

INSTRUCTIONS

There are three files included in this package, the first being the keyboard verilog file which contains relevant code for using the PS/2 keyboard, the second is the oneshot verilog file which is also needed for the keyboard to receive signals.

Verilog code for keyboard.v and oneshot.v are from John Loomis
(<http://www.johnloomis.org/digitallab/ps2lab1/ps2lab1.html>)

The code below shows how to use the various modules.

```
// Don't forget to take in PS2_CLK and PS2_DAT as inputs to your top level module.
// RELEVANT FOR PS2 KB
    wire [7:0] scan_code;
    wire read, scan_ready;
    reg [7:0] scan_history[1:2];

    always @(posedge scan_ready)
    begin
        scan_history[2] <= scan_history[1];
        scan_history[1] <= scan_code;
    end
// END OF PS2 KB SETUP

//      Keyboard Section
keyboard kb(
    .keyboard_clk(PS2_CLK),
    .keyboard_data(PS2_DAT),
    .clock50(CLOCK_50),
    .reset(0),
    .read(read),
    .scan_ready(scan_ready),
    .scan_code(scan_code));

oneshot pulse(
    .pulse_out(read),
    .trigger_in(scan_ready),
    .clk(CLOCK_50));

wire p1_up = ((scan_history[1] == 'h1d) && (scan_history[2][7:4] != 'hF)); // Key for
W
wire p1_down = ((scan_history[1] == 'h1b) && (scan_history[2][7:4] != 'hF)); // Key
for S
```