

This document has been downloaded from:



The largest resource for amusement machines
documentation on the world wide web!



FLIPPERSPILL.COM

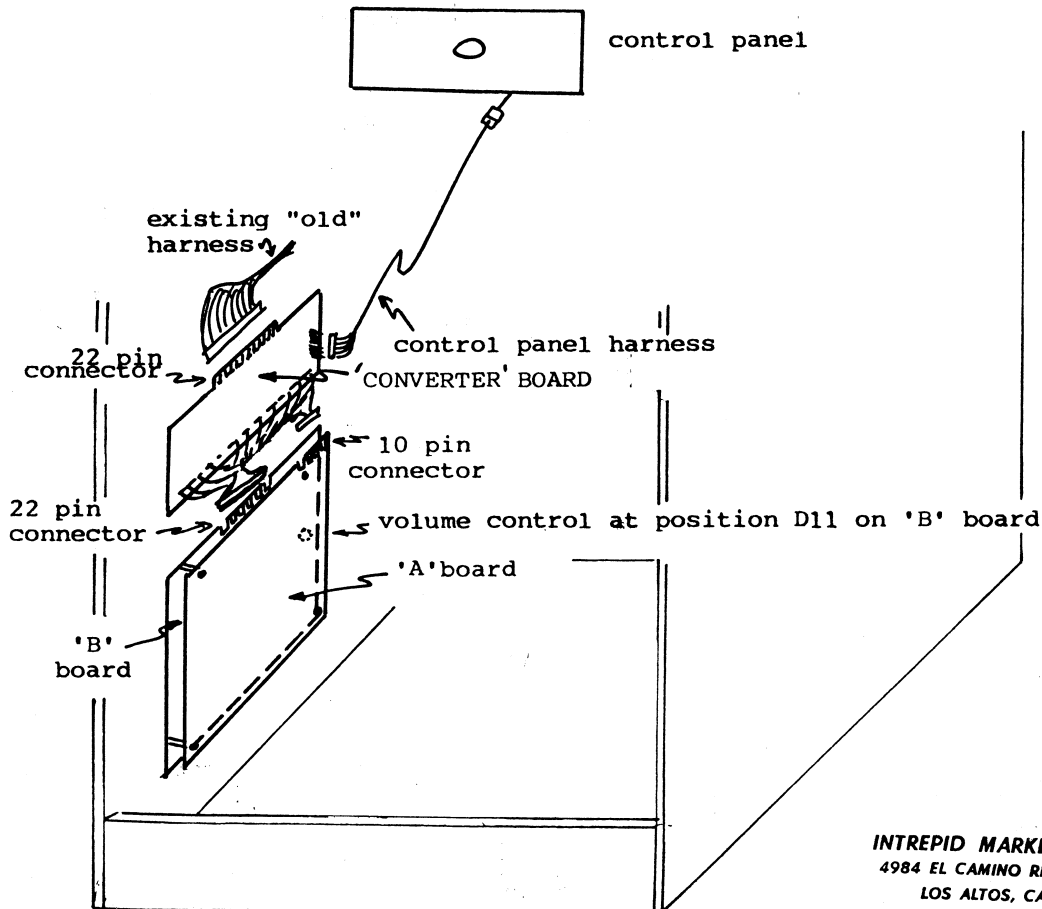
BEEZER

INSTALLING CIRCUIT BOARDS

1. Remove old circuit boards, save all mounting brackets.
2. Relocate upper brackets to fit larger boards.
3. Secure 'A' and 'B' boards to side of game.
4. Connect 'CONVERTER' board to 'A/B' boards as shown in diagram below.
5. Connect old main harness to 'CONVERTER' board as old set of boards you removed.
6. Assemble control panel and connect to 'CONVERTER' board at connector shown in diagram.

NOTE !!

The potentiometer on the 'CONVERTER' board is VOLTAGE ADJUSTMENT. PRE-SET AT FACTORY, TECHNICIAN ADJUST ONLY!!!
The potentiometer on 'B' board at D11 is VOLUME control



INTREPID MARKETING, INC.
4984 EL CAMINO REAL, STE. 217
LOS ALTOS, CA 94022

BEEZER

B. BOARD					A. BOARD					
SOLDERING SIDE		COMPONENT SIDE			SOLDERING SIDE		COMPONENT SIDE			
+5V	(B1)	22	Z	(A1)	+5V	GND	(1)	10	L	(1) GND
	(B2)	21	Y	(A2)		BLUE	(2)	9	K	(2)
+12V	(B3)	20	X	(A3)		GREEN	(3)	8	J	(3)
	(B4)	19	W	(A4)	GND	RED	(4)	7	H	(4)
	(B5)	18	V	(A5)			(5)	6	F	(5)
	(B6)	17	U	(A6)		SYNC	(6)	5	E	(6)
-5V	(B7)	16	T	(A7)	-5V		(7)	4	D	(7)
+12V	(B8)	15	S	(A8)	+12V	+12V	(8)	3	C	(8) +12V
SPEAKER (+)	(B9)	14	R	(A9)		-5V	(9)	2	B	(9) -5V
	(B10)	13	P	(A10)	SPEAKER (-)	+5V	(10)	1	A	(10) +5V
GND	(B11)	12	N	(A11)	GND					
	(B12)	11	M	(A12)	-5V					
	(B13)	10	L	(A13)						
PLAY 1 (DO TEST)	(B14)	9	K	(A14)						
PLAY 2 (SELECT TEST)	(B15)	8	J	(A15)						
COIN	(B16)	7	H	(A16)						
SLAM	(B17)	6	F	(A17)						
Y ₃	(B18)	5	E	(A18)	X ₃					
Y ₂	(B19)	4	D	(A19)	X ₂					
Y ₁	(B20)	3	C	(A20)	X ₁					
Y ₀	(B21)	2	B	(A21)	X ₀					
GND	(B22)	1	A	(A22)	GND					

NITE:

- (A4) is the audio enable ground, should connect to (A11) or (A22).
- Board A., board B. & mini track ball board's ground should connect together.
- Mini track ball board's X₀-X₃, Y₀-Y₃ connect to board B.'s X₀-X₃, Y₀-Y₃.
- Mini track ball board's X_A, X_B, Y_A, Y_B should connect to track ball, X_A, X_B are horizontal control, Y_A, Y_B are vertical control.
- The audio amplifier is bridge output. Do not connect speaker to ground.
- Audio level potentiometer is at position D11.

GALAXIAN (TO BEEZER)

GND	22	Z	GND
GND	21	Y	GND
	20	X	AC 12V
	19	W	AC 12V
AUDIO (+)	18	V	AUDIO (-)
SYNC	17	U	BLUE
GREEN	16	T	RED
GND	15	S	GND
	14	R	
	13	P	
	12	N	
	11	M	
	10	L	
SERVICE SW.	9	K	
	8	J	COIN SW.
JUMPER TOGETHER	7	H	COIN METER (-)
	6	F	
	5	E	COIN METER (+) (12V)
	4	D	AC 7V
	3	C	AC 7V
GND	2	B	GND
GND	1	A	GND

CONVERT BOARD TO CONTROL PANEL

1. GROUND (BLACK) TO MINI TRACK BALL BLACK WIRE.
2. X_A (GREEN) TO WICO TRACK BALL GREEN WIRE.
3. X_B (YELLOW) TO WICO TRACK BALL YELLOW WIRE.
4. Y_A (PURPLE) TO WICO TRACK BALL PURPLE WIRE.
5. Y_B (BLUE) TO WICO TRACK BALL BLUE WIRE.
6. GROUND (BLACK) TO 1P, 2P SWITCH COMMON.
7. 1 PLAY (WHITE) TO 1P SWITCH.
8. 2 PLAY (BROWN) TO 2P SWITCH.
9. +5V OUT (RED) TO WICO TRACK BALL RED WIRE.
10. +5V OUT (RED) TO WICO TRACK BALL RED WIRE.
11. SPARE (GRAY) NOT USED.
12. SPARE (ORANGE) NOT USED.

TRACKBALL INTERFACE & COUNTER DRIVER.

	<u>S</u>	<u>L</u>	<u>D</u>	<u>E</u>	<u>R</u>	<u>S</u>	<u>I</u>	<u>D</u>	<u>E</u>	<u>A</u>	<u>C</u>	<u>O</u>	<u>M</u>	<u>P</u>	<u>O</u>	<u>N</u>	<u>E</u>	
	I	D	E	R	S	I	D	E	R	A	C	O	M	P	O	N	E	
+ 5V	10	L	+	5V														
GND	9	K	G	N														
COIN METER	8	J	C	O	I	N	O	U	T	(	C	O	N	N	E	C	T	T
(CONNECT TO B BOARD B18)	Y ₃	7	H	X ₃	(	C	O	N	N	E	C	T	T	O	B	B	O	A
(CONNECT TO B BOARD B19)	Y ₂	6	F	X ₂	(	C	O	N	N	E	C	T	T	O	B	B	O	A
(CONNECT TO B BOARD B20)	Y ₁	5	E	X ₁	(	C	O	N	N	E	C	T	T	O	B	B	O	A
(CONNECT TO B BOARD B21)	Y ₀	4	D	X ₀	(	C	O	N	N	E	C	T	T	O	B	B	O	A
SERVICE	3	C	C	O	I	N	I	N										
DOWN (FROM TRACKBALL)	Y _B	2	B	X _B	(	F	R	O	M	T	R	A	C	K	B	A	L	L
UP (FROM TRACKBALL)	Y _A	1	A	X _A	(	F	R	O	M	T	R	A	C	K	B	A	L	L

* Voltage control potentiometer is preset do not adjust!

(BEEZER)

ADJUSTMENT SWITCHES

A SET OF DIP SWITCHES ARE LOCATED ON THE GAME LOGIC BOARD TO ADJUST FOR COINS.

* NOTE: MAKE SURE POWER IS OFF BEFORE MAKING THESE ADJUSTMENTS.

SWITCH SETTING:

SWITCH B:

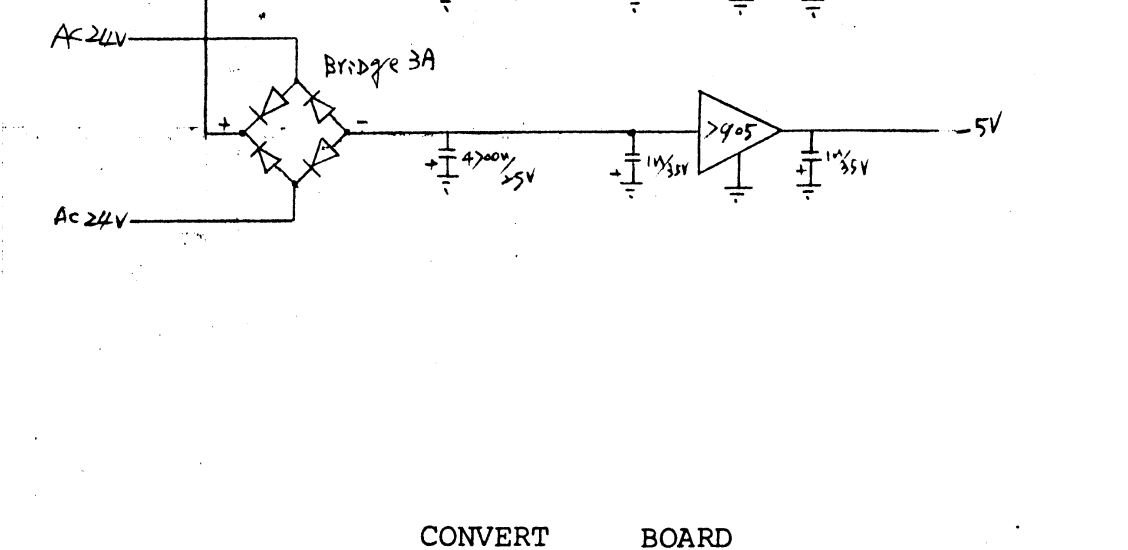
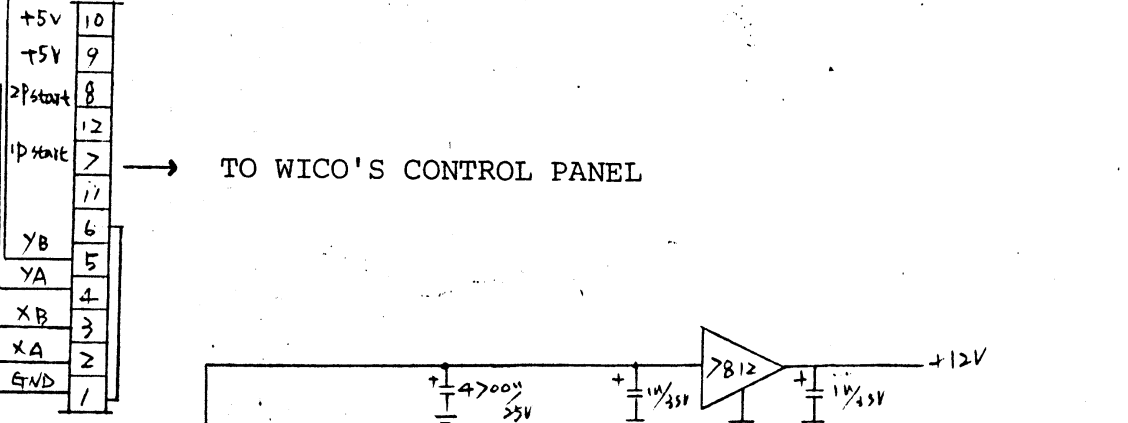
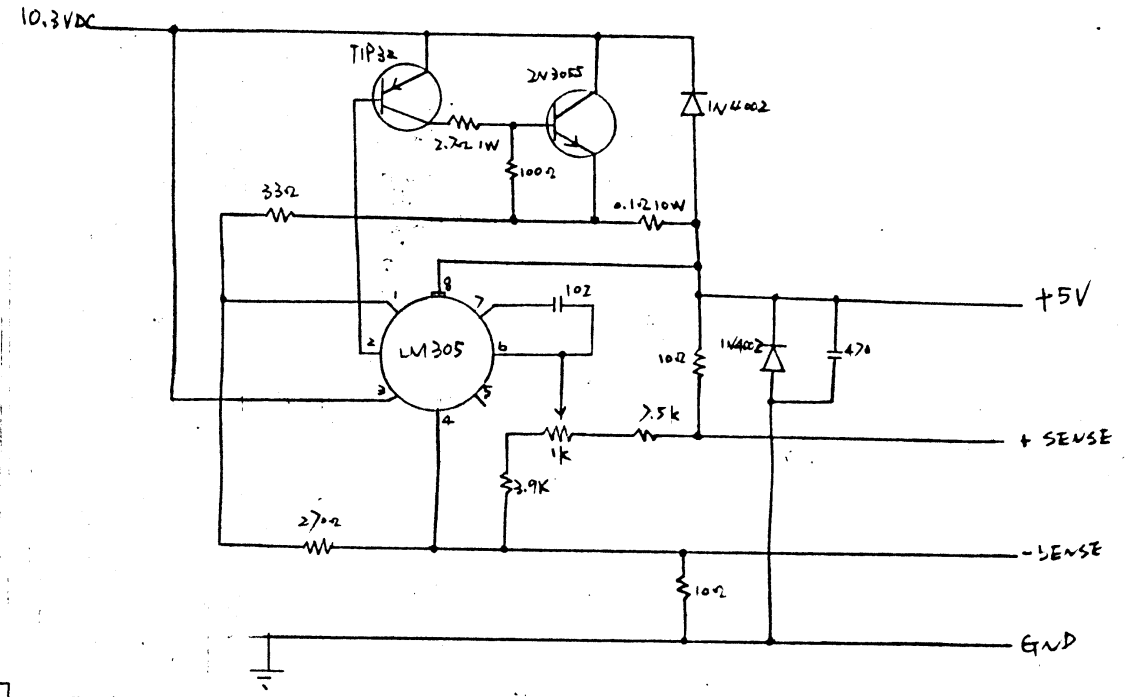
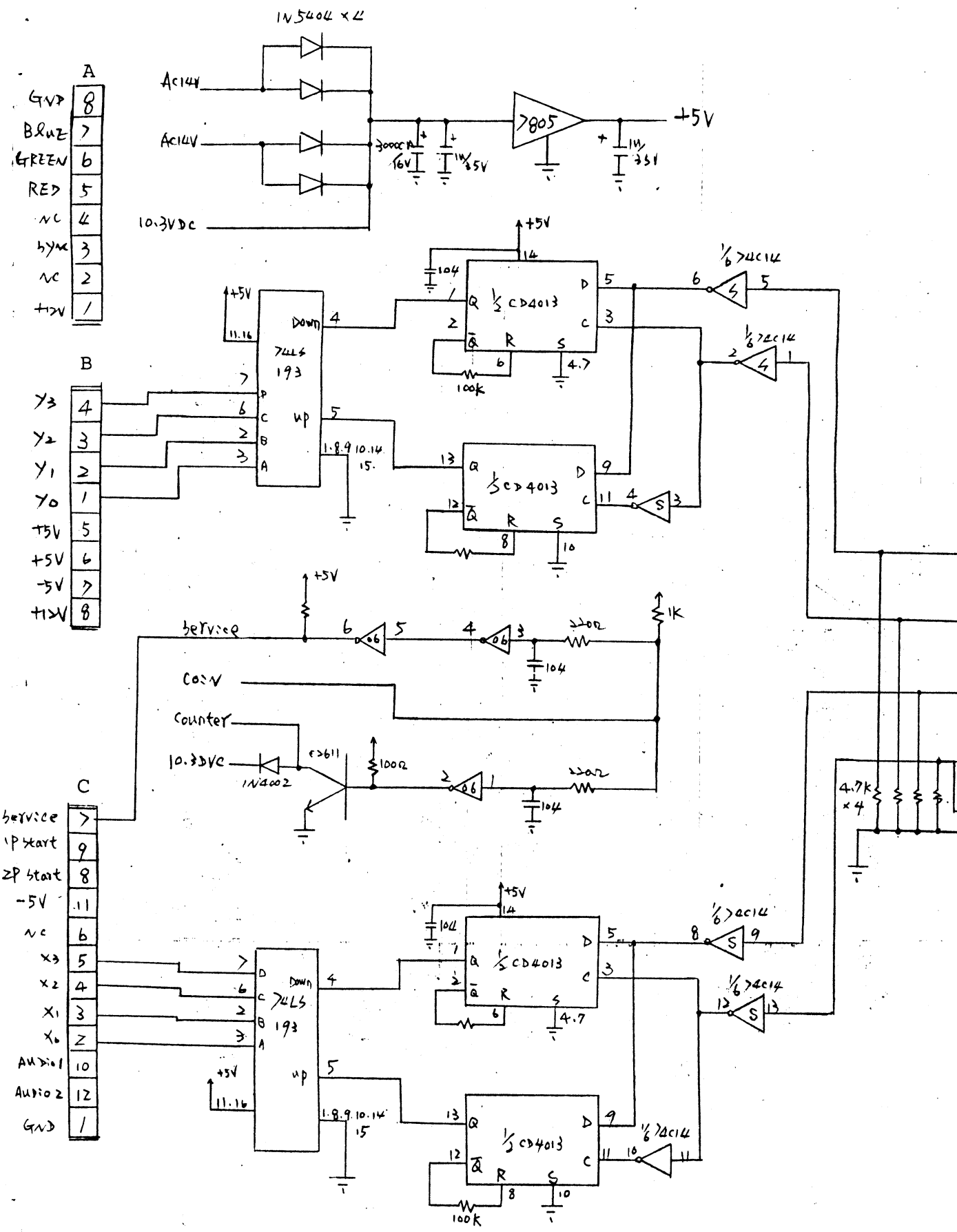
	1	2	3	4	5	6	7	8
1 COIN 1 CREDIT	OFF	OFF						
2 COIN 1 CREDIT	ON	OFF						
FREE PLAY	ON	ON						
3 BEEZER START			OFF					
4 BEEZER START			ON					
ATTRACT MODE SOUND ON				OFF				
ATTRACT MODE SOUND OFF				ON				
NO BONUS					OFF	OFF		
BONUS AT 90,000 POINTS					ON	ON		
BONUS AT 60,000 POINTS					OFF	ON		
BONUS AT 30,000 POINTS					ON	OFF		
EASY							OFF	OFF
MEDIUM EASY							ON	OFF
HARD							ON	ON
MEDIUM HARD							OFF	ON

SWITCH A:

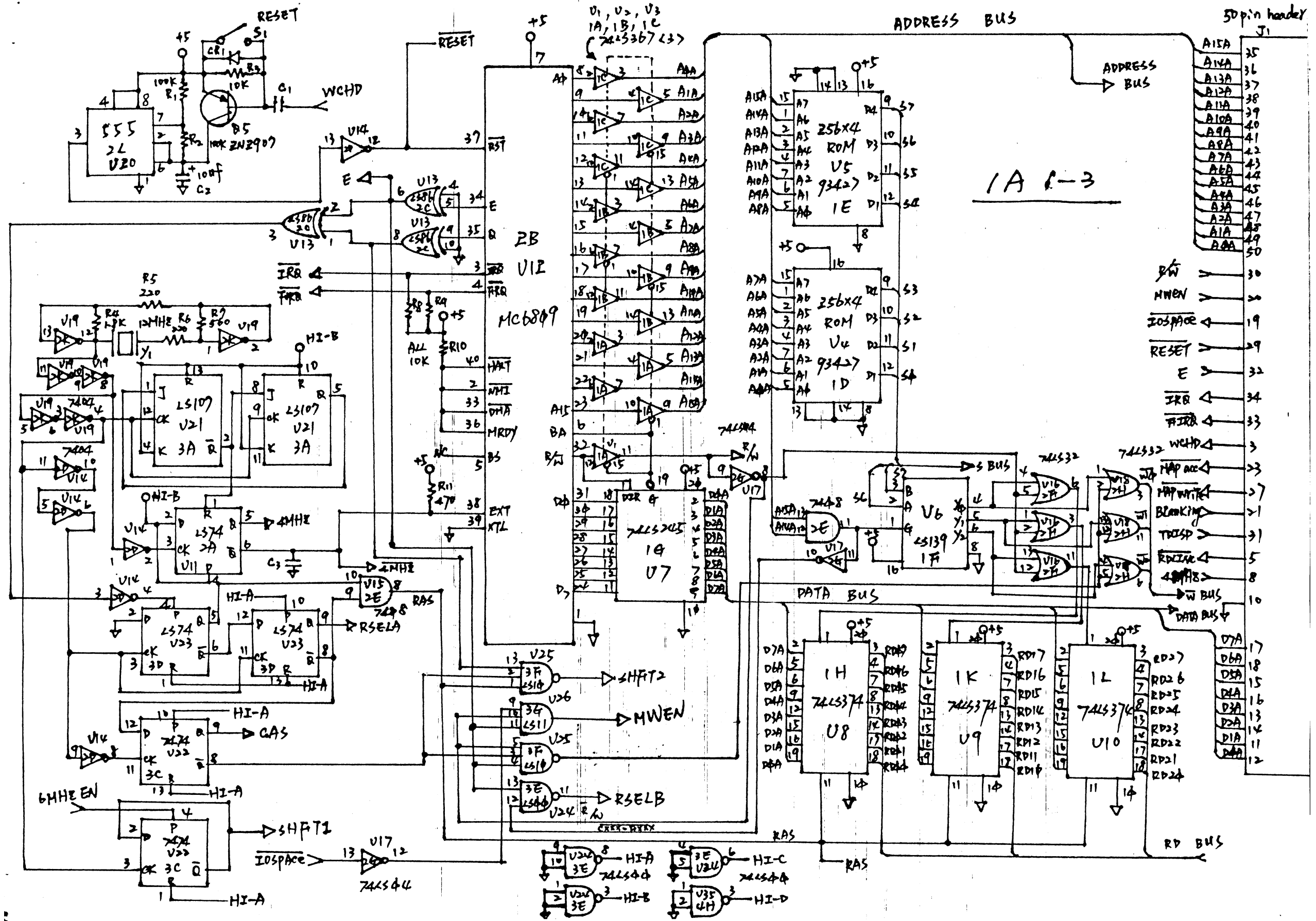
NOT USED

INSTRUCTION FOR TEST MODE:

- (1) To enter test mode:
 - (a) Power down
 - (b) Turn on while holding down LP / 2P start switches
- (2) Now in test mode. If not, repeat (1) (a) and (1) (b).
- (3) Test manuel on screen:
 - (a) cycle to required item using 1P button
 - (b) enter specific test using 2P button
 - (c) cycle next test using 1P button
 - (d) leave test by cycling to start or turn off/on.



CONVERT BOARD



50 pin header J1

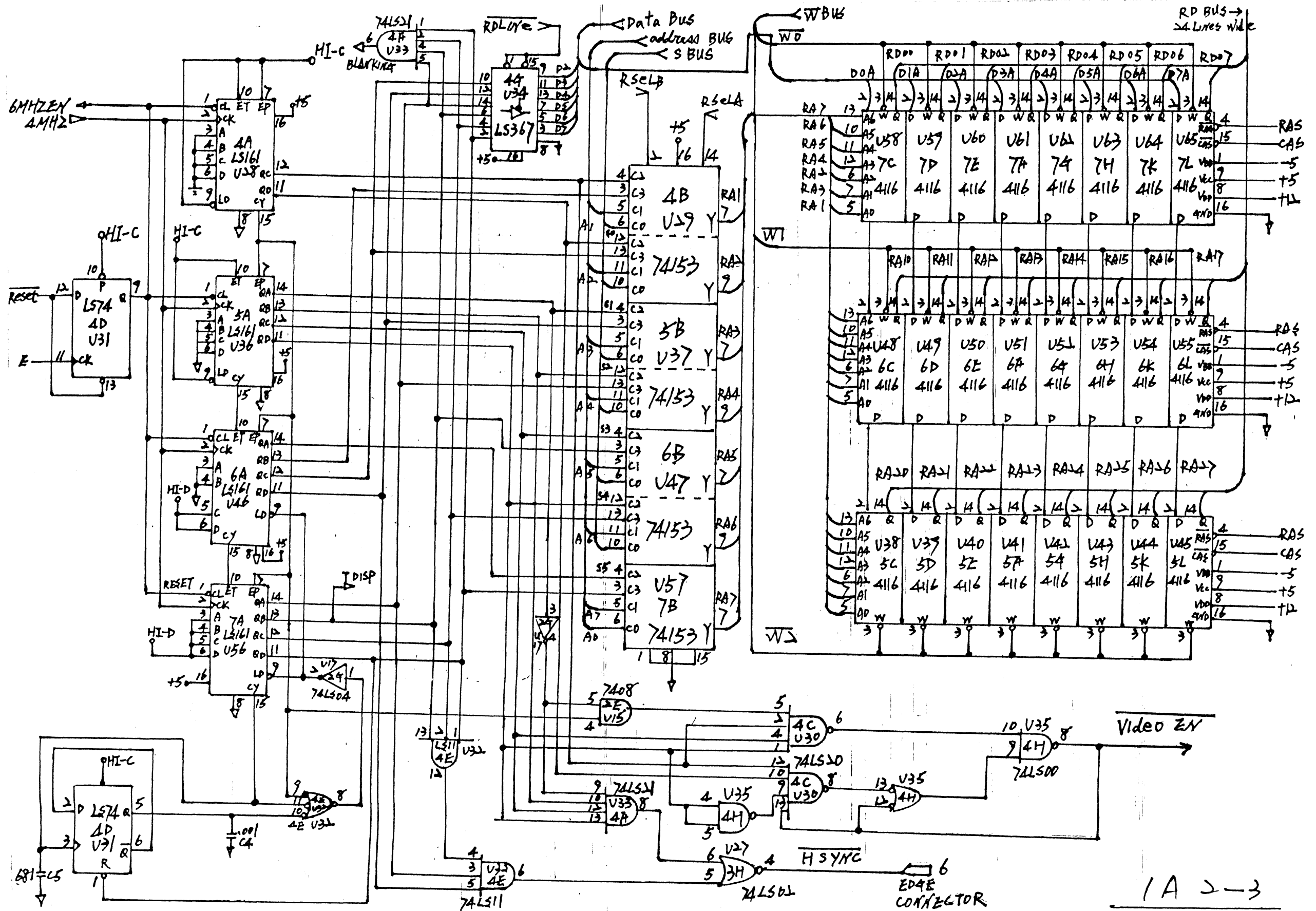
A15A	35
A14A	36
A13A	37
A12A	38
A11A	39
A10A	40
A9A	41
A8A	42
A7A	43
A6A	44
A5A	45
A4A	46
A3A	47
A2A	48
A1A	49
A0A	50

RW	30
MWEN	26
I/Ospace	19
RESET	29
E	32
IRB	34
FRB	33
WCHD	3
MAP acc	23
MAP write	27
BLANKING	21
TRESP	21
RDRIVE	5
4MHz	8
DW BUS	10
DATA BUS	10

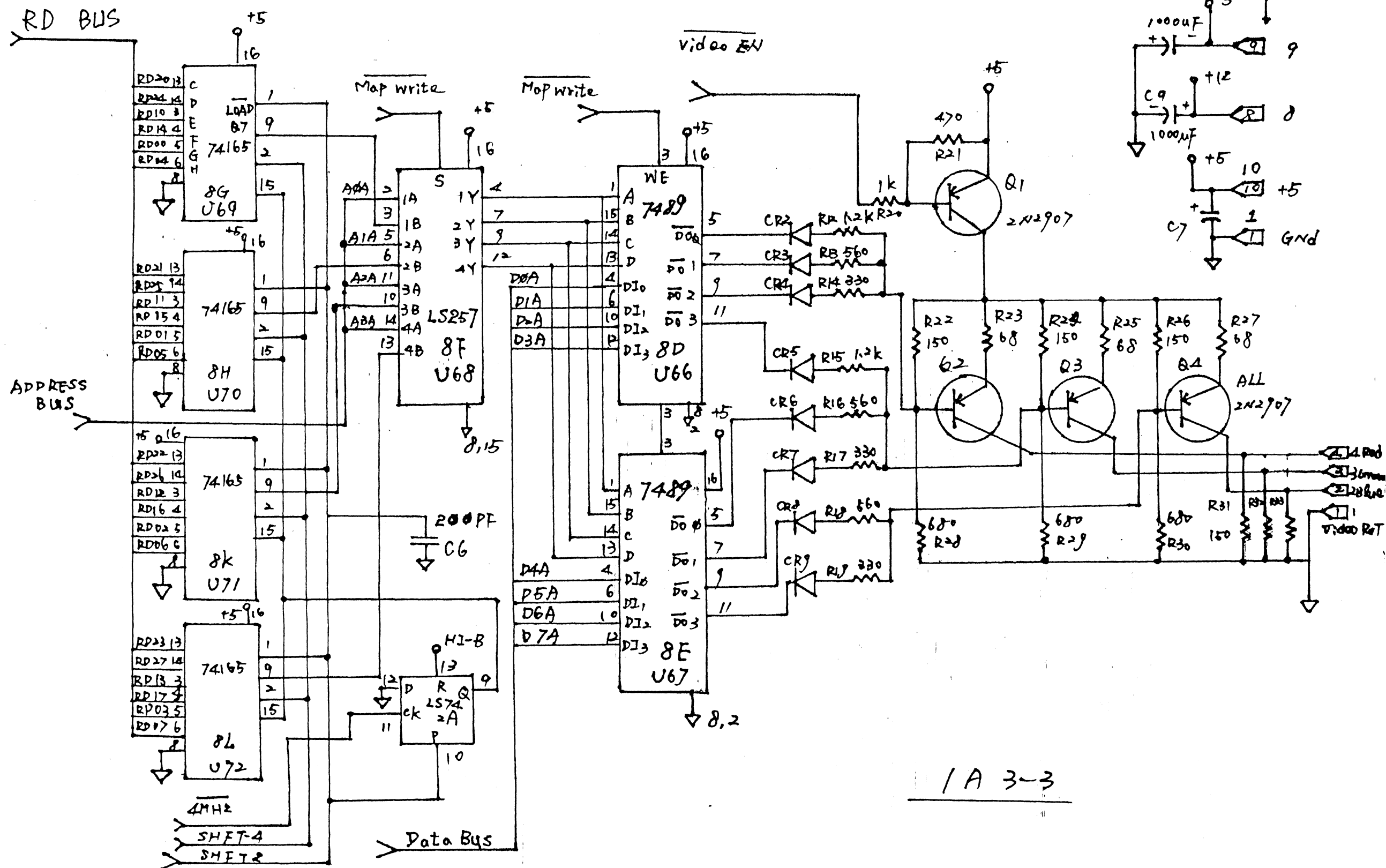
D7A	17
D6A	18
D5A	15
D4A	16
D3A	13
D2A	14
D1A	11
D0A	12

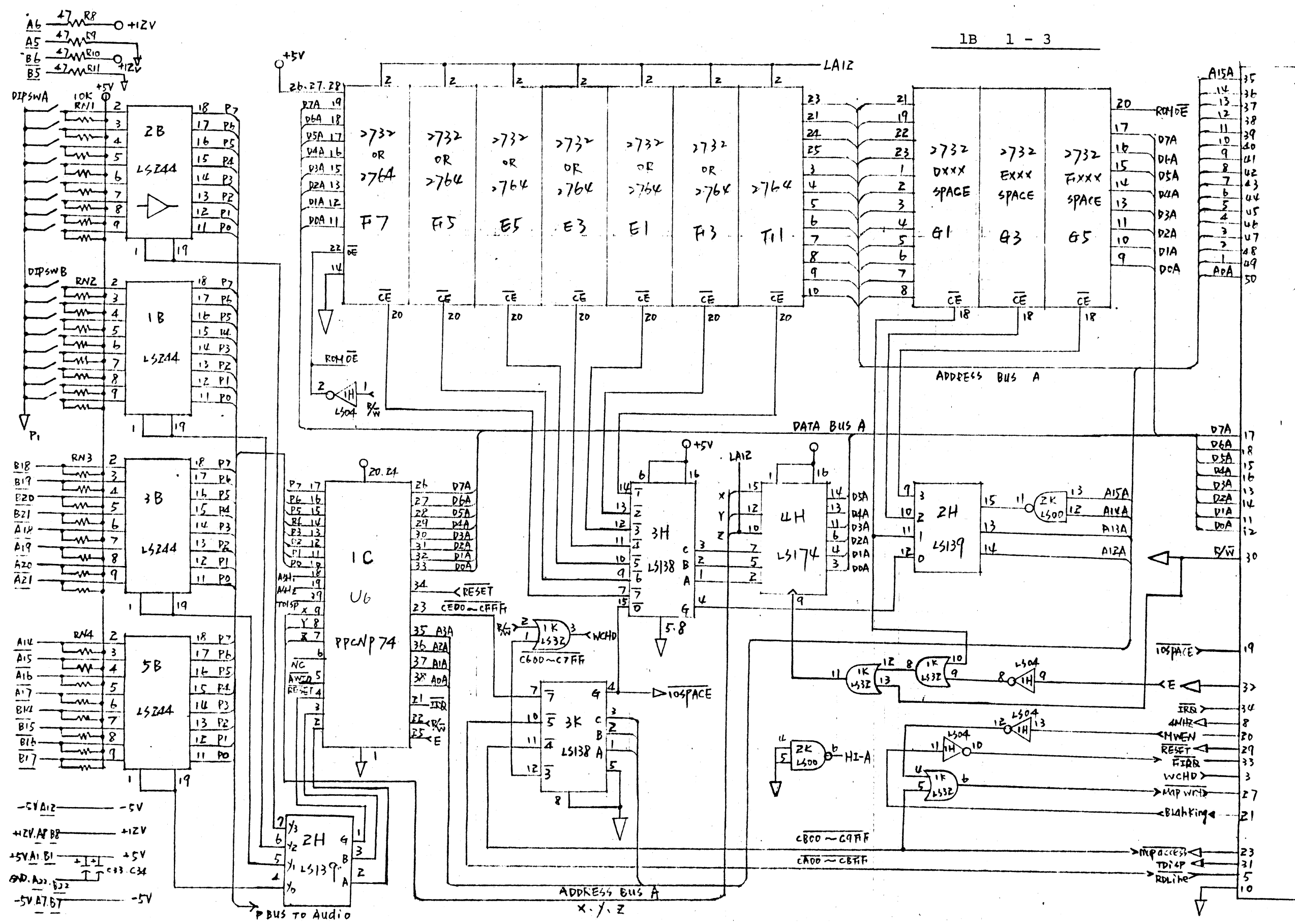
RD7	3
RD6	4
RD5	6
RD4	7
RD3	8
RD2	9
RD1	10
RD0	11
RD7	12
RD6	13
RD5	14
RD4	15
RD3	16
RD2	17
RD1	18
RD0	19

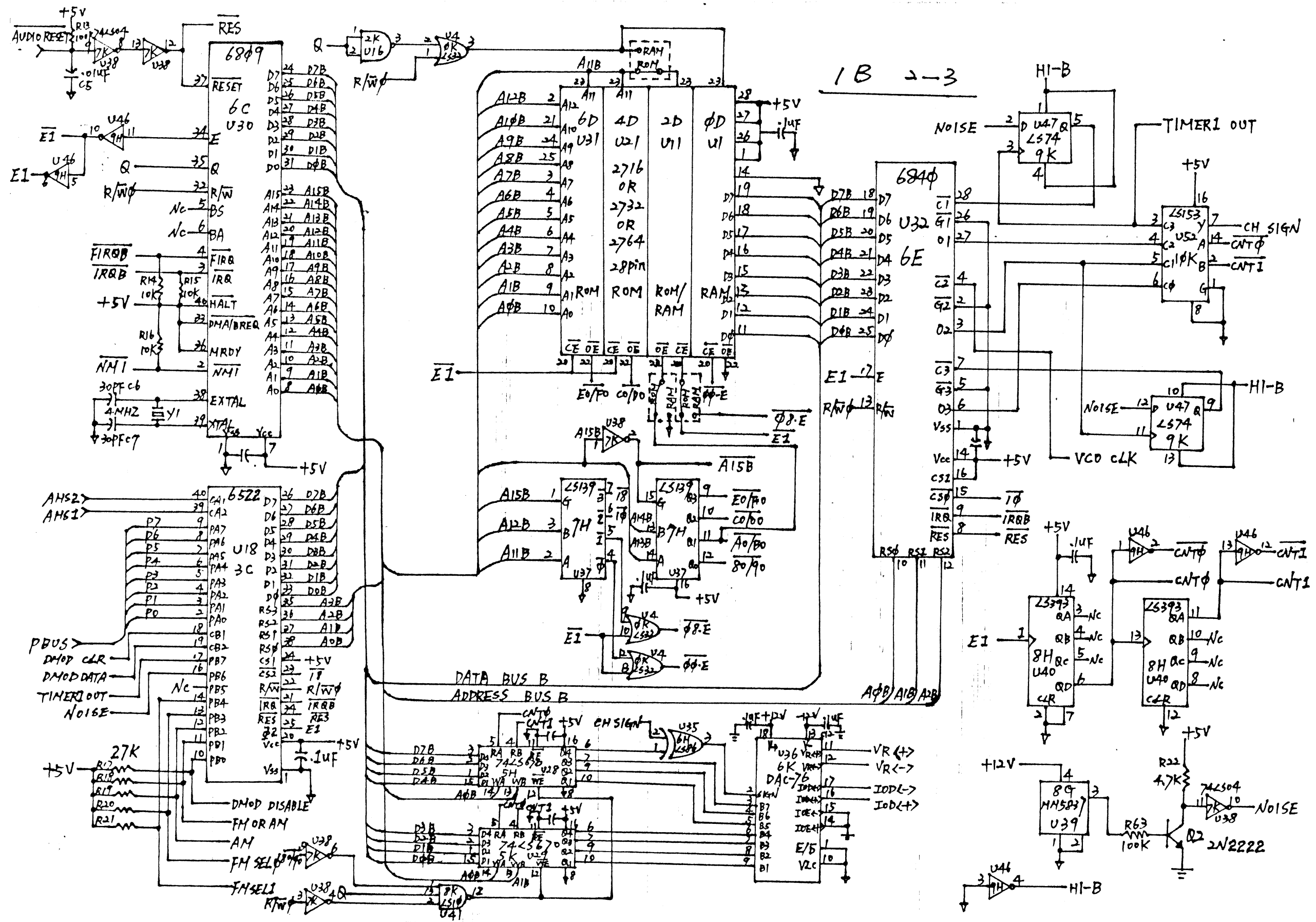
U20	3E	HI-A
U21	3E	HI-C
U22	3E	HI-B
U23	4H	HI-D

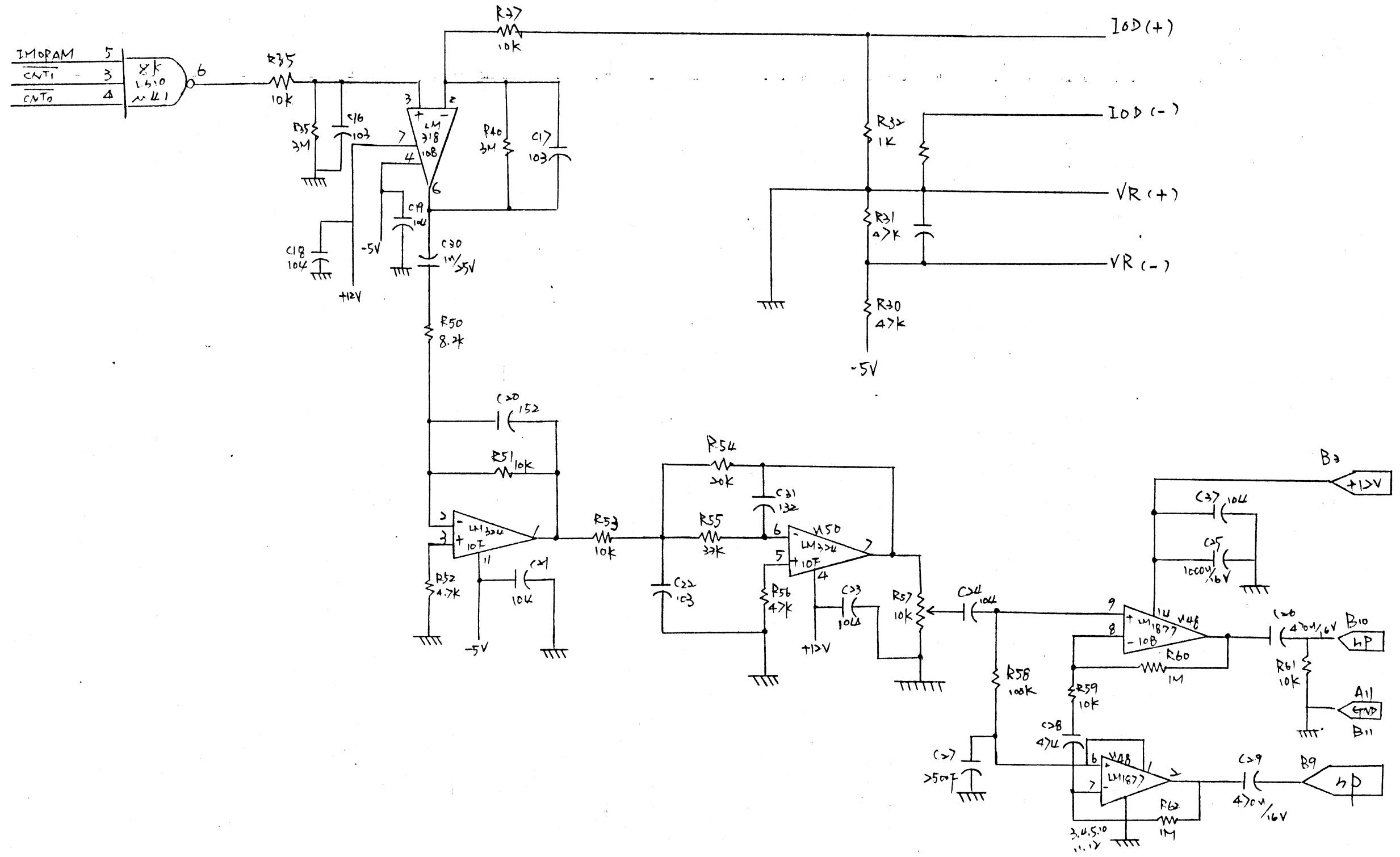


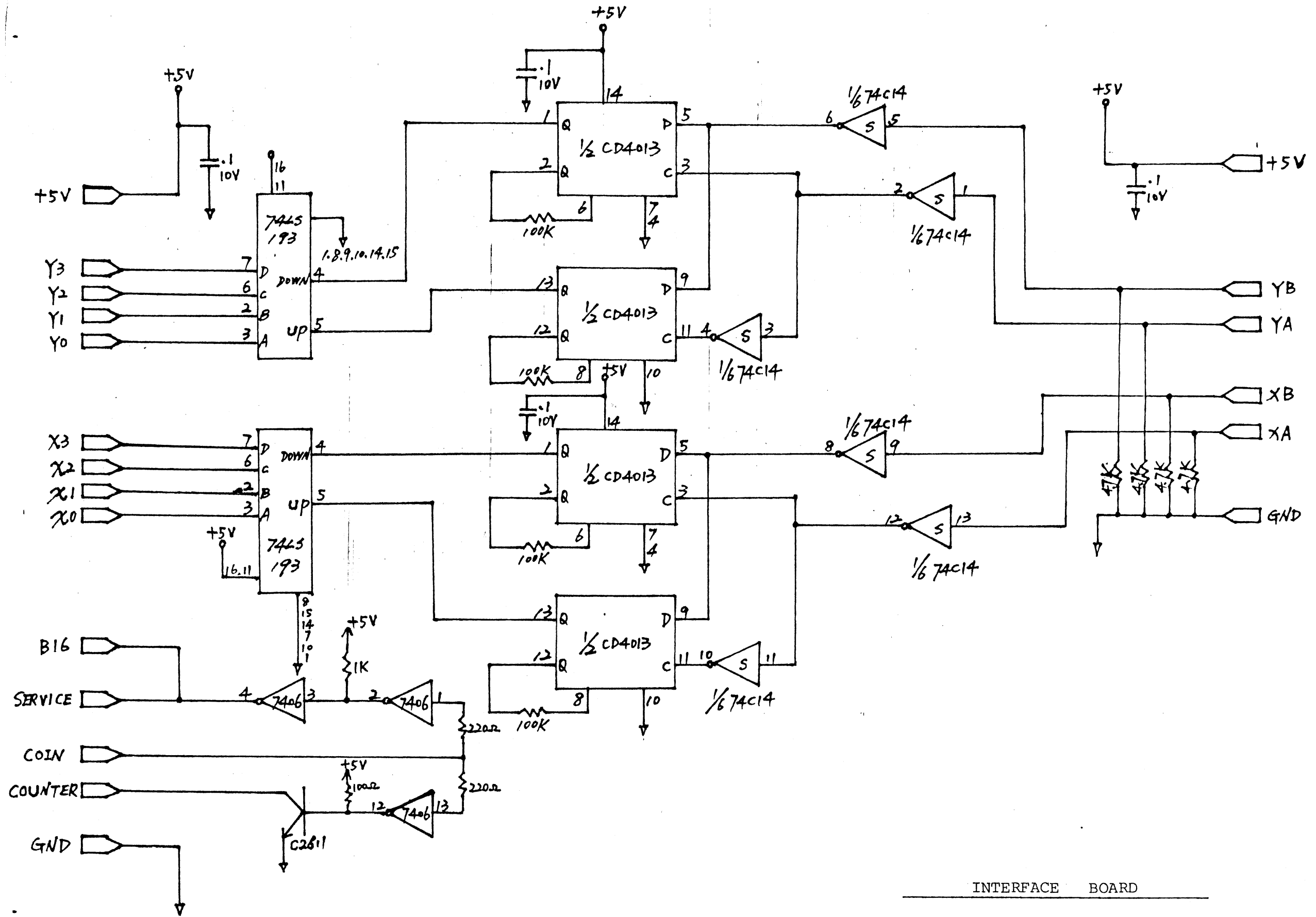
1A 2-3











INTERFACE BOARD