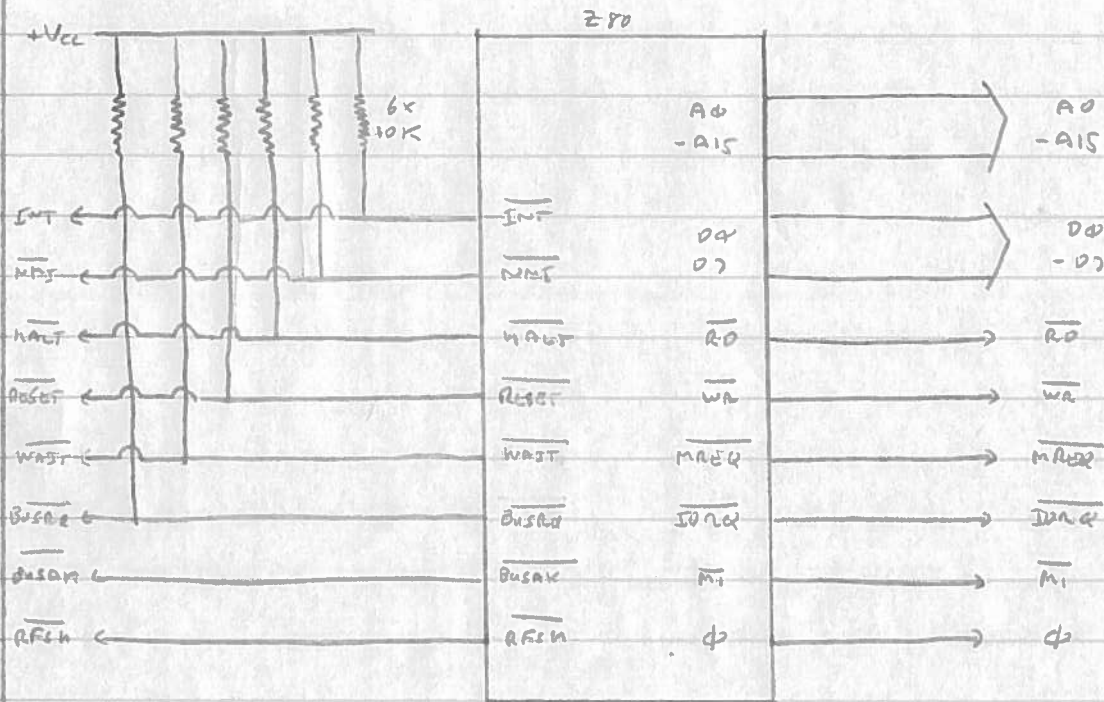
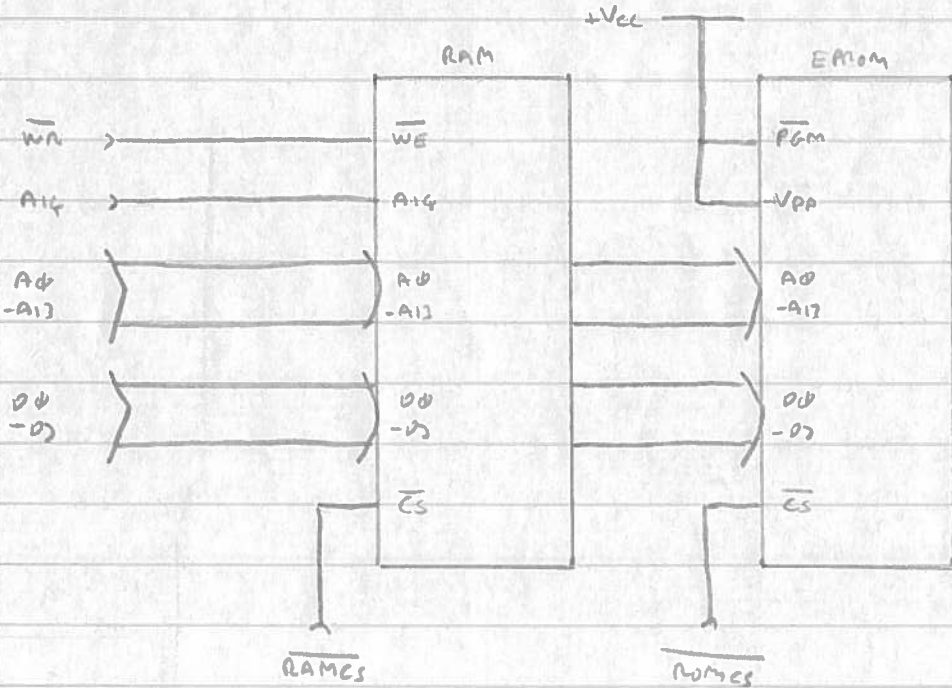


HOME MADE COMPUTER - CPU BOARD

CPU

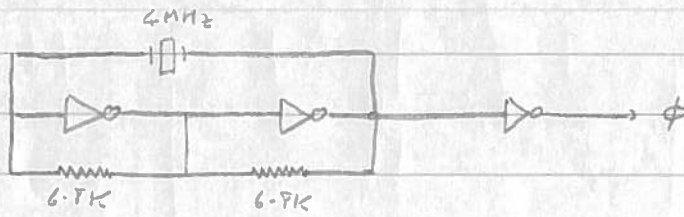


MEMORY

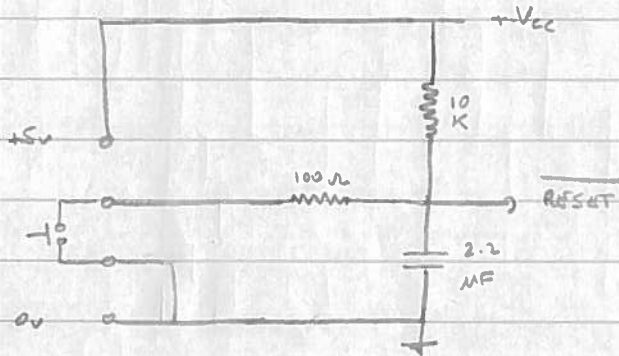


HOME MADE COMPUTER - CPU BOARD

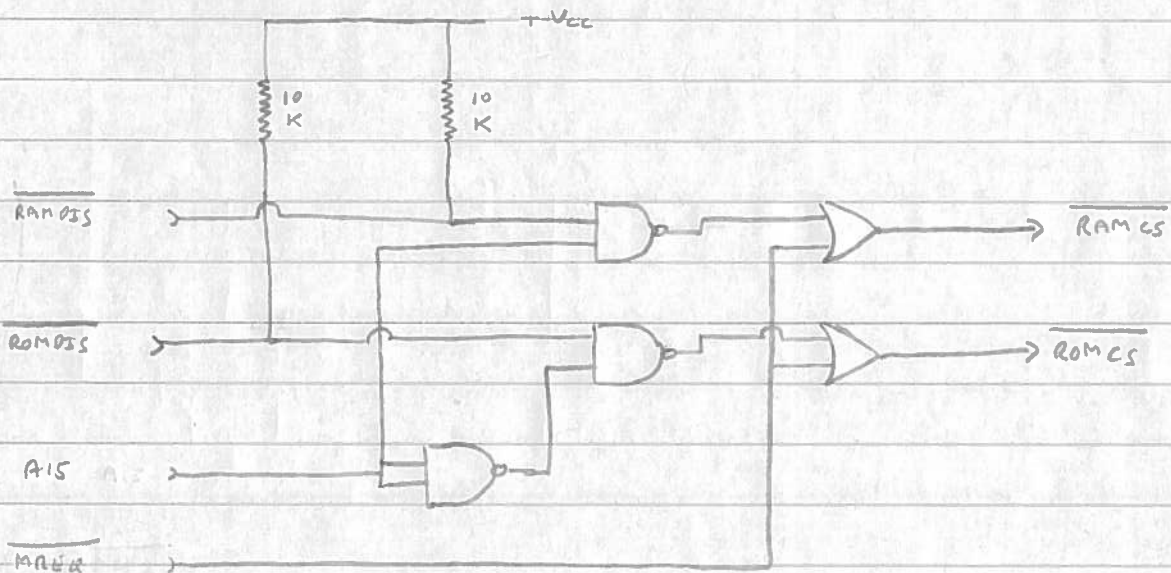
OSCILLATOR



RESET

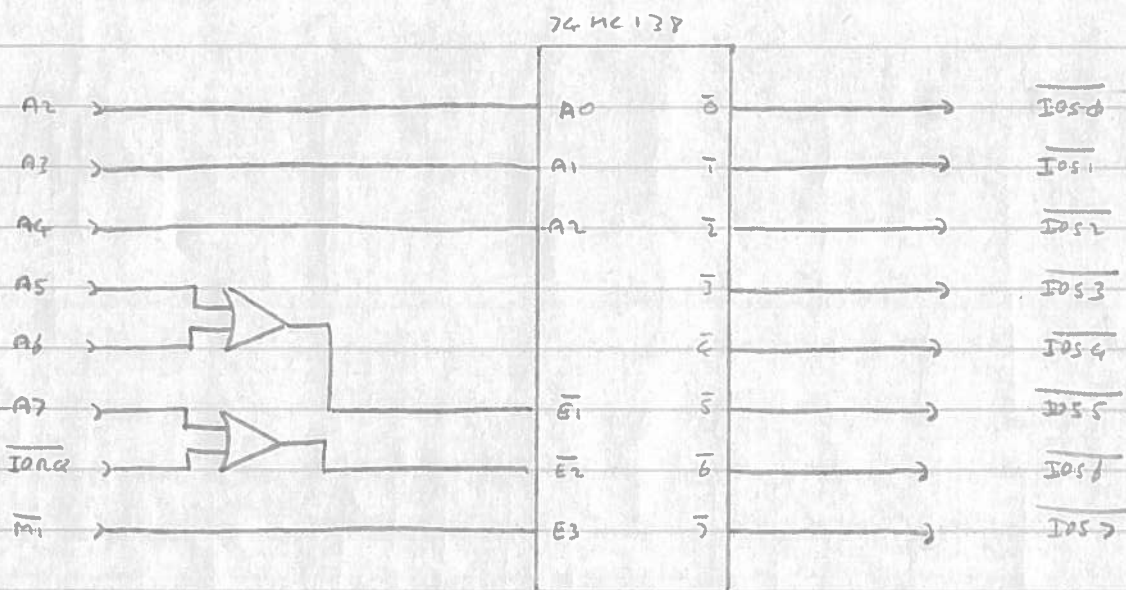


MEMORY SELECT

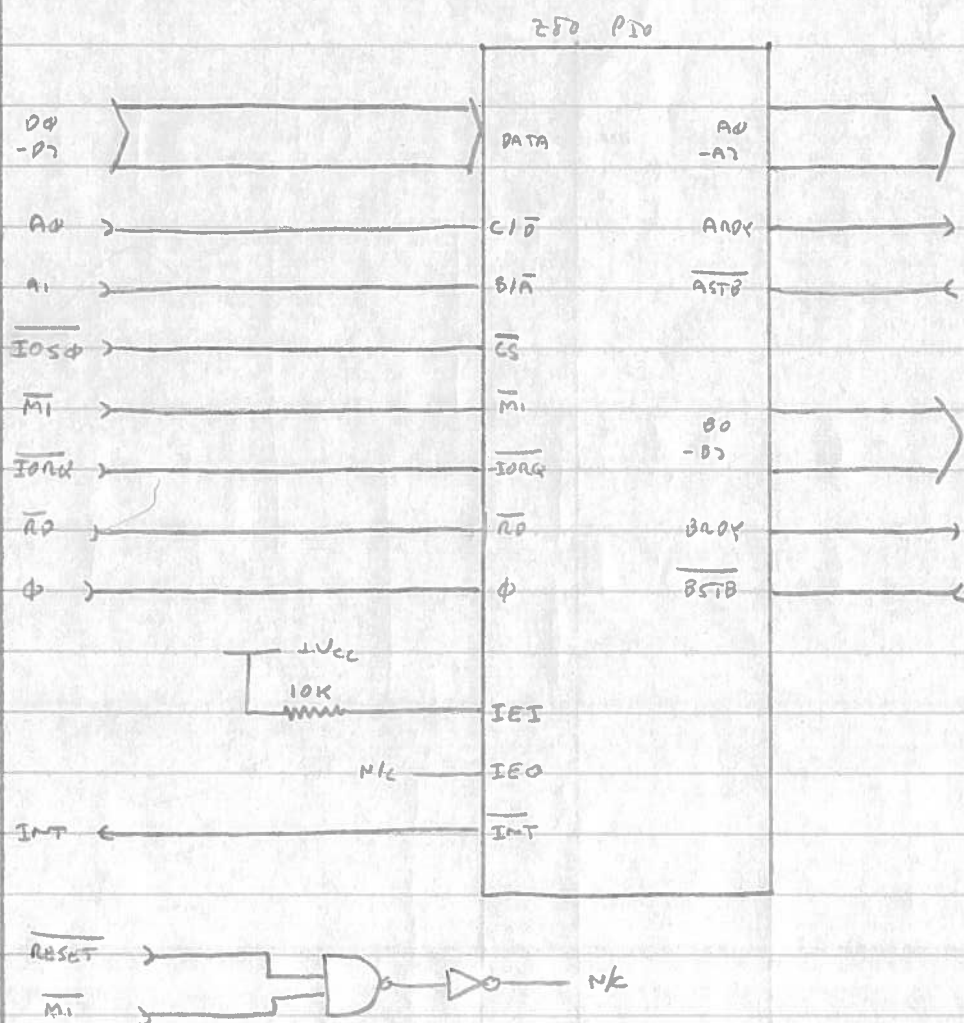


HOME MADE COMPUTER - CPU BOARD

I/O SELECT

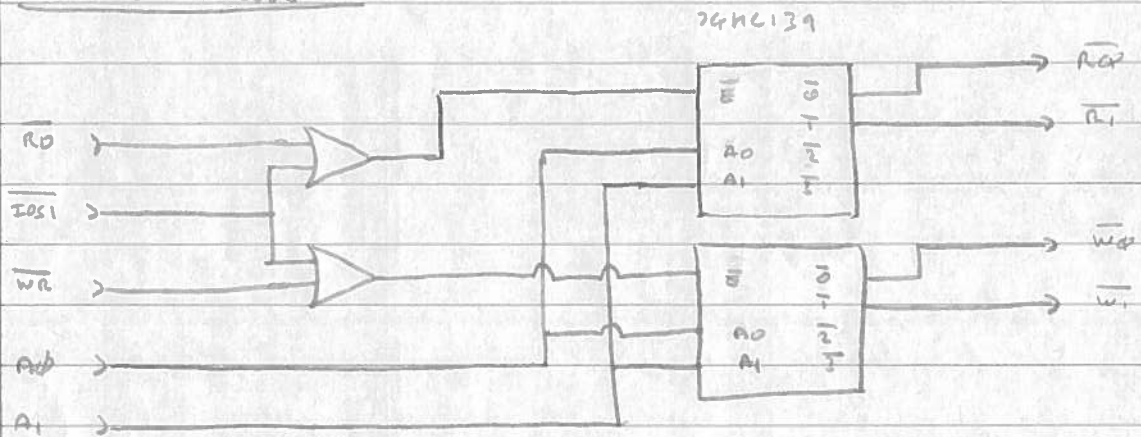


PLO

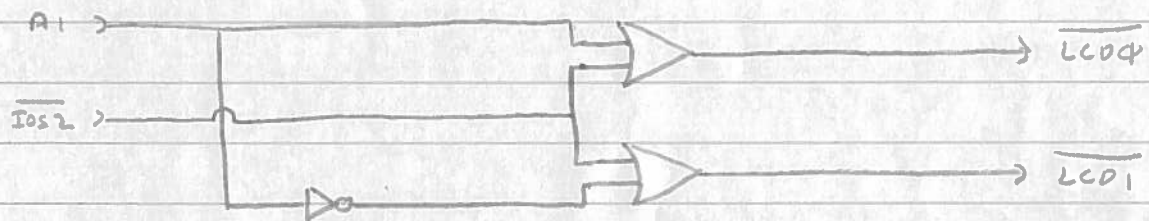


HOME MADE COMPUTER - I/O BOARD

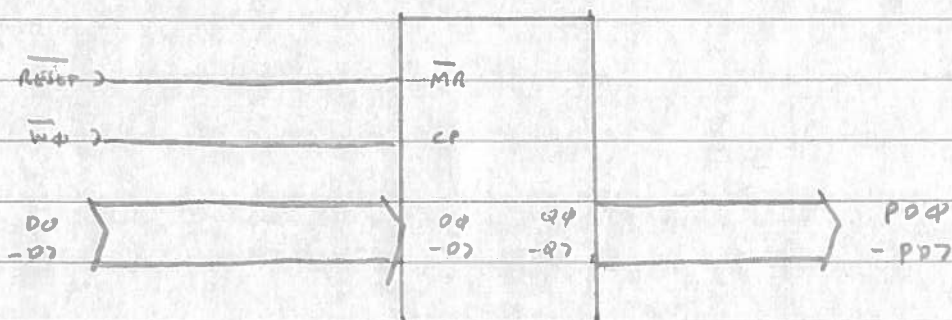
Address Decode 1



Address Decode 2

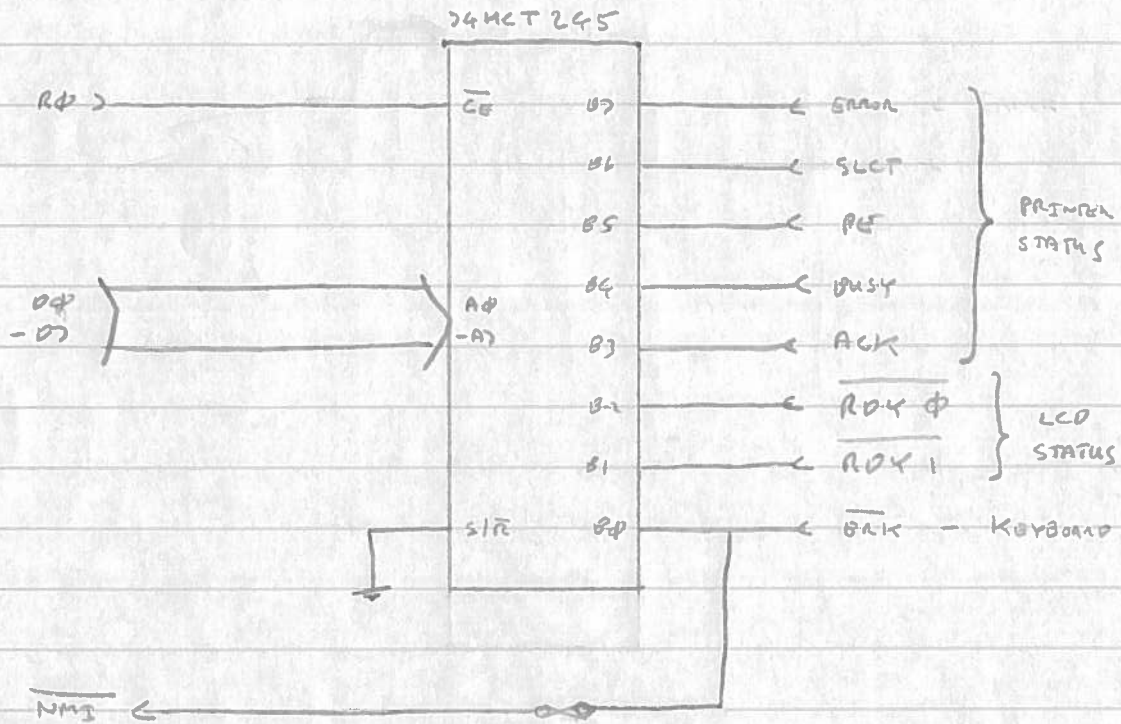


PRINT DATA LATCH

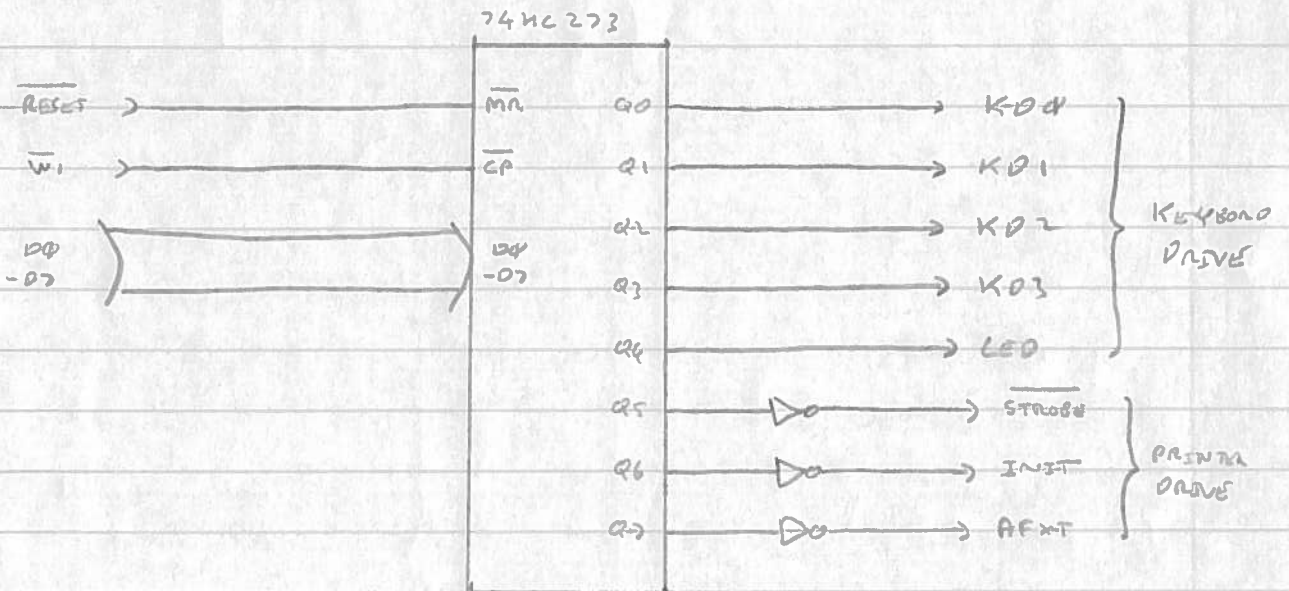


HOME MADE COMPUTER - I/O BOARD

PRINTER SENSE

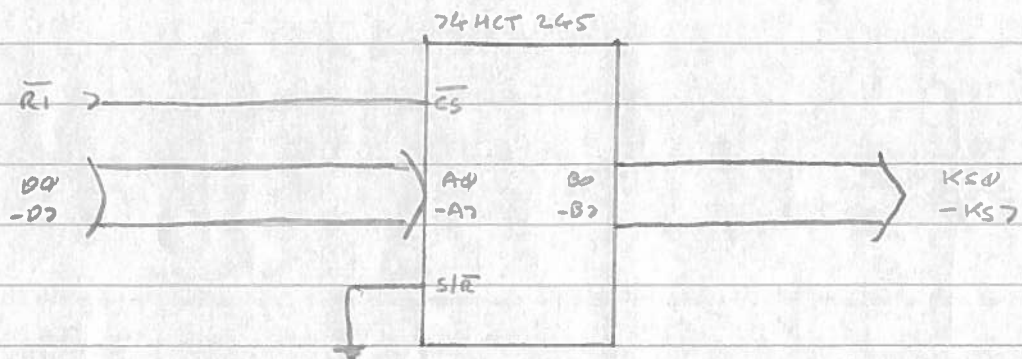


KEYBOARD LATCH

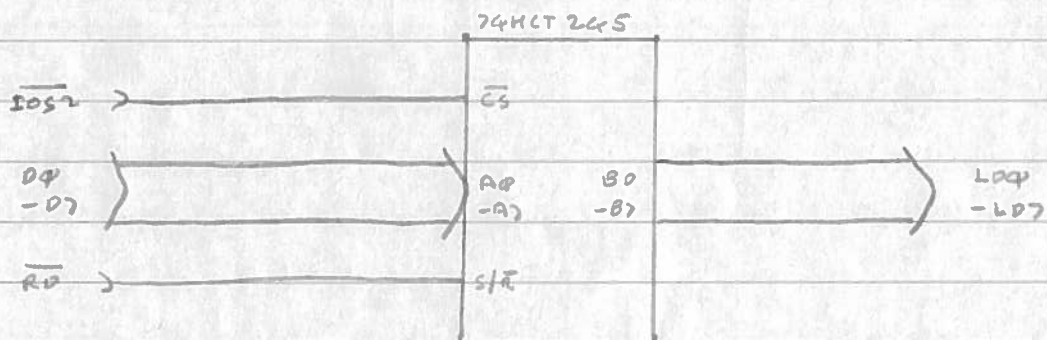


HOME MADE COMPUTER - I/O BOARD

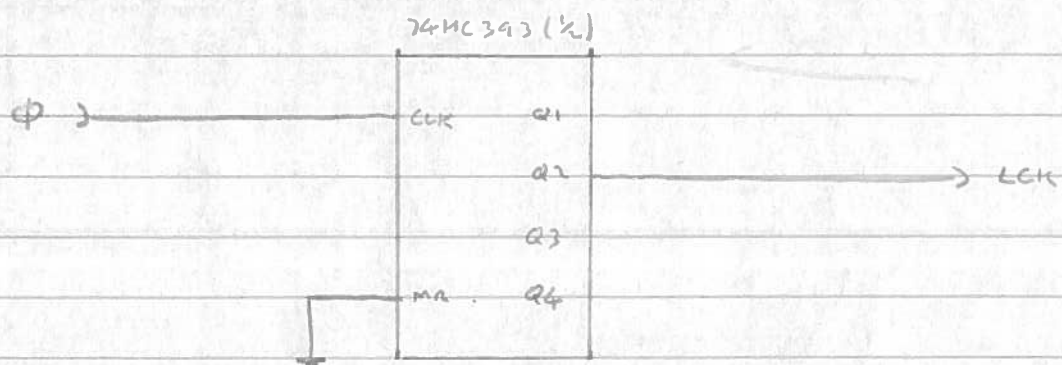
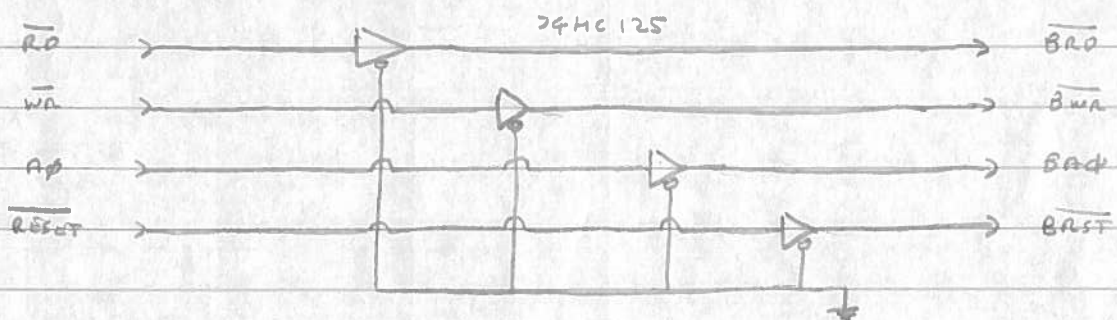
KEYBOARD SENSE



LCD DATA



LCD DRIVE



Home Made Computer - I/O Map

Address	Input	Output
00	PID 1 - Port A Data	PID 1 - Port A Data
01	PID 1 - Port A Command	PID 1 - Port A Status
02	PID 1 - Port B Data	PID 1 - Port B Data
03	PID 1 - Port B Command	PID 1 - Port B Status
04	BIT 0 - Backup Key 1 - <u>LCD Ready 1</u> 2 - <u>LCD Ready 0</u> 3 - <u>Printer ACK</u> 4 - <u>Printer Busy</u> 5 - <u>Printer PE</u> 6 - <u>Printer SCLT</u> 7 - <u>Printer Error</u>	Printer Data
05	Keyboard Data	Bits 0-3: Keyboard Data 4: LED Strobe 5: Printer Strobe 6: Printer Prime 7: Printer Feed XT
08	LCD 0 Command	BIT 7: LCD 0 Busy
09	LCD 0 Data	
0A	LCD 1 Command	BIT 7: LCD 1 Busy
0B	LCD 1 Data	

HOME MADE COMPUTER - BACKPLANE

	A	C
1	GROUND	GROUND
2	$\overline{IOS1}$	$\overline{IOSCP}$
3	$\overline{IOS3}$	$\overline{IOS2}$
4	$\overline{IOS5}$	$\overline{IOS4}$
5	$\overline{IOS7}$	$\overline{IOS6}$
6		
7		
8		
9		
10		
11	$\overline{RAMDES}$	$\overline{ROMDIS}$
12	$\overline{IORR}$	$\overline{RD}$
13	$\overline{WRER}$	$\overline{WR}$
14	$\overline{HALT}$	$\overline{BUSAR}$
15	$\overline{NMIF}$	$\overline{WAST}$
16	$\overline{INT}$	$\overline{BUSRD}$
17	D1	$\overline{RESET}$
18	D0	$\overline{M}$
19	D7	$\overline{RFSH}$
20	D2	
21		A4
22	D6	A1
23	D5	A2
24	D3	A3
25	D4	A4
26	Φ	A5
27	A15	A6
28	A14	A7
29	A13	A8
30	A12	A9
31	A11	A10
32	Vcc	Vcc

HOME MADE COMPUTER - PORTS

PID PORTS (ON CPU BOARD)

+5V
P7
P6
P5
P4
P3
P2
P1
P0
$\overline{STB}$
$\overline{RDY}$
GROUND

PORT A Plug
IS NEAREST EDGE
OF PCB.

PORT B Plug
IS FURTHER IN.

LCD PORT (I/O BOARD)

	LOWER ROW	UPPER ROW
1	GND	N/C
2	$\overline{LCDI}$	$\overline{LCDO}$
3	$\overline{RDYI}$	$\overline{RDYD}$
4	CLK	$\overline{BRO}$
5	$\overline{BWR}$	BAP
6	$\overline{BRST}$	LD3
7	LD6	LD5
8	LD4	LD3
9	LD2	LD1
10	LD4	VCC

HOME MADE COMPUTER - PORTS

PRINTER PORT (I/O BOARD)

	Lower Row	Upper Row
1	STROBE	GND
2	PD4	GND
3	PD1	GND
4	PD2	GND
5	PD3	GND
6	PD4	GND
7	PD5	GND
8	PD6	GND
9	PD7	GND
10	ACK	GND
11	BUSY	GND
12	PE	GND
13	SLCT	INST
14	AFXT	ERRA
15	MIC	GND
16	GND	MIC
17	GND	MIC

KEYBOARD PORT (I/O BOARD)

	Lower Row	Upper Row
1	VCC	KS7
2	KS6	KS5
3	KS4	KS3
4	KS2	KS1
5	KS0	BACK
6	KD4	KD1
7	KD2	KD3
8	LED	GND

HOME MADE COMPUTER - PORTS

KEYBOARD

1	NC
2	VCC
3	SENSE 7
4	SENSE 6
5	SENSE 5
6	SENSE 4
7	SENSE 3
8	SENSE 2
9	SENSE 1
10	SENSE ϕ
11	BREAK
12	DRIVE 3
13	DRIVE 2
14	DRIVE 1
15	DRIVE ϕ
16	GROUND

OUTPUTS HAVE
4-7K Pull Up
to VCC.

Home Made Components - Key Board Map

DRIVE		SENSE							
CODE	LINE	D7	D6	D5	D4	D3	D2	D1	D0
0	A	1 !			ESC	↑	↓	SHIFT LOCK	SHIFT
1	B	3 #	4 \$	E		D	C	X	
2	C	2 "	Q	W	CTRL	S	A	Z	
3	D	5 %	R	T		G	F	V	
4	E	6 &	Y	H		N	B	SPACE	
5	F	7 '	8 (	U			J	M	
6	G	9)	I	O			K	, <	
7	H	4 ^	P	L			; +	. >	
8	I	- =	@ '	[			: *	/ ?	
9	J	DEL	]	←			→	ENTER	

LAYOUT

ESC	!	"	#	\$	%	^	~	(	)	^	=	\	BACK	
A4	A7	C7	B7	B6	D7	E7	F7	F6	G7	H7	I7	I6		
CONTROL		Q	W	E	R	T	Y	U	I	O	P	L	J	DEL
C4		C6	C5	B5	D6	D5	E6	E5	G6	G5	H6	I5	J6	J7
J	T	A	S	D	F	G	H	J	K	L	+	*	←	→
A2	A3	C2	C3	B3	D3	E3	F2	G2	H5	H2	I2	J5	J2	
SHIFT LOCK	SHIFT	Z	X	C	V	B	N	M	<	>	?	SHIFT	ENTER	
A1	A4	C1	B1	B2	D1	E2	E3	F1	G1	H1	I1	A4	J1	
SPACE														
E1														