYNC CODE	JUMPERS
00	026 _B	W1, W2, W3, W4, W5, W6, W7, W8, W9, W10, W11, W12, W13, W14, W15, W16
01	06 _A	W1, W2, W3, W4, W5, W6, W7, W8, W9, W10, W11, W12, W13, W14, W15, W16



© 1971 WMS DWG 755 f DWG 809

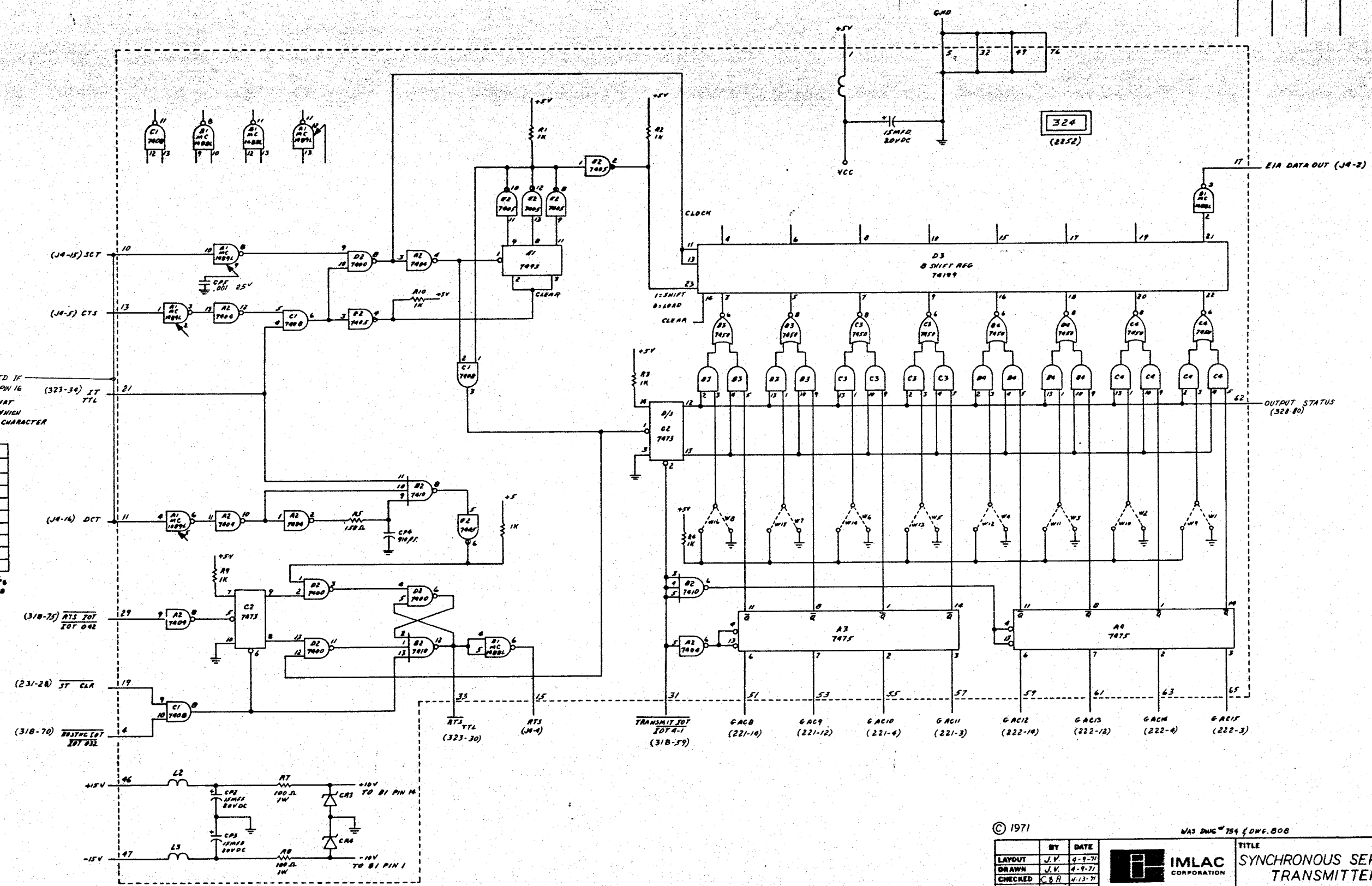
LAYOUT	J.V	4-9-71
DRAWN	J.V	4-9-71
CHECKED	C.B.A	7-13-71
APPROVED		
ISSUE		
COPIED		
MATERIAL		

IMLAC CORPORATION
206 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

TITLE
SYNCHRONOUS SERIAL RECEIVER

PREFIX	SIZE	DRAWING NUMBER	REV.
	L D	860	A
PROJECT	PROD		
Scale	Sheet		

REV	FCN	DATE	BY	APP'D
A	-	1 JUN 71	H.C.M.	
B	-	2 JUL 71	H.C.M.	
C	-	29 JUL 71	H.C.M.	
D	-	14 AUG 71	H.C.M.	



NOTES:
 1. THIS CONNECTION IS TO BE REMOVED IF MODEM OUTPUTS A DIBIT CLOCK ON PIN 16
 2. - THE FOLLOWING TABLE SHOWS WHAT JUMPER WIRE IS ASSOCIATED WITH WHICH ASCII CODE BIT OF THE SYNC IDLE CHARACTER

BIT	JUMPER	
	ONE	ZERO
8	W8	W16
7	W7	W15
6	W6	W14
5	W5	W13
4	W4	W12
3	W3	W11
2	W2	W10
1	W1	W9

GROUP 00 IS SYNC WORD 026
 GROUP 01 IS SYNC WORD 068

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 200 NEWTON STREET
 WALTHAM, MASSACHUSETTS 02154

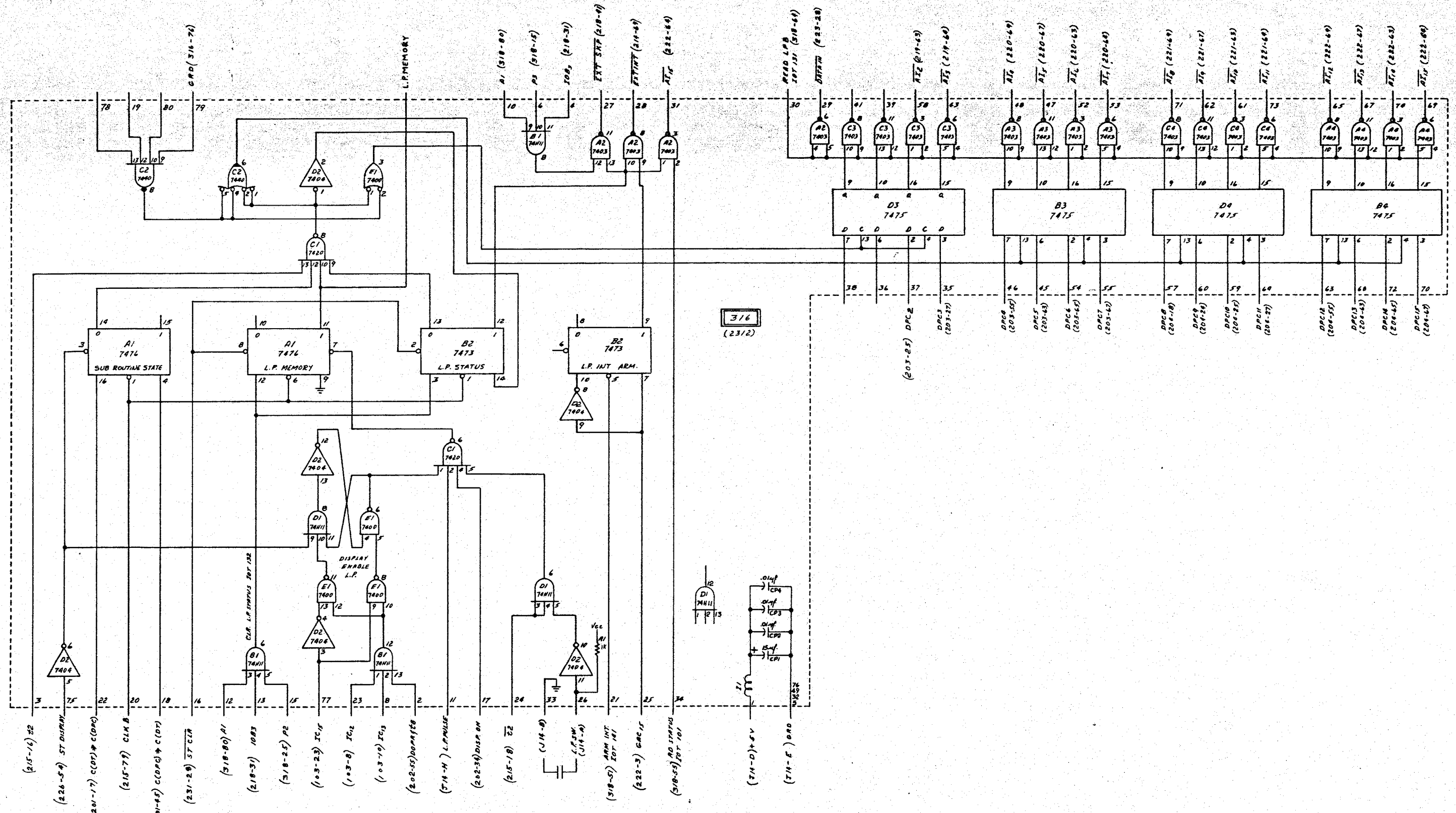
WAS DWG 754 DWF. 808

LAYOUT	BY	DATE
BROWN	J.V.	4-9-71
CHECKED	C.B.F.	4-9-71
APPROVED		
ISSUE		
COPIED		
MATERIAL		

TITLE: SYNCHRONOUS SERIAL TRANSMITTER

PREFIX	SIZE	DRAWING NUMBER	REV
L	D	861	D

PROJECT: PROD

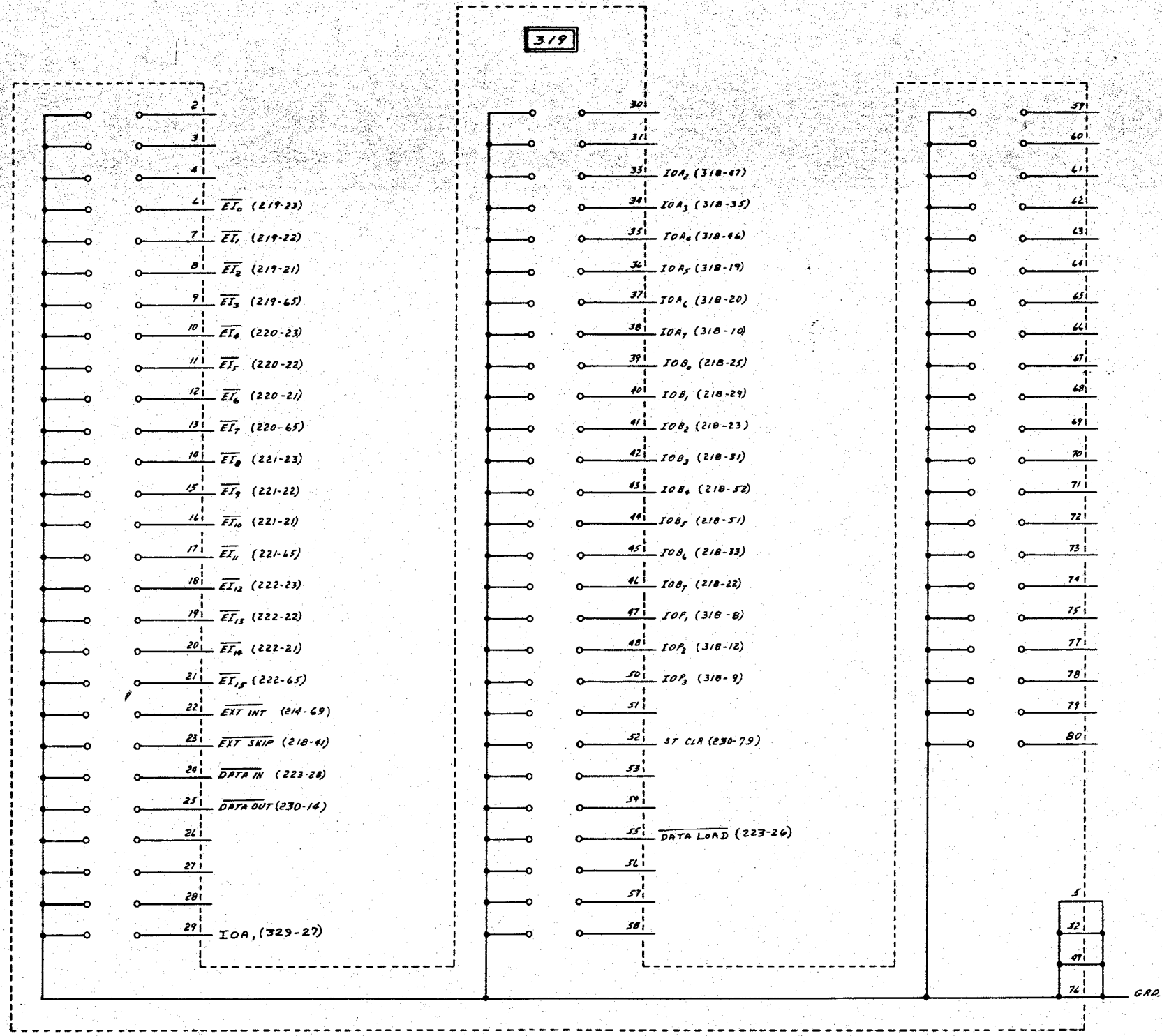


© 1971, 1972, 1973 DRAWING MADE FROM 862 12 APR 72 R.T.M.


BY DATE		TITLE
LAYOUT	J.V. 8-8-71	
DRAWN	J.V. 4-8-71	
CHECKED		IMLAC CORPORATION 280 HEATON STREET WALTHAM, MASSACHUSETTS 02154
APPROVED		
ISSUE		PREF. X SIZE DRAWING NUMBER REV.
COPIED		L D 862-B D
MATERIAL		Scale Sheet
PROJECT	PROD	

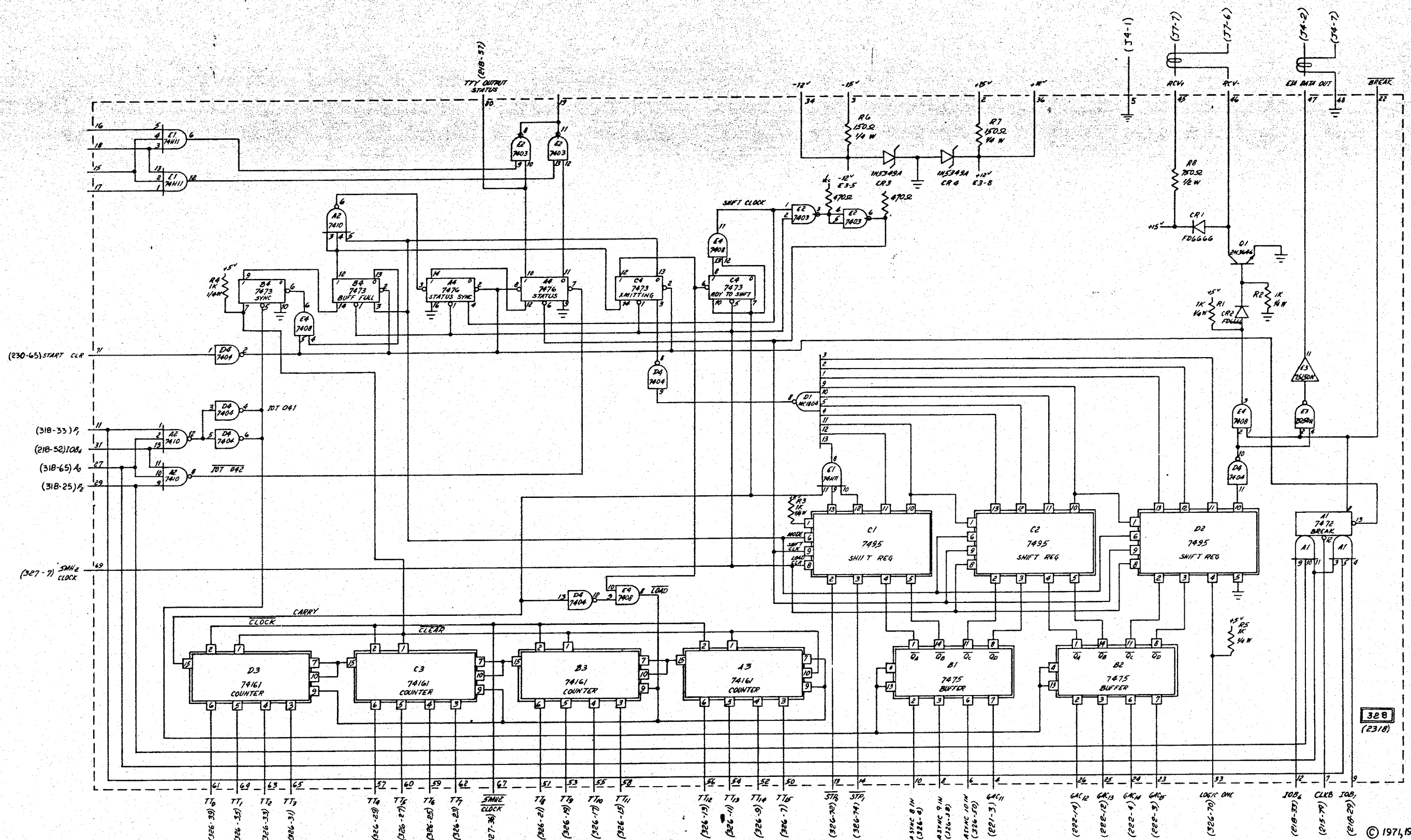
REV	ECH	DATE	DFTR	APPVD.
D	-	17 JAN 73	R.T.M.	
C	---	8-14-72	J.V.	
B	-	6-28-72	J.V.	
A	-	12 APR 72	R.T.M.	

REV	ECN	DATE	DEFIN	APPV
D	-	3-28-73	015	JP



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LAYOUT	BY	DATE	 IMLAC CORPORATION <small>200 LAW STREET WALTHAM, MASSACHUSETTS 02154</small>	TITLE	
DRAWN	J.V.	4-5-71		I/O CONNECTOR	
CHECKED	J.V.	6-5-71		PROJECT	PROJ
APPROVED				SIZE	DRAWING NUMBER
ISSUE				Scale	863-B
COPIED					Sheet



328
(2318)

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REV	ECN	DATE	DESCRIPTION	APPV.	REV	ECN	DATE	DESCRIPTION	APPV.

BY DATE
 H.C.M. 10/17/71
 J.V. 10/17/71
 H.C.M. 10/17/71
 H.C.M. 10/17/71
 D.F. 10/17/71

MATERIAL

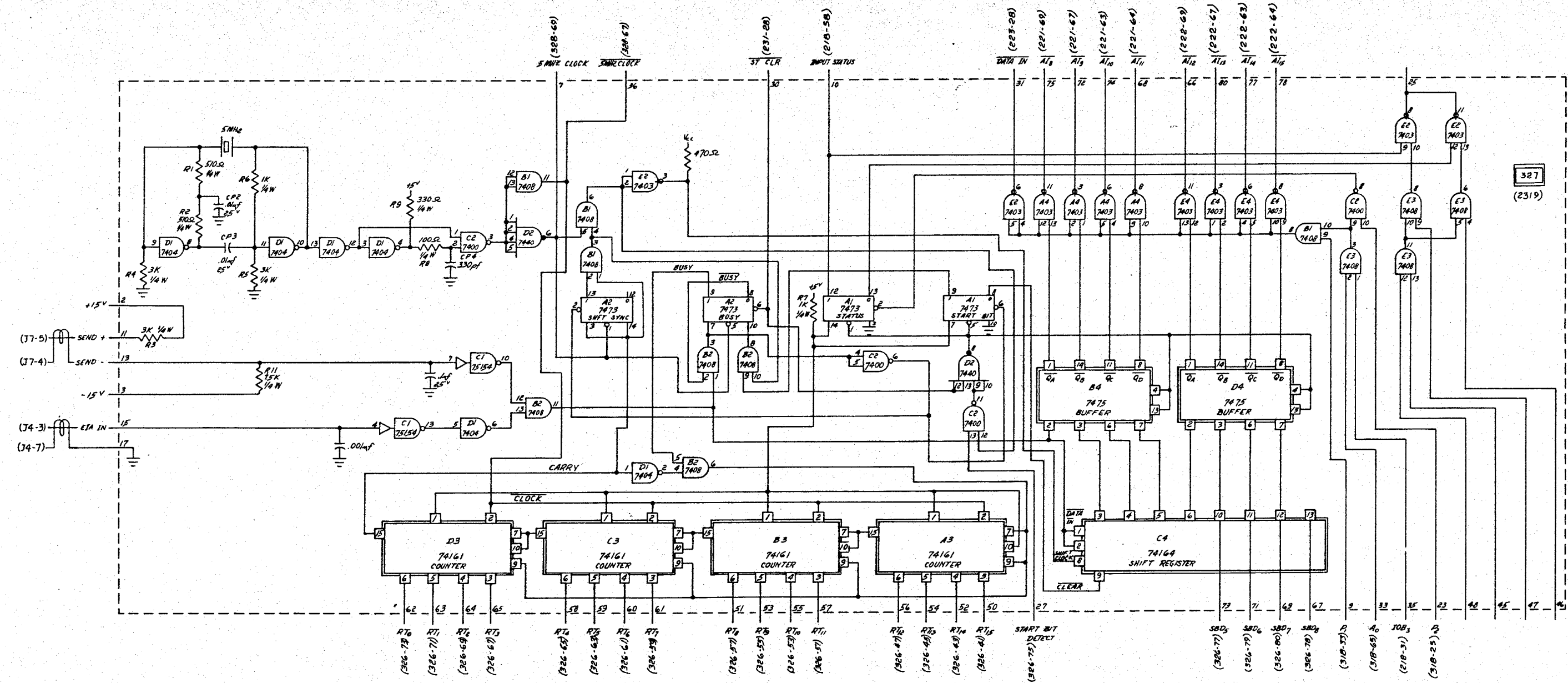
PROJECT
 PROD

IMLAC CORPORATION
 100 NEALON STREET
 WILMINGTON, MASSACHUSETTS 01897

TITLE
ASYNCHRONOUS SERIAL TRANSMITTER

PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	869-B	I
Scale		Sheet	

REV	ECN	DATE	DTM	APPV
1				
2				
3				
D		7 Jun 71	H.C.M.	D.B.F.
E	459	16 Jun 71	H.C.M.	J.C.
F		30 Jun 71	H.C.M.	
G		10-27-71	J.V.	898
H		08 Oct 71	H.C.M.	
I		11 Nov 71	H.C.M.	899
J		13 Nov 72	H.C.M.	



327
(2319)

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BY	DATE
LAYOUT	H.C.M. 30 Jun 71
DRAWN	H.C.M. 30 Jun 71
CHECKED	J.S. 30 Jun 71
APPROVED	
ISSUE	
COPIED	



TITLE
ASYNCHRONOUS SERIAL
RECEIVE

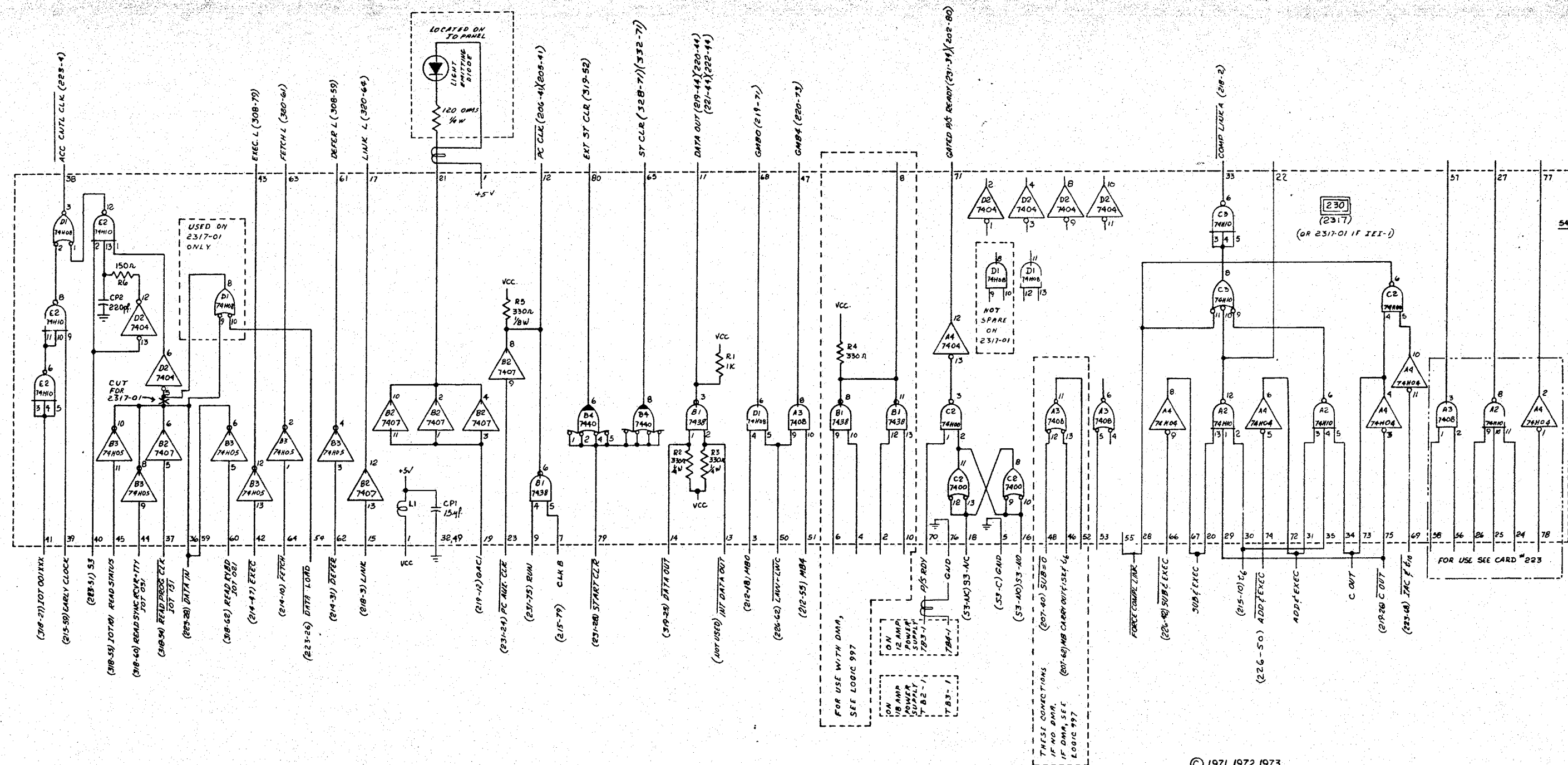
MATERIAL

PROJECT
PROD

PREFIX	SIZE	DRAWING NUMBER	REV.
		870	J

Scale Sheet

REV.	ECN.	DATE	DETM.	APPV.
A	-	7 JUN 77	A.C.M.	
B	---	8-2-77	J.V.	
C	-	8 Feb 78	A.C.M.	D.J.
D	-	5 Apr 78	A.C.M.	
E	-	12 JUN 78	R.T.M.	
F	-	18-20-78	J.V.	
G	-	17 JAN 79	R.T.M.	
H	-	30 MAR 79	R.T.M.	
J	-	23 JUN 79	R.T.M.	



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LAYOUT: WJF
 DRAWN: NJF
 CHECKED: G.B.
 APPROVED:
 COPIED:
 MATERIAL:



MISC. CONTROL

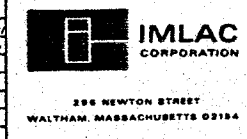
PROJECT	PREFIX	SIZE	DRAWING NUMBER	REV.
PROD	LD		872-B	J.
				Sheet

	COMMON TO ALL EXECUTE				20 _b DAC (4)				24 _b XAM (5)						30 _b ISL (6)				34 _b JMS (7)				44 _b AND (9)						50 _b IOR (10)								
	IF	JD	C(PC _{i-4})	C(PC _{i-4})	S ₀	S ₁	S ₂	S ₃	M	C _{IN}	C(ALU)	C(PC)	S ₀	S ₁	S ₂	S ₃	M	C _{IN}	C(ALU)	C(PC)	S ₀	S ₁	S ₂	S ₃	M	C _{IN}	C(ALU)	C(PC)	S ₀	S ₁	S ₂	S ₃	M	C _{IN}	C(ALU)	C(PC)	
1	(B42)	IF JD	C(PC _{i-4})	C(PC _{i-4})																																	
2																																					
3																																					
4																																					
5																																					
6	(B42)		C(MB)	C(B)																																	
7																																					
8																																					
9																																					
10																																					

	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 _{IN}	C(ALU)	C(PC)	S ₀	S ₁	S ₂	S ₃	M	C _{IN}	C(ALU)	C(PC)	S ₀	S ₁	S ₂	S ₃	M	C _{IN}	C(ALU)	C(PC)	S ₀	S ₁	S ₂	S ₃	M	C _{IN}	C(ALU)	C(PC)				
1																																				
2																																				
3																																				
4																																				
5																																				
6																																				
7																																				
8																																				
9																																				
10																																				

NOTE: THE NUMBERS IN PARENTHESES INSIDE A SIGNAL e.g. (B42) INDICATES LOGIC ZONE ON WHICH SIGNAL ORIGINATES.

BY	DATE
LAYOUT	LLF 1/5/72
DRAWN	LLF 2/2/72
CHECKED	
APPROVED	
ISSUE	
COPIED	



TITLE		
TIMING DIAGRAM EXECUTE CYCLES		
PREFIX	SIZE	DRAWING NUMBER
LD		890
Scale		Sheet 3 of 4


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THIS IS THE FRANKEL 71471

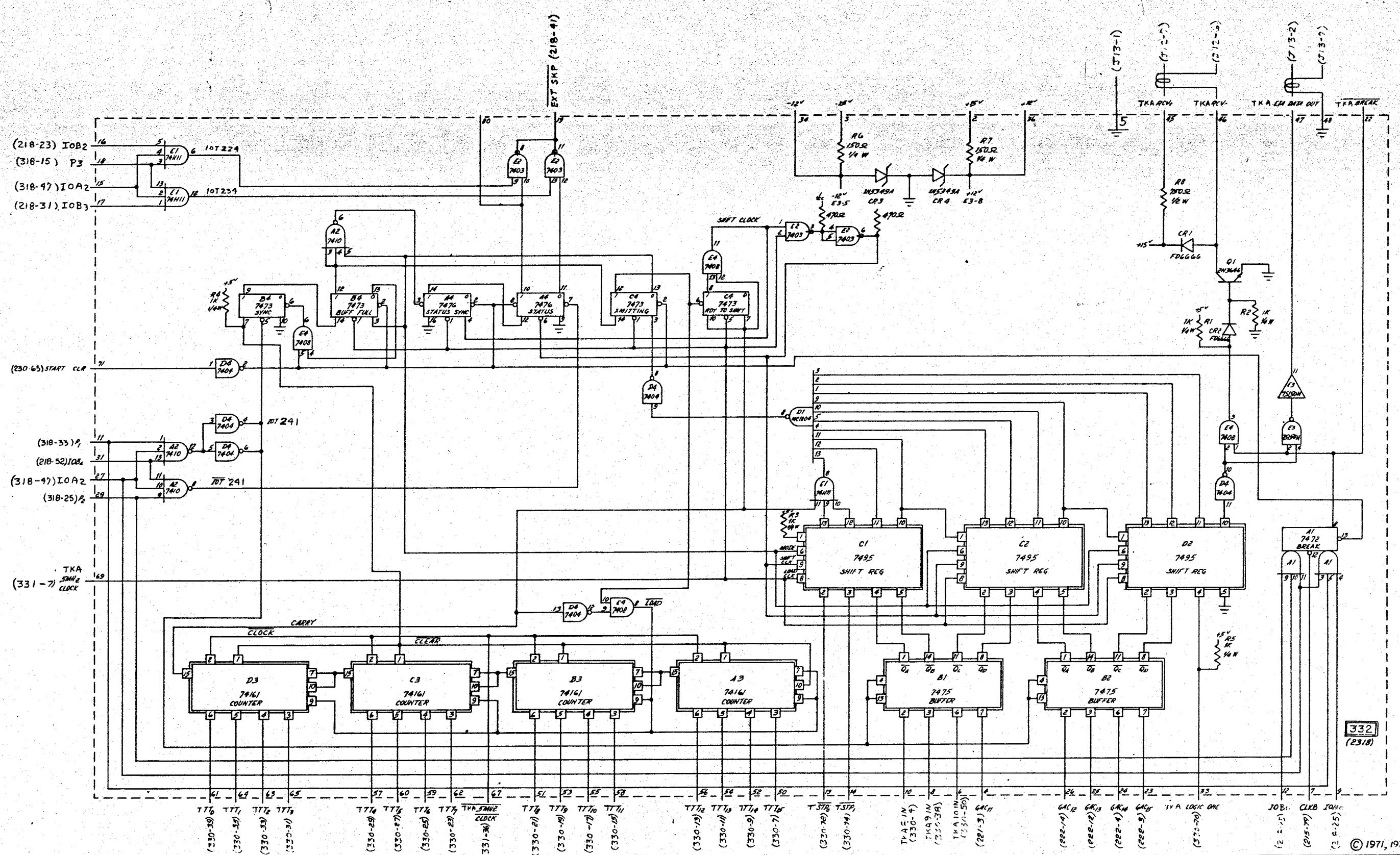
			DISPLAY BREAK	00 D OPR	01 D LIA N	02 D LYA N	03 D EIM		
1			C(DPC) + C(MA) (838)					1	
2								2	
3			C(DPC) + 1 → C(DPC) (838)					3	
4								4	
5			C(BMC) → C(DMB) C(BMC ₂) → C(DMB)					5	
6			IF INC SL-B HERE EQUIVALENT TO C(DMB) → C(DC) (838)					6	
7								7	
8				IF IC ₁ = 1 C(DI) → C(DPC) LOAD DPC CLEAR IN DISPLAY IF IC ₁ = 0 (798) IF IC ₁ = 1 SET SCALE PER IC ₁ (838)					8
9					C(IC) → C(XAC) (838)	C(IC) → C(YAC) (838)		9	
10			IF (INC) & (IN DISPLAY) SET DISPLAY BREAK (798)				SET INC SET STATE 0 SL-B (798)	10	

	04	05 D JMS Q O	06 D JMP Q	07	INC f IC ₀	INC f IC ₁		
1								1
2					IF IC ₃ +1 TO XAC (838) IF IC ₆ +1 TO YAC	IF IC ₁ = 0 → C(XAC) _{LSB} IF IC ₁ = 0 → C(YAC) _{LSB}	IF IC ₃ +1 TO XAC (838) IF IC ₆ +1 TO YAC (838)	2
3					IF IC ₀ = 1 BEAM ON (798) ALL ELSE = BEAM OFF			3
4								4
5					IF IC ₄ +1 TO XAC (838) IF IC ₇ +1 TO YAC			5
6		C(DPC) → C(DI) (838)						6
7								7
8					IF IC ₃ +1 TO XAC (838) IF IC ₆ +1 TO YAC			8
9								9
10		C(IC ₄₋₅) → C(DPC) (838)	C(IC ₄₋₅) → C(DPC) (838)		IF STATE 0 GO TO STATE 1 (798) IF STATE 1 GO TO STATE 0 & SET DISP (838) SL-B	IF IC ₁ SET DISP BEAM & CLEAR INC. (798) IF IC ₂ C(DI) → C(DPC) (838) SL-B		10

NOTE: THE NUMBERS IN PARENTHESES BESIDE A SIGNAL, e.g. (838), INDICATES LOGIC DUC ON WHICH SIGNAL ORIGINATES.

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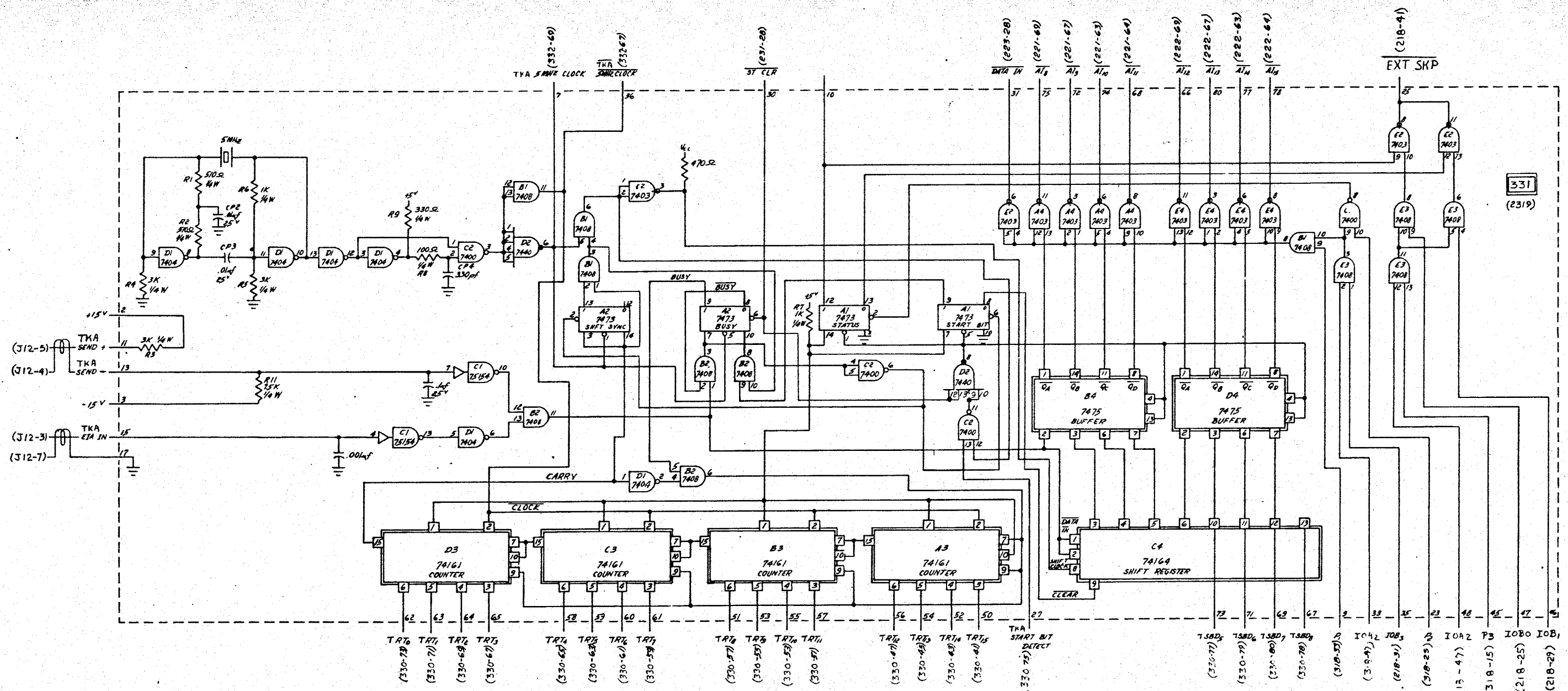
BY	DATE	 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE TIMING DIAGRAM DISPLAY CYCLES		
LAYOUT	ALJ 11/27/71				
DRAWN	ALJ 11/27/71				
CHECKED					
APPROVED					
ISSUE					
COPIED		PREFIX	SIZE	DRAWING NUMBER	REV.
MATERIAL	PROJECT	L	D	890-B	
		Scale		Sheet	4 of 4



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LAYOUT		BY	DATE	 IMLAC CORPORATION 280 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		I KA	
DRAWN		H.C.M. H.A.M. 7/71			ASYNCHRONOUS SERIAL TRANSMITTER			
CHECKED		H.C.M. H.A.M. 7/71			PREFIX	SIZE	DRAWING NUMBER	REV.
APPROVED					L	D	698-B	D
ISSUE					Scale			
COPIED					Sheet			
REV	ECU	DATE	DTN	APPVD.	PROJECT		PROD	

REV	ECN	DATE	DTM	APPV
B		10-17-71	GB	HPD
C		10-27-71	J.V.	HPD
E		9-16-71	H.C.M.	
F		11-18-72	G.B.	HPD



331
(2319)

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LAYOUT	BY	DATE
DRAWN	H.C.M.	5/11/71
CHECKED	H.C.M.	5/11/71
APPROVED		
ISSUE		
COPIED		
MATERIAL		

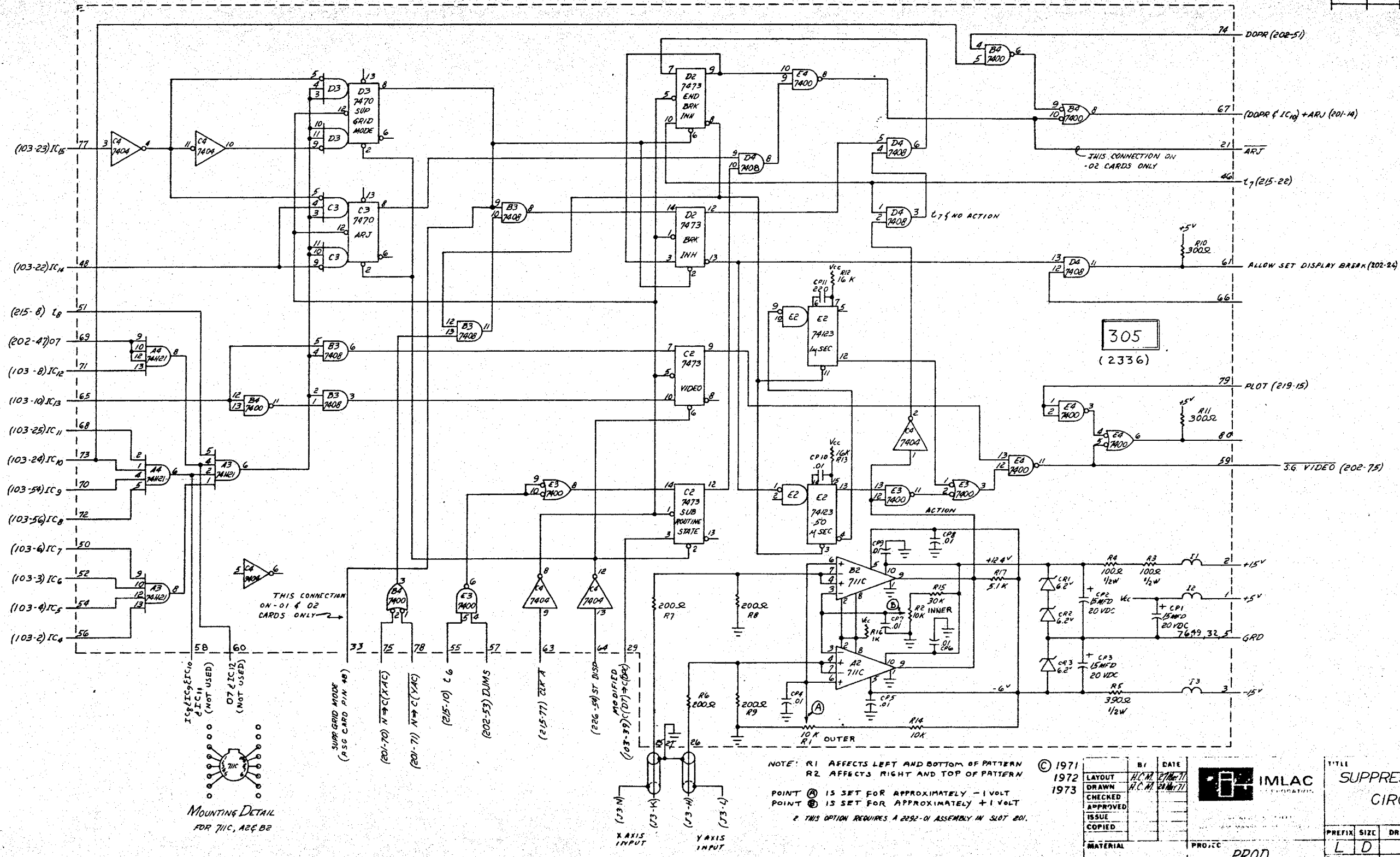
IMLAC CORPORATION
300 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

TITLE
TKA
ASYNCHRONOUS SERIAL
RECEIVE

PREFIX	SIZE	DRAWING NUMBER	REV.
		899	F
Scale			Sheet

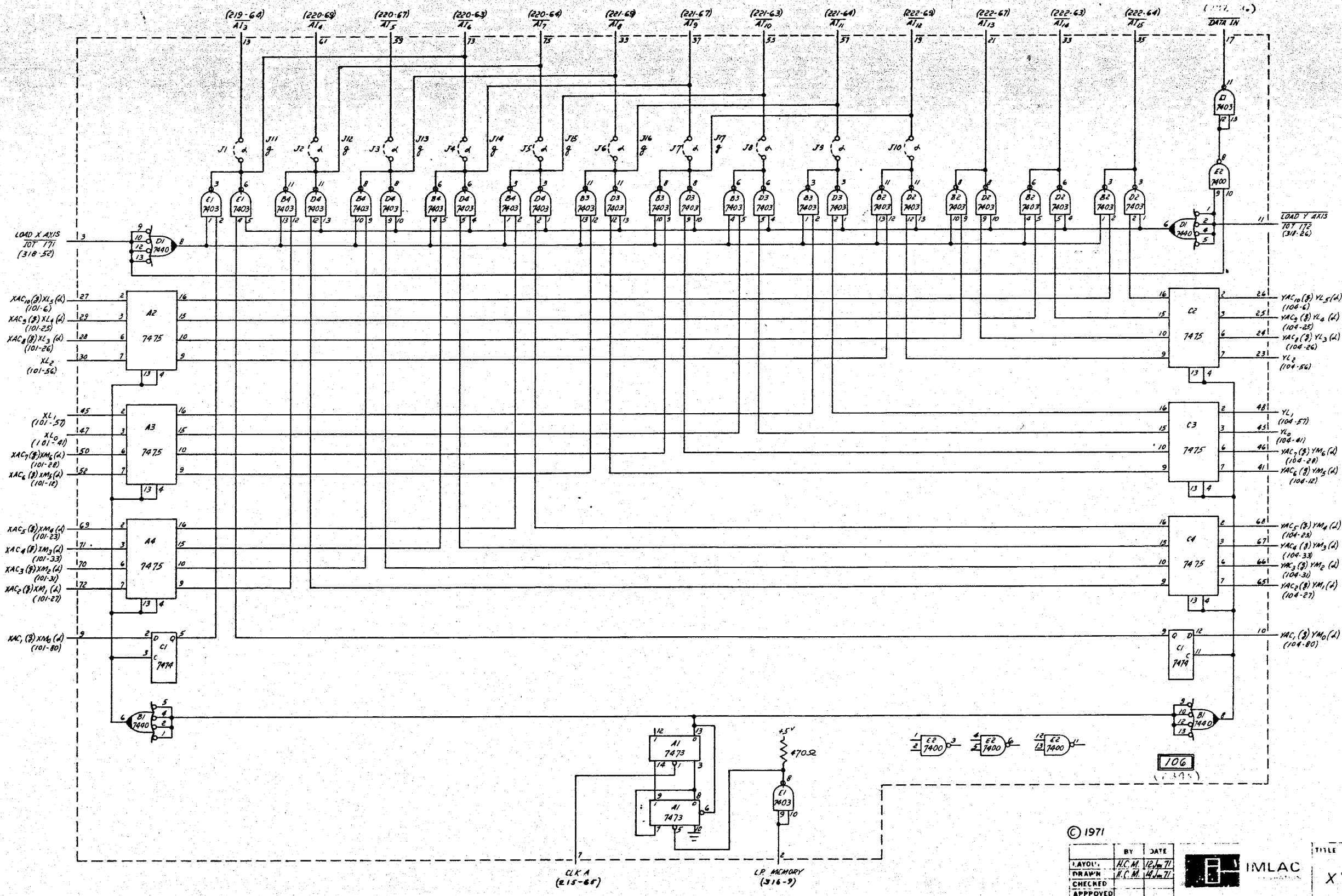
PROJECT: PROD

REV	ECN	DATE	DFTN	APRV
A	-	7 JUL 71	H.C.M.	
B	-	13 JUL 71	G.B.	
C	-	28 JUL 71	J.V.	
D	-	8-26-71	J.V.	
E	-	29 SEP 71	SB	246
F	-	17 DEC 71	H.C.M.	247
G	-	14 JAN 72	N.J.F.	248
H	-		D	249
I	-	11 AUG 72	R.T.M.	
K	-	18 JAN 73	R.T.M.	
L	-	7 Feb 73	H.C.M.	251
M	-	21 MAY 73	A.E.A.	252



MOUNTING DETAIL FOR 711C, A2 & B2

REV	ECN	DATE	DTM	APP'V
A	-	15/71	H.C.M.	

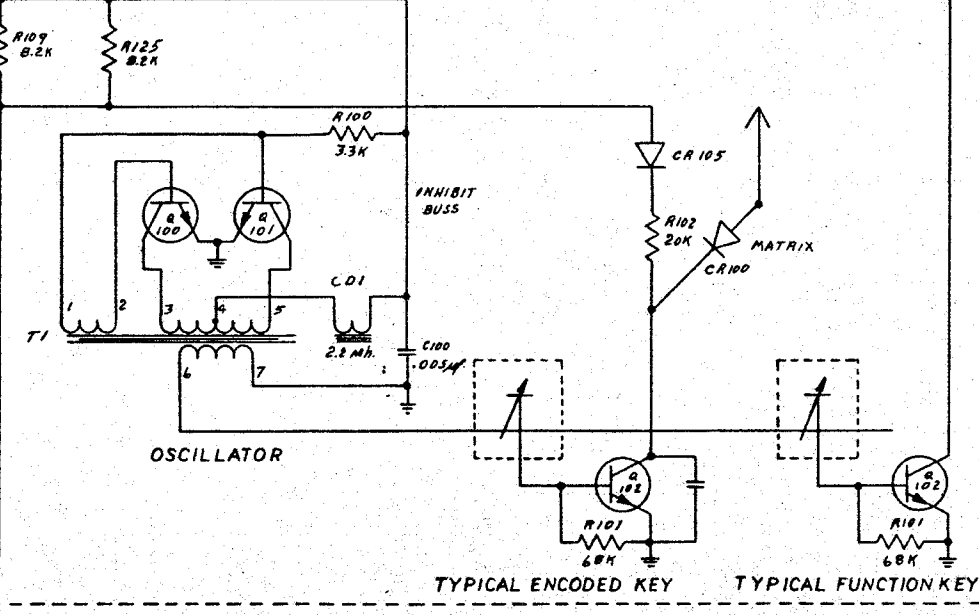
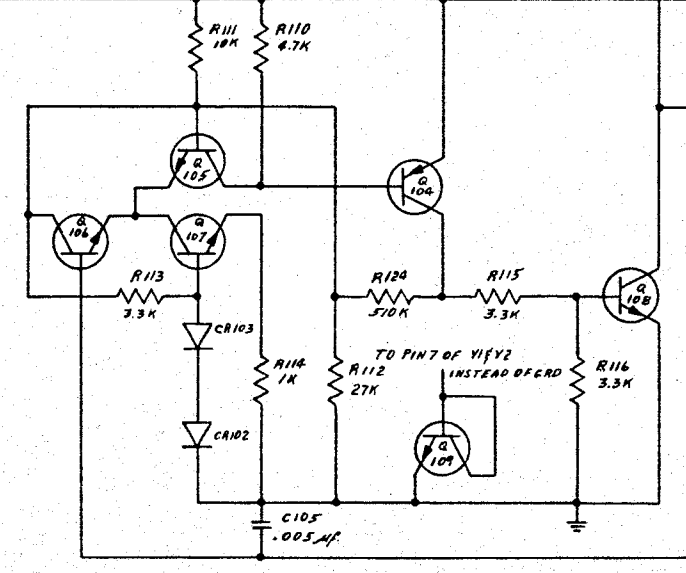
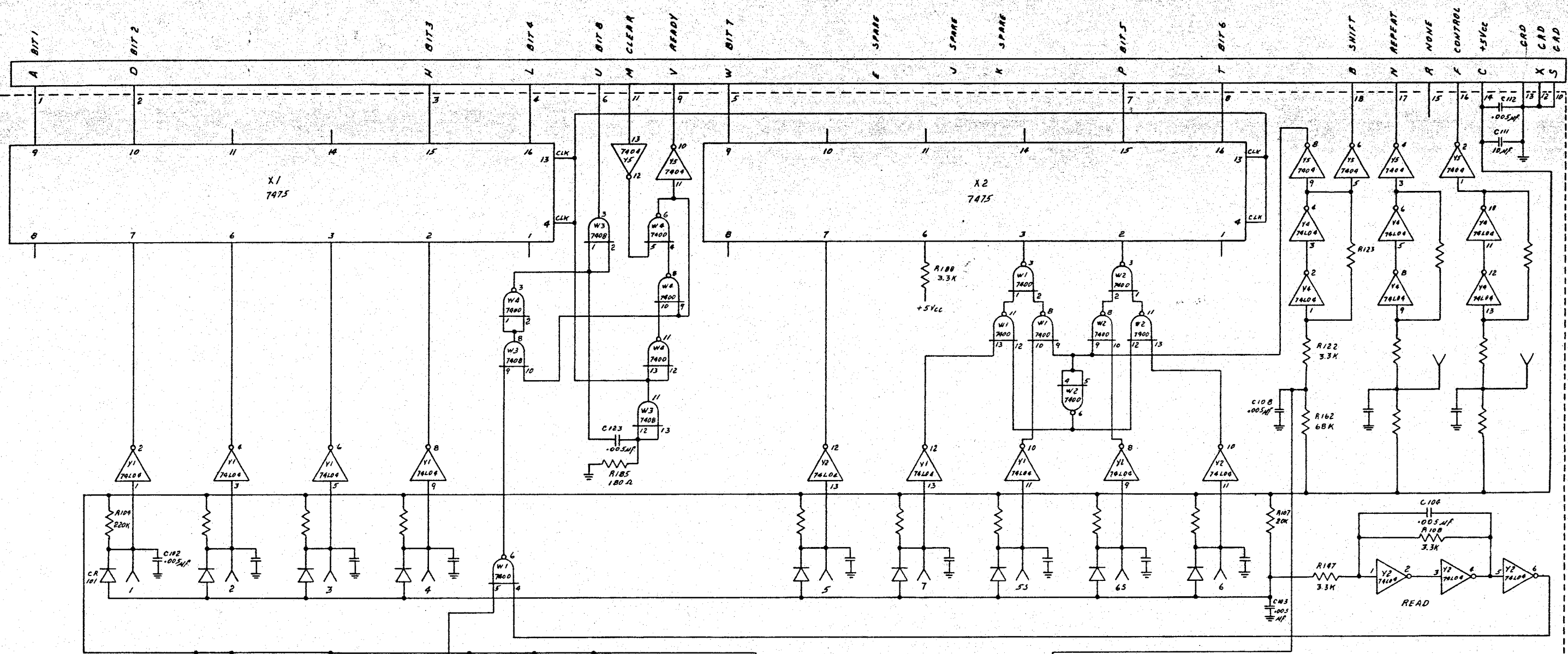


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LAYOUT	BY	DATE
DRAWN	H.C.M.	12/71
CHECKED	H.C.M.	14/71
APPROVED		
ISSUE		
COPY		
MATERIAL		



TITLE			
XYR CIRCUITS			
PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	915	A
Scale		Sheet	



COMPONENTS LEGEND		
COMP	HIGHEST NO.	COMPONENTS NOT USED
RES	R 1 B B	R 103, 105, 106, 119, 120, 121, 126, 127 THRU 146, 148 THRU 161, 163 THRU 186, 187
CAP	C 123	C 106, 107, 109 THRU 122
DIODE	CR 120	CR 104 THRU 118
TRANS.	Q 109	Q 103

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	BY	DATE
LAYOUT	J.V.	7-27-71
DRAWN	J.V.	7-29-71
CHECKED		
APPROVED		
ISSUE		
COPIED		



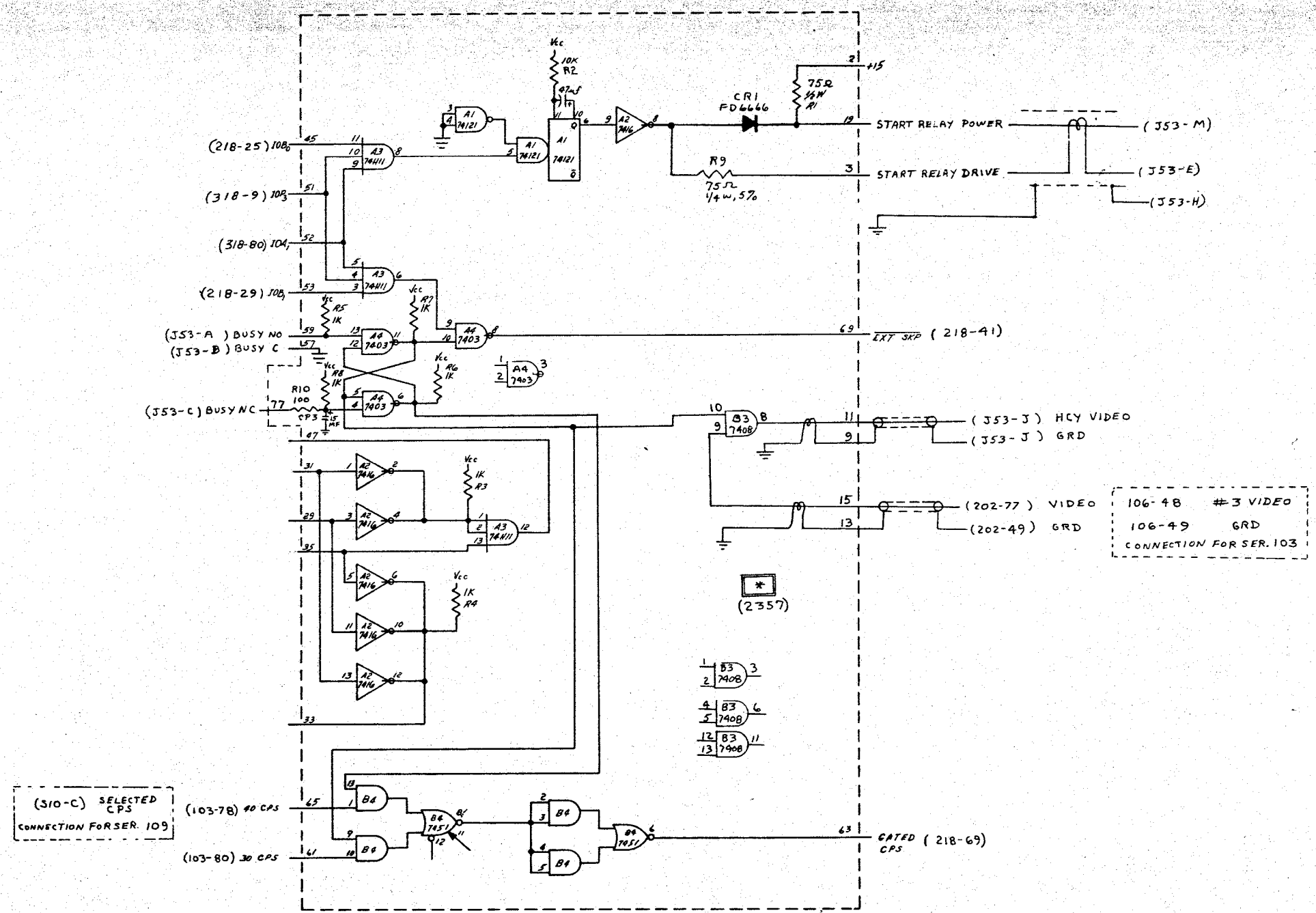
REV	ECN	DATE	APP'D

TITLE: CD KEYBOARD LOGIC

PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	929	

Scale: Sheet

REV	EDN	DATE	BY	APPV
A	---	8-26-71	J.V.	J.P.F.
B	---	8-30-71	J.V.	
C	---	10-01-71	WDM	
D	---	22-01-71	GB	



106-48 #3 VIDEO
106-49 GRD
CONNECTION FOR SER. 103

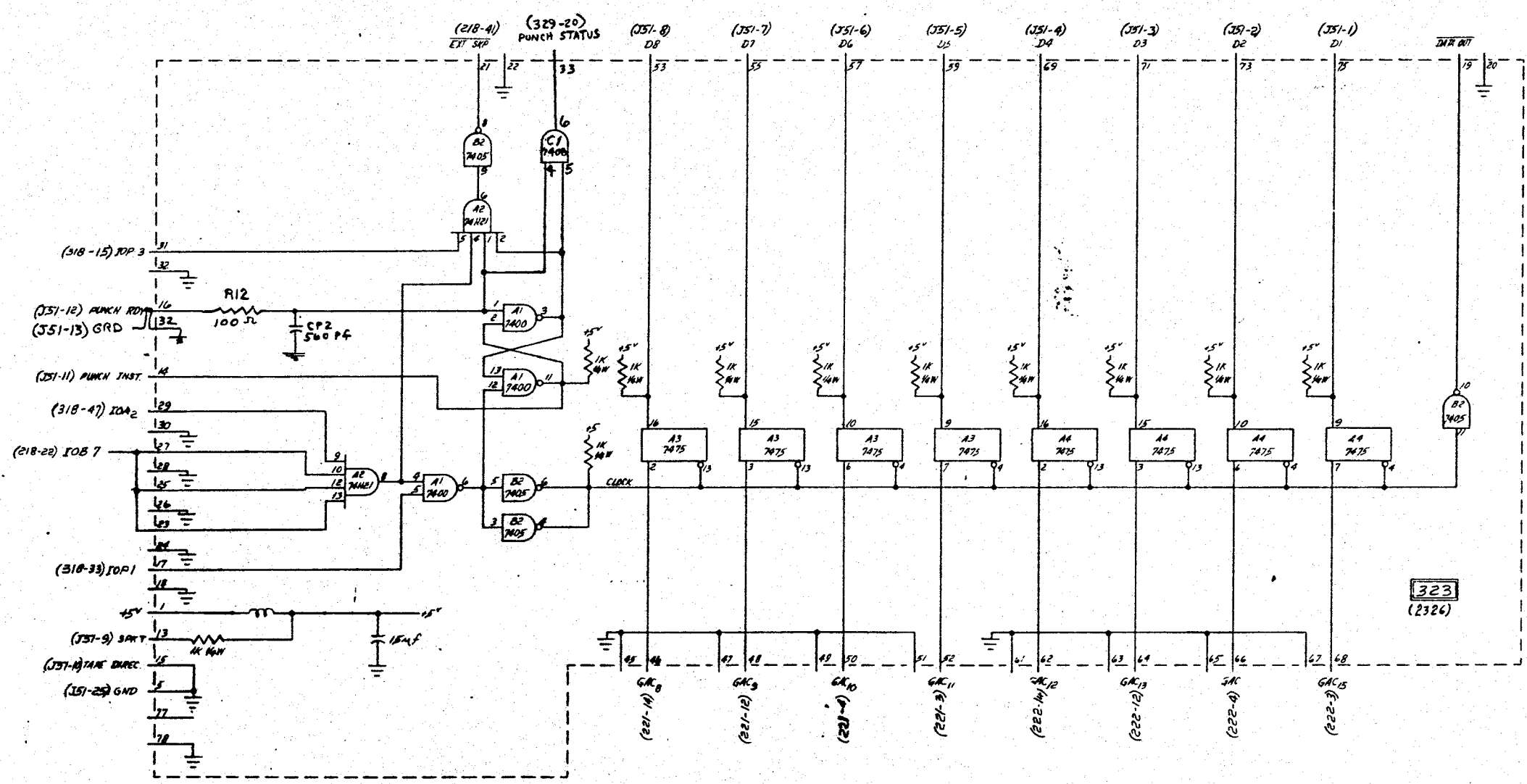
(S10-C) SELECTED CPS
CONNECTION FOR SER. 109

MACHINE #	SERIAL #	POSITION	WIRE LIST
99	109		2426
109	324		2454
103	323		2468


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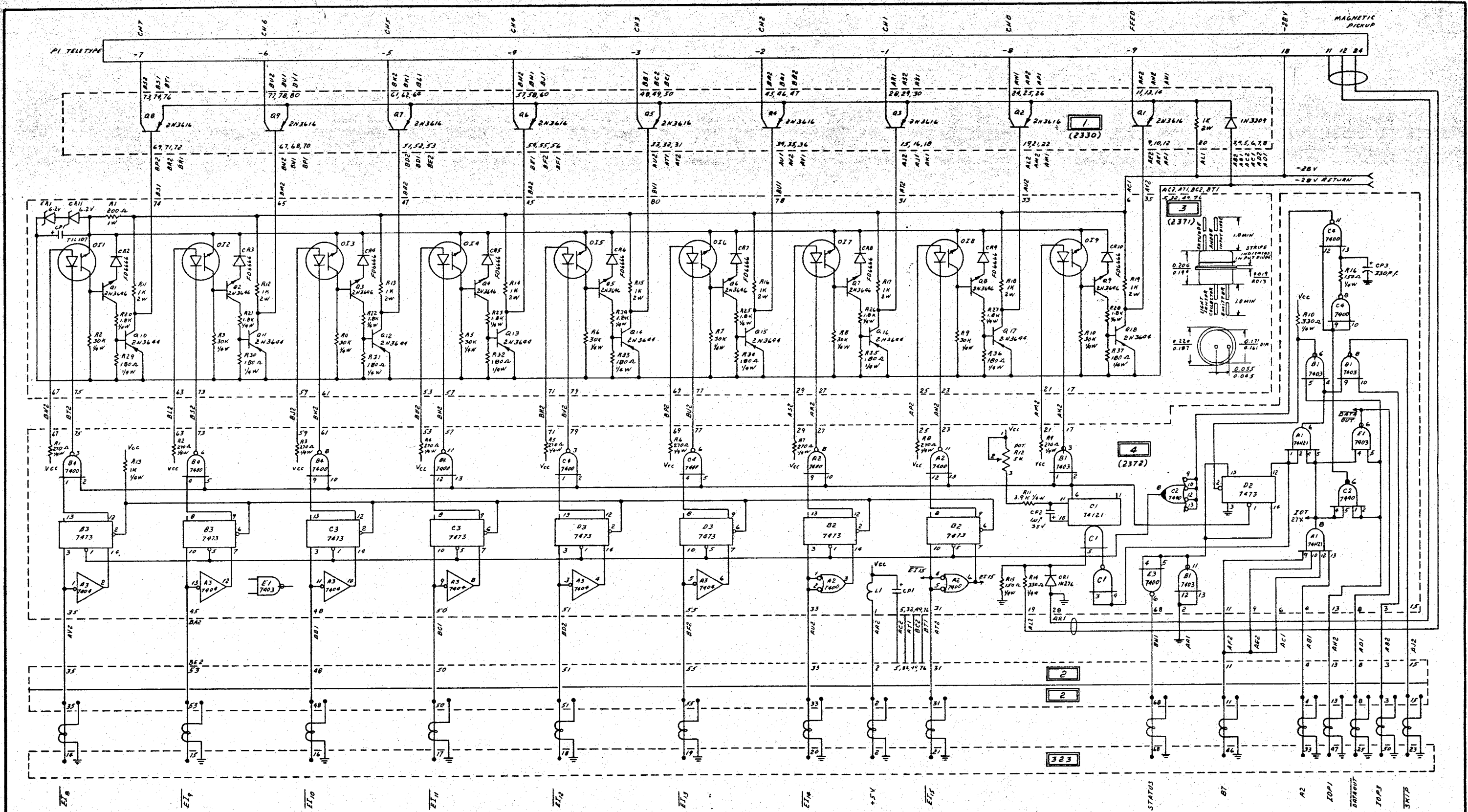
LAYOUT	BY	DATE	TITLE
DRAWN	H.C.M.	8/26/71	HARD COPY CONTROL
CHECKED	H.C.M.	8/26/71	
APPROVED			
ISSUE			
CUPIED			
PROJECT			PREFIX SIZE
MATERIAL			Sheet
DRAWING NUMBER			REV.
L D 930			D

REV	ECN	DATE	DESCRIPTION
A	---	29577	GD
B	---	240022	GD
C	---	240022	GD



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LAYOUT	BY	DATE	 IMLAC CORPORATION <small>100 NEWTON STREET WALTHAM, MASSACHUSETTS 02154</small>	TITLE		
DRAWN	HCN	8.5.77		FACIT TAPE PUNCH INTERFACE		
CHECKED	HCN	8.5.77				
APPROVED						
ISSUE						
COP. ED.				PREFIX	SIZE	DRAWING NUMBER
MATERIAL				L	D	935
				Scale		Sheet



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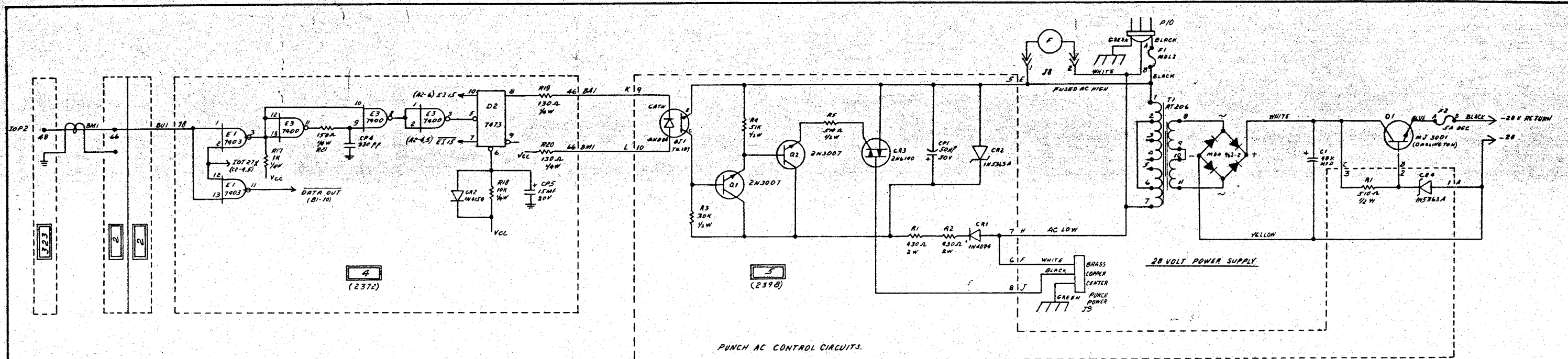
REV.	ECN	DATE	DTM	APP'D.
F	-	3-21-72	J.V.	
E	-	6-20-72	H.C.M.	
D	-	6-26-72	H.C.M.	
C	-	5-24-71	H.C.M.	
B	-	11-22-71	J.V.	
A	-	10-13-71	J.V.	

BY	DATE
J.V.	9-27-71
J.V.	9-27-71


TITLE	PROJECT	SCALE	SIZE	DWG. NUMBER	REV.
TELETYPE PUNCH INTERFACE			L D	944	F

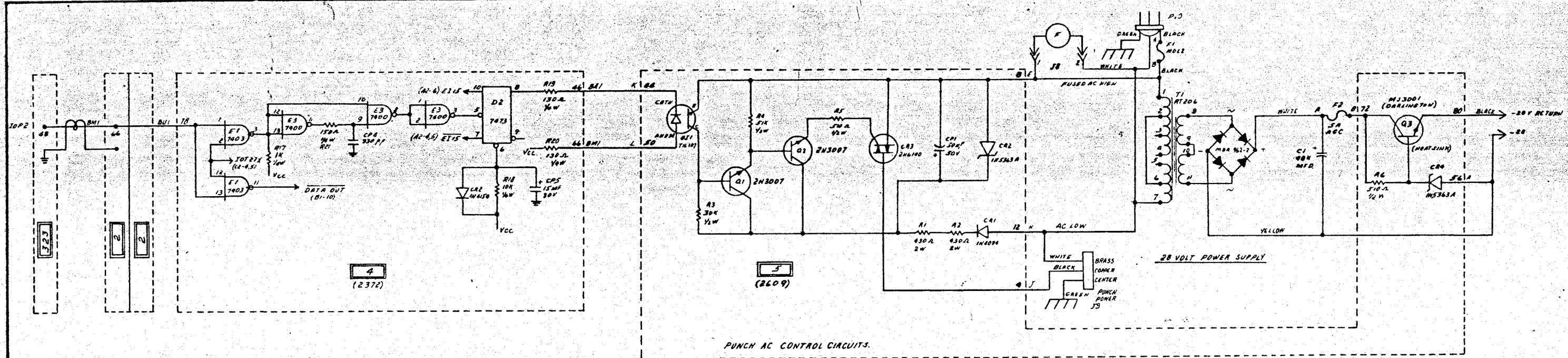


Sheet 1 of 3



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				BY	DATE	TITLE	
LAYOUT	J.V.	11-22-72	 IMLAC CORPORATION TELETYPE PUNCH INTERFACE				
DRAWN	J.V.	11-22-72					
CHECKED							
APPROVED							
ISSUE							
C	H.D.	71	H.C.M.			PREFIX	SIZE
B	J.V.	11-22-71			MATERIAL	RAWING NUMBER	REV.
A	J.V.	10-18-71			PROJECT	LD	944
REV	ECN	DATE	DTM	APP'D	Scale		Sheet 2 of 3



PUNCH AC CONTROL CIRCUITS.

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REV	ECN	DATE	DTM	APPD	BY	DATE	LAYOUT	DRAWN	CHECKED	APPROVED	ISSUE	COPIED	MATERIAL	PROJECT	PREFIX	SIZE	DRAWING NUMBER	REV	
A	---	3-31-72	J.V.			1-22-72											LD	944	F
B	---	4-22-72	J.V.																
C	---	4-22-72	J.V.																
D	---	4-22-72	J.V.																
E	---	4-22-72	J.V.																
F	---	4-22-72	J.V.																



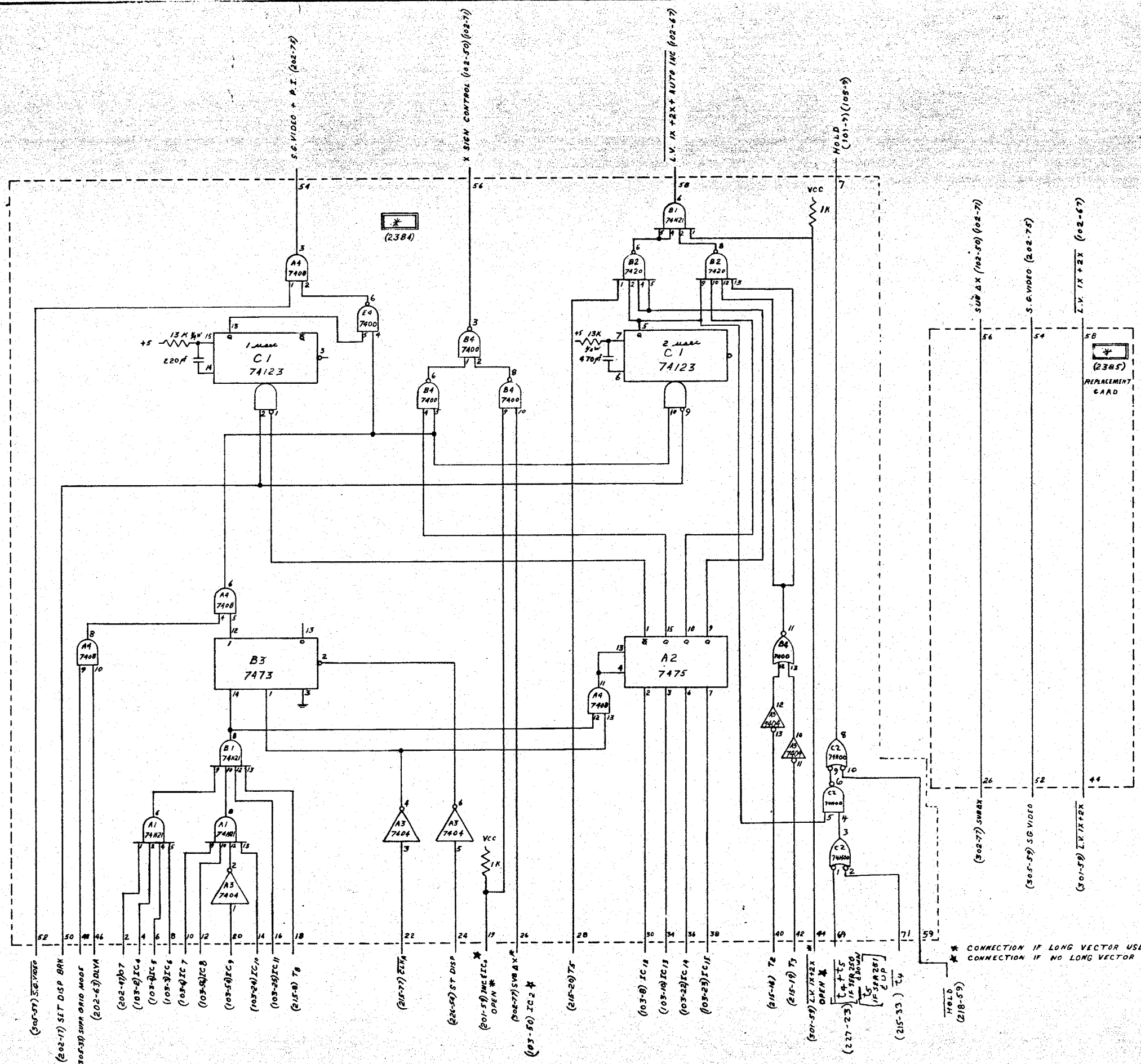
TITLE
TELETYPE PUNCH
INTERFACE

200 NEWTON STREET
WALTHAM MASSACHUSETTS 01981

PREFIX SIZE DRAWING NUMBER REV
LD 944 F

Scale Sheet 3 of 3

REV	ECK	DATE	DFTM	APPV
A	-	28 FEB 72	R.T.M.	
B	-	21 JUN 72	GB	NOB
C	-	1 SEP 72	R.T.M.	JLB
D	-	23 JAN 73	R.T.M.	ZF
E	-	1 MAY 73	R.T.M.	JLB
F	-	18 JUN 73	GB	ZF



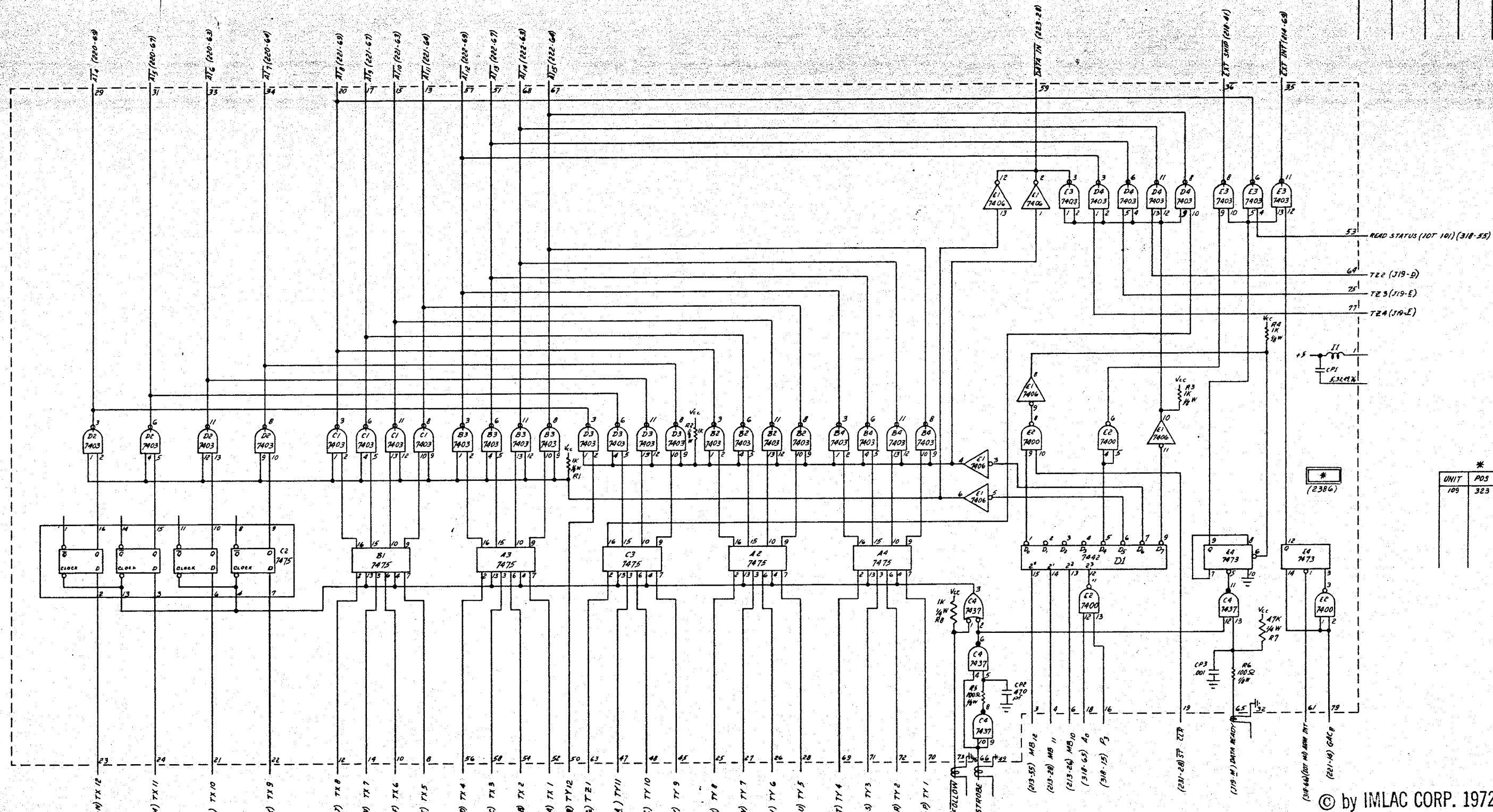
UNIT SER. NO.	LOCATION #	WIRE LIST
109	106	2456
167	106	2456

© by IMLAC CORP. 1972, 1973

BY DATE			TITLE ASG-1	
LAYOUT	R.T.M. 10-18-71		X AUTO INCREMENT FOR SUPPRESSED GRID	
DRAWN	R.T.M. 10-18-71			
CHECKED				
A. PROVED				
ISSUE				
COPIED				
MATERIAL	PROJECT	PREFIX	SIZE	DRAWING NUMBER
		L D		953
		Scale		Sheet

* CONNECTION IF LONG VECTOR USED
CONNECTION IF NO LONG VECTOR

REV	ECN	DATE	DF/TM	APP'V
A	-	5-7-73	R.T.M.	JL

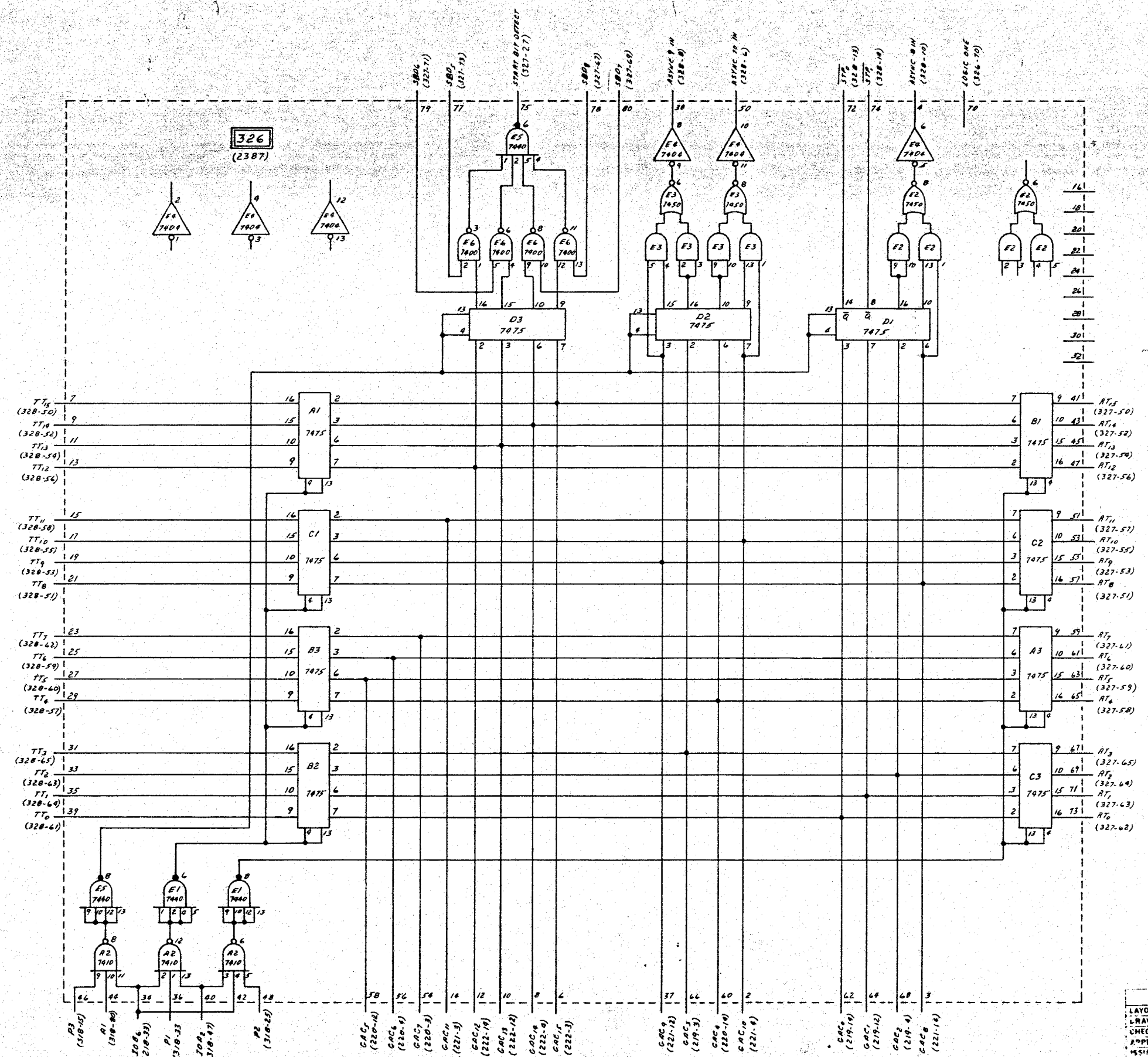


UNIT	POS	WORK LIST
109	323	2457

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BY	DATE	TITLE
L.C.M.	5/7/73	12 BIT BUFFERED TABLET INTERFACE WITH INTERRUPT
CHECKED		
APPROVED		
ISSUE		
CCPIET		
MATERIAL	PP01.C	
PREFIX	SIZE	DRAWING NUMBER
L	D	954
Scale		Sheet

REV	ECN	DATE	DTM	APPD.
A	---	12-8-72	J.V.	
B	---	1-12-73	J.V.	
C	---	2-10-73	AXM	J.P.F.
D	---	1 SEP 72	GB	LOG



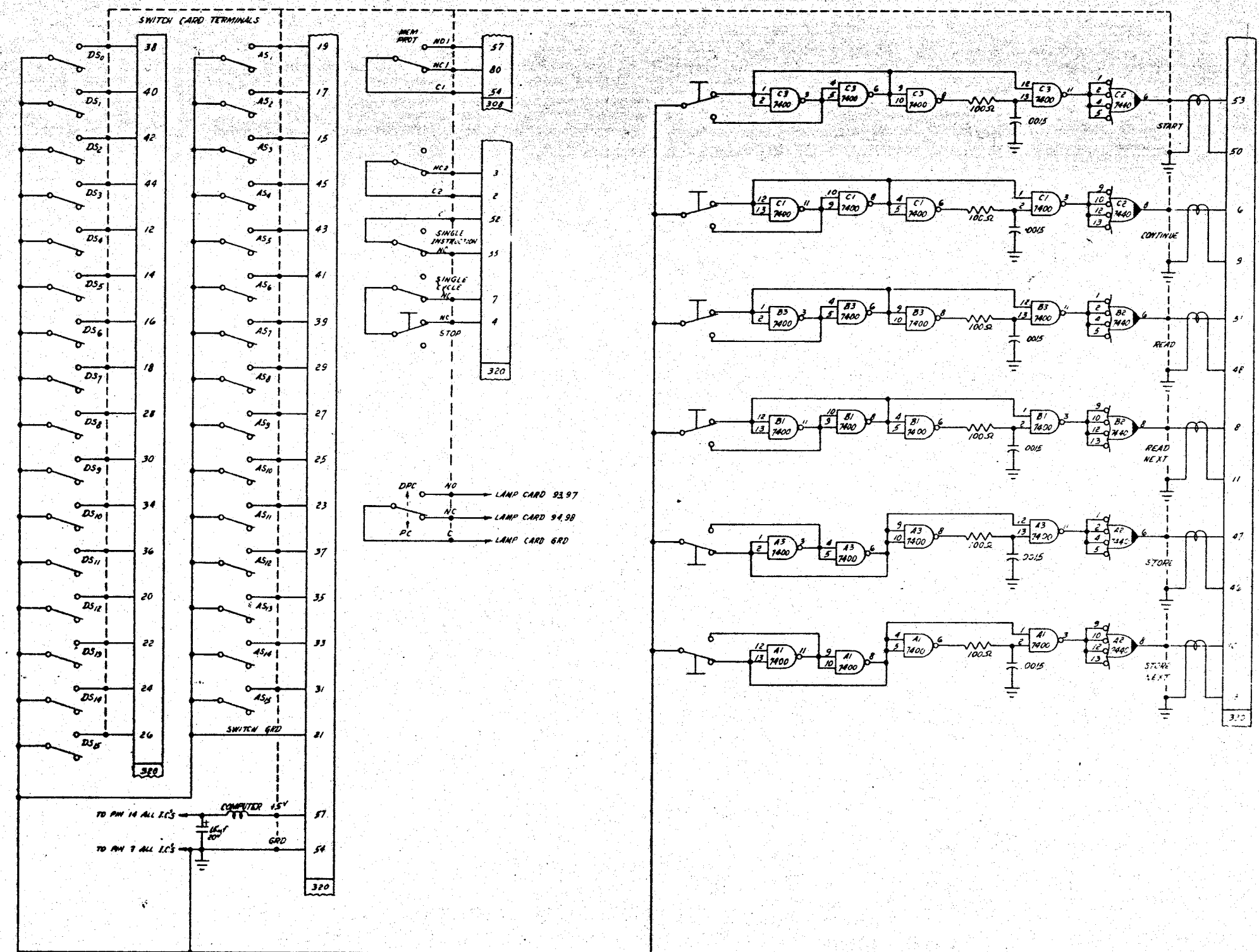
© by IMLAC CORP. 1972, 1973

BY	DATE	TITLE
LAYOUT	J.V. 10-9-72	IMLAC COMM. SPEED BUFFER
DRAWN	J.V. 10-9-72	
CHECKED		
APPROVED		
ISSUE		
COPIED		
MATERIAL		

REV	DATE	DESCRIPTION
1		

PREFIX	SIZE	DRAWING NUMBER	REV
LID		956	D

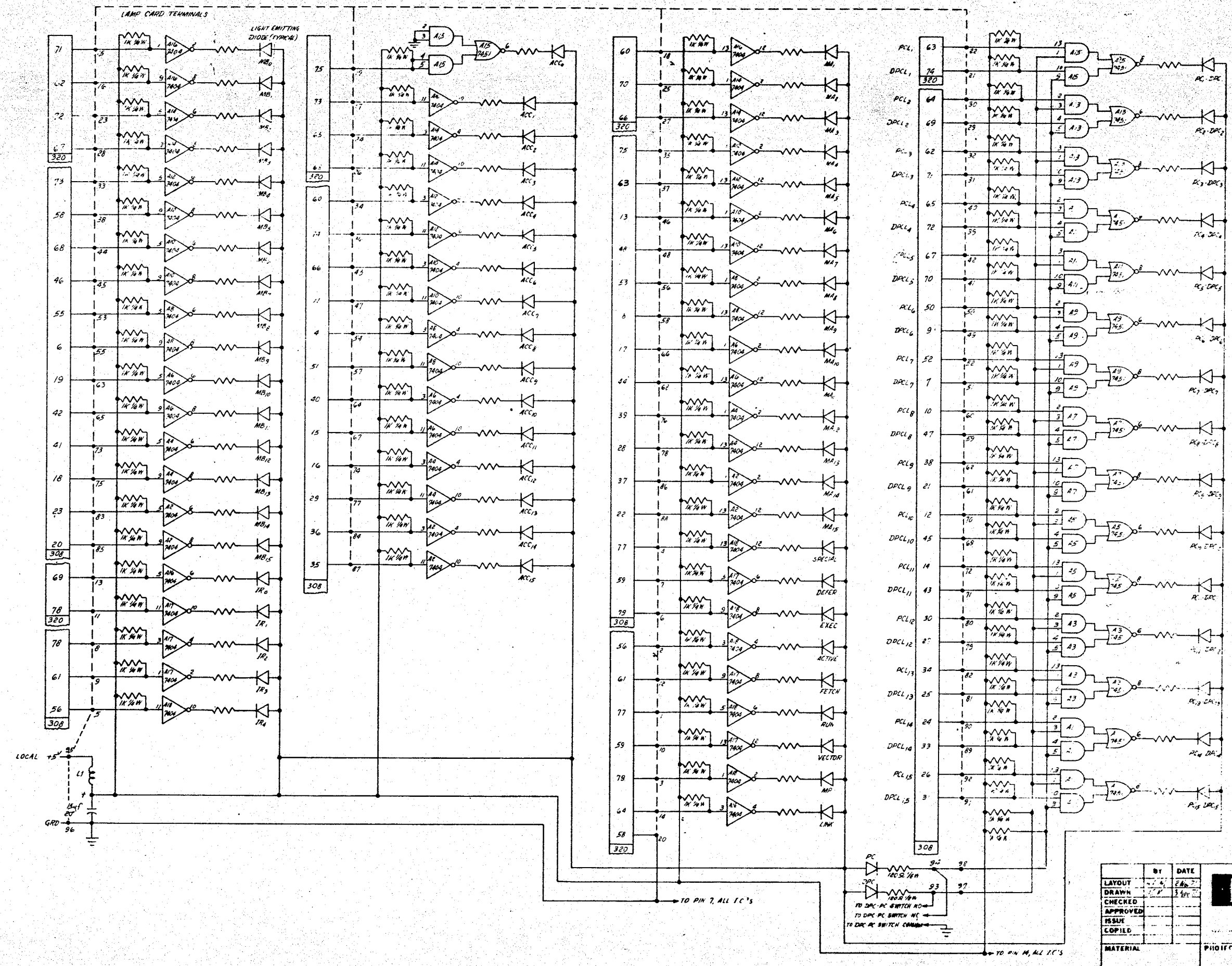
REV	ECN	DATE	DTM	APPY



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LAYOUT	BY	DATE	 IMLAC CORPORATION	TITLE		
DRAWN	HCM	28/2/73		100 WASHINGTON STREET BOSTON, MASSACHUSETTS 02154	CONSOLE SWITCH CARD	
CHECKED	REM	29/2/73			PREFIX	SIZE
APPROVED					L	D
ISSUE					DRAWING NUMBER	
COPIED			962			
MATERIAL			PROJECT	Scale		

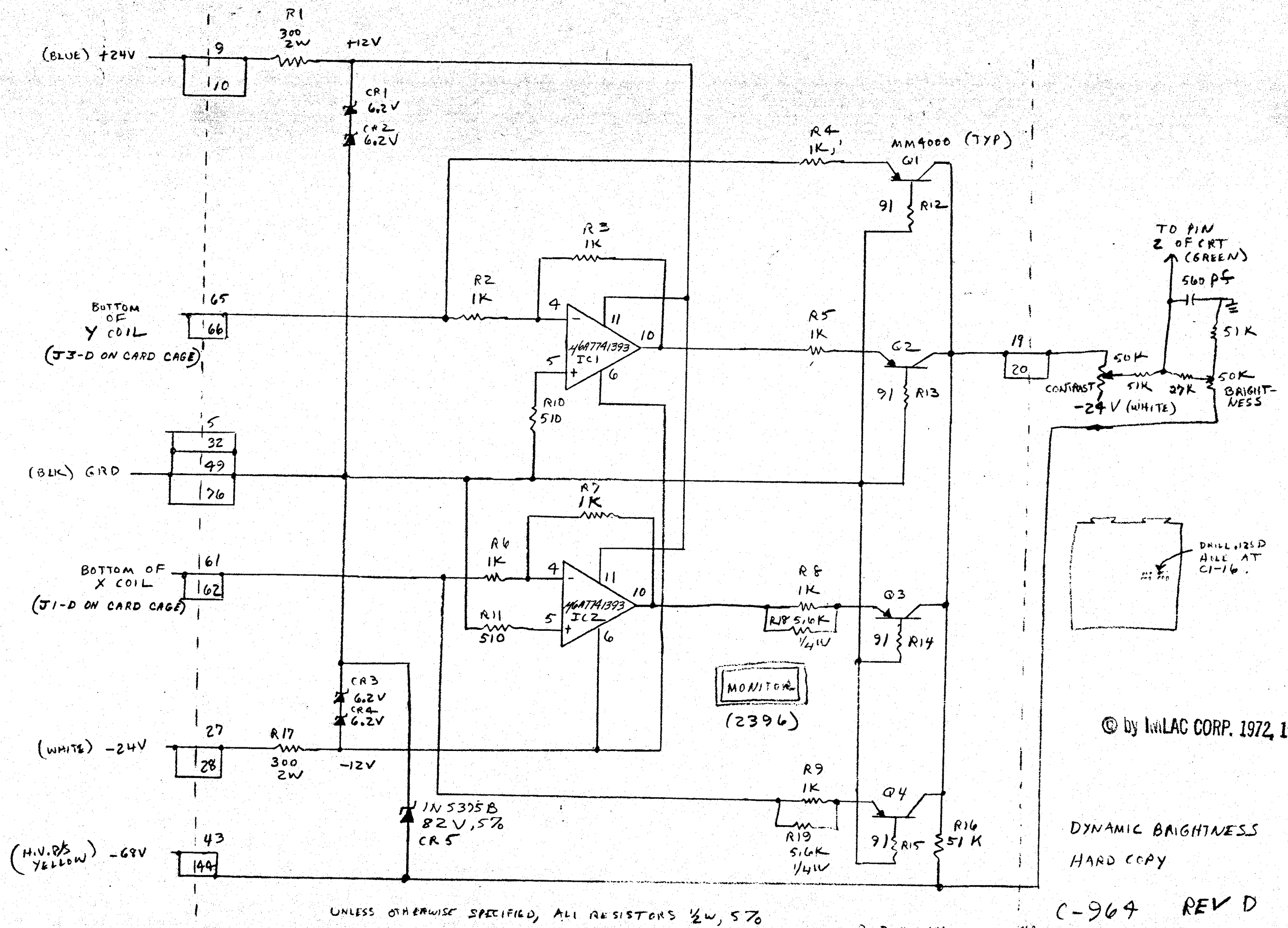
REV	ECN	DATE	BY	APPV
A	-	27Apr 72	A.C.M.	
B	-	7Apr 72	H.C.M.	



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ALL RESISTORS ARE 200 OHMS UNLESS SPECIFIED OTHERWISE.
A3105

LAYOUT		BY	DATE	TITLE
DRAWN	CHECKED			
APPROVED				
ISSUE				
COPIED				
MATERIAL		PHOTO		IMLAC CORPORATION 10000 W. 10th Ave., Denver, CO 80202
Scale		Sheet		
PREFIX	SIZE	DRAWING NUMBER	REV.	
L	D	963	B	



© by INELAC CORP. 1972, 1973

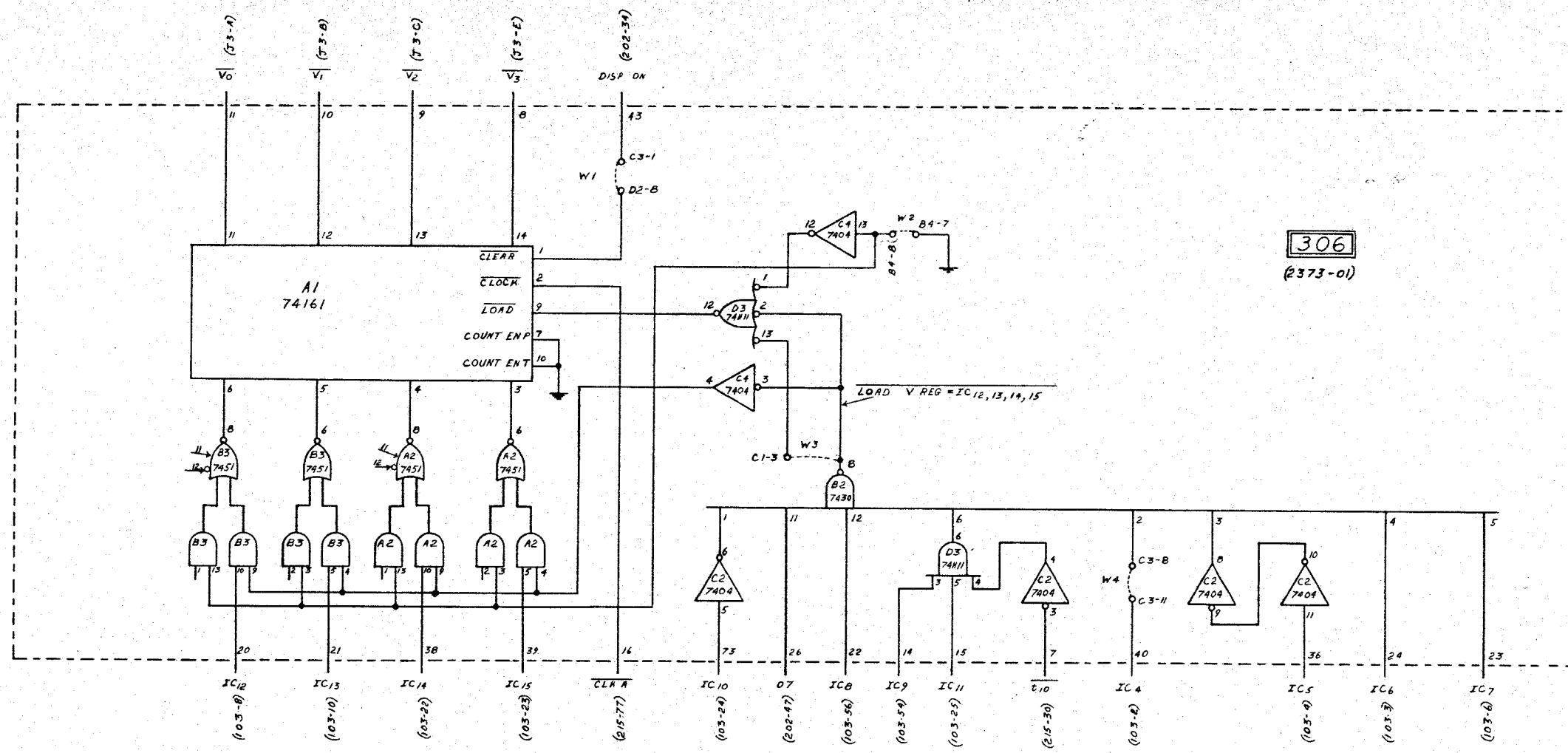
DYNAMIC BRIGHTNESS
HARD COPY

C-964 REV D

REV A 24 JAN 72
 REV B 31 AUG 72
 REV C 3 MAY 73

RWD-11(147) 283UN33

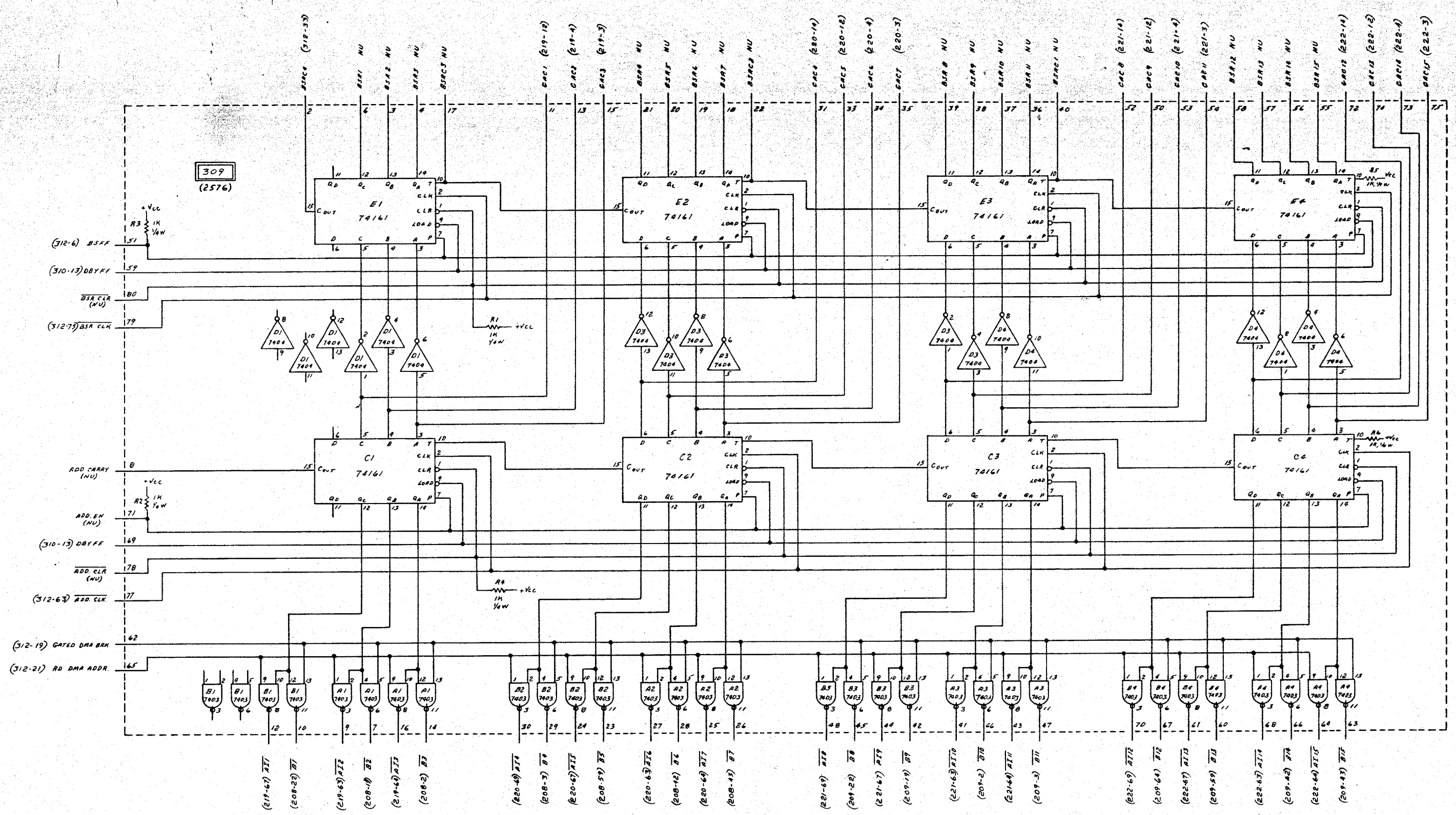
REV	ECN	DATE	DTM	APPV




© by IMLAC CORP. 1972, 1973

NOTE: SEE LOGIC 940 FOR HANDWIRED ASSEMBLY

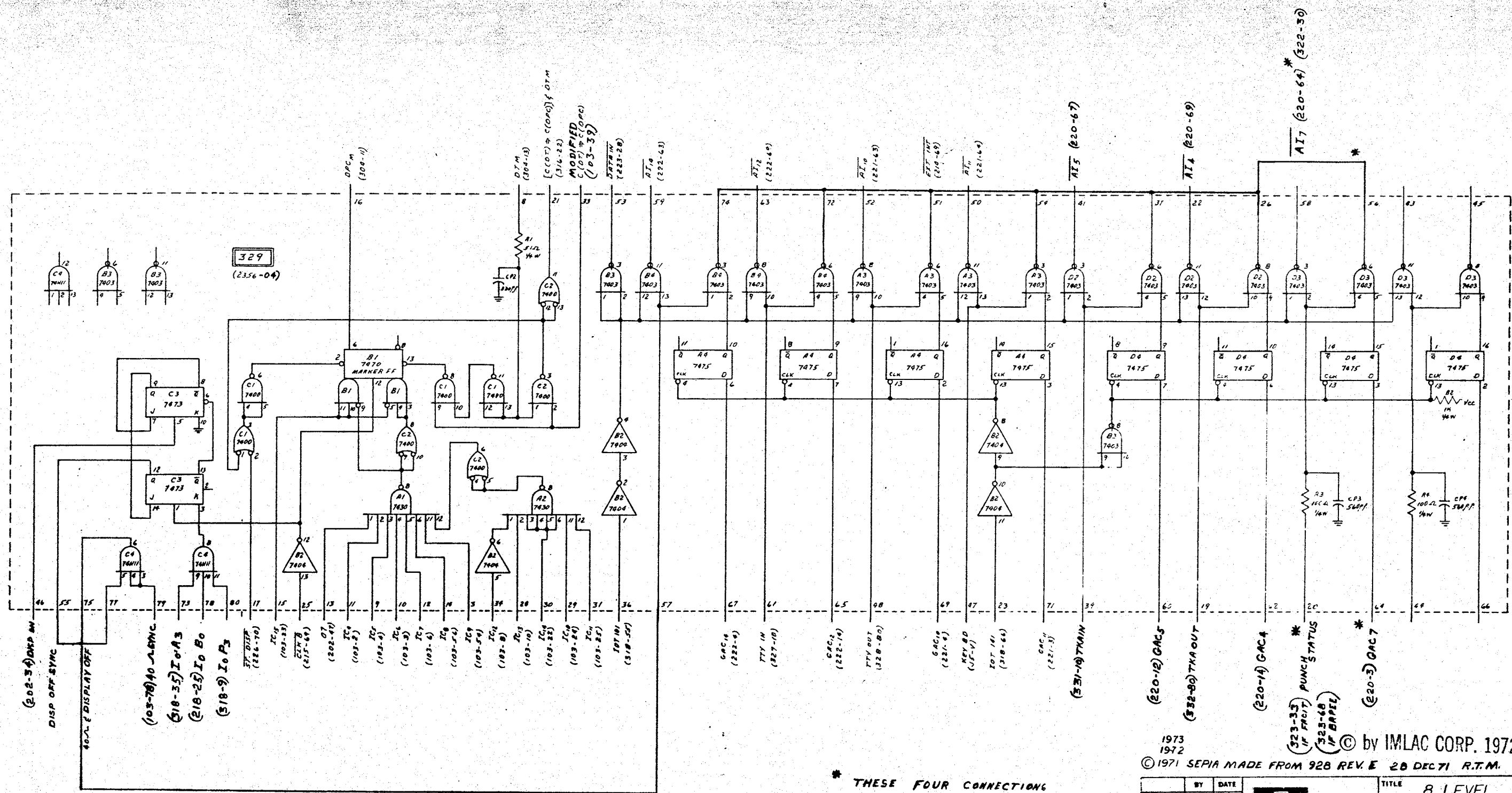
LAYOUT	BY	DATE		TITLE GREY SCALE CIRCUITS
DRAWN	R.T.M.	5/27/72		
CHECKED	R.T.M.	5/27/72		
APPROVED	A.C.M.	5/27/72		
ISSUE				
COPIED				
MATERIAL				
PREFIX	SIZE	DRAWING NUMB'R	REV.	
	D	971		
Scale			Sheet	



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LAYOUT DRAWN		BY	DATE	 IMLAC CORPORATION 10000 WILSON BLVD., SUITE 2010A WASHINGTON, D.C. 20037	TITLE	
CHECKED		J.V.	1-7-72		DMA ADDRESS REGISTER & COUNTER	
APPROVED		J.V.	1-7-72		PREFIX	SIZE
ISSUE					L	D
COPIED				DRAWING NUMBER		
MATERIAL				974		
PROJECT				REV.		
A		4 APR 72	R.T.M.	Scale		
REV	ECN	DATE	DTM	APP'D	Sheet	A

REV	ECN	DATE	BY	APPY
A	-	23 FEB 71	R.T.M.	
B	-	28 APR 71	G.B.	APP
C	-	18 JUN 71	R.T.M.	



* THESE FOUR CONNECTIONS MADE ONLY IF PUNCH INTERFACE.

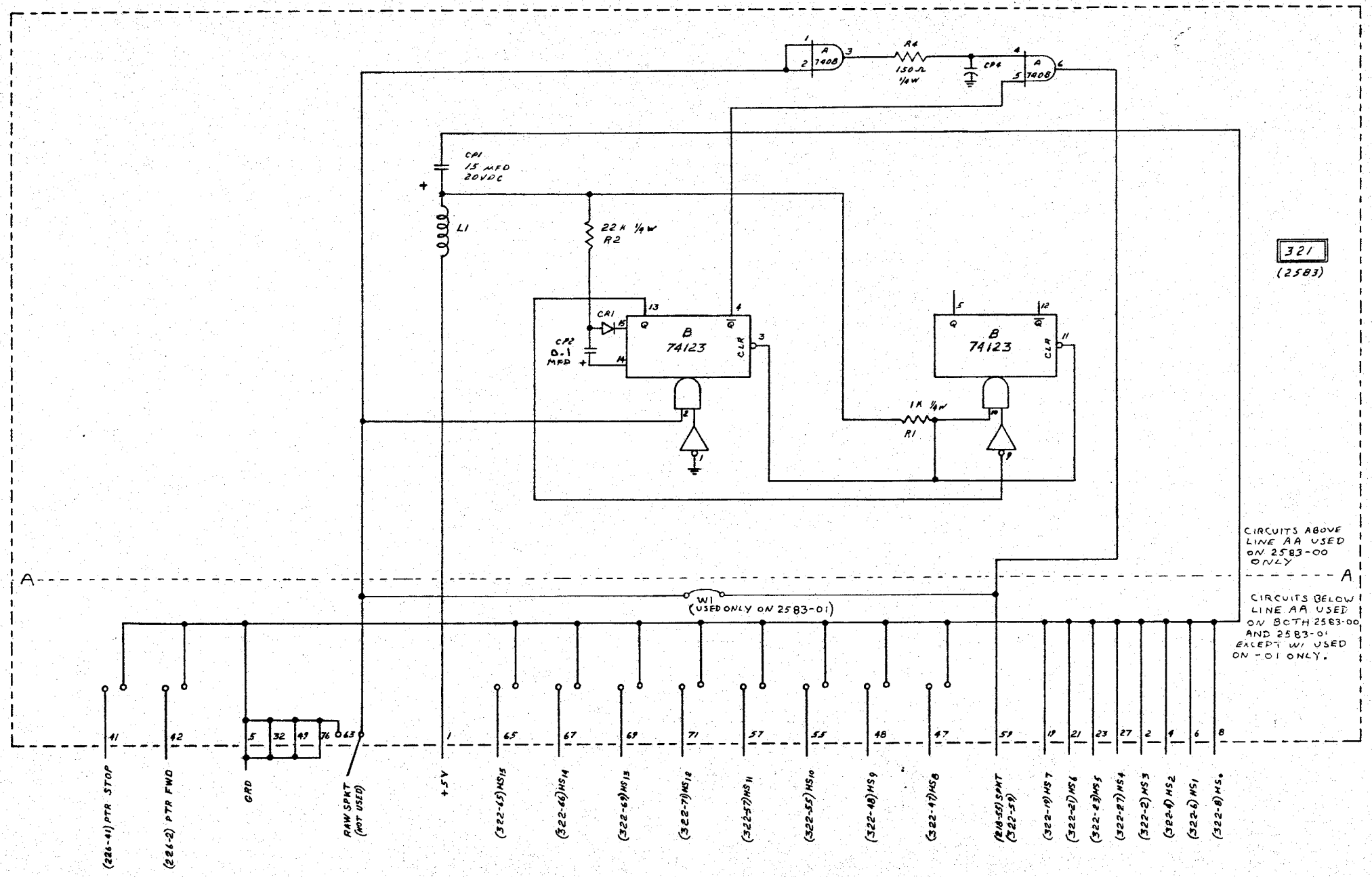
1973
1972
© 1971 SEPIA MADE FROM 928 REV. E 28 DEC 71 R.T.M.

BY		DATE	TITLE
LAYOUT	H.C.M.	23/12/71	8 LEVEL LIGHT PEN ADAPTER & INTERRUPTS FOR "D" PACKAGE
DRAWN	H.C.M.	26/12/71	
CHECKED			
APPROVED			
ISSUE			
COPIED			
MATERIAL			
PROJECT			
PREFIX	SIZE	DRAWING NUMBER	
L	D	975	



IMLAC CORPORATION
200 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

REV	ECN	DATE	DFTN	APPRV
A	---	2-28-72	J.V.	
B	---	12oct72	GB	GB
C	---	13oct73	GA	GA



321
(2583)

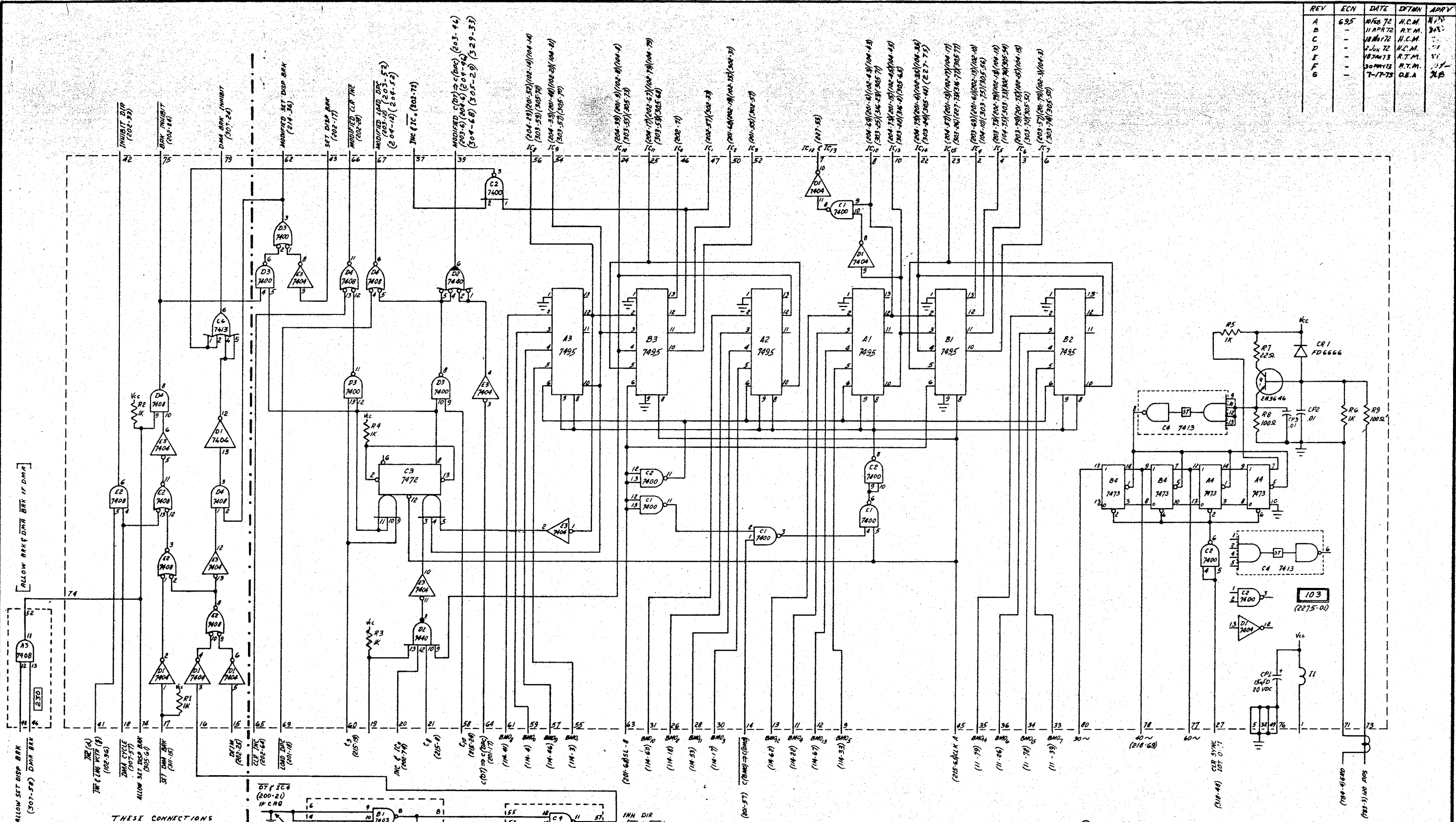
CIRCUITS ABOVE
LINE AA USED
ON 2583-00
ONLY.

CIRCUITS BELOW
LINE AA USED
ON BOTH 2583-00
AND 2583-01
EXCEPT W1 USED
ON -01 ONLY.

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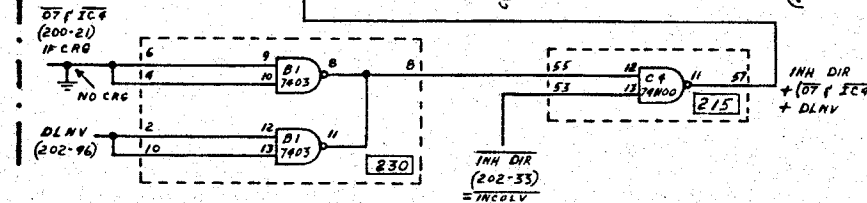
B1		DATE	TITLE	
LAYOUT	RTM	2/28/72	PTR CABLE	
DRAWN	RTM	2/28/72		
CHECKED				
APPROVED				
ISSUE				
COPIED				
MATERIAL	PROJECT		PREFIX	REV.
			D	982
			Scale	Sheet

REV	ECN	DATE	DFTM	APRY
A	695	10 FEB 72	H.C.M.	H.A.
B	-	11 APR 72	R.T.M.	N.A.
C	-	18 MAY 72	H.C.M.	-
D	-	2 JUN 72	H.C.M.	-
E	-	30 MAR 73	R.T.M.	VI
F	-	7-17-73	D.E.A.	N.B.



(205-56) (205-6) ALLOW SET DISP BRK (207-58) DMA BRK (102-36) DMA CYCLE (207-57) ALLOW SET DISP BRK (205-6) SET DMA BRK (207-15)

THESE CONNECTIONS FOR DMA OPTION ONLY



© 1971, 1972, 1973		
LAYOUT	BY H.C.M.	DATE 2/18/72
DRAWN	BY H.C.M.	DATE 2/18/72
CHECKED		
APPROVED		
ISSUE		
COPIED		
MATERIAL		

PROJECT: 997-B

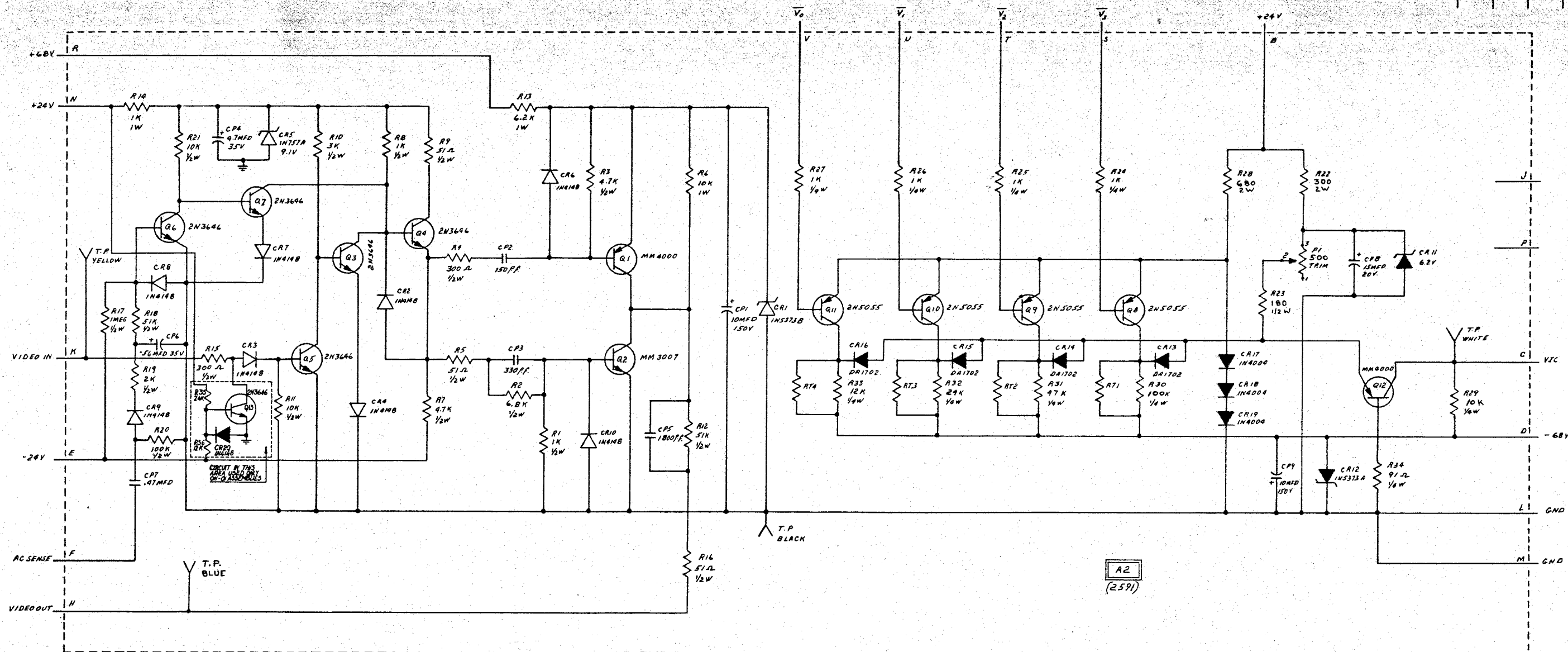
TITLE: DISPLAY MEMORY BUFFER & INCREMENT CONTROL REG & 40 CYCLE SYNC & DEIL

PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	997-B	6

Scale: _____ Sheet: _____

IMLAC CORPORATION
176 NEWTON STREET
MALDEN, MASSACHUSETTS 02148

REV	FCN	DATE	BY	APP'D.
A	-	6MAY72	R.T.M.	J.L.
B	-	15MAY72	GB	238B
C	-	2JUN72	H.C.M.	271
D	-	12JUN72	R.T.M.	271
E	-	1MAY73	A.E.A.	271

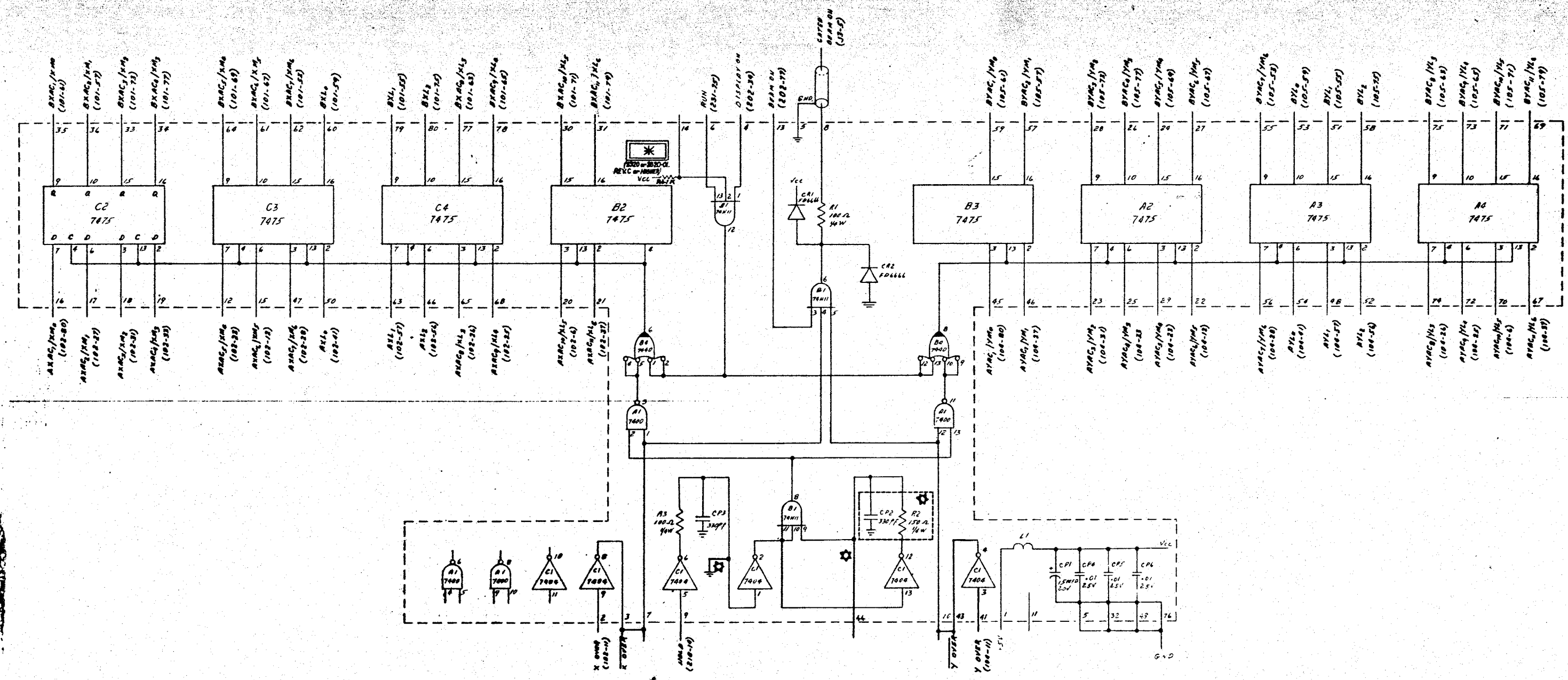


A2
(2591)

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BY	DATE	IMLAC CORPORATION 280 WASHINGTON STREET WALTHAM, MASSACHUSETTS 01981	TITLE		
LAYOUT	J.V. 2-18-72		VIDEO AMPLIFIER AND GREY SCALE DAC		
DRAWN	J.V. 2-19-72				
CHECKED					
APPROVED					
ISSUE					
COPIED					
MATERIAL	PROJECT	PREFIX	SIZE	DRAWING NUMBER	REV.
		L	D	998	E
		Scale		Sheet	

REV	FCN	DATE	DTM	APP
A		15DEC72	A.T.M.	25
B		22MAR73	A.E.A.	26



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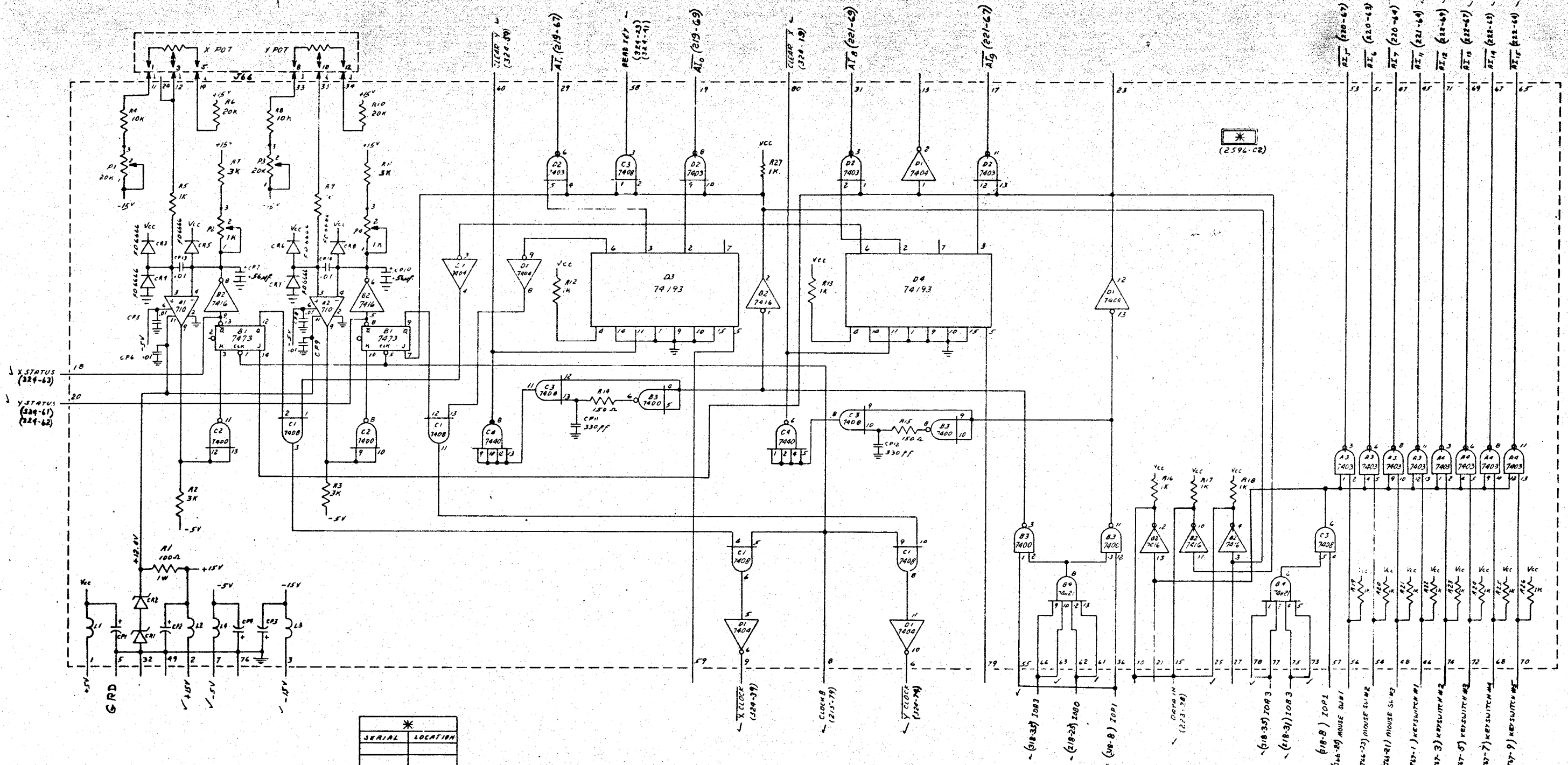
NOTES: * PW1-A-106
 * FOR 2520-DI REV.C OR HIGHER, REMOVE R2 AND C2
 ADD JUMPER BI-B TO PIN 44, ADD JUMPER CI-1 TO GRD.

SEPIA COPY MADE FROM LOGIC DWN. 873.J.V. FEB. 25, 1972.

BY	DATE
LAYOUT	J.V. 2-25-72
DRAWN	J.V. 2-25-72
CHECKED	
APPROVED	J.V. 2-27-72
ISSUE	
COPIED	
MATERIAL	

TITLE		PREFIX SIZE		DRAWING NUMBER		REV
DIS-1		L D		1-000		B
IMLAC CORPORATION		Scale		Sheet		


REV	ECN	DATE	BY	APPV
A		30 JUN 72	H.C.M.	
B		10-23-72	J.V.	



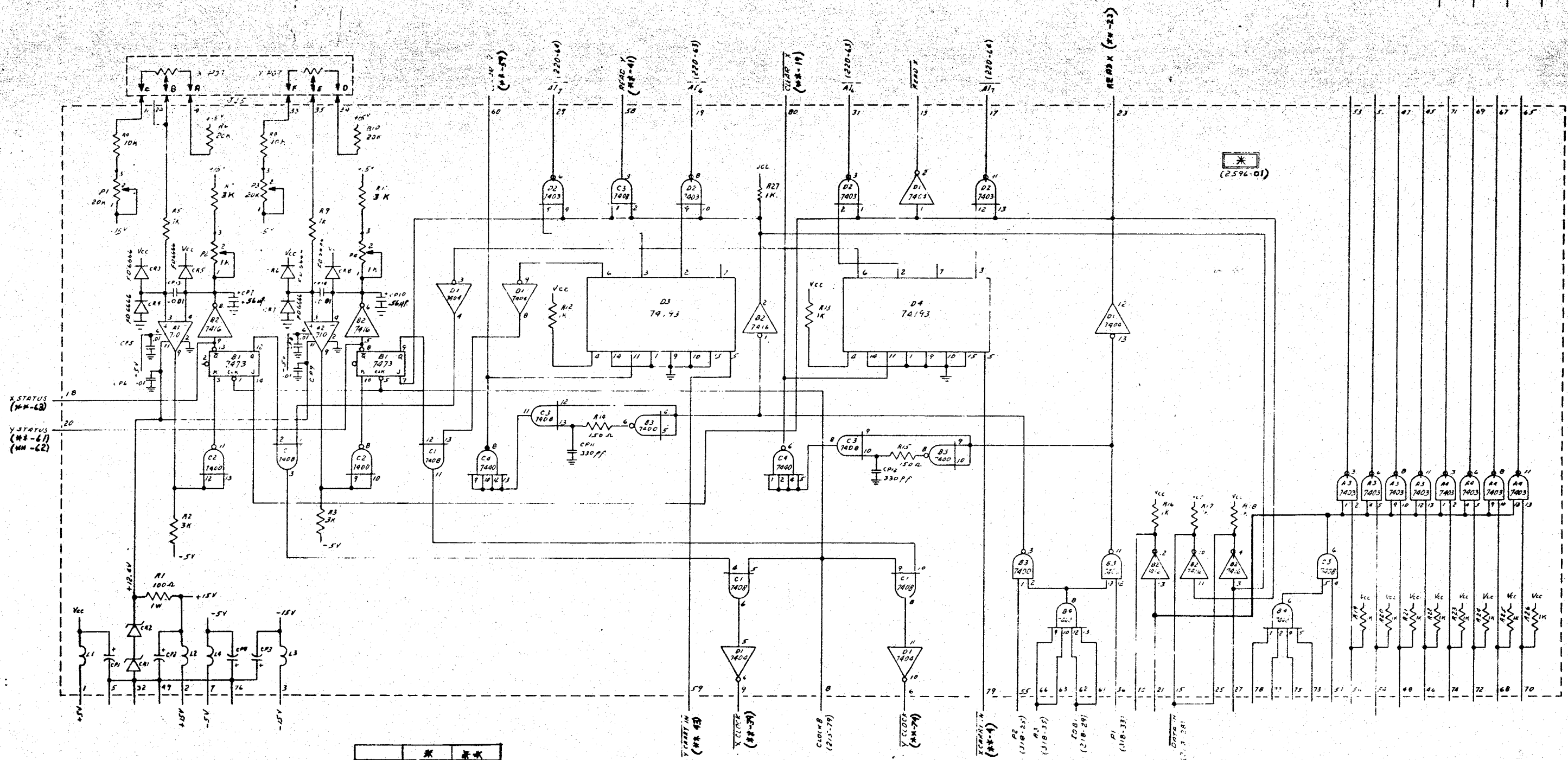
* SERIAL LOCATION	

© by IMLAC CORP. 1972, 1973

NOTE: ALL RESISTORS ARE 1/4W 5%, UNLESS OTHERWISE SPECIFIED.

LAYOUT	BY	DATE	 IMLAC CORPORATION <small>284 NEWTON STREET WALTHAM, MASSACHUSETTS 01981</small>	TITLE MOUSE CONTROL		
DRAWN						
CHECKED						
APPROVED						
ISSUE						
COPIED			PREFIX	SIZE	DRAWING NUMBER	REV.
			L	D	1-005	B
MATERIAL			PROJECT		Scale	Sheet

REV	ECN	DATE	BY	APPY
A	-	3 MAR 72	GB	MB
B	-	13 OCT 72	GB	MB
C	-	13 OCT 72	J.V.	MB



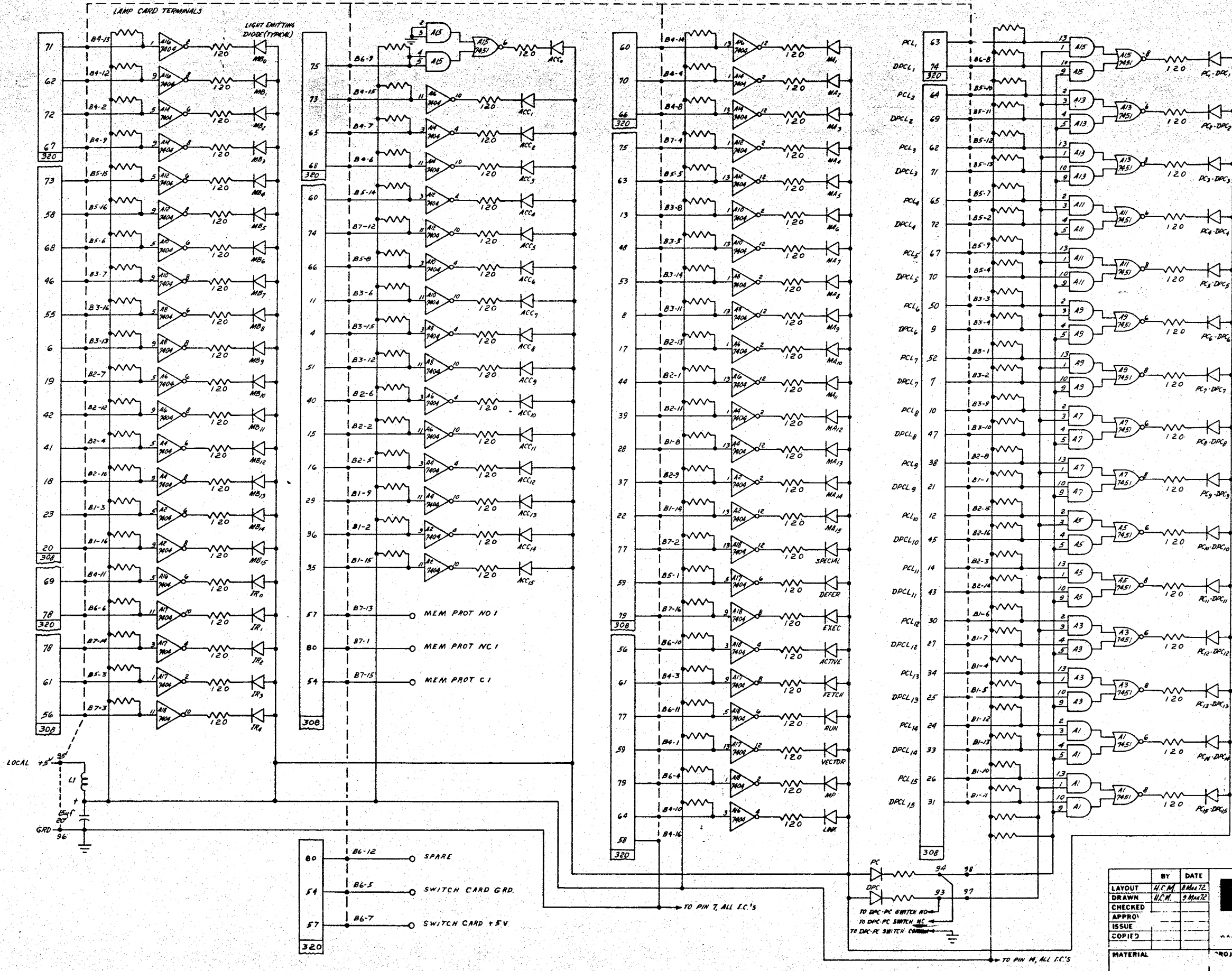
SERIAL	LOCATION	REMARKS
139	323	
161	323	

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NOTE: ALL RESISTORS ARE 1/4W 5% UNLESS OTHERWISE SPECIFIED.

LAYOUT	BY	DATE	 IMLAC CORPORATION 100 NEWTON STREET WALTHAM, MASSACHUSETTS 01981	TITLE	JOYSTICK AND TRACK-BALL CONTROL	
DRAWN	A.C.S.	19 JUL 72		PREFIX	LD	
CHECKED				SIZE	1-006	
APPROVED				DRAWING NUMBER	1-006	
ISSUE				REV	1	
COPIED			MATERIAL		PROJECT	
			Scale	Sheet		

REV	ECN	DATE	DTM	APPV
A	-	12 JUN 62	R.T.M.	RJC

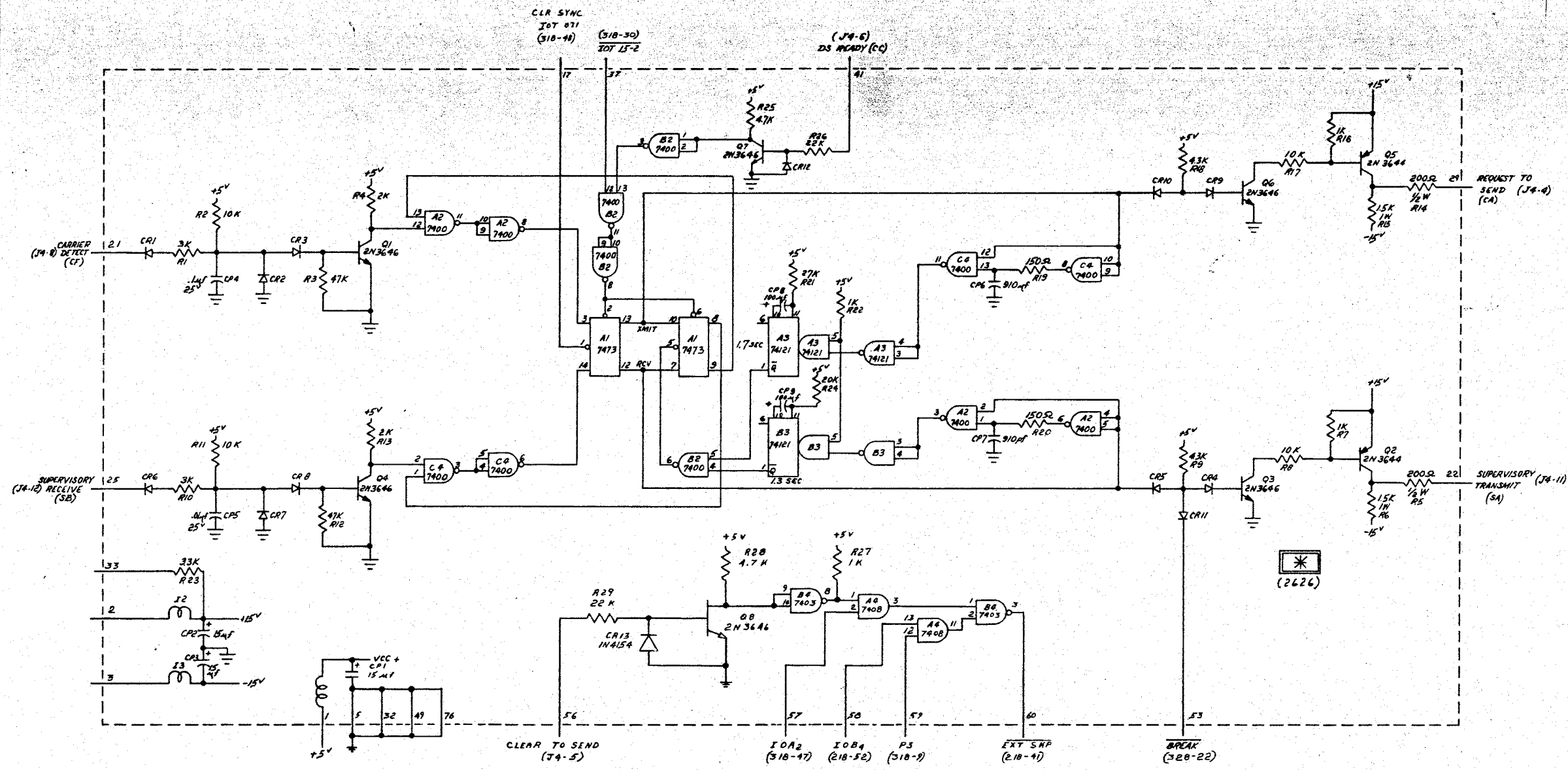


NOTES:
 1. UNLESS OTHERWISE SPECIFIED ALL RESISTOR VALUES ARE IN OHMS $\pm 5\%$, $\frac{1}{4}$ W UNMARKED RESISTORS ARE 5.1K

BY	DATE	TITLE
LAYOUT	H.C.M. 8 MAR 72	CONSOLE LAMP CARD
DRAWN	H.C.M. 9 MAR 72	
CHECKED		
APPROV		
ISSUE		
COPIED		
MATERIAL	PROJECT	

PREFIX	SIZE	DRAWING NUMBER	REV.
L	D	1-012	A

REV	EDN	DATE	BY/TMH	APP'Y
A	-	12/14/72	H. C. M.	
B	-	5-26-72	J. V.	



SERIAL #	LOCATION
147	311
140	324

NOTES:
 1. ALL DIODES ARE IN 4154 UNLESS SPECIFIED OTHERWISE.
 2. ALL RESISTORS ARE 1/4 WATT UNLESS SPECIFIED OTHERWISE.

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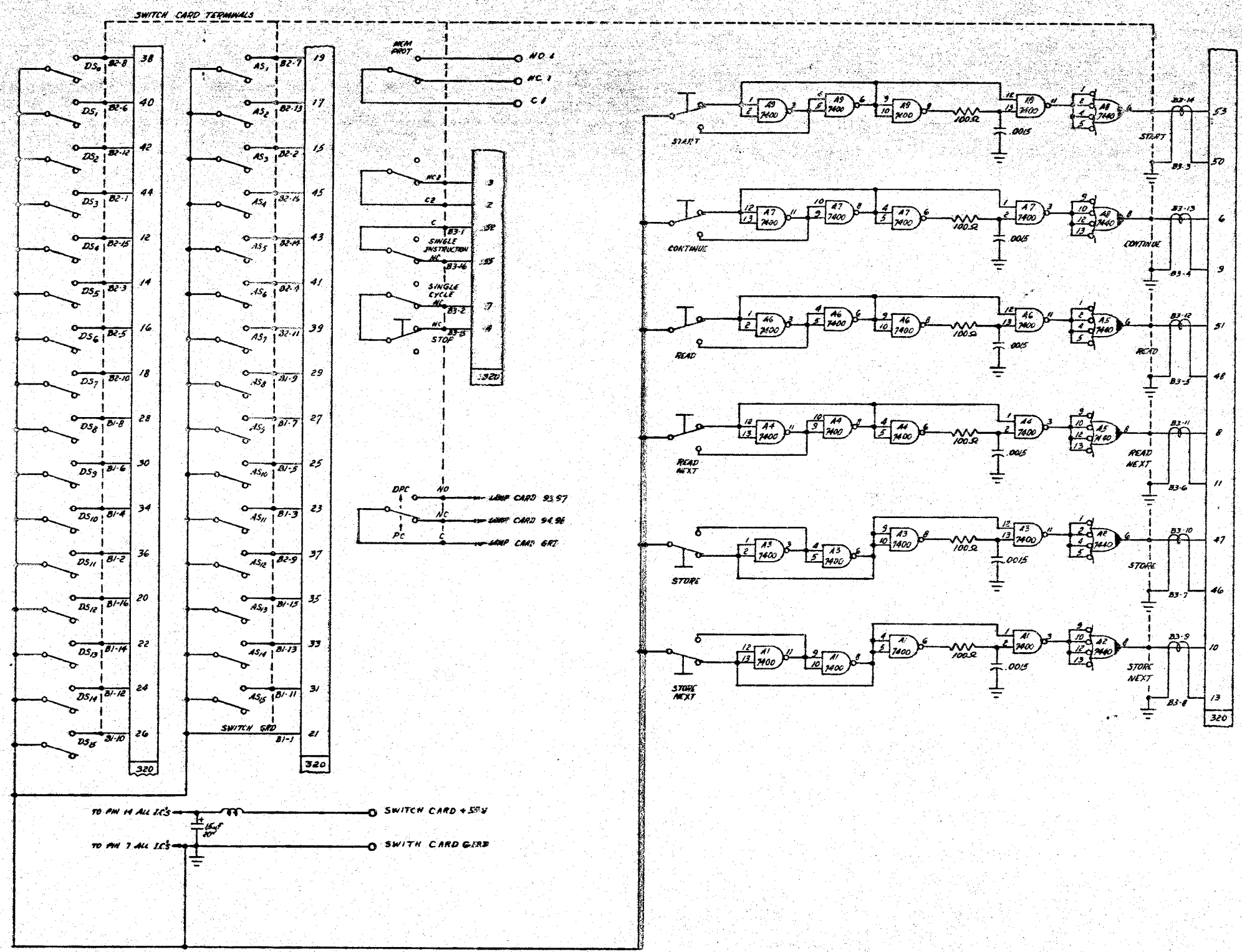
LAYOUT	BY	DATE
DRAWN	H.C.M.	11/24/72
CHECKED	H.C.M.	12/14/72
APPROVED		
ISSUE		
FOOTED		

TITLE		PREFIX		SIZE		DRAWING NUMBER		REV.	
DATA SET 202C INTERFACE		L		D		1-018		B	
HDC-1		Scale		Sheet					



IMLAC CORPORATION
 1000 N. 10TH STREET
 WASHINGTON, D.C. 20004

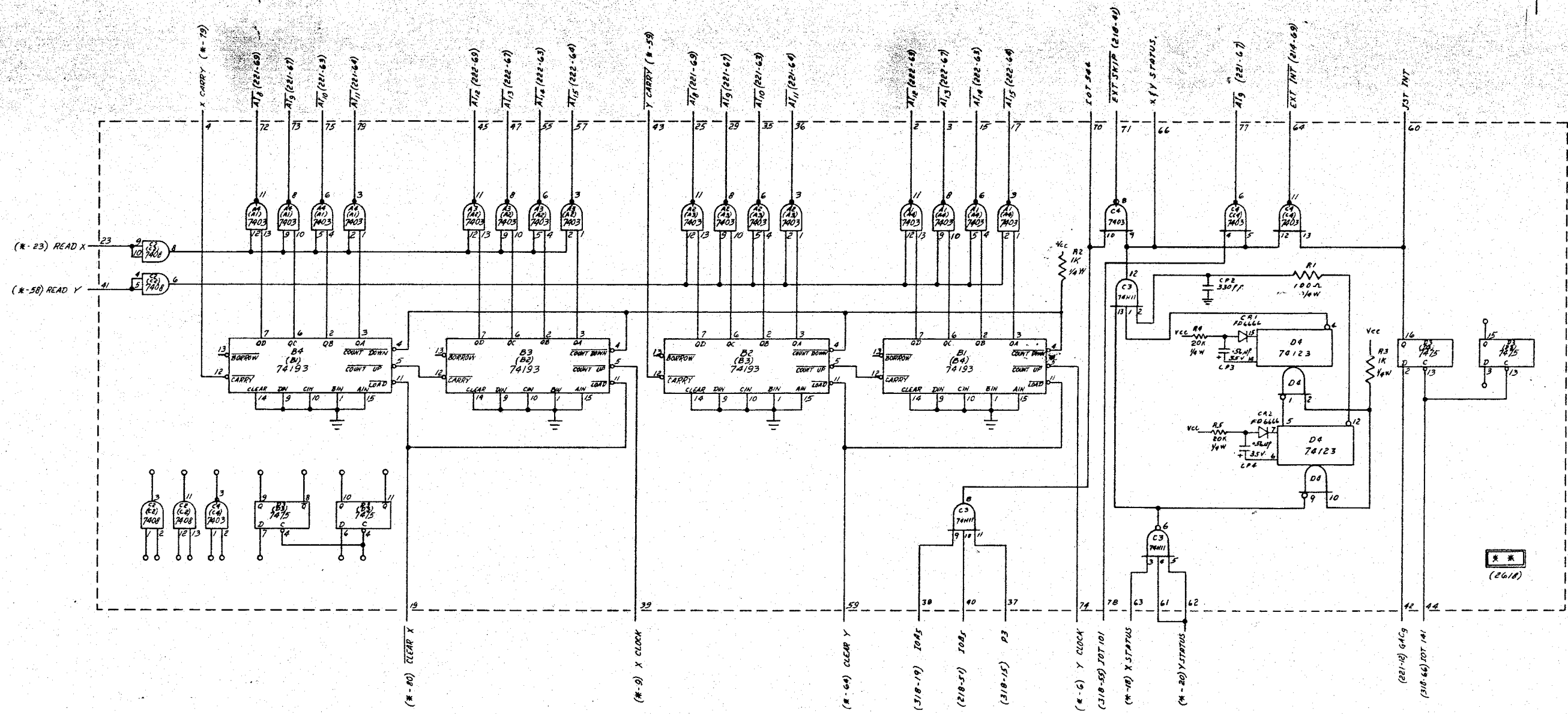
REV	ECN	DATE	DTM	APPV
A	-	14 JUN 72	R.T.M.	RAK



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BY	DATE	IMLAC CORPORATION 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE		
LAYOUT	H.C.M. 6/24/72		CONSOLE SWITCH CARD	PREFIX SIZE	DRAWING NUMBER
DRAWN	H.C.M. 7/24/72		L D	1-022	A
CHECKED			Scale	Sheet	
APPROVED	H.D.B. 7/27/72				
ISSUE					
COPIED					
MATERIAL		PROJECT			

REV	ECN	DATE	DTM	APPV
A		6-26-72	J.V.	



SERIAL	* LOCATION	**
139	324	

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I.C. POSITION IN PARENTHESES ARE THE LOCATIONS ON THE HAND WIRED BOARD.

NOTES:

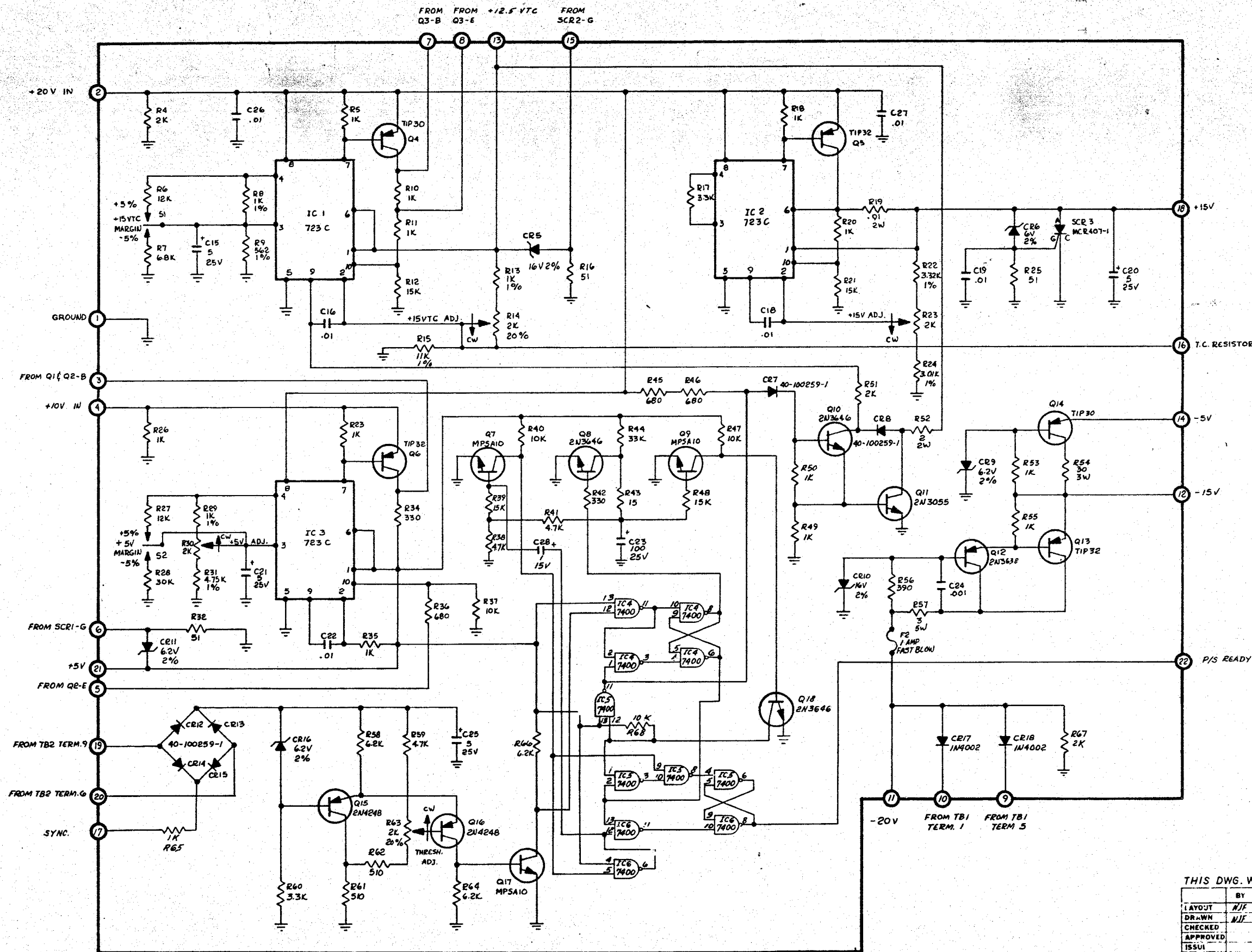
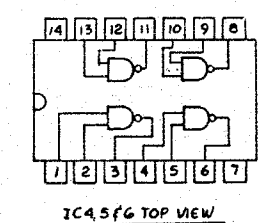
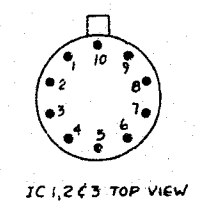
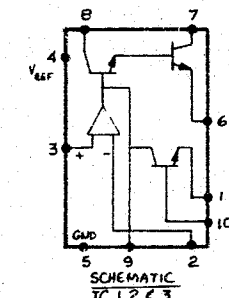
LAYOUT	DATE		GRAPHIC INPUT COUNTER		
DRAWN					
CHECKED					
APPROVED					
ISSUE					
LOP.FD					
MATERIAL	PROJECT	PREFIX	SIZE	DRAWING NUMBER	REV.
		L	D	1-028	A
		Scale		Sheet	

REV.	ECU.	DATE	DFTMU	APPD.

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

SYMBOLS USED
IC1 - IC6 SCR3 - SCR3
Q4 - Q18 CR5 - CR18
S1 - S2 C15 - C29
F2 - F2 R4 - R68

SYMBOLS NOT USED
C17, C29



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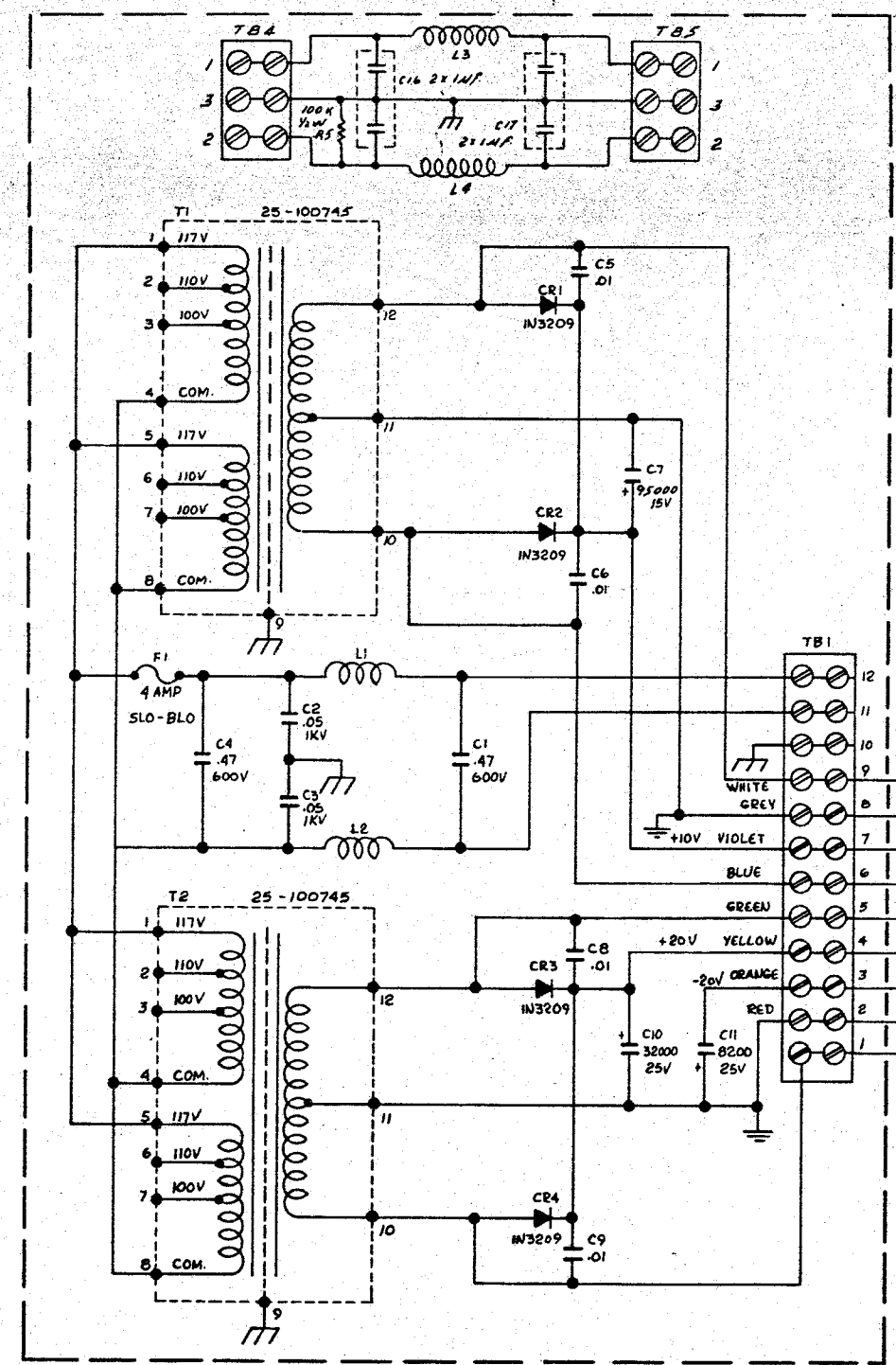
THIS DWG. WAS MADE FROM DWG. 871.- APR. 28-72 J.V.

LAYOUT	BY	DATE	TITLE
	N/J	12/21/71	POWER SUPPLY - 18A
DRAWN	N/J	2/23/72	LOGIC
CHECKED			
APPROVED			
ISSUED			
COPIED			

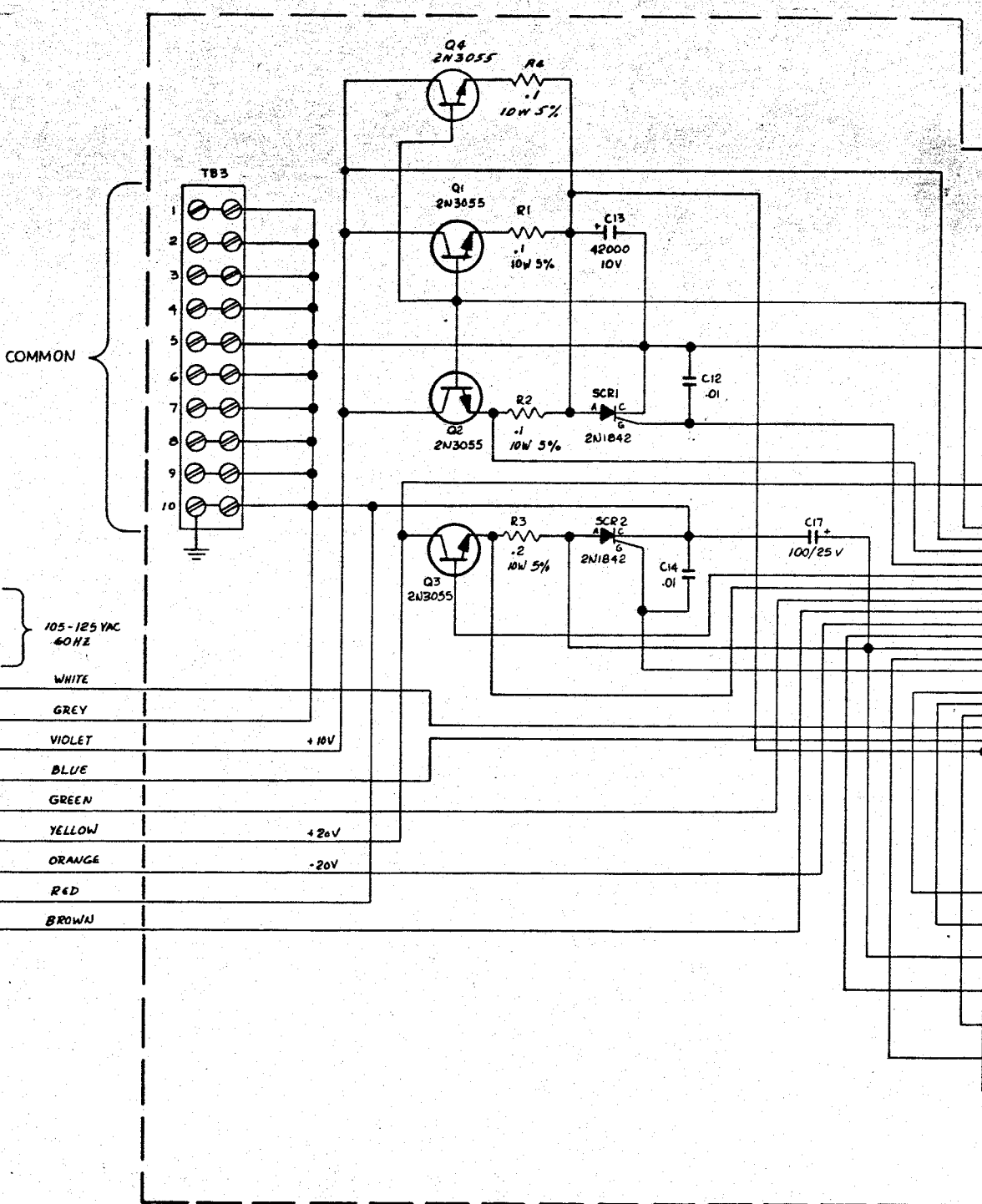
MATERIAL	PROJECT	PREFIX	SIZE	DRAWING NUMBER	REV.
		LD		1-030	

Scale: Sheet 1/2

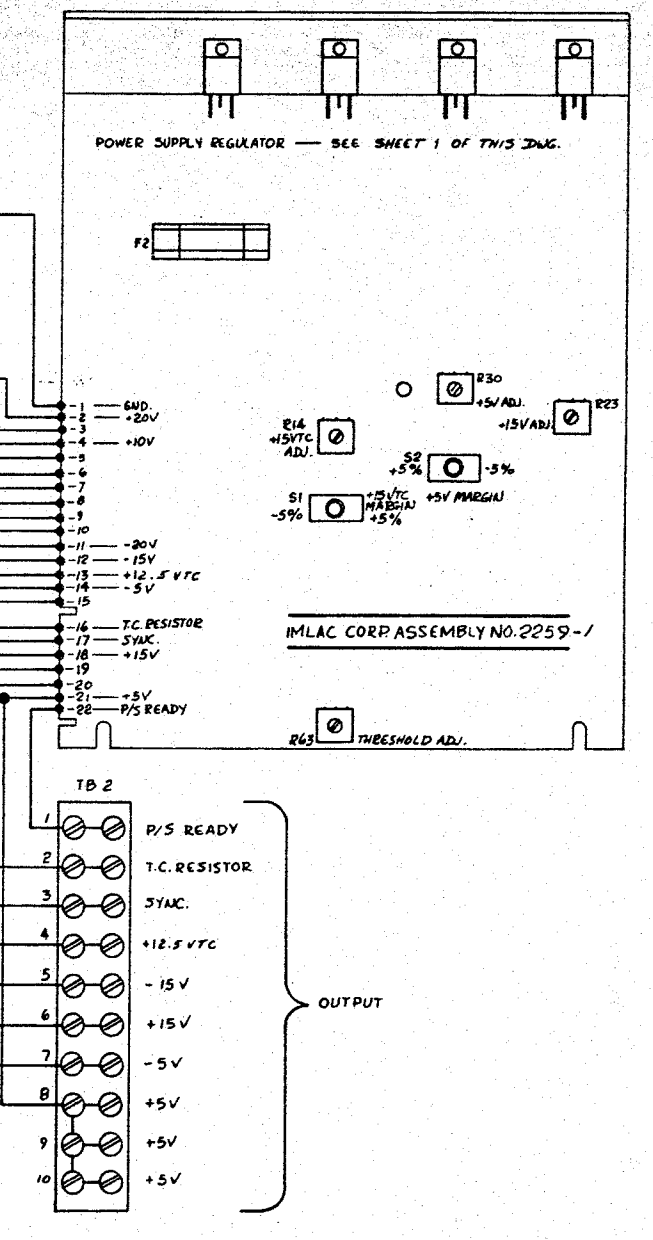
REV	ECN	DATE	DFTM/J	APP/D.



IMLAC CORP. ASSEMBLY NO. 2369



IMLAC CORP. ASSEMBLY NO. 2370



RESISTANCE IN OHMS
CAPACITANCE IN MFDS

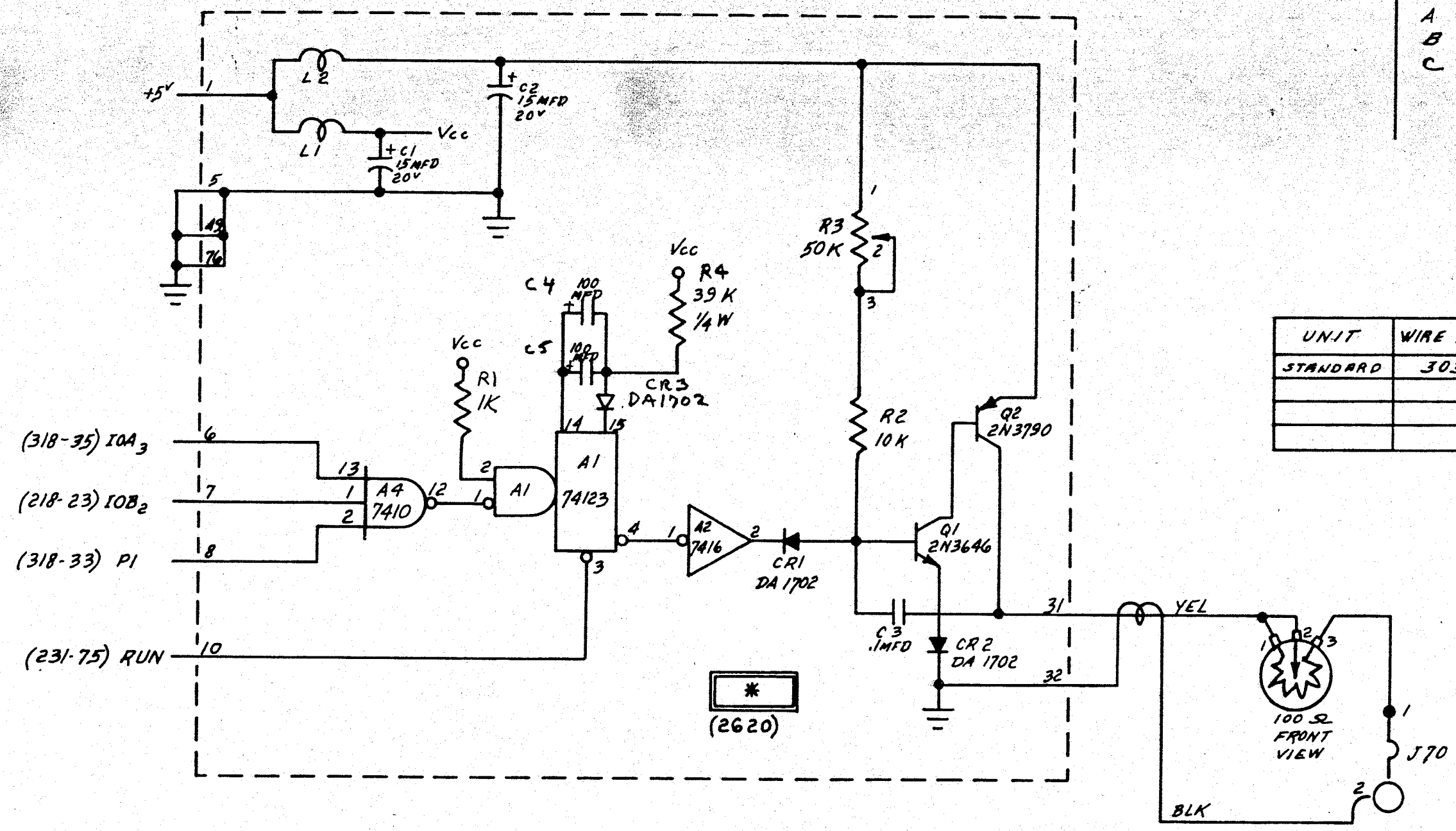
SYMBOLS USED
 F1 - F1 TB1 - TB5 CR1 - CR4
 T1 - T2 Q1 - Q4 C1 - C14, C17
 L1 - L4 SCR1 - SCR2 R1 - R5

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THIS DWG. WAS MADE FROM DWG. #871 - APR. 28-72 J.V.


BY DATE		IMLAC CORPORATION	TITLE	
LAYOUT	NJF 23SEP71		POWER SUPPLY - 18A LOGIC	PREFIX
DRAWN	NJF 23SEP71	L		D
CHECKED		DRAWING NUMBER	REV	
APPROVED		1-030		
ISSUE		Scale	Sheet 242	
COPIES				
MATERIAL		PROJECT		

REV	ECN	DATE	DFTMN	APP'V
A	-	18 May 72	H.C.M.	JPB
B	967	7-18-72	J.V.	JPB
C	-	20 OCT 72	GB	JPB



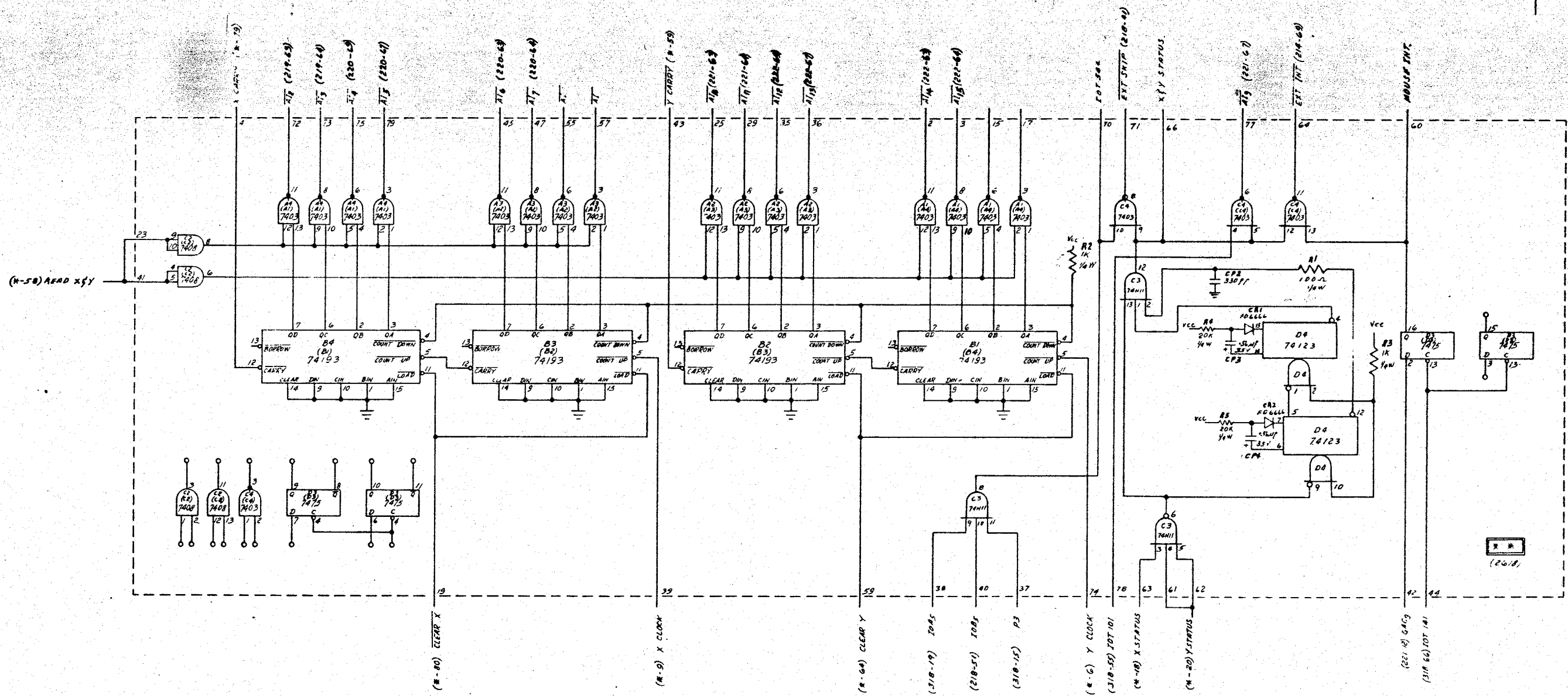
UNIT	WIRE LIST	LOCATION
STANDARD	3039	307

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			BY	DATE	 IMLAC CORPORATION 238 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE								
			LAYOUT	H.C.M.		18 May 72	BEL-1 CIRCUITS							
			DRAWN	H.C.M.	18 May 72									
			CHECKED			<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>B</td> <td>1-031</td> <td>C</td> </tr> </tbody> </table>	PREFIX	SIZE	DRAWING NUMBER	REV.	L	B	1-031	C
PREFIX	SIZE	DRAWING NUMBER	REV.											
L	B	1-031	C											
			APPROVED			Scale	Sheet							
			ISSUE											
			COPIED											
			MATERIAL											
			PROJECT											
00	A5072	D5000	APPLICATION											
CRP.	NEXT ASSY	FINAL ASSY.												

1-031

REV	ECN	DATE	EXTN	APP
A	-	20.1.72	H.L.M.	J.P.S.




SERIAL	* LOCATION	**
139	324	

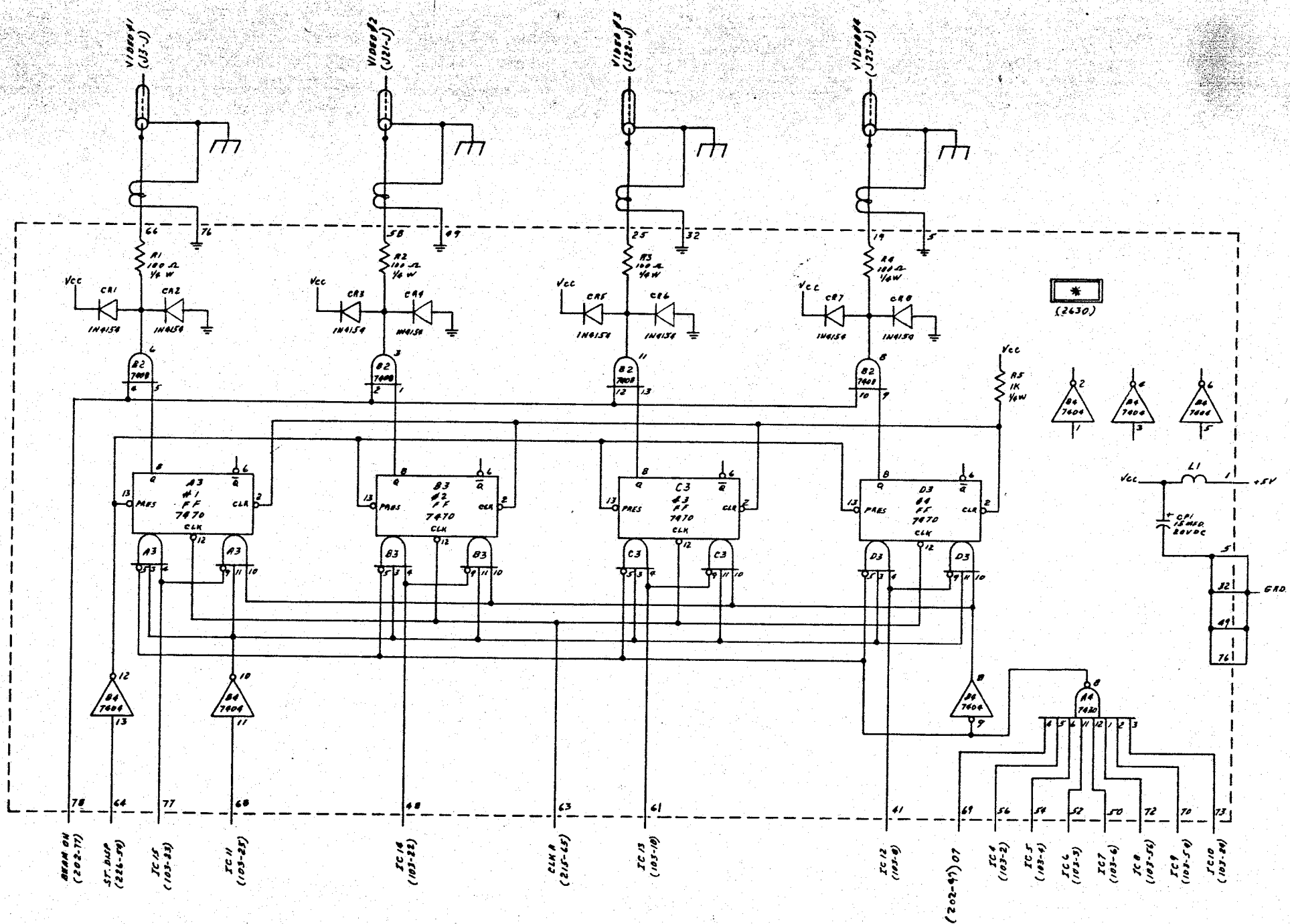
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2. SEPIA MADE FROM DWG. # 1-028.6-26-76. J.V.
 1 IC POSITION IN PARENTHESES ARE THE LOCATIONS ON THE HAND WIRED BOARD

NOTES


LAYOUT	BY	DATE	 IMLAC CORPORATION 288 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE GRAPHIC MOUSE INPUT COUNTER
DRAWN	H.C.M.	J.P.S.		
CHECKED	H.C.M.	J.P.S.		
APPROVED	J.P.S.	J.P.S.		
ISSUE				
COPIED				
MATERIAL	PROJECT		PREFIX	SIZE
			L D	DRAWING NUMBER
				1-040
			Scale	Sheet
				1

REV	ECN	DATE	BY	APP'D
A		2/23/72	RTH	YB
B		3/30/72	GB	YB
C		2/17/72	GB	YB

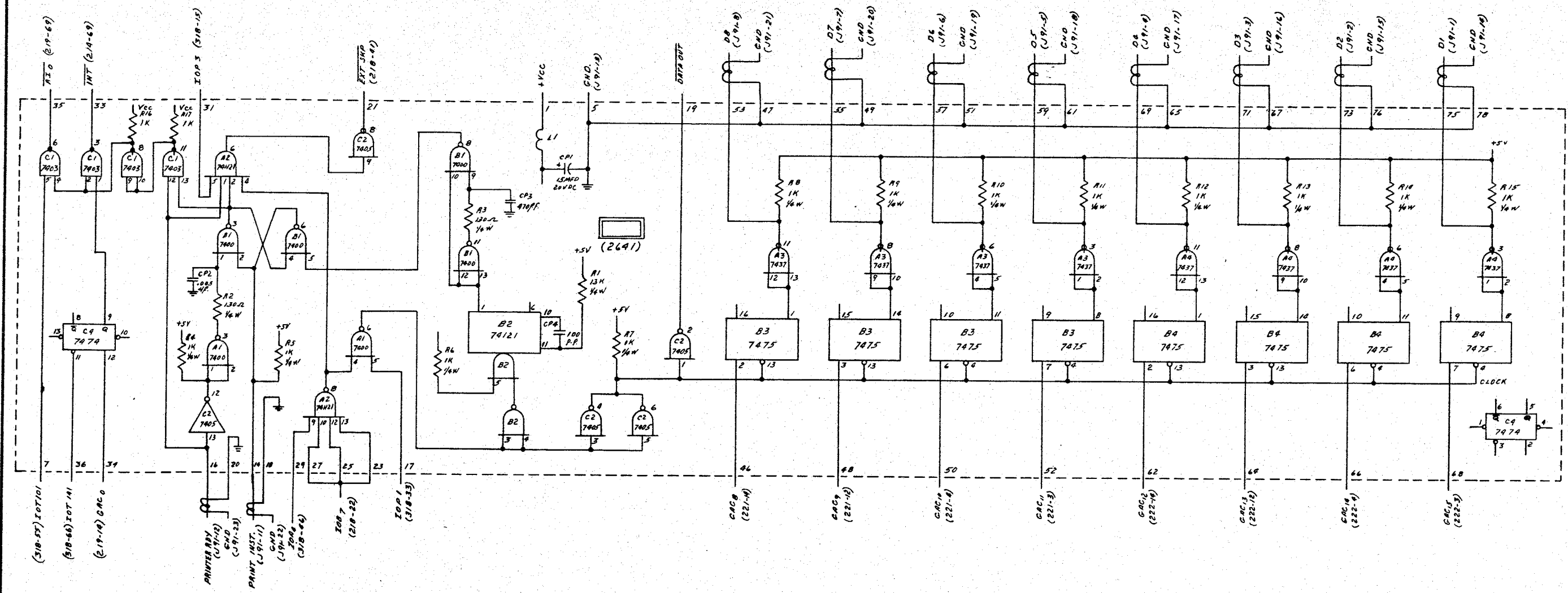


SERIAL #	LOCATION #
167	306
173	306
129	106

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BY		DATE	 IMLAC CORPORATION 200 NEWTON STREET WALTHAM, MASSACHUSETTS 02154	TITLE
LAYOUT	J.V.	6-7-72		MCI-1
DRAWN	J.V.	6-8-72		
CHECKED	R.T.H.	6-20-72		
APPROVED	Y.B.	2-3-73		
ISSUE				
COPIED				
MATERIAL		PROJECT		
PREFIX	SIZE	DRAWING NUMBER	REV.	
L	D	1-048	C	
Scale		Sheet		

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
A			8-16-72	J.V.
B			9-14-72	J.V.
C				



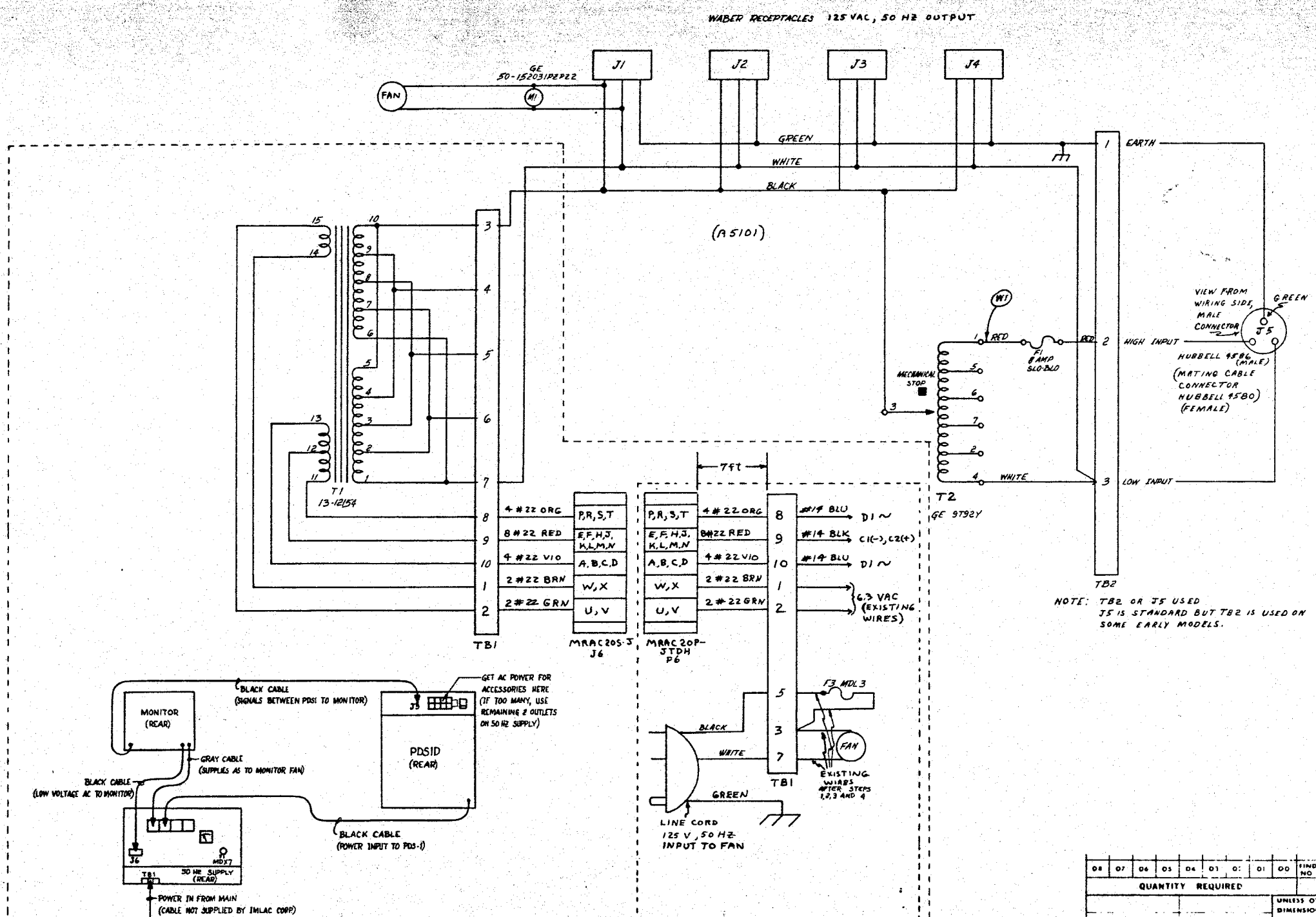
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QUANTITY REQUIRED		BILL OF MATERIALS	
08	07	06	05
04	03	02	01
00	FIND NO.	SYM	PART NUMBER
DESCRIPTION		MANUFACTURER	MANUFACTURER'S NUMBER
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAFTSMAN J.A. VALDES DATE 6-21-72	
TOLERANCES		CHECKED	
ANGLES		DECIMALS ±.2	
MATERIAL		INCHES ±.015	
DO NOT SCALE DRAWING		ENGINEER	
FINISH		ENGINEERING APPROVAL	
NEXT ASSY		CONTRACT NUMBER	
FINAL ASSY		PROJECT NUMBER	
APPLICATION		DRAWING NUMBER	
		L D 1-051	
		SCALE	
		SHEET OF	



LINE PRINTER INTERFACE

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
1			26 Sep 72	JB
			20 Nov 72	JB
			10 Jan 73	JB



NOMINAL INPUT VOLTAGE	CONNECT W1 TO	PLACE MECHANICAL STOP AT
100	6	80%
117	5	100% (NO STOP)
200	1	70%
220	1	65%
240	1	60%

3. FOR OPERATION AT 60 HZ, OPERATE AT 125V AND SET R63 WITH 103V
2. THIS ADJUSTMENT IS DONE AT FACTORY. IT MUST BE RE-DONE IF 2859 CARD IS CHANGED OR IF 15V CURRENT IS CHANGED SIGNIFICANTLY.
1. FOR OPTIMUM OPERATION AT 50 HZ, SET VARIABLE TRANSFORMER SO THAT METER INDICATES 125 V.
- NOTES
- © by IMLAC CORP. 1972, 1973

CIRCUITS INSIDE THIS AREA USED ONLY ON A5101-00 ASSEMBLY.

- MONITOR, MODIFIED AS FOLLOWS:
1. REMOVE T1.
 2. REMOVE DOUBLE DIODE FROM TBI-10.
 3. REMOVE LINE CORD AND RECONNECT AS SHOWN ABOVE
 4. MOVE BLACK WIRE FROM TBI-3 TO TBI-5
 5. CONNECT NEW WIRING AS SHOWN ABOVE.

QTY	DESCRIPTION	MANUFACTURER'S NUMBER
1	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES DECIMALS	
1	DO NOT SCALE DRAWING	
1	FINISH	
1	APPLICATION	

DATE	DESCRIPTION	MANUFACTURER'S NUMBER
23 AUG 72	POWER SOURCE	
26 SEP 72	230V - 115V 50 HZ	
10 JAN 73		

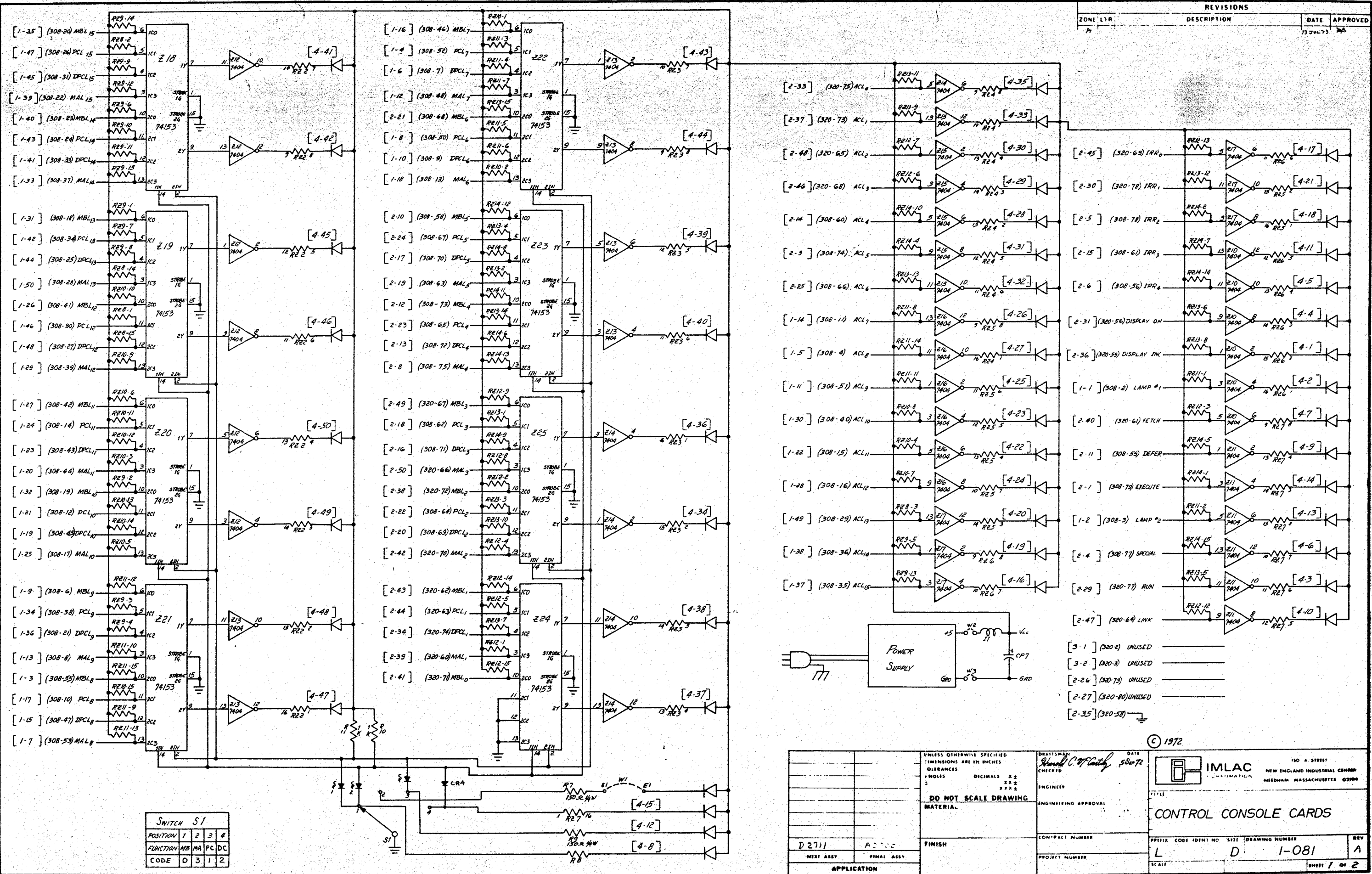
IMLAC
150 A STREET
NEW ENGLAND INDUSTRIAL CENTER
NEEDHAM, MASSACHUSETTS 02194

POWER SOURCE
230V - 115V 50 HZ

SCALE: L D 1-078

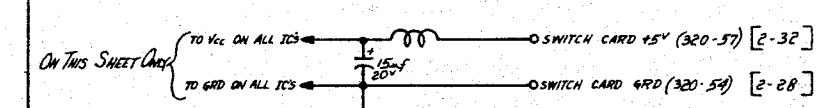
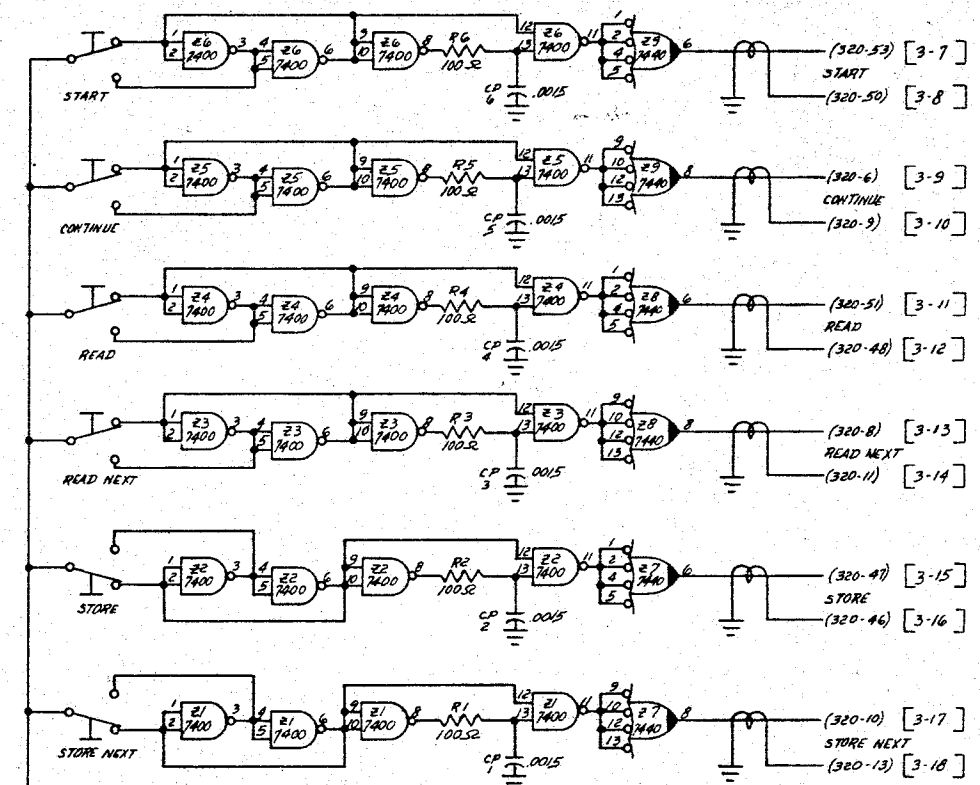
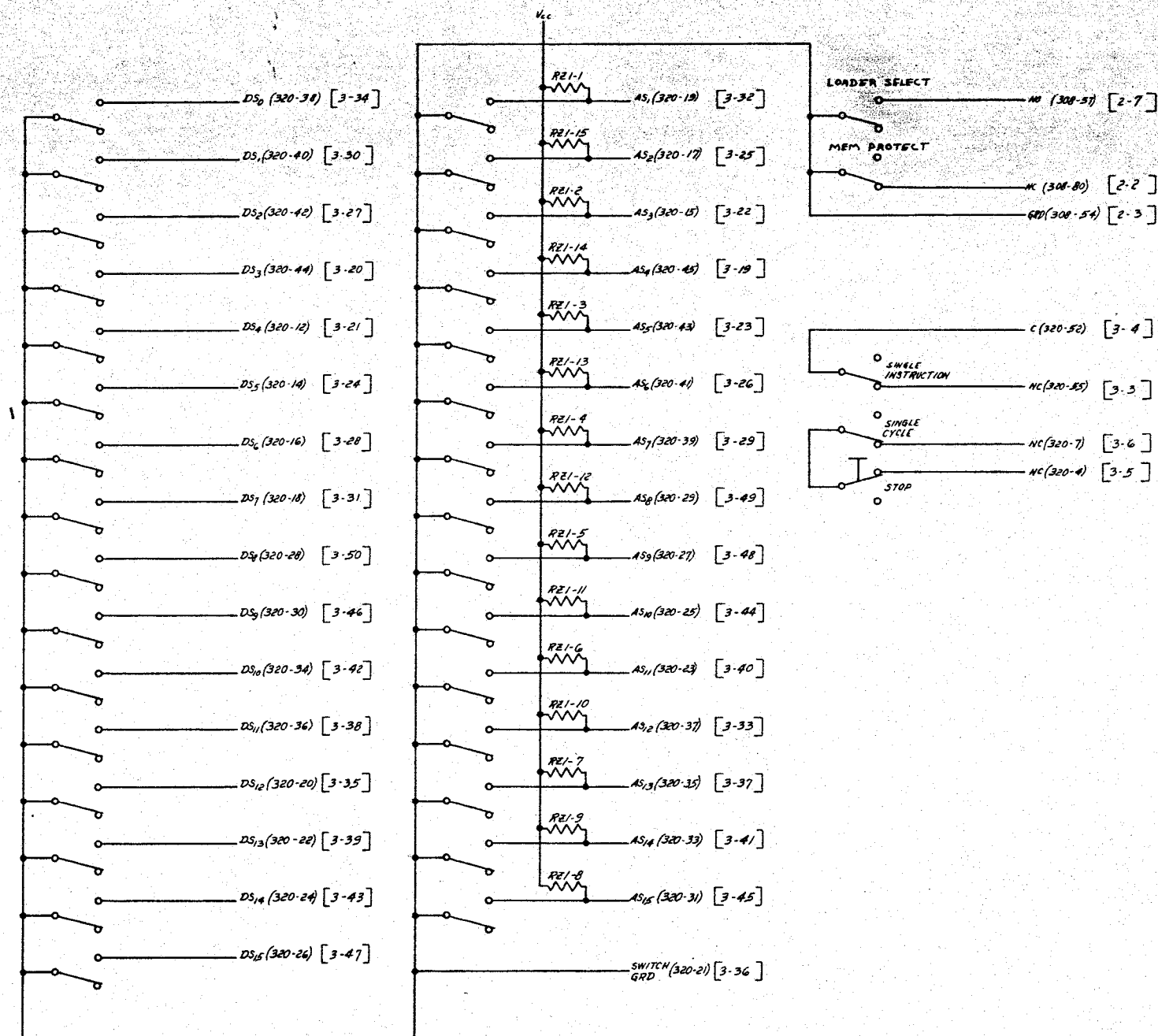
SHEET 1 OF 1

REVISIONS			
ZONE LTR	DESCRIPTION	DATE	APPROVED
		13 JUL 73	



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES DECIMALS .XX ANGLES XXX FINISH XXX		DRAWN BY <i>Shawn C. McCarthy</i> CHECKED DATE 5/8/72	ISO A - STREET NEW ENGLAND INDUSTRIAL CENTER METHUEN MASSACHUSETTS 02844
DO NOT SCALE DRAWING MATERIAL		ENGINEER	TITLE CONTROL CONSOLE CARDS
APPLICATION NEXT ASSY FINAL ASSY		ENGINEERING APPROVAL	PROJECT NUMBER
CONTRACT NUMBER		SPECIFIC CODE IDENT NO 5771 DRAWING NUMBER L D 1-081	
SCALE		REV A	
SHEET 1 OF 2			

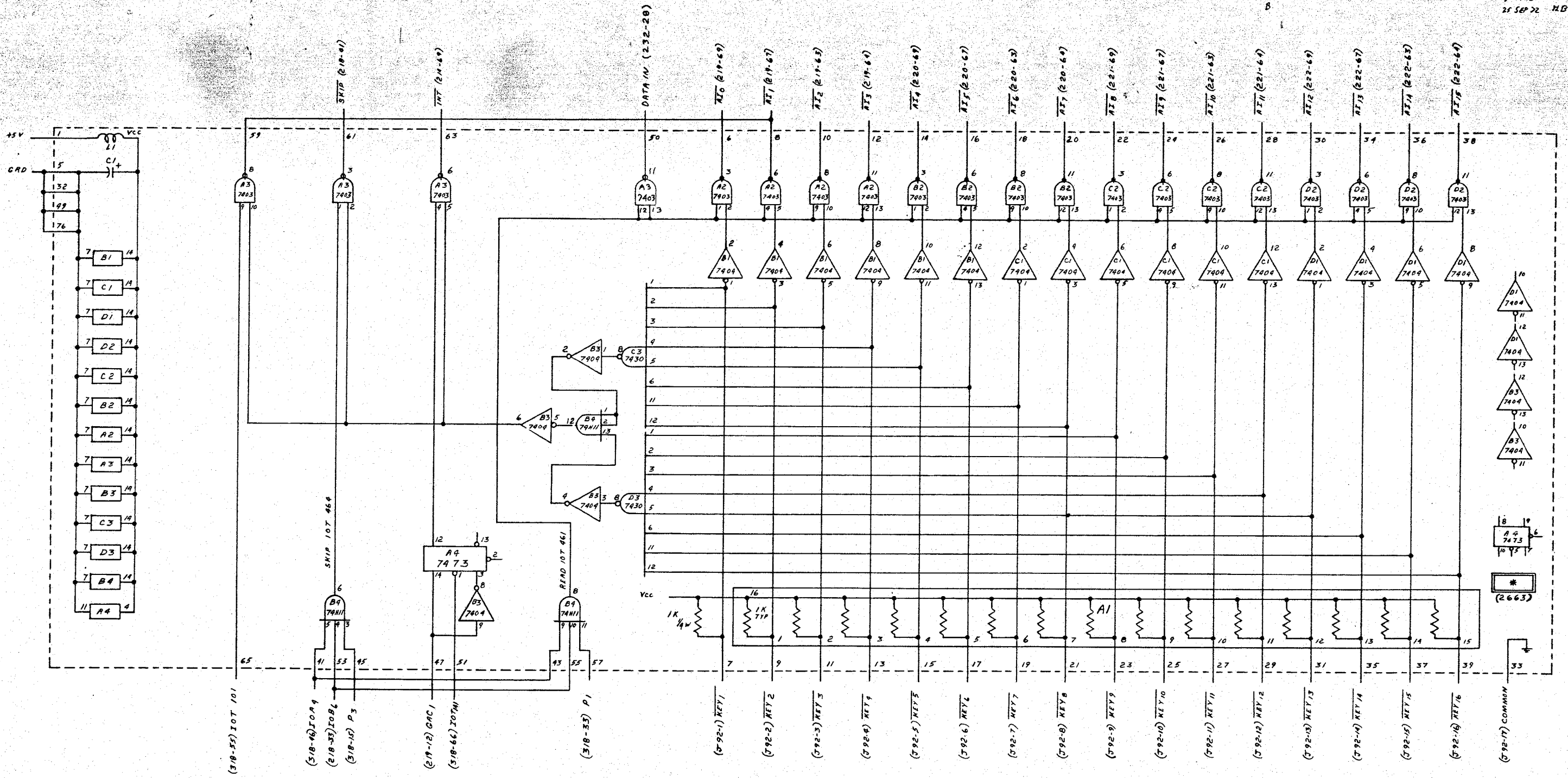
REVISIONS			
LINE	DESCRIPTION	DATE	APPROVED
A	SWITCH CARD GRD & +5V TAGS WERE INCORRECT 9 MAR 73	1304-73	JJ↑
B			7/2



© 1972

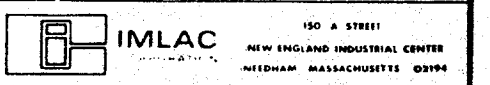
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DESIGNER Richard C. McCarthy	DATE 5/5/72	150 A STREET NEW ENGLAND INDUSTRIAL CENTER MIDDHAM, MASSACHUSETTS 02949
TOLERANCES		CHECKED	ENGINEER	
ANGLES		DECIMALS ±	ENGINEERING APPROVAL	CONTROL CONSOLE CARDS
		XXX		
		±		CONTRACT NUMBER
		XXX		
DO NOT SCALE DRAWING				PROJECT NUMBER
MATERIAL				
FINISH				REV
APPLICATION				
P 0211	A 2700			L D 1-081 B
SHEET ASSY	FINAL ASSY			
				SCALE
				SHEET 2 OF 2

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED
	A		9-17-72	
	B		25 SEP 72	H.B.



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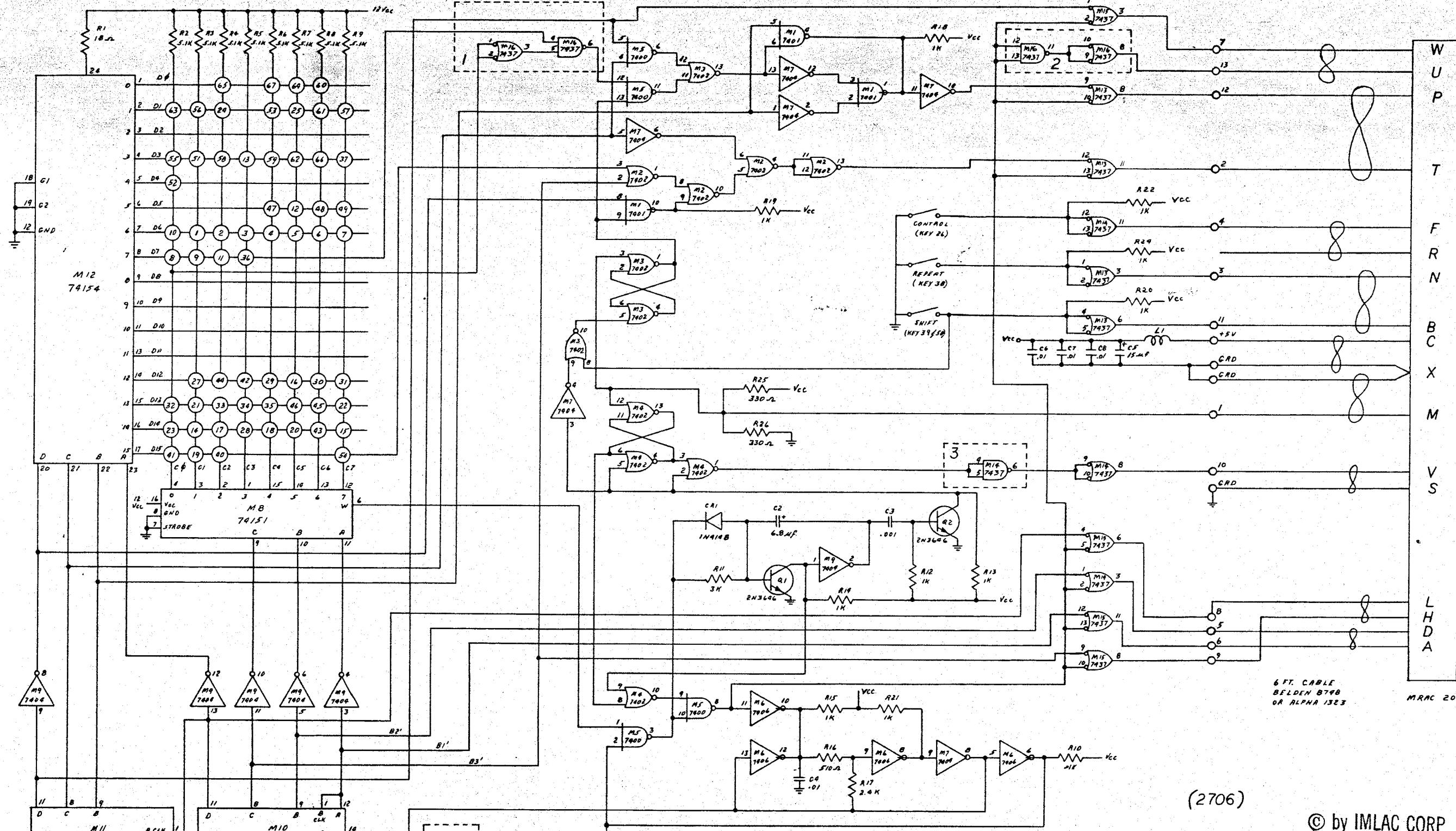
OR	D7	O6	O5	O4	O3	O2	O1	O0	IND	SYM	PART NUMBER	DESCRIPTION	MANUFACTURER'S NUMBER
QUANTITY REQUIRED												DATE	
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES												9-12-72	
TOLERANCES												DRAWN	
ANGLES												CHECKED	
DECIMALS												ENGINEER	
MATERIAL												ENGINEERING APPROVA.	
DO NOT SCALE DRAWING												CONTRACT NUMBER	
FINISH												PROJECT NUMBER	
APPLICATION												DRAWING NUMBER	
												D 1-082	
												REVISION	
												B	



FNT-1 CONTROL

D 1-082

REVISIONS				
ZONE	ITR	DESCRIPTION	DATE	APPROVED

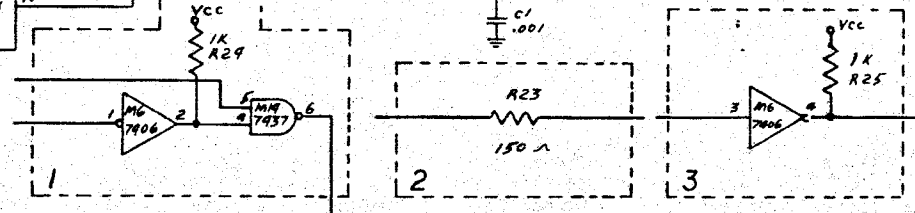


6 FT. CABLE
BELDEN B798
OR ALPHA 1323
MRC 20P-JTDH

(2706)

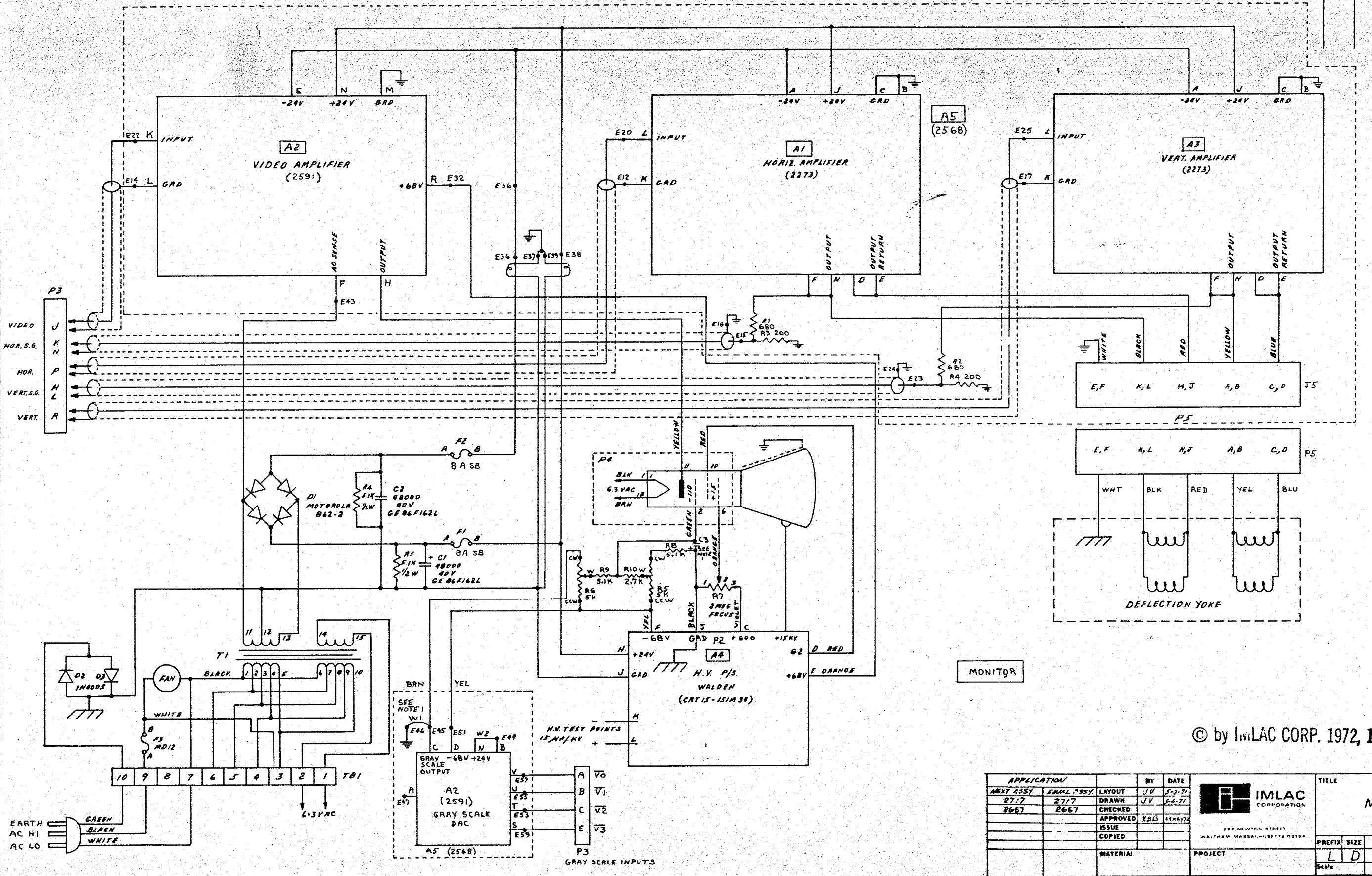
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CIRCUITS USED ON SER 1-10 ONLY



UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: ANGLES DECIMALS X ± S XXX 3 X 2		DRAFTSMAN <i>Oral Mungley</i> CHÉ KFD	DATE 1-8-73	 150 A. STREET NEW ENGLAND INDUSTRIAL CENTER NEEDHAM MASSACHUSETTS 02194
DO NOT SCALE DRAWING MATERIAL		ENGINEER	ENGINEERING APPROVAL	
FINISH		CONTRACT NUMBER		TITLE IMLAC 67 KEY KEYBOARD
NEXT ASSY		PROJECT NUMBER		PRIOR CODE IDENT NO L
FINAL ASSY		PROJECT NUMBER		SIZE D
APPLICATION		PROJECT NUMBER		DRAWING NUMBER 1-097
				REV
				SCALE
				SHEET OF

REV	ECN	DATE	DTM	APP'D
1		12/67	MJ	
B		16JUL73		7B



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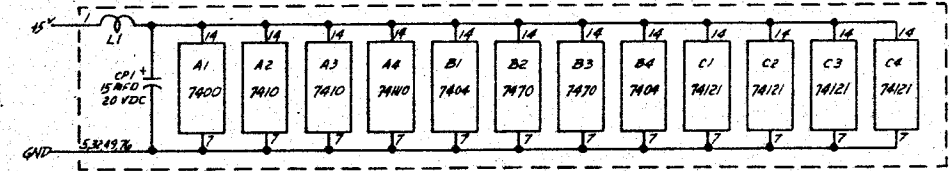
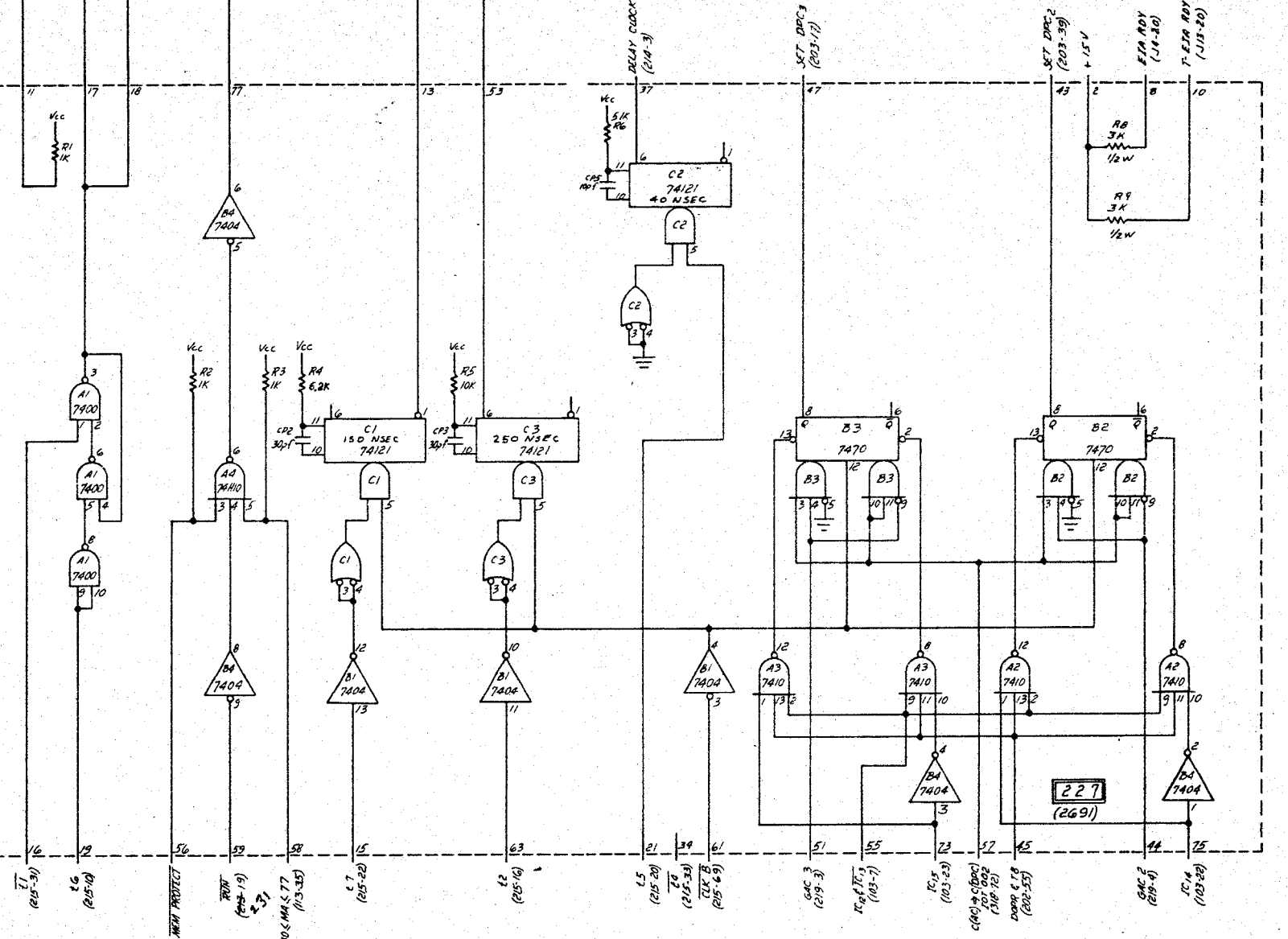
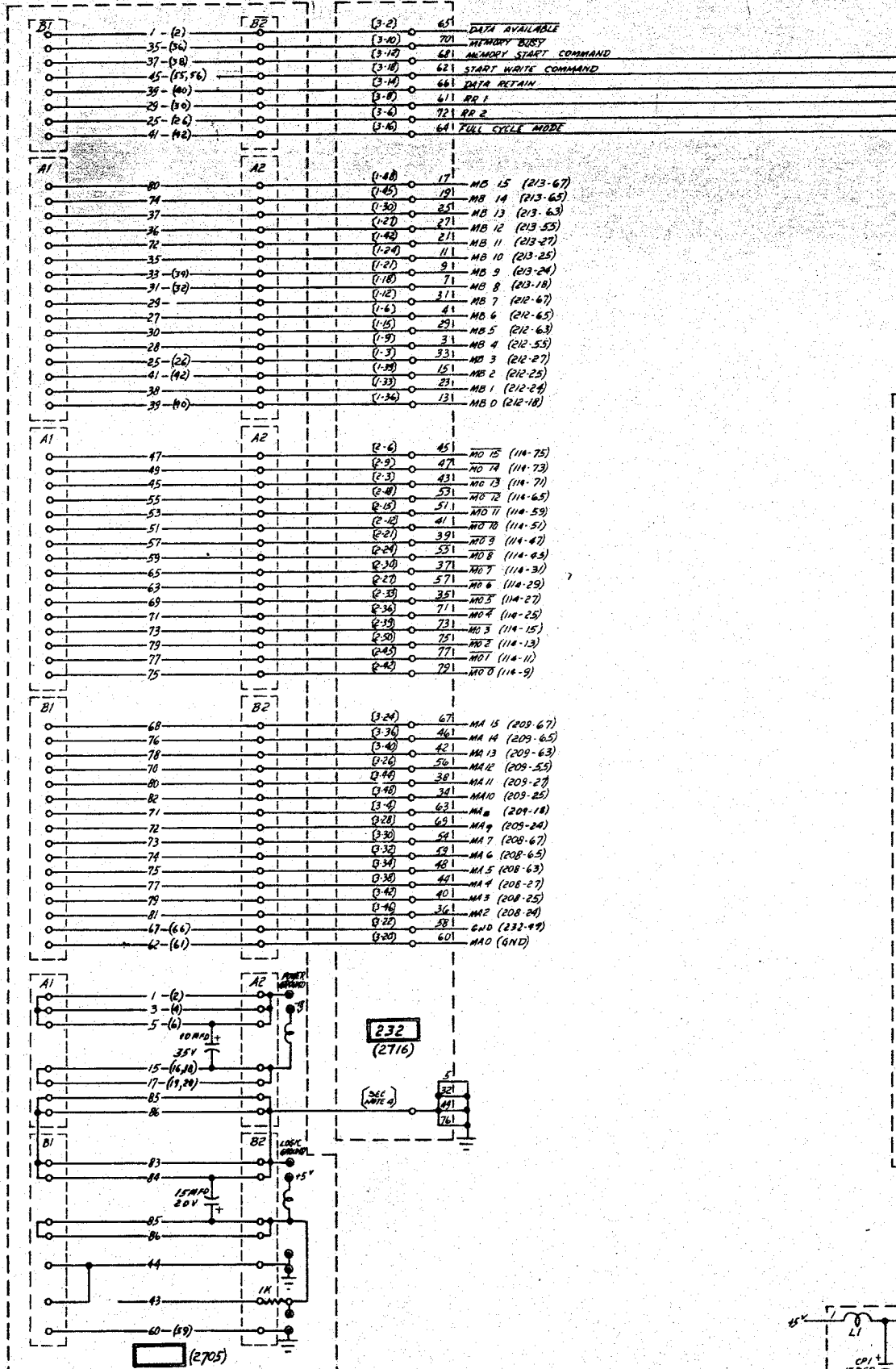
APPLICATION		BY	DATE	TITLE
AWAY ASSY.	EMUL ASSY.	LAYOUT	JV	
2717	2717	DRAWN	JV	5-6-71
2657	2657	CHECKED		
		APPROVED	ABD	11MAY72
		ISSUE		
		COPIED		
MATERIAL		PROJECT		

PREFIX		DRAWING NUMBER		REV.
L	D	1-101		B
Scale		Sheet		



200 NEWTON STREET
WALTHAM, MASSACHUSETTS 02154

REVISIONS		DATE	APPROVED
DESCRIPTION			
		7/12	
		1 MAY 73	
		8-27-73	
		16 JUL 73	



5 ON 2704 ASSEMBLY, PINS IN PARENTHESES ARE UNUSED.
 ALL UNUSED CABLE PINS ON BD 2654 TO BD 2704 ARE GROUNDED.
 3 (3-2) INDICATES CABLE #3, WIRE 2.
 2 @ INDICATES JUMPER CONNECTION.
 ALL RESISTORS ARE 1/4W 5%, UNLESS SPECIFIED OTHERWISE.
 NOTES:

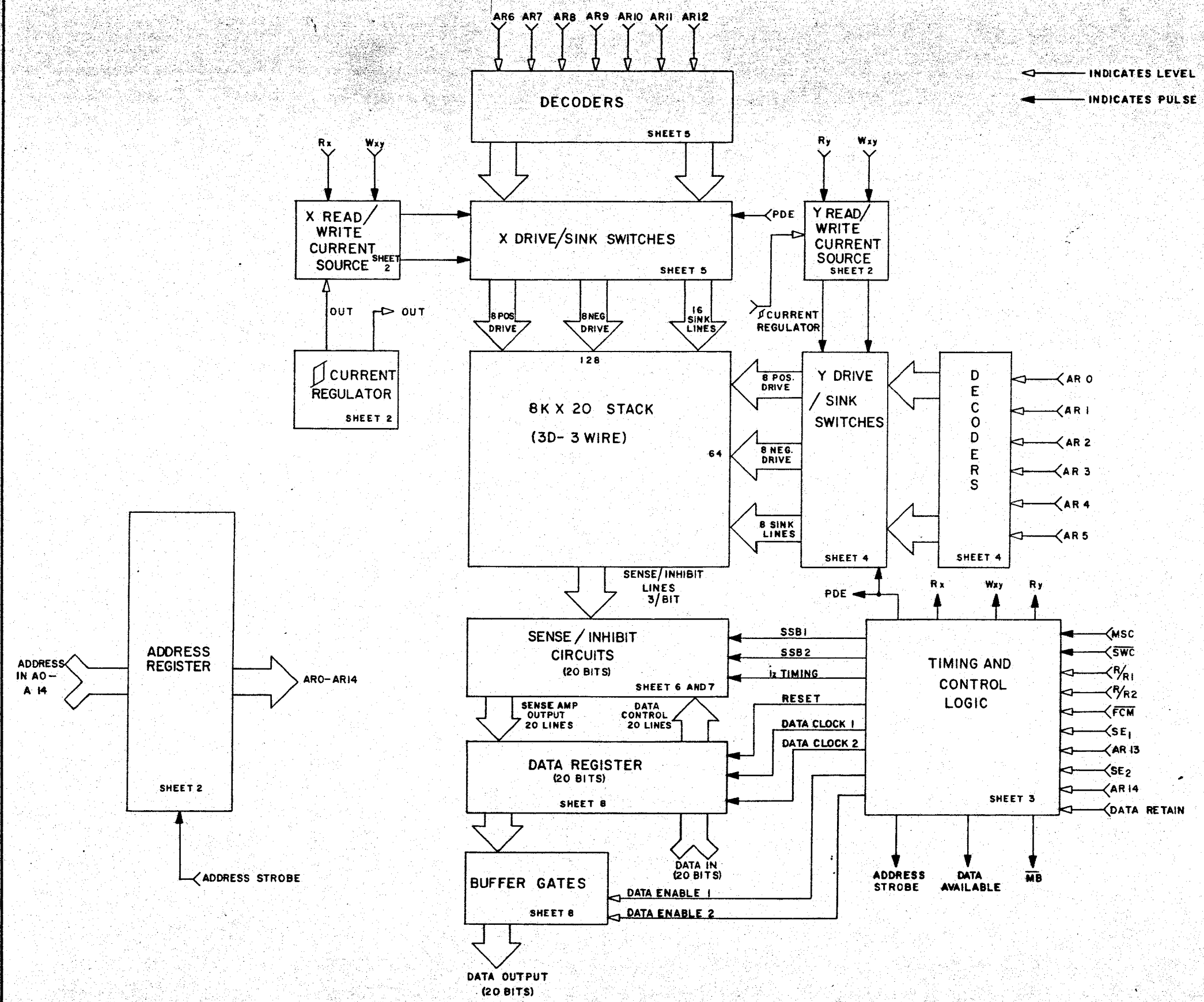
Handwritten signature: Harold C. M. Partridge 4/26/72

IMLAC
 NEW ENGLAND INDUSTRIAL CENTER
 NEEDHAM, MASSACHUSETTS 02194

MEMORY CONTROL

PROJECT NUMBER	L	DRAWING NUMBER	D 1-096	REV	F
SHEET		1 OF 1			

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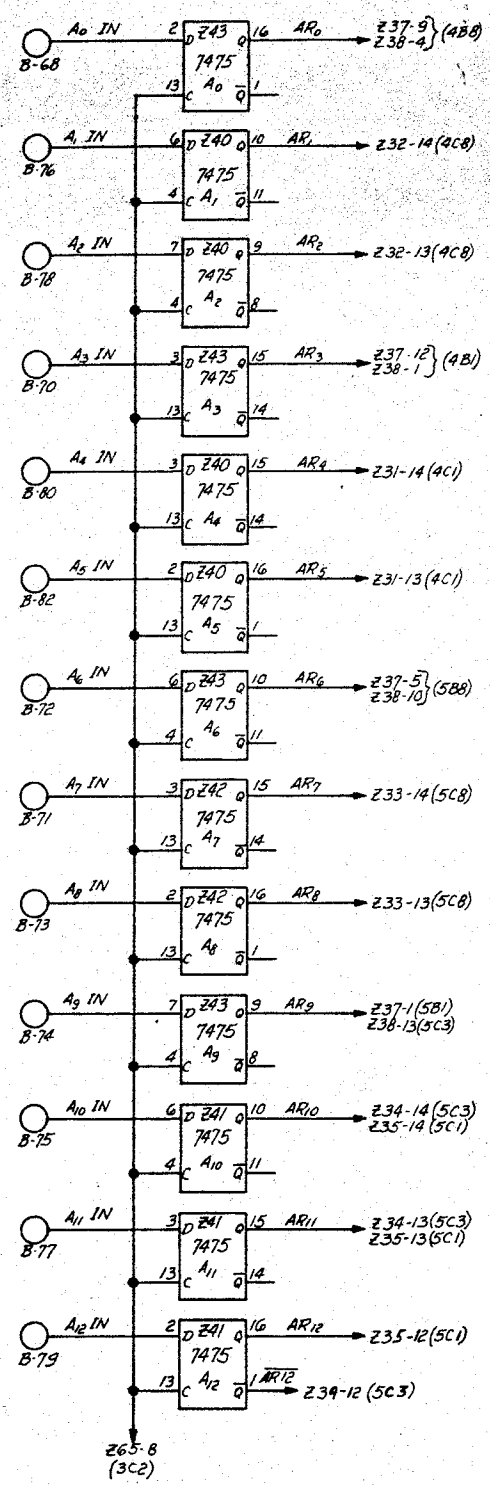
← INDICATES LEVEL
 ← INDICATES PULSE

BLOCK DIAGRAM

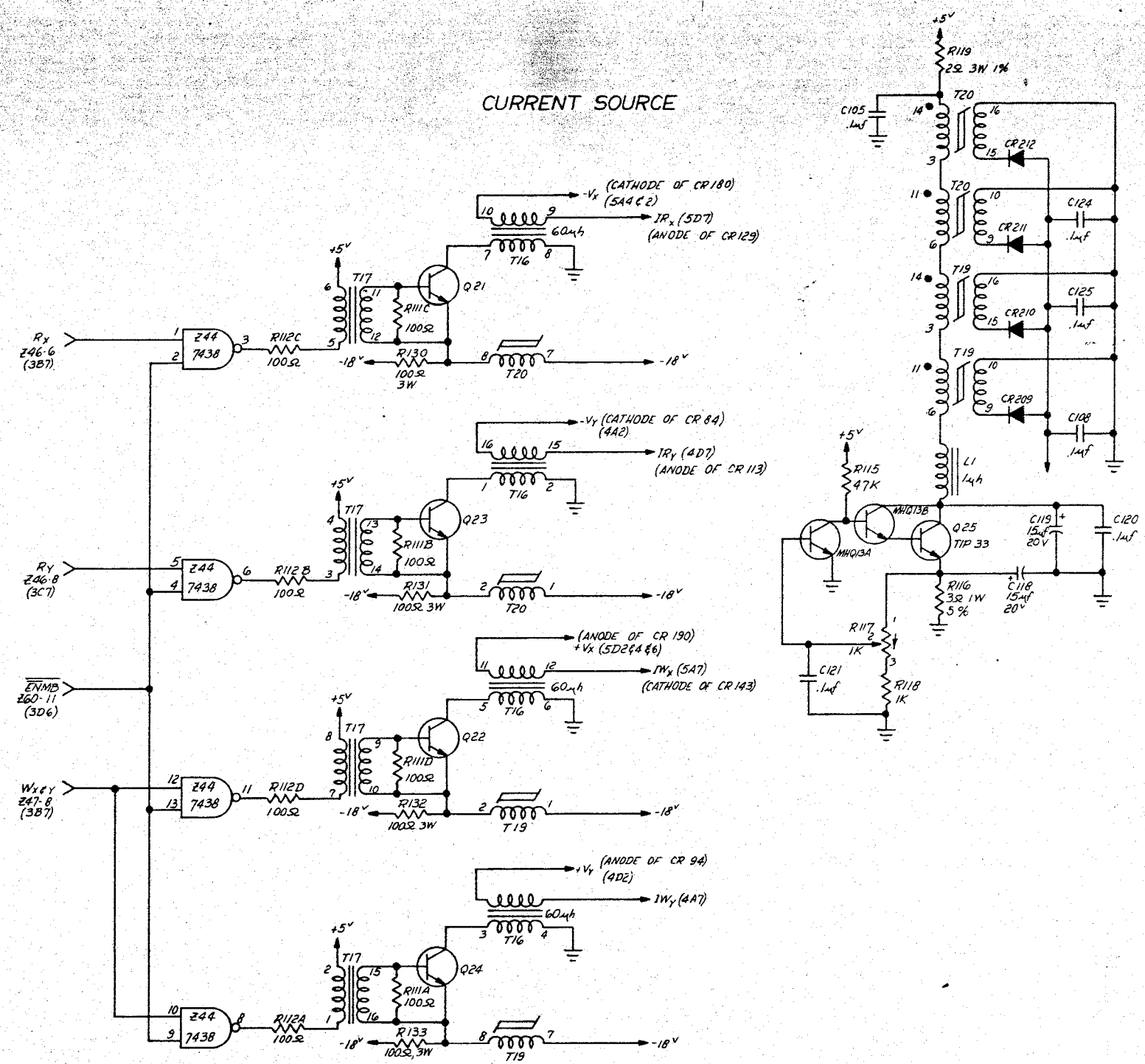
© by IMLAC CORP. 1972, 1973

DRAFTSMAN RALPH T. MURPHY 6FEB73 CHECKED ENGINEER ENGINEERING APPROVAL	IMLAC 150 A STREET NEW ENGLAND INDUSTRIAL CENTER NEEDHAM, MASSACHUSETTS 02194
MEMORY MODULE	
CONTRACT NUMBER PROJECT NUMBER	DRAWING NUMBER A D 1-102 SCALE SHEET 1 OF 8

ADDRESS REGISTER



CURRENT SOURCE

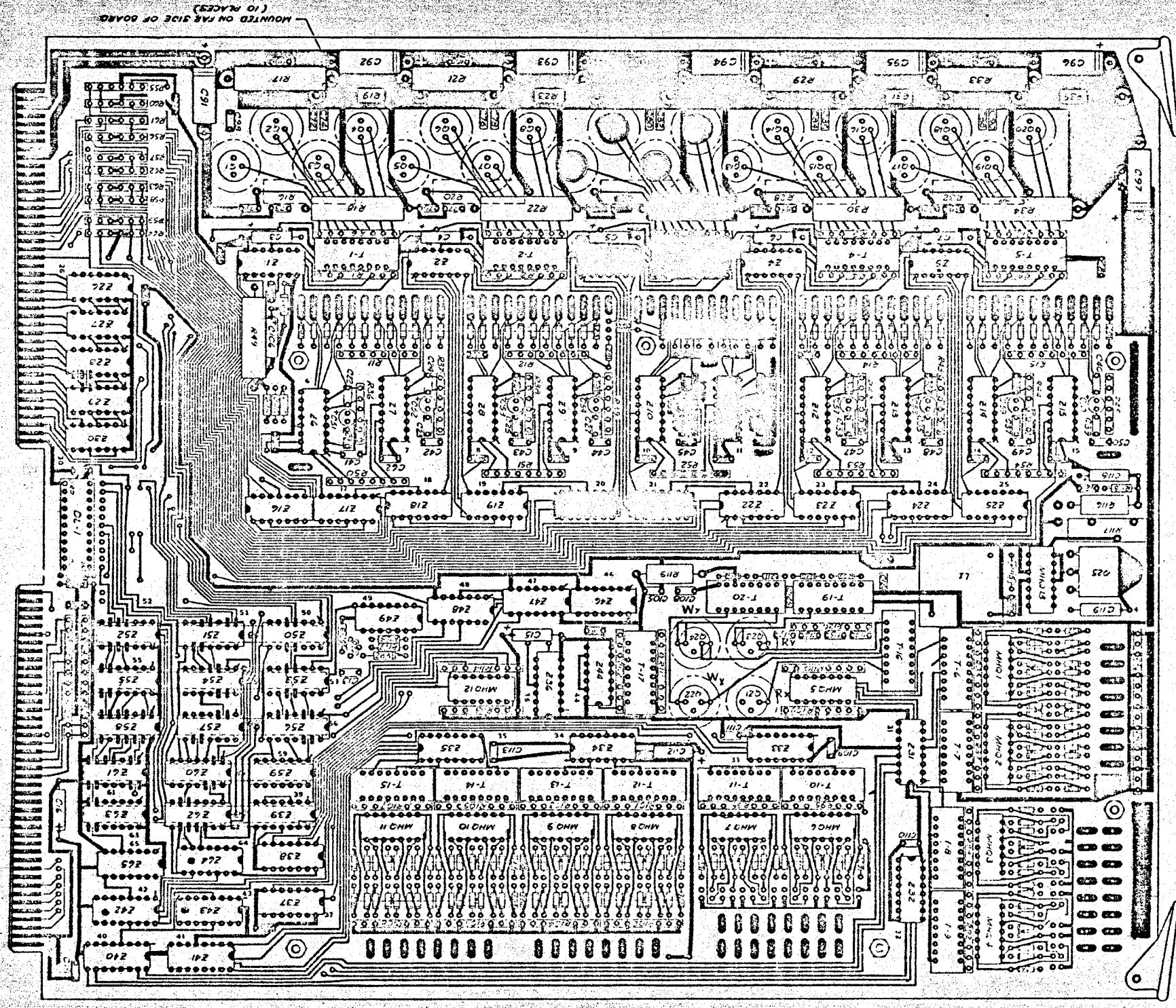


REVISIONS		DATE	APPROVED
1	DESCRIPTION	21JUN73	RE

SHEET NUMBER
VERTICAL LOCATION
HORIZONTAL LOCATION
(2A5)
LOCATION CODE

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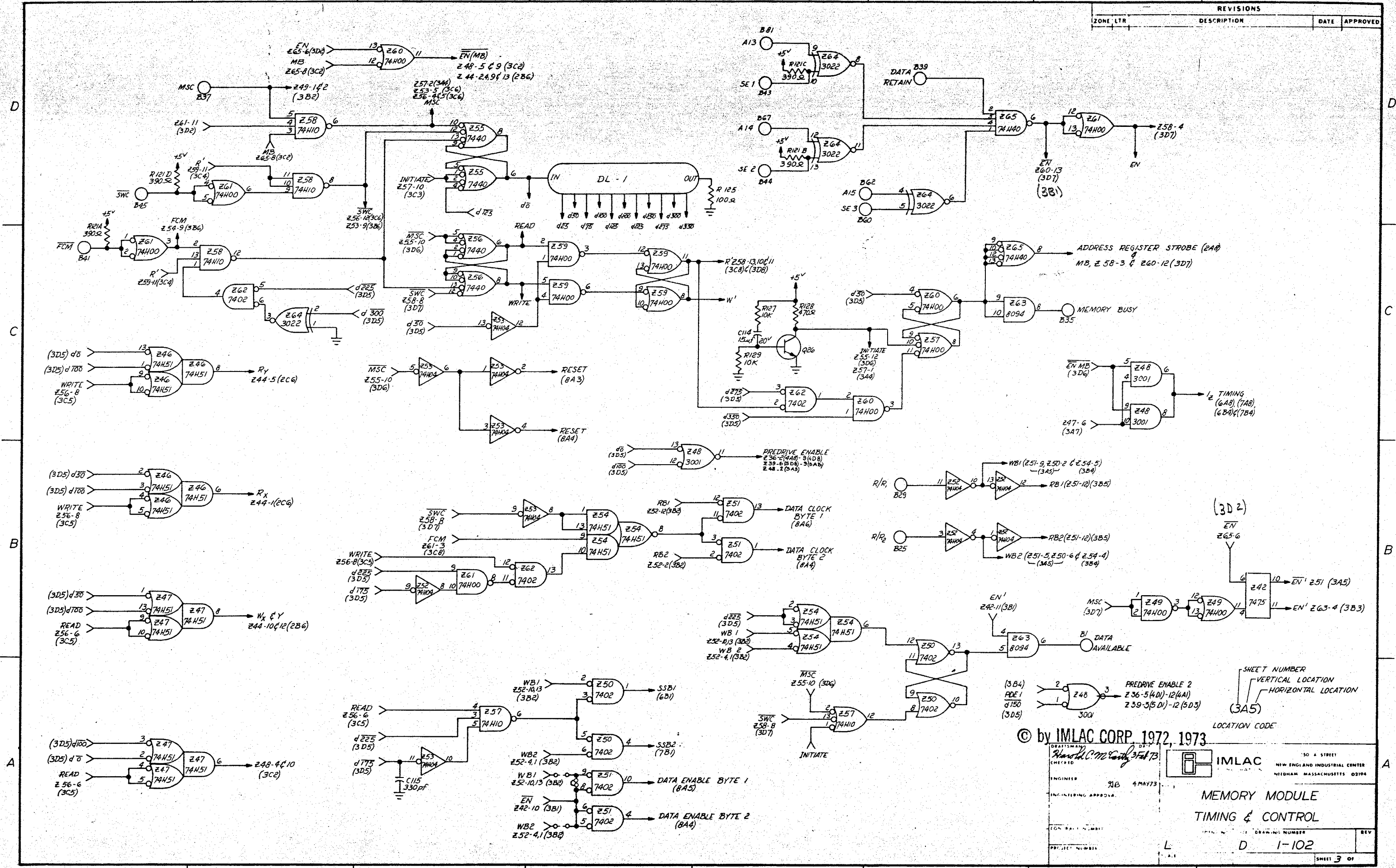
IMLAC
 150 A STREET
 NEW ENGLAND INDUSTRIAL CENTER
 MILFHAM, MASSACHUSETTS 02194
 MEMORY MODULE
 ADDRESS REG & CURRENT SOURCE
 DRAWING NUMBER: D 1-102
 SHEET 2 OF 2



MOUNTED ON FAR SIDE OF BOARD
(10 PLACES)

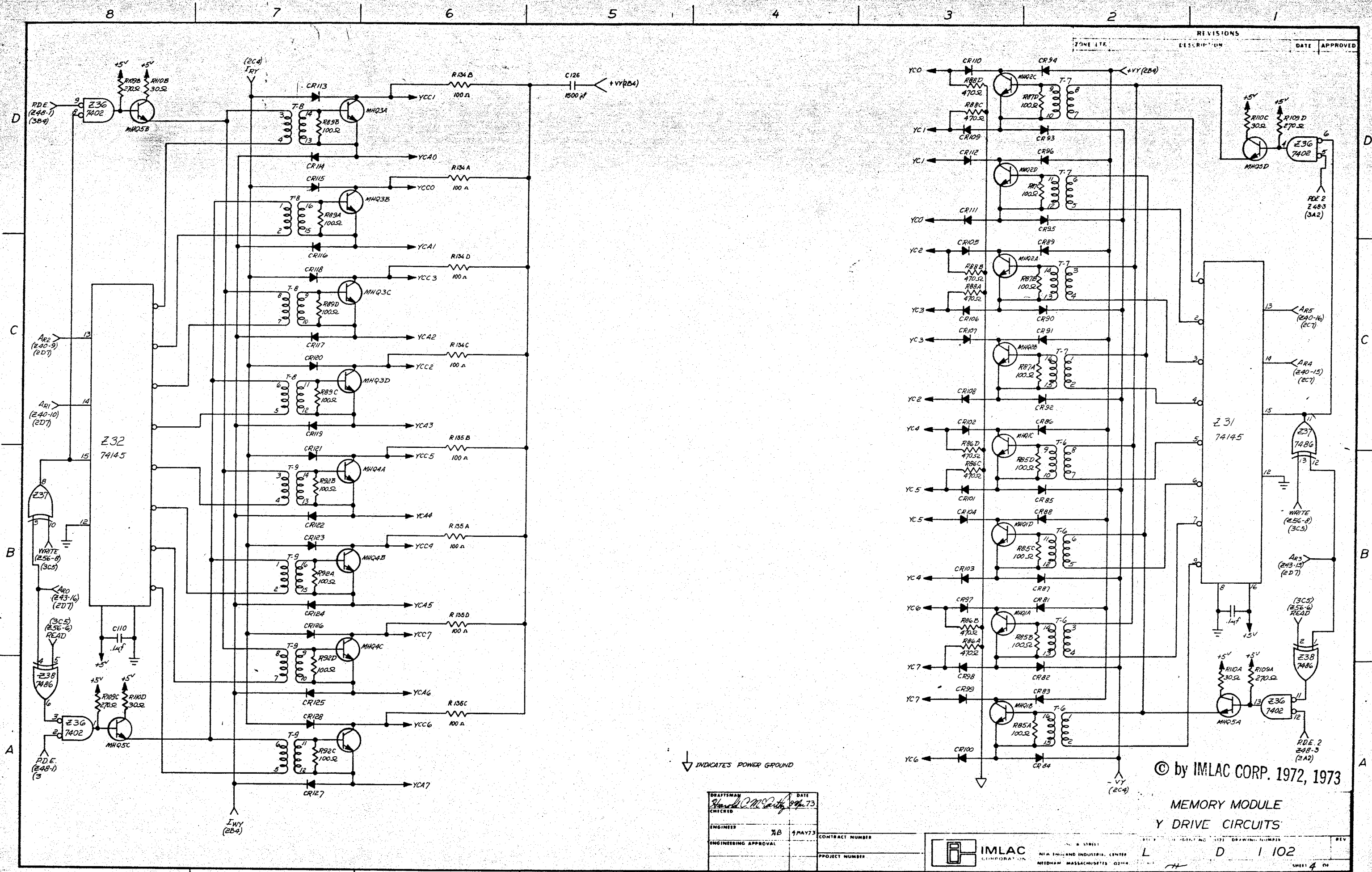
PCB LAYOUT

REVISIONS				
ZONE	LTR	DESCRIPTION	DATE	APPROVED



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DRAWN BY: *Richard C. Smith*
 CHECKED: *RB*
 ENGINEER: *RB* 4 MAY 73
 INCORPORATING APPROVAL: _____
 IMLAC
 150 A STREET
 NEW ENGLAND INDUSTRIAL CENTER
 NICHAM, MASSACHUSETTS 02194
**MEMORY MODULE
 TIMING & CONTROL**
 SHEET NUMBER: **D 1-102**
 LOCATION CODE: **(3A5)**
 SHEET 3 OF 3



ZONE	REV	DESCRIPTION	DATE	APPROVED

↓ INDICATES POWER GROUND

DRAFTSMAN	DATE
CHECKED	
ENGINEER	
ENGINEERING APPROVAL	

CONTRACT NUMBER
PROJECT NUMBER

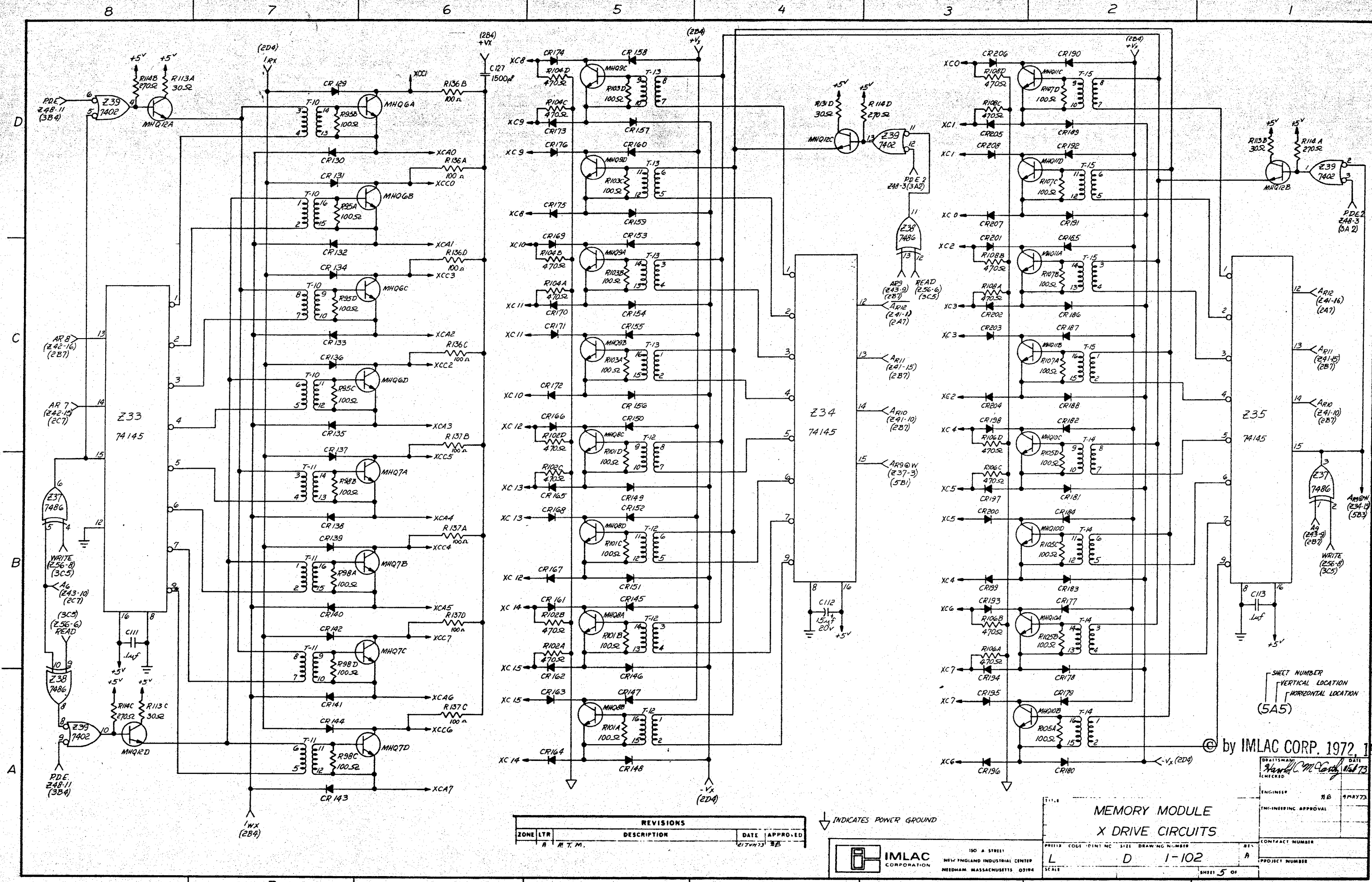
© by IMLAC CORP. 1972, 1973

MEMORY MODULE
Y DRIVE CIRCUITS

IMLAC CORPORATION
NEW ENGLAND INDUSTRIAL CENTER
NEEDHAM MASSACHUSETTS 02146

D 1 102

SHEET 4 OF 4



REVISIONS			
ZONE	LTR	DESCRIPTION	DATE APPROVED
A	M.T.M.		2/7/73 BB

INDICATES POWER GROUND



150 A STREET
NEW ENGLAND INDUSTRIAL CENTER
NEEDHAM, MASSACHUSETTS 02454

MEMORY MODULE
X DRIVE CIRCUITS

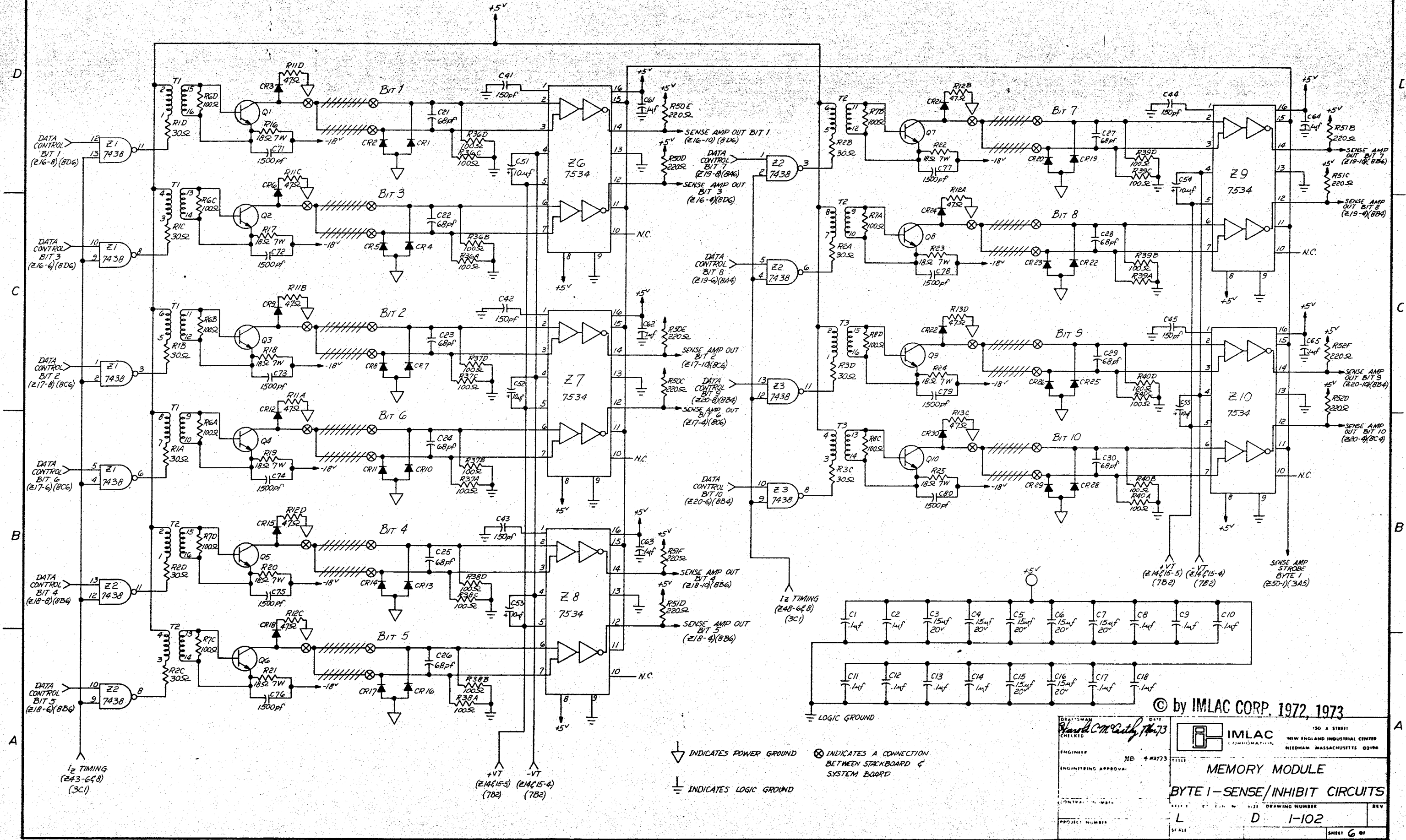
PRINTED COLOR PRINT INC SITE DRAWING NUMBER
L D 1-102
SCALE SHEET 5 OF

SHEET NUMBER
VERTICAL LOCATION
HORIZONTAL LOCATION
(5A5)

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DESIGNED BY HARDY	DATE 1/15/73
ENGINEER	18
ENGINEERING APPROVAL	
CONTRACT NUMBER	
PROJECT NUMBER	

REVISIONS			
7-TIME LTR	DESCRIPTION	DATE	APPROVED



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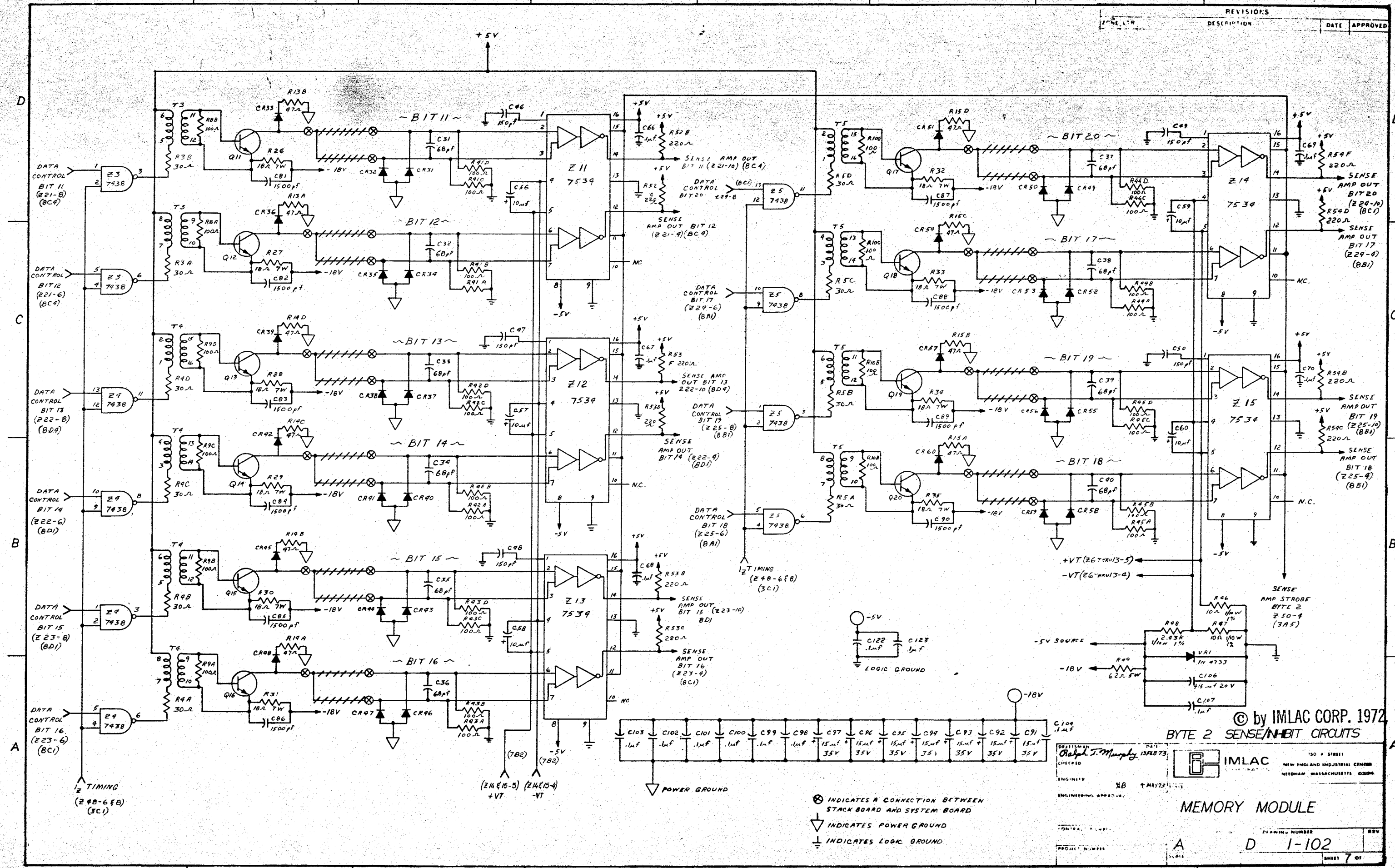
130 A STREET
 NEW ENGLAND INDUSTRIAL CENTER
 NEEDHAM MASSACHUSETTS 02194

MEMORY MODULE
 BYTE 1 - SENSE/INHIBIT CIRCUITS

D 1-102

REVISIONS: 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100

REVISIONS		DATE	APPROVED
1	DESCRIPTION		



D
C
B
A

C
B
A

8 7 6 5 4 3 2 1

- ⊗ INDICATES A CONNECTION BETWEEN STACK BOARD AND SYSTEM BOARD
- ▽ INDICATES POWER GROUND
- ⊥ INDICATES LOGIC GROUND

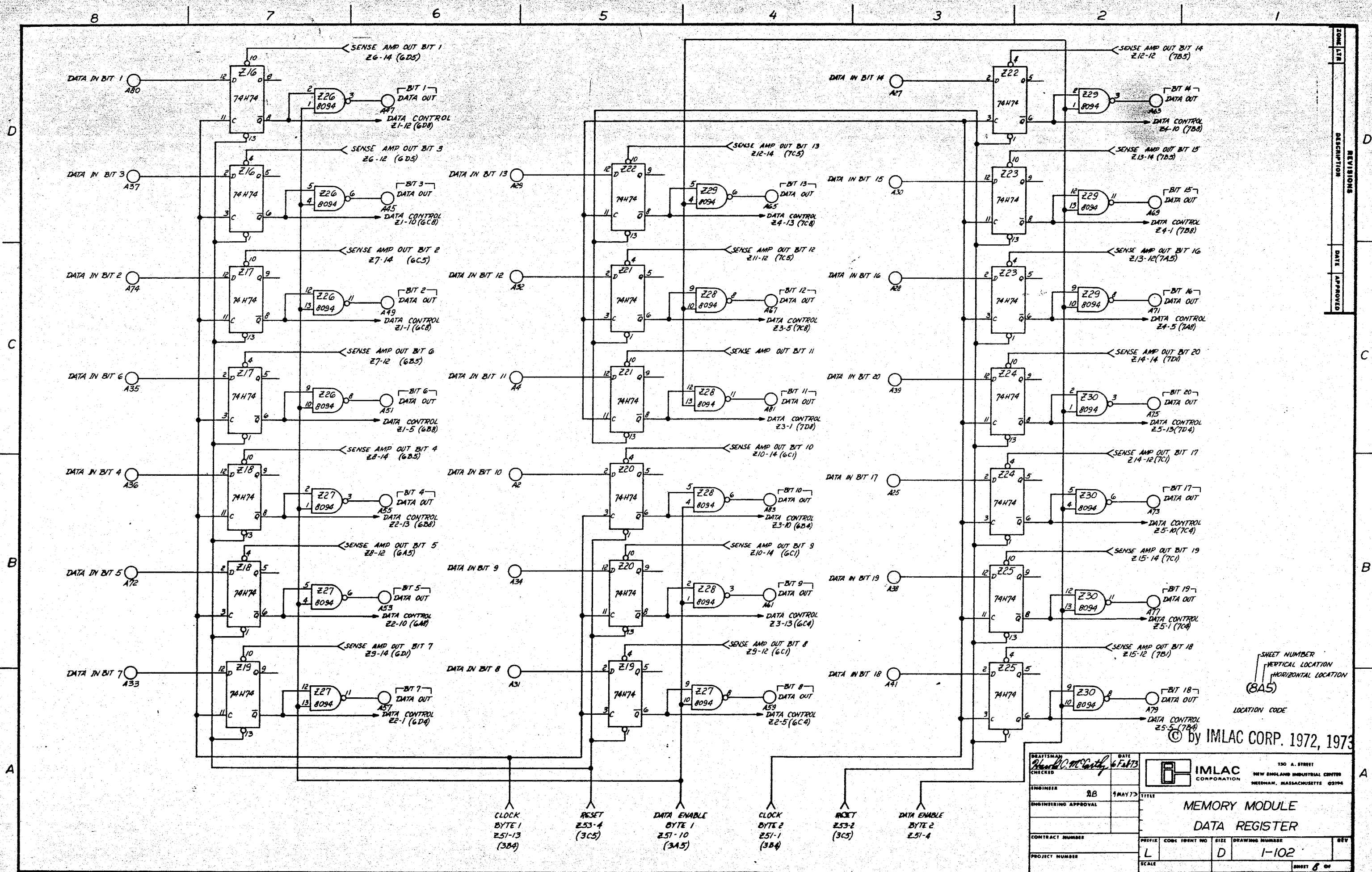
© by IMLAC CORP. 1972 1973
BYTE 2 SENSE/N-BIT CIRCUITS

IMLAC
 150 A STREET
 NEW ENGLAND INDUSTRIAL CENTER
 NEEDHAM MASSACHUSETTS 02464

MEMORY MODULE

DRAWING NUMBER: **D 1-102**

SHEET 7 OF



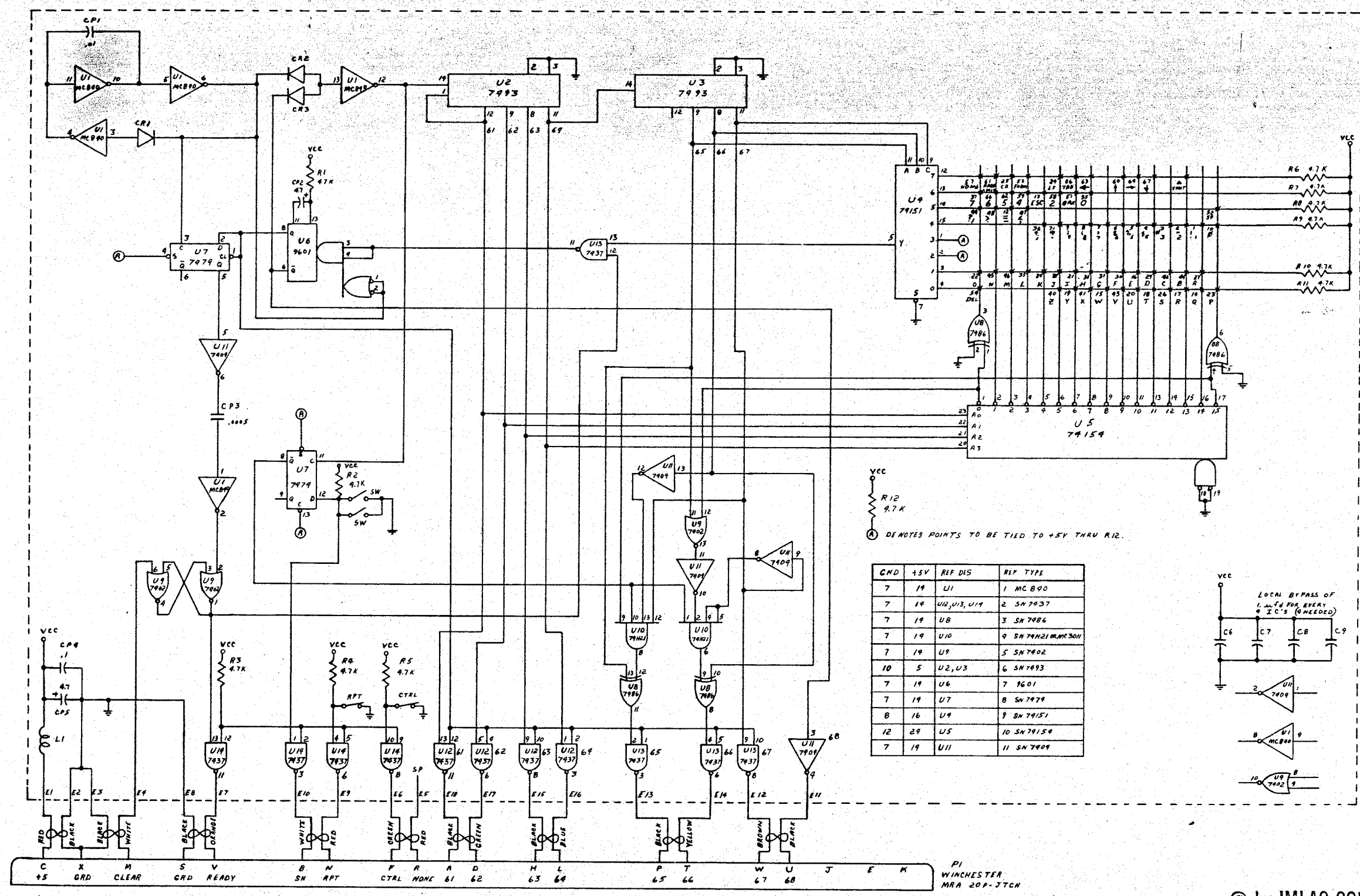
REV. 1	DATE	APPROVED
DESCRIPTION		

SHEET NUMBER
 VERTICAL LOCATION
 HORIZONTAL LOCATION
 (8A5)
 LOCATION CODE

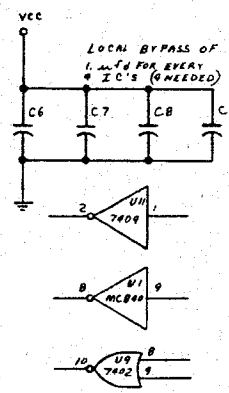
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DRAFTER <i>W.C. McCarthy</i> CHECKED DATE 6 Feb 73	130 A STREET IMLAC CORPORATION NEW ENGLAND INDUSTRIAL CENTER NEEDHAM, MASSACHUSETTS 02194
ENGINEER 1B 1 MAY 73 TITLE	MEMORY MODULE DATA REGISTER
CONTRACT NUMBER PROJECT NUMBER	PREFIX CODE IDENT NO L SIZE D DRAWING NUMBER 1-102 REV 8 OF

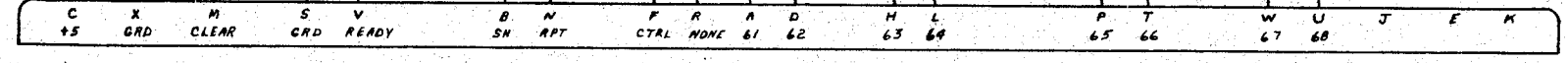
REVISIONS			
ZONE	ITR	DESCRIPTION	DATE APPROVED



CND	45V	REF DIS	REF TYPE
7	19	U1	1 MC890
7	19	U2,U3,U14	2 SN7493
7	19	U8	3 SN7402
7	19	U10	4 SN7402
10	5	U2,U3	6 SN7493
7	19	U6	7 9601
7	19	U7	8 SN7474
8	16	U4	9 SN74151
12	29	U5	10 SN74154
7	19	U11	11 SN7409



⊙ DENOTES POINTS TO BE TIED TO +5V THRU R12.



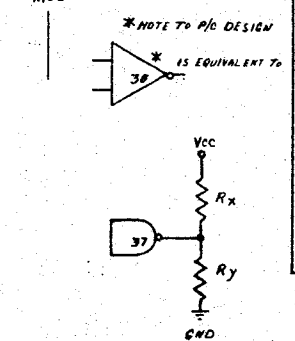
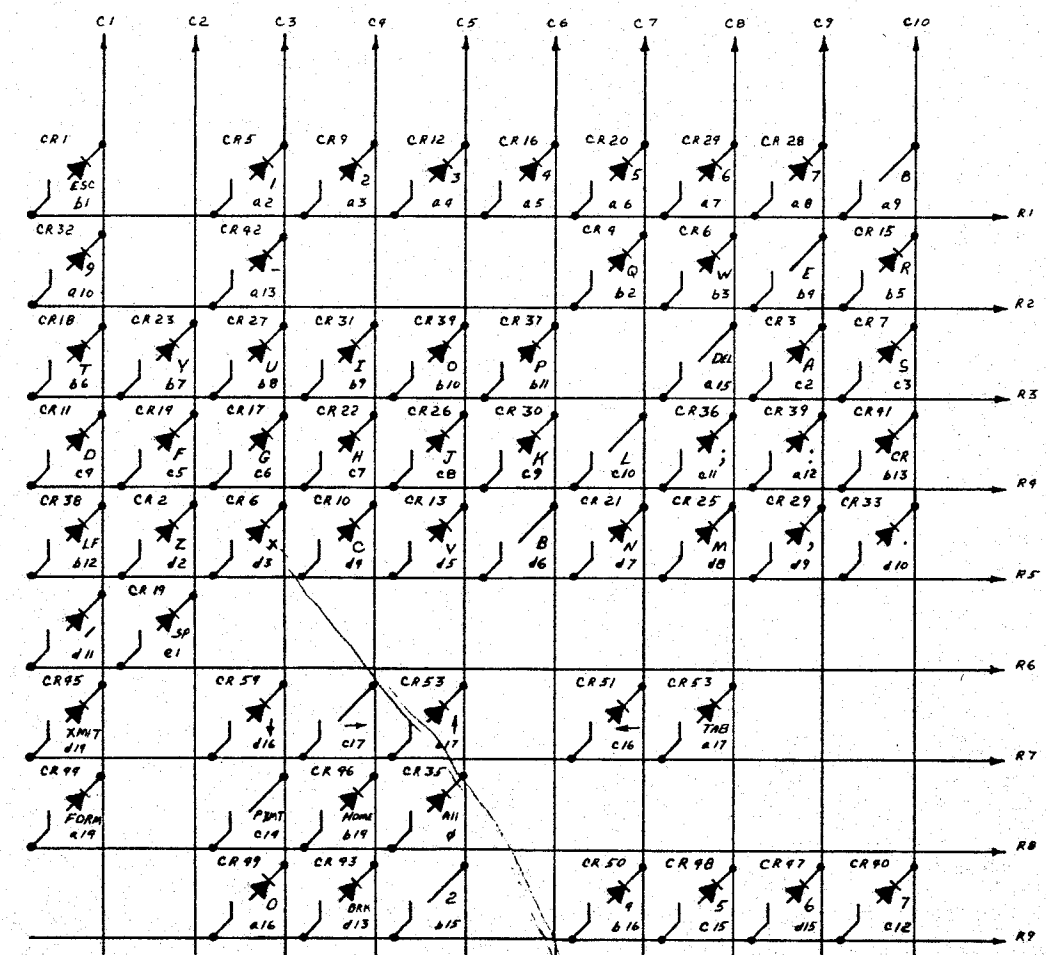
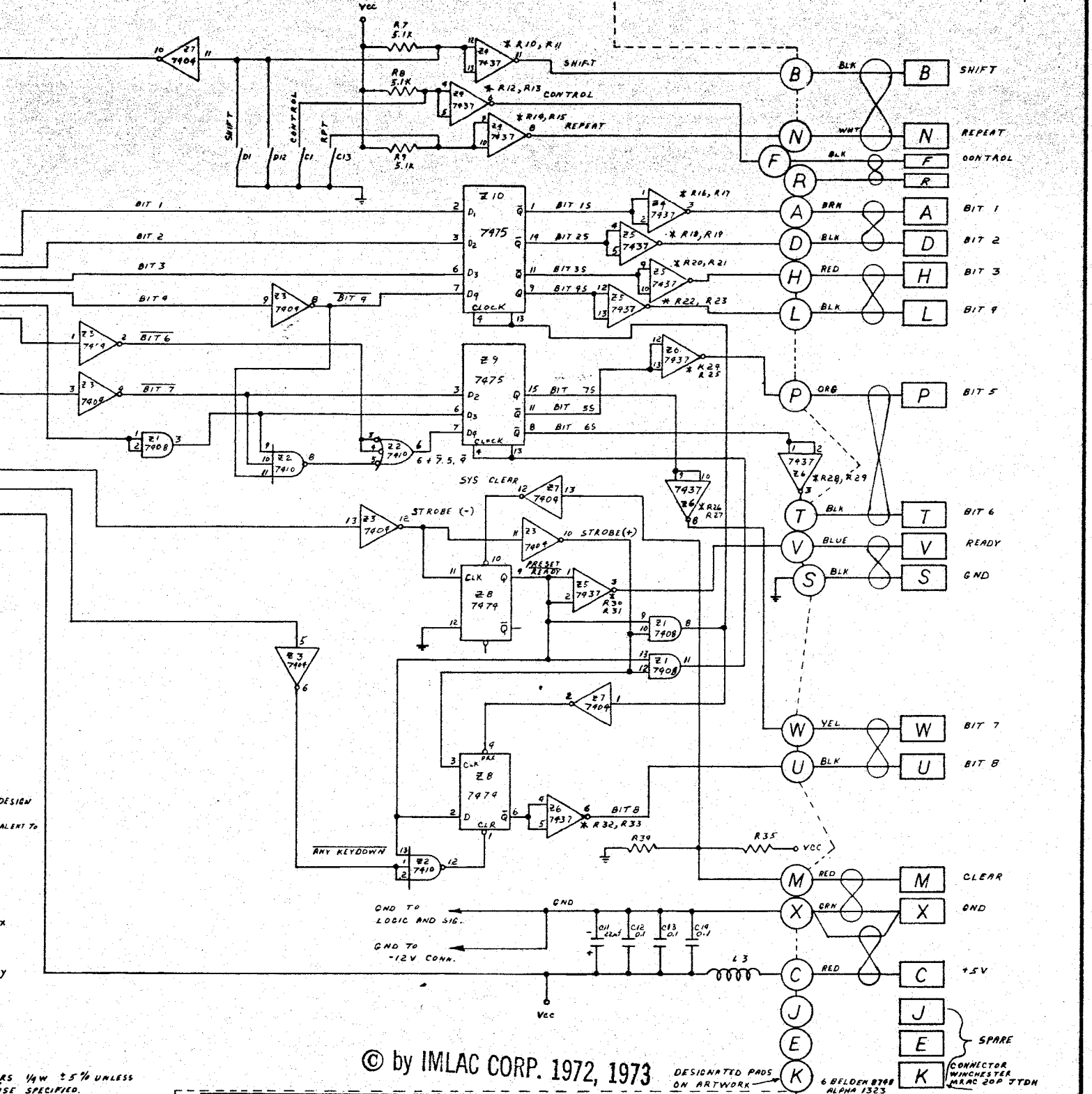
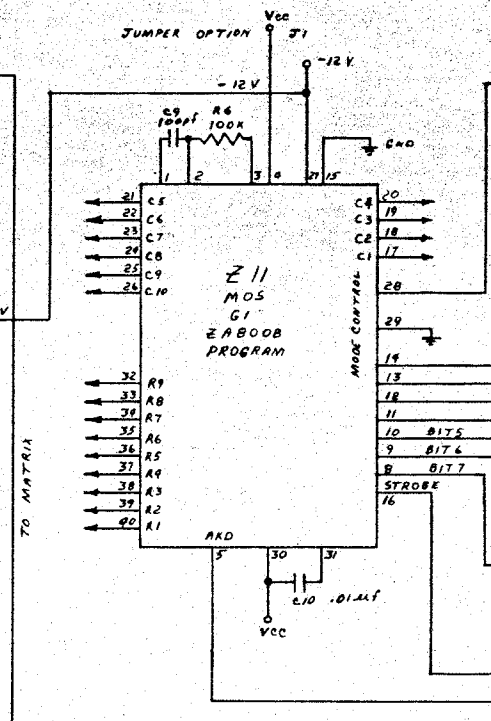
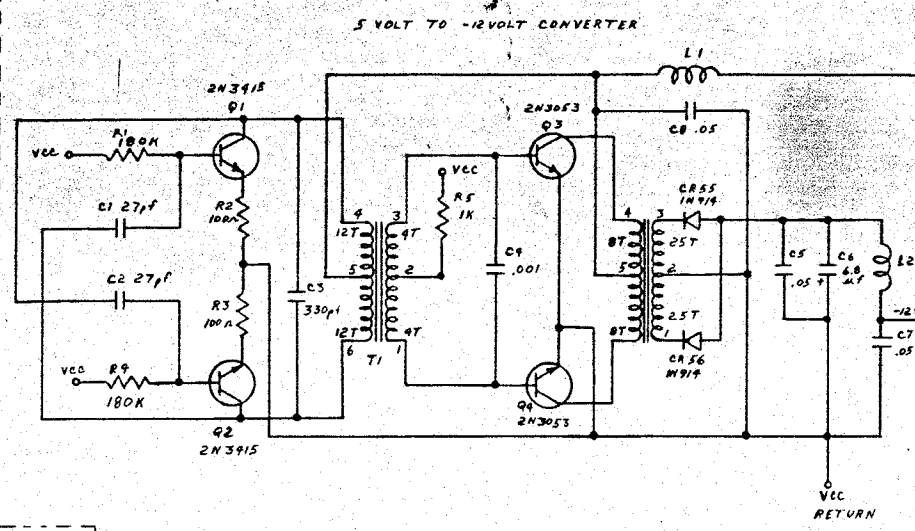
P1 WINCHESTER MRA 20P-JTCH

CHERRY ELECTRICAL DWD. NO. JMLAC KEYBOARD 880-36AA 091-0637 120-0063

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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ANGLES DECIMALS .X ± .X ± .XXX ±	DRAFTER <i>Ralph Murphy</i>	DATE 9 JUL 73	IMLAC CORPORATION 150 A STREET NEW ENGLAND INDUSTRIAL CENTER NEEDHAM, MASSACHUSETTS 02194
	CHECKED ENGINEER ENGINEERING APPROVAL	CONTRACT NUMBER PROJECT NUMBER	
FINISH APPLICATION	NEXT ASSY FINAL ASSY	PREFIX CODE IDENT NO L D	SIZE DRAWING NUMBER 1-209
SCALE	SHEET 01	REV	REV

REV. NO.	DESCRIPTION	DATE	APPROVED



NOTE:
ALL RESISTORS 1/4W ±5% UNLESS OTHERWISE SPECIFIED.
ALL DIODES IN 1N41 UNLESS OTHERWISE SPECIFIED.
ALL CAPACITOR VALUES ARE IN µF UNLESS OTHERWISE SPECIFIED.

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DATE	DESIGNED BY	CHECKED	ENGINEER	ENGINEERING APPROVAL

FINISH	CONTRACT NUMBER	PROJECT NUMBER	SCALE	SHEET	OF

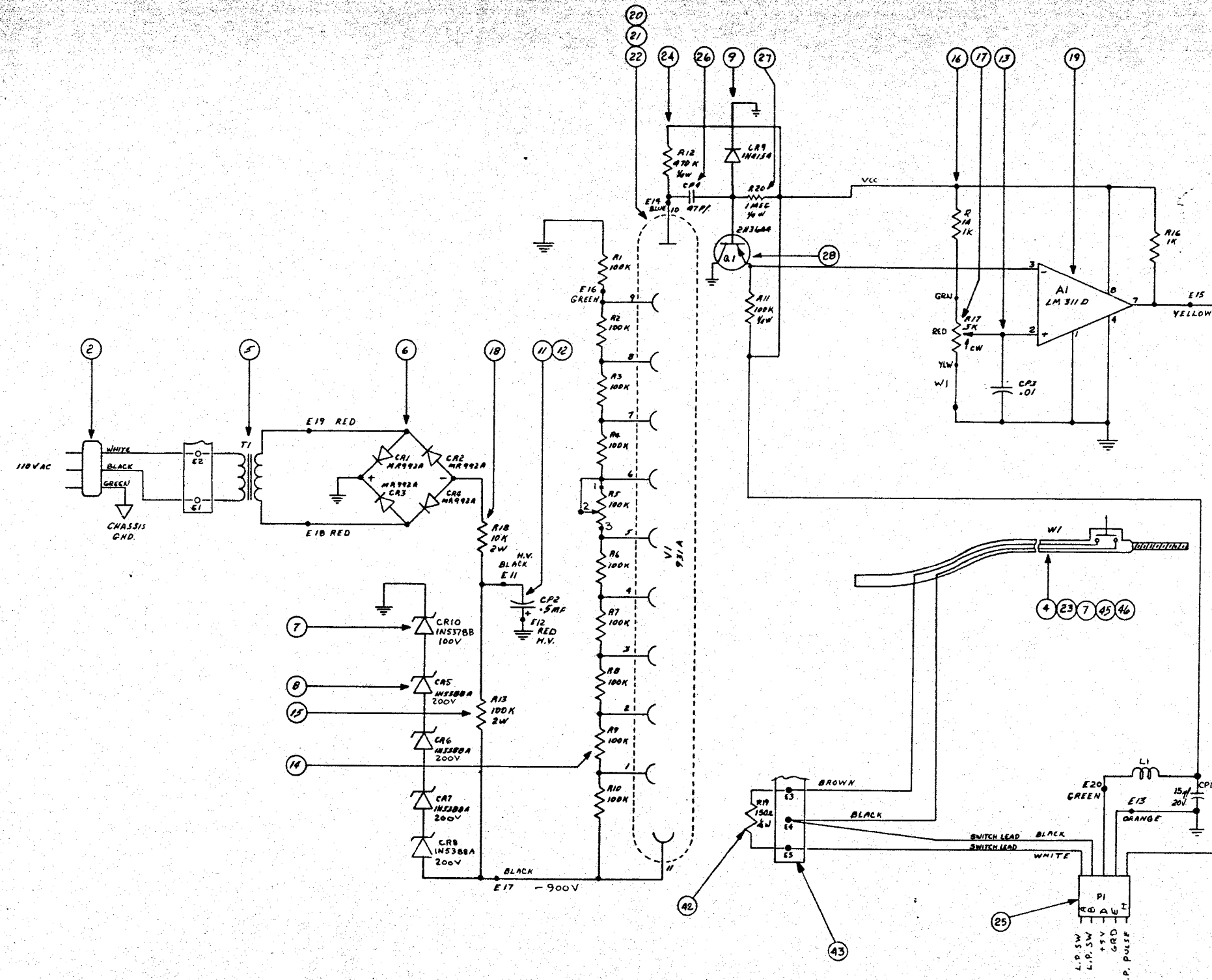
PREF. CODE	IDENT NO.	SIZE	DRAWING NUMBER	REV.
L	D	1-210		

IMLAC CORPORATION
50 A STREET
NEW ENGLAND INDUSTRIAL CENTER
NEEDHAM, MASSACHUSETTS 02464

DATA ELECTRONICS
KEYBOARD

REV.	ECN	DATE	DFTM	APPD.	REV.	ECN	DATE	DFTM	APPD.
0	1867	28 JUN 73	R.T.M.	J.J.T.	1	271	11-5-70	J.V.	J.J.P.
1	1867	23 JUN 73	J.J.T.		2	271	11-5-70	J.V.	J.J.P.
					3	349	12-16-70	J.V.	J.J.P.
					4	358	1-6-71	J.V.	J.J.P.
					5	409	28 APR 71	J.V.	J.J.P.
					6	411	1 MAY 71	J.V.	J.J.P.
					7	419	17 MAY 71	J.V.	J.J.P.
					8	431	6-4-71	J.V.	J.J.P.
					9	411	11-5-71	J.V.	J.J.P.
					10	531	3 SEP 71	J.V.	J.J.P.
					11	539	22 Dec 71	J.V.	J.J.P.
					12	558	30 Jun 72	J.V.	J.J.P.
					13	967	8 Jun 72	J.V.	J.J.P.
					14	1197	19 Oct 72	J.V.	J.J.P.
					15	1853	6-27-73	J.V.	J.J.P.

NOTE: 1. ADJUST R17 TO MAKE A1-2 0.2V MORE NEGATIVE THAN A1-3.
 2. ADJUST R5 FOR DESIRED SENSITIVITY.
 3. @ INDICATES MOUNTING HOLE
 4. BARE LEAD MUST BE CROSSED UNDER OF



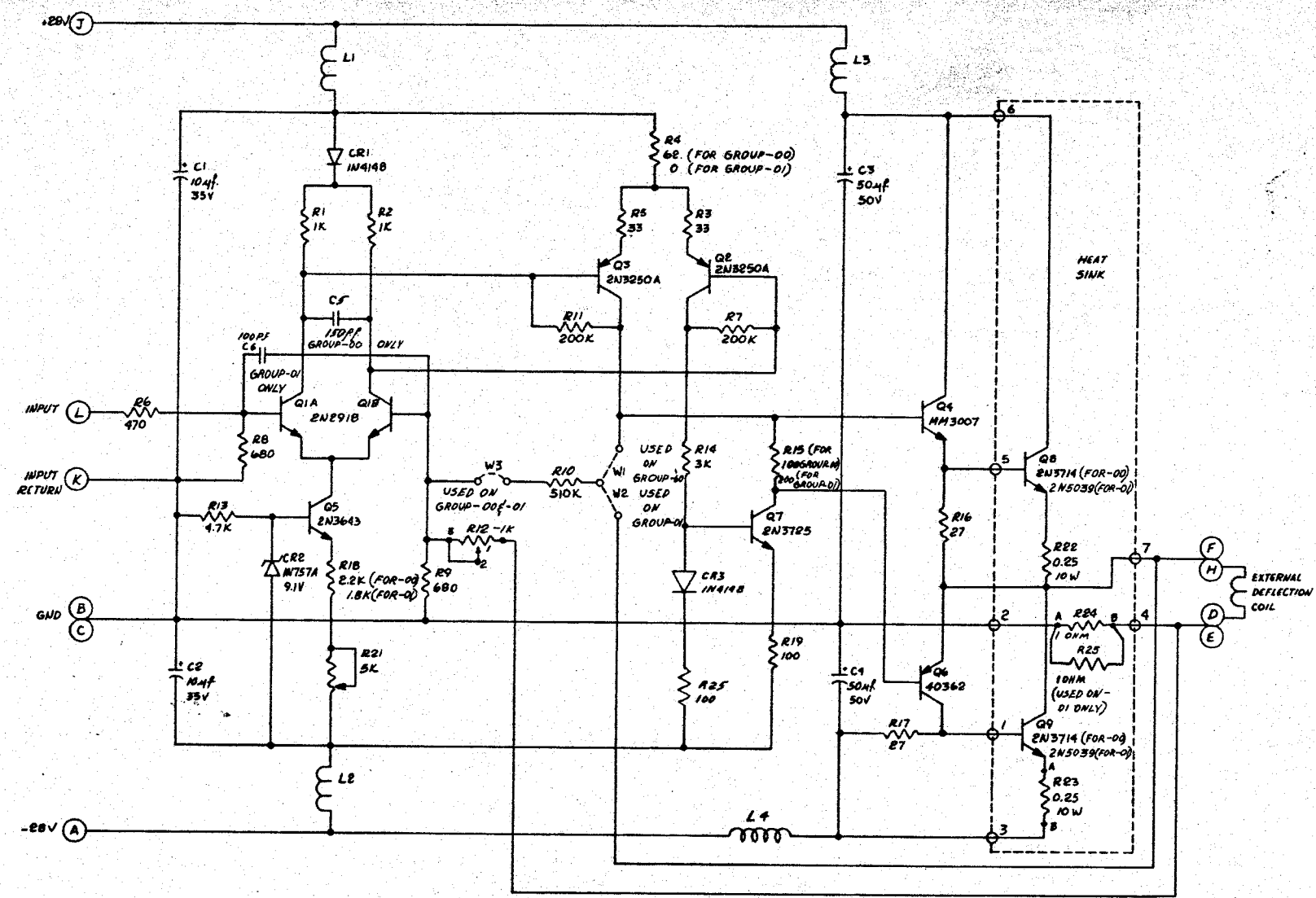
REV.	ECN	DATE	DFTM	APPD.	REV.	ECN	DATE	DFTM	APPD.
1	1	1	48	CR10	07-12051	DIODE ZENER 100V, 5W			1N5378B
1	1	1	47	R5	04-12896	RESISTOR, VARIABLE, 100K PANEL MOUNT	BOURNS	305L-1-100M	
1	1	1	46		16-12088	LENS HOOD ASSY	POLAR KENNER	LH 500	
1	-	-	45		15-12552	NON-COHERENT LIGHT PEN ASSY	BAUSCH & LOMB	329970161	
1	1	-	44	-	16-12268	MOUNTING PANEL (INT)			
2	1	1	43	-	-	5 PIN TERMINAL STRIP	JONES		
1	1	1	42	R19	04-11028	RESISTOR, 150R, 1/4W			
1	1	1	41	W1	-	JUMPER WIRE #22 TEFLON			
2	2	2	40	-	-	WIRE, BLACK, STRANDED, 4 GA. TYPE 66			
2	2	2	39	-	-	1/2" STRAIN RELIEF			
5	5	5	38	-	-	#22 STRANDED WIRE TRO. W/ FLEX-TUB.			
2	2	2	37	-	-	1" STANDOFF 6-32 TND 2 ENDS			
4	4	4	36	-	-	SCREW, 6-32 x 1/2 W/ WASHER			
4	4	4	35	-	-	WOODSCREW			
			34	-	-	SCREW 4-40 x 1/2 W/ WASHER			
3	2	2	33	-	-	SCREW, 8-32 x 1/2 W/ WASH. & NUT			
4	4	4	32	-	-	SCREW, FLATHEAD, 6-32 x 1/2 W/ WASH. & NUT			
1	1	1	31	-	16-12269	MOUNTING PANEL (EXTERNAL)			
1	1	1	30	-	13-12254	INSTRUMENT CASE	IMLAC		
1	1	1	29	-	13-12255	INST. CASE COVER	IMLAC		
1	1	-	28	Q1	08-11667	TRANSISTOR			2N3644
1	1	-	27	R20	04-12121	RESISTOR 1 MEG. 1/2 WATT, 5%	A.B.		RC07
1	1	-	26	CP4	05-11239	CAPACITOR, 47PF.			
1	1	-	25	P1	03-11996	CONNECTOR, PLUG, 5 PINS	AMPHENOL		126-217
1	1	-	24	R12	04-12122	RES. FIXED COMP. 470K, 1/4W, ±5%	A.B.		RC07
1	1	1	23	XJ1	16-12045	MOUNTING HUB	IMLAC		
1	1	1	22	XV1	SEC ITEM #21	MOUNTING BRACKET FOR TUBE SOCKET			
1	1	1	21	XV1	03-11993	TUBE SOCKET, 11PINS	AMPHENOL		77-MIP-117M
1	1	1	20	V1	13-11990	PHOTOMULTIPLIER TUBE	RCA		931-A
1	1	1	19	A1	09-12059	VOLTAGE COMPARATOR	INT. SEM CORP.		LM311D
1	1	1	18	R18	04-12070	RES. FIX. COMP. 10 M, 2 W, 5%	A.B.		RC
1	1	1	17	R17	04-11703	RES. VARIABLE, 5K,	BOURNS		3009P-1-502
2	2	2	16	R16/16	04-11049	RES. FIX. COMP. 1K, 1/4W, ±5%	A.B.		RC07
1	1	1	15	R13	04-12071	RES. FIX. COMP. 100K, 2 W, 5%	A.B.		RC
10	10	10	14	R1-R4 R6-R11	04-11095	RES. FIX. COMP. 100K, 1/4W, ±5%	A.B.		RC07
1	1	1	13	CP3	05-11595	CAPACITOR, 0.01MFD, 25V.	SPRAGUE		NY-480
2	2	2	12	XC2	13-12053	CAPACITOR HOLDER	SPRAGUE		CP02-PAS
1	1	1	11	CP2	05-12008	CAPACITOR, 5MFD, 1500V	SPRAGUE		SPRAGUE 1094K1
1	1	1	10	CP1	05-11263	CAPACITOR, 15MFD, 20VDC ±20%	SPRAGUE		CS10BE 16A R
1	1	1	9	CA9	07-11843	DIODE	MOTOROLA		1N4150
4	4	4	8	CR5-B	07-12052	DIODE, ZENER, 200V, 5W	MOTOROLA		1N5388 A
-	-	-	7	-	-	BUTTON CAP RED	GREYHILL		30802-S
4	4	4	6	CR1-A	07-12050	RECTIFIER, P.I.V. 2000	MOTOROLA		MA 992-A
1	1	1	5	T1	13-12155	TRANSFORMER, LIGHT PEN	TITAN		TT 9436
-	-	-	4	W1	15-12003	FIBRE OPTICS CABLE, 50L x 1/8" D	DALAN JEWANE		
1	1	1	3	L1	06-11306	CHOKE 2 1/2 TURNS	FERROCUBE		VK-200-10/30
1	1	1	2	-	13-11675	LINE CORD, 8 FT, GROUNDED	BELDEN		
1	1	1	1	-	01-12076	PRINTED CIRCUIT BOARD	IMLAC		

DWG. NO. 2261 LIGHT PEN

APPROVAL	BY DATE	TITLE
LAYOUT	J.V. 10-23-70	IIMLAC CORPORATION
DRAWN	J.V. 10-23-70	
CHECKED		LIGHT PEN
APPROVED		
ISSUE		PREFIX SIZE DRAWING NUMBER
COPY ED		S D 2261
MATERIAL	PROJECT	Scale
00 AS103 DS000		Sheet 1 of 3
AS052 DS000		
NEXT ASSY	FINAL ASSY	

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REV	ECN	DATE	DTM	APPD
A		1-6-71		RPE
B		04-8-71		UJF
C		1-7-71		UJF
D	675	5-18-72	R.T.M.	JIS
E	597	2-24-72	J.V.	JIT
F	134	8-11-72	J.V.	JIT
G	967	11-11-72	J.V.	JIT
H	1363	11-11-72	R.T.M.	JIS
I	107	11-18-73	UJF	JIT
M	1000	7-9-78	R.E.A.	JIS



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

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BY DATE			TITLE	
LAYOUT	UJF	11/18/70	DEFLECTION AMPLIFIER	
DRAWN	UJF	11/18/70		
CHECKED				
APPROVED				
ISSUE				
COPIED				
MATERIAL	PROJECT		PREFIX SIZE	DRAWING NUMBER
			S D	2273
			Scale	Sheet 1 of 2