```
1  /**
2    Infrared Action (Reciever) - Mission Possible MK2
3    Ward Melville HS Science Olympiad - Team A - 2017-2018
4    infraredTinyTwo.ino
5    Purpose: Sets the output of the action high for one second when three leading edges are
   detected by an IR reciever.
6
7    @author David Cutting
8    @version 2.0 3/3/2018
9  */
10
11 // Definitions for microcontroller pin numbers
12 const int IN_PIN = 2;
13 const int OUT_PIN = 4;
14
15 // Variables and constants for the pulse counter code
16 int increment = 0;
17 long int timer = 0;
18 long int current = 0;
19
20 void setup() {
21   // Set the microcontroller pins as either inputs or outputs
22   pinMode(IN_PIN, INPUT);
23   pinMode(OUT_PIN, OUTPUT);
24
25   // Write the output pin low (off)
26   digitalWrite(OUT_PIN, LOW);
27
28   GIMSK = (1<<PCIE); // Turn on pin change interrupts only
29   PCMSK = (1<<PCINT2); // Turn on interrupts on pin 2 only
30   sei();             // Enable interrupts
31
32 }
33
34 void loop() {
35   if(increment>3) {  // Ideal delay is about 0.1 second
36     digitalWrite(OUT_PIN, HIGH);
37   }
38 }
39
40 ISR(PCINT0_vect)
41 {
42   // Timer has +/-10% accuracy, so 2.5 ms maximum off. Temp and voltage also affect it, at
   nominal conditions mean freq is <8 mHz.
43   current = millis();
44   if((current < (timer+7)) && (current > (timer+3))) {
45     increment++;
46   }
47   else {
48     increment = 0;
49   }
50   timer = millis();
51 }
52
```