

S100 IDE board Version 02 build/testing notes

Although it has been suggested that a 74LS03 can be used in position U18 and U19 I have found in my experience for this not to be the case, the drive signals /IOWRA and /IORDA were only hitting 3.4v and not the 4.0v minimum required. To resolve the issue I fitted 74S03 chips in both locations and changed RR1 to 330ohms, problem solved.

90% of the board circuitry can be tested by using the S100 Z80 monitor software to output the following sequence of values to the ports A, B, and C on the 8255 Chip. The following sequence assumes the board is configured for the base port address of 30H. (values given are hex)

Q033,80	; Configures ports A, B and C as output ports
Q032,2b	; Selects right hand pair of digits
Q030,01	; Should display 01 on right digit pair, work through each bit and Check display indicates the corresponding bit. i.e. 1,2,4,8,10,20,40,80,FF
Q032,2c	; Selects middle pair of digits
Q030,01	; Should display 01 on middle digit pair, work through each bit and check display indicates the corresponding bit. i.e. 1,2,4,8,10,20,40,80,FF
Q032,2d	; Selects left hand pair of digits
Q031,01	; Should display 01 on left digit pair, work through each bit and check display indicates the corresponding bit. i.e. 1,2,4,8,10,20,40,80,FF

Testing drive selection flip/flop

Q034,0	; Selects CF-A (P41) & Illuminates D18 (Drive Select A)
Q034,1	; selects CF-B (P40) & Illuminates D19 (Drive Select B)