ADDRESS DECODING

& — 74LS20 ($\frac{1}{2}$)

▷ — 74LS04 ($\frac{1}{6}$)

Expansion Port

A7	19
A6	18
A5	17
A4	16
A10	22
A11	23
Y3 ~ IC17 #9 ?	

74LS04

74LS20

74LS02

CS1
CS2
R/W
CS
CS2
DD

74LS00

TRUTH TABLE

	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0		CS1	CS2
ADDRESS BUS	1	1	1	1	0	1	1	1	0	0	0	0							
	1	1	1	0	1	1	0	0											

INTERNAL TO VIA

Ø — F

PINS 13,14 IC17

PINS 13,14 SELECTED

			CS1	CS2
	0	0	Y0	
	0	1	Y1	
	1	0	Y2	
	1	1	Y3	

DECODED BY:

IC23
— E000 – FFFF
IC(15 Ω)
— F000 – FFFF

Expansion Port Pin

		MPU PIN 40
VSS	1	
CA2	2	
RS0	3	
RS1	4	
RS2	5	6
RS3	6	7
RES	11	
D0	12	13
D1	13	14
...		
CS1	31	
CS2	32	
R/W	32	
IRQ	1	
CB1		
CB2		
VCC		+5V

=> ADDRESSES SELECTED: F700 – F70F

OR: F7F0 – F7FF

(Bits 4–7 can also
select cs1 if
they are high)
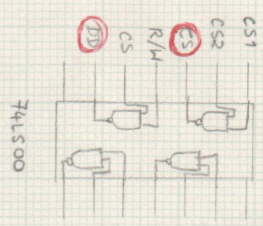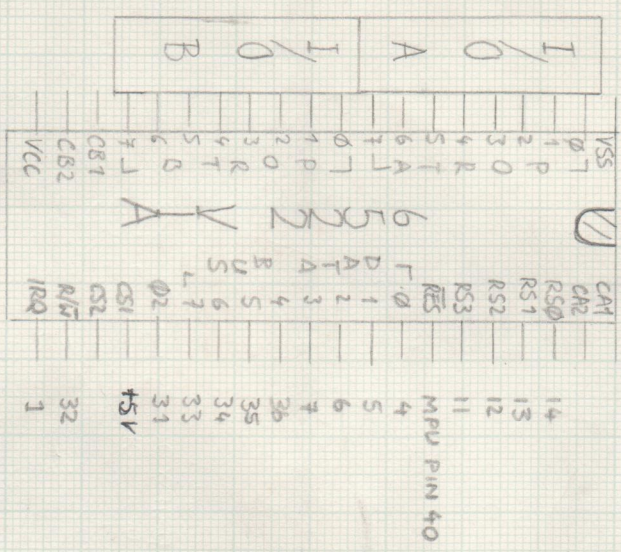
15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0

1 1 1 1 0 1 1 1 0 0 0 0

DECODED BY

IC 23 — Y3 — -E000 -FFFF

IC 15 a) — Y3 IC17 — F000 -FFFF

A7
A6
A5
A4

Y3
A11
A10

+5V

74LS04

74LS20

74LS00

INTERNAL TO VIA

R/W
CS
&
DD

CS
&
CS

CS
R/W
&
DD
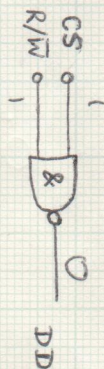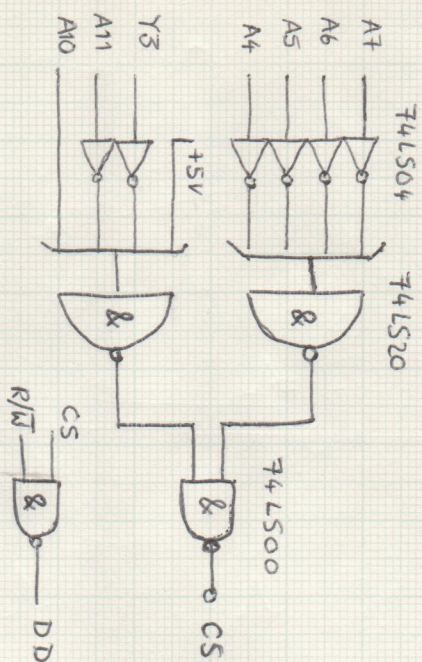
LOW DD   READ FROM EXT BUS

HIGH DD   WRITE TO EXT BUS