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</pre>

```
import RPi.GPIO as GPIO
from time import time
```

```
def setup():
    GPIO.setmode(GPIO.BOARD) # Numbers GPIOs by physical location
    GPIO.setup(11, GPIO.IN, pull_up_down=GPIO.PUD_DOWN)
```

```
def binary_acquire(pin, duration):
    # acquires data as quickly as possible
    t0 = time()
    results = []
    while (time() - t0) &lt; duration:
        results.append(GPIO.input(pin))
    return results
```

```
def on_ir_receive(pinNo, bouncetime=150):
    # when edge detect is called (which requires less CPU than constant
    # data acquisition), we acquire data as quickly as possible
    data = binary_acquire(pinNo, bouncetime/1000.0)
    if len(data) &lt; bouncetime:
        return
    rate = len(data) / (bouncetime / 1000.0)
    pulses = []
    i_break = 0
    # detect run lengths using the acquisition rate to turn the times in to
    microseconds
    for i in range(1, len(data)):
        if (data[i] != data[i-1]) or (i == len(data)-1):
            pulses.append((data[i-1], int((i-i_break)/rate*1e6)))
            i_break = i
    # decode ( &lt; 1 ms "1" pulse is a 1, &gt; 1 ms "1" pulse is a 1, longer than 2
    ms pulse is something else)
    # does not decode channel, which may be a piece of the information after the long
```

```

1 pulse in the middle
outbin = ""
for val, us in pulses:
if val != 1:
continue
if outbin and us > 2000:
break
elif us < 1000:
outbin += "0"
elif 1000 < us < 2000:
outbin += "1"
try:
return int(outbin, 2)
except ValueError:
# probably an empty code
return None

def destroy():
GPIO.cleanup()

if __name__ == "__main__":
setup()
try:
print("Starting IR Listener")
while True:
print("Waiting for signal")
GPIO.wait_for_edge(11, GPIO.FALLING)
code = on_ir_receive(11)
if code:
print(str(hex(code)))
else:
print("Invalid code")
except KeyboardInterrupt:
pass
except RuntimeError:
# this gets thrown when control C gets pressed
# because wait_for_edge doesn't properly pass this on
pass
print("Quitting")
destroy()
<pre>

```