

Notes on programming the 8255 PPI for Labs 2 and 3 and beyond.

To control operation of the 8255, you can write to its control register (port 303h). As we will learn later, we are operating the 8255 in **MODE 0**, which means that certain bits of the control register are locked in place, with others that are free to change depending on how we want to use the PPI. The register in MODE 0 is defined as follows:

CR = 1 0 0 x 0 0 x 0

So we can change bits 1 and 4 in this mode.

Bit 1 controls port B: bit1=1 makes B an input port, bit1=0 makes B an output port

Bit 4 controls port A: bit4=1 makes A an input port, bit4=0 makes A an output port

We want port A to be input (switch bank) and port B to be output (LED bank), so we must write to the control register:

CR = 1 0 0 1 0 0 0 0 = 90h

If we want port A to be output and port B to be input, we would write:

CR = 1 0 0 0 0 0 1 0 = 82h