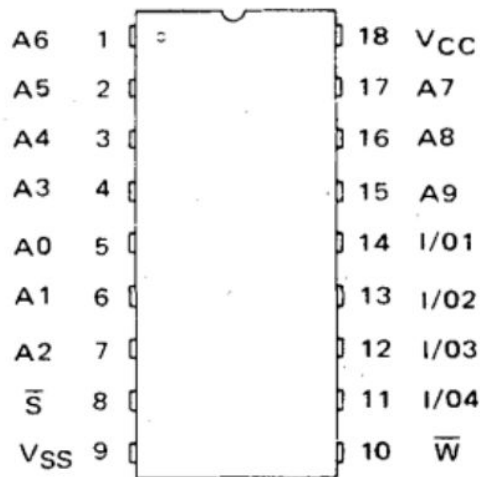


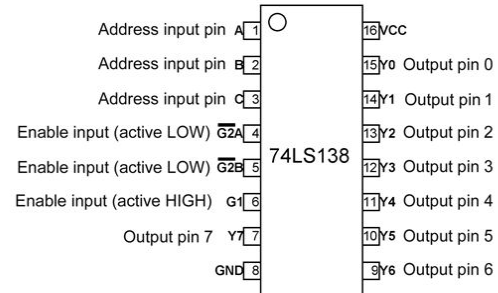
Chips

Static RAM - MCM 2114

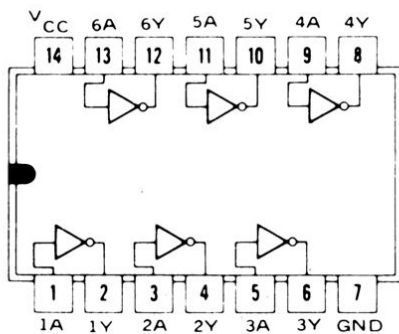
PIN ASSIGNMENT



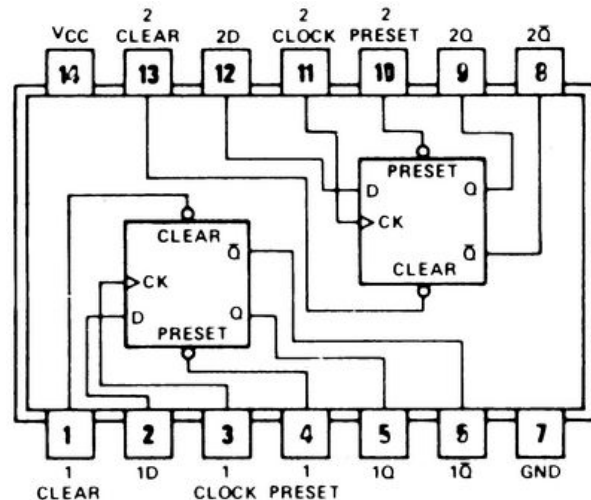
3 to 8 Decoder - 74LS138



NOT gate - 74LS04

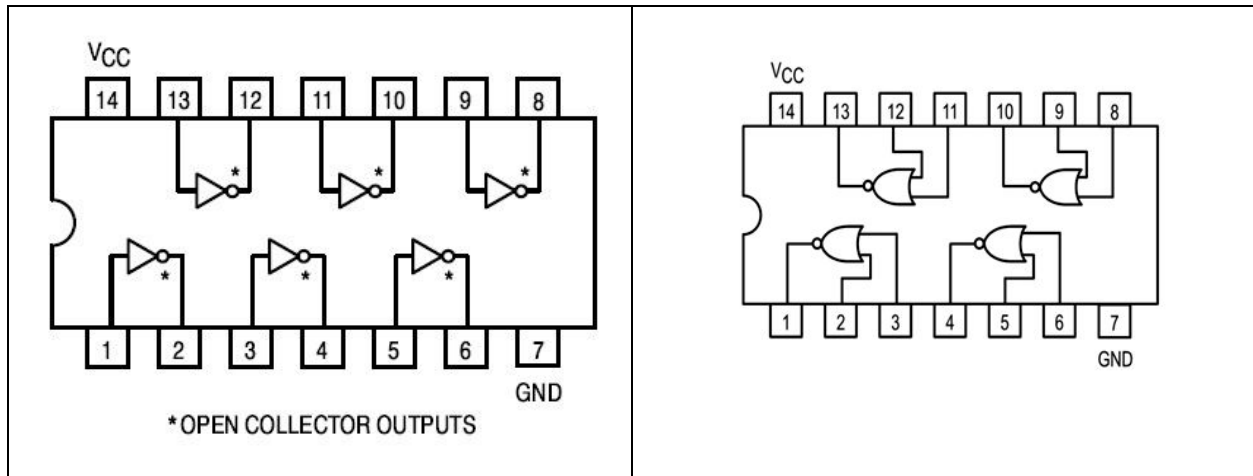


D Flip Flop - 74LS74



NOT hex inverter - 74LS05

NOR - 74LS02



PINOUTS FOR THE THREE RIBBON CABLE CONNECTORS ON THE FRONT PANEL OF THE SANPER-1 EDUCATIONAL LAB UNIT

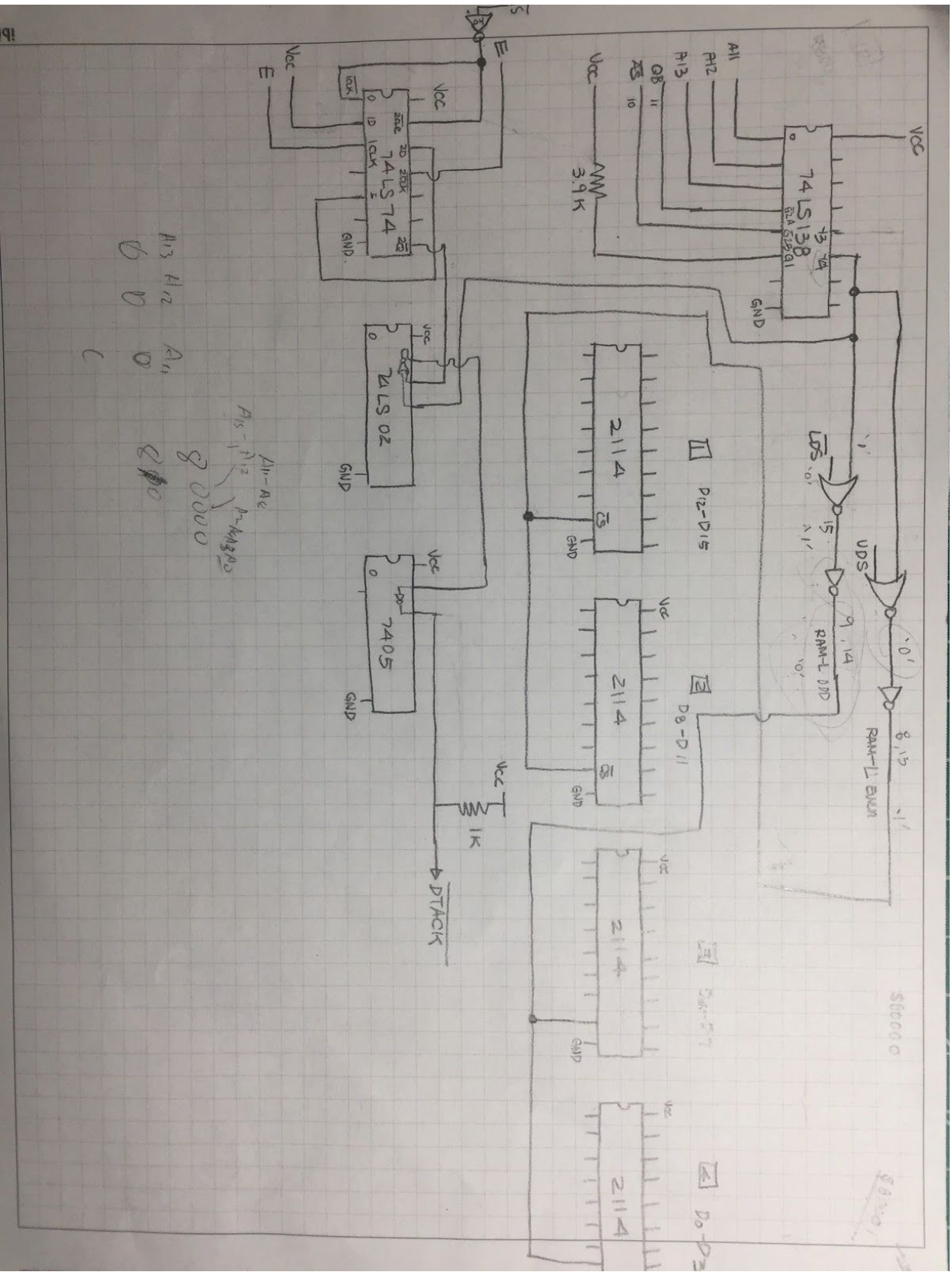
FRONT VIEW OF EACH CONNECTOR

39	37	35	33	31	29	...	11	9	7	5	3	1
40	38	36	34	32	30	...	12	10	8	6	4	2

CONNECTOR NAME			
PIN NO.	ADDR. & DATA	CONTROL	PIA
1	A1	*AS	CA1
3	A2	*UDS	CA2
5	A3	*LDS	PA0
7	A4	R/*W	PA1
9	A5	-----	PA2
11	A6	FC0	PA3
13	A7	FC1	PA4
15	A8	FC2	PA5
17	A9	-----	PA6
19	A10	*RESET	PA7
21	A11	-----	CB1
23	A12	*BR	CB2
25	A13	*BG	PB0
27	A14	*BGACK	PB1
29	A15	*VMA	PB2
31	A16	-----	PB3
33	A17	*BERR	PB4
35	A18	*HALT	PB5
37	A19	-----	PB6
39	A20	-----	PB7

CONNECTOR NAME			
PIN NO.	ADDR. & DATA	CONTROL	PIA
2	A21	-----	GND
4	A22	-----	GND
6	A23	-----	GND
8	---	*IRQ1	GND
10	D0	*IACK1	GND
12	D1	*Q5	GND
14	D2	*Q6	GND
16	D3	*Q7	GND
18	D4	*Q8	GND
20	D5	-----	GND
22	D6	-----	GND
24	D7	E	GND
26	D8	CLK	GND
28	D9	-----	GND
30	D10	TIN	GND
32	D11	*DTACK	GND
34	D12	*VPA	GND
36	D13	-----	GND
38	D14	-----	GND
40	D15	-----	GND

Schematics



A13 A12 A11
 0 0 0
 C
 A15-A12
 8 0000
 2 0000

