

# USB Forensics and Pentesting

Dr. Phil Polstra  
PhD, CISSP, CEH

@ppolstra  
<http://philpolstra.com>

Certifications:

<http://www.securitytube-training.com>

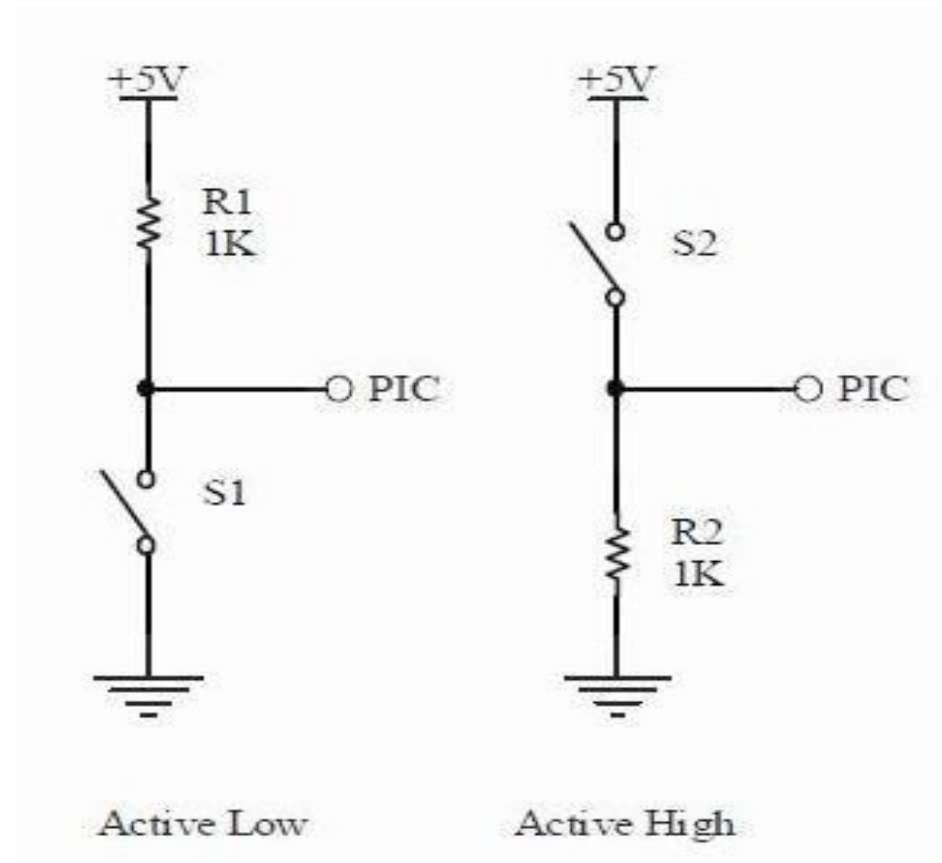
Pentester Academy:

<http://www.PentesterAcademy.com>

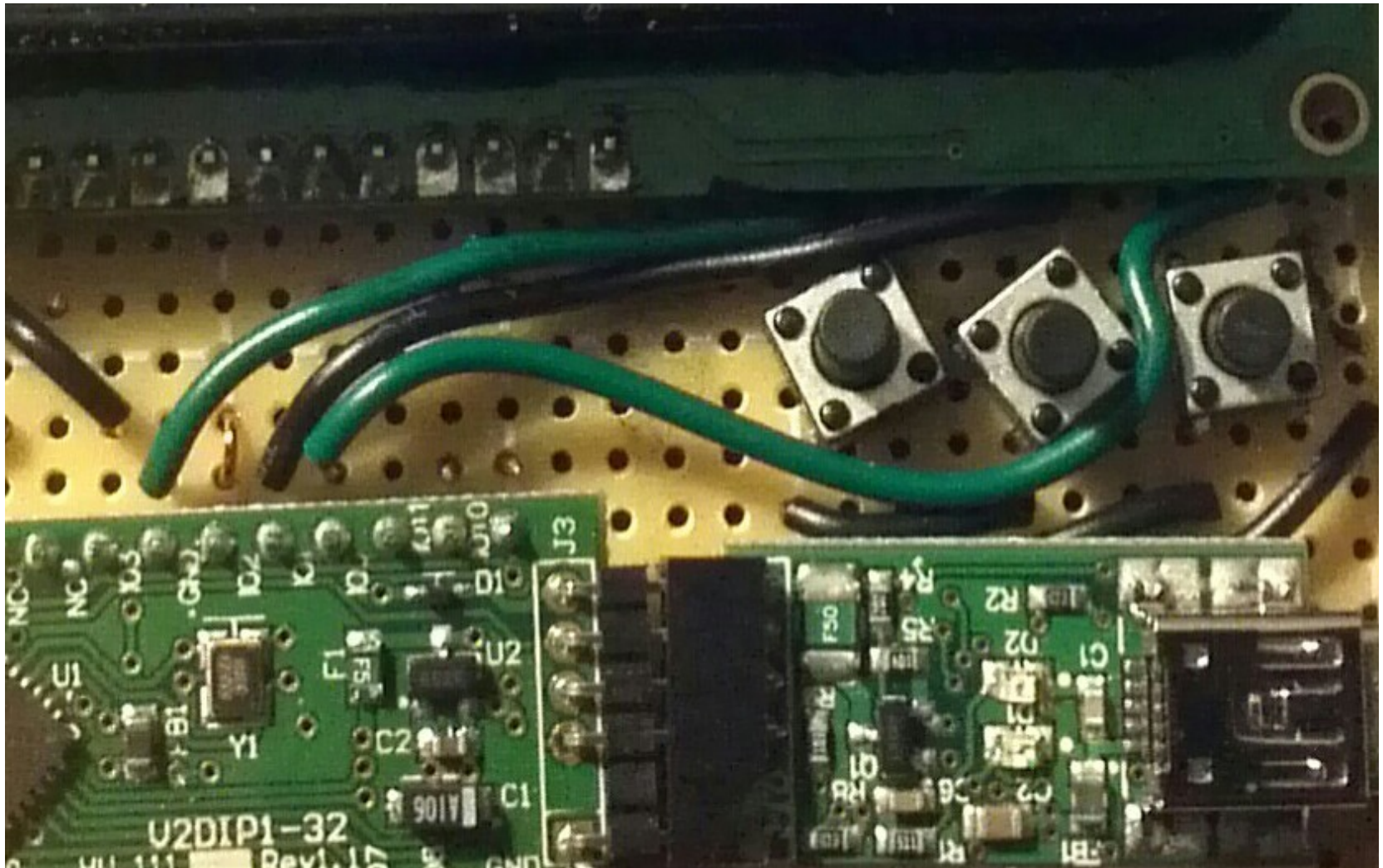
# Impersonator: Buttons & Timers

# Buttons

- May be active high or low
- Debounced?



# Impersonator Buttons



# Button Code

```
vos_dev_read(hGPIO_PORT_E, &buttonBits, 1, NULL);
while (~buttonBits)
{
    if ((buttonBits ^ 0xF7)==0) // write protect button
    pressed
    { // do something
    }
    ...
}
```

# Timers

- Most microcontrollers and many CPUs support timers
- Count up or down
- Single shot or continuous
- Can block until timer expires
- We start a timer and stop it if enumeration completes
- If timer expires we move to next VID/PID

# Buttons & Timer Demo