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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 1.1 1/26/2018
9  */
10
11 // Definitions for microcontroller pin numbers
12 const int IN_PIN = 2;
13 const int OUT_PIN = 4;
14
15 // Variables for states of the pins
16 bool inState = HIGH;
17 bool outState = LOW;
18
19 // Variables and constants for the pulse counter code
20 unsigned int pulseCounter = 0;
21
22 void setup() {
23   // Set the microcontroller pins as either inputs or outputs
24   pinMode(IN_PIN, INPUT);
25   pinMode(OUT_PIN, OUTPUT);
26
27   // Write the output pin low (off)
28   digitalWrite(OUT_PIN, LOW);
29 }
30
31 void loop() {
32   if(!outState && inState && !digitalRead(IN_PIN)) { // If the output hasn't triggered, the
   last input is high (off), and the current input is low (on)...
33     inState = LOW; // Set the input archive to low (on)
34     pulseCounter++; // Increment the pulse counter
35   }
36   else if(!outState && !inState && digitalRead(IN_PIN)) { // Otherwise, if the output hasn't
   triggered, the last input is low, and the current input is high...
37     inState = HIGH; // Set the input archive to high (off)
38   }
39   if(pulseCounter >= 3 && !outState) { // If the pulse counter has been incremented three
   or more times...
40     outState = HIGH; // Set the out state high
41     delay(500); // Wait half a second for observation
42     digitalWrite(OUT_PIN, HIGH); // Set the out pin to the value of out state (in this case high),
   triggering the next action
43     delay(1000); // Wait 1 second so electromagnet and reed switch in next action can be
   observed
44     digitalWrite(OUT_PIN, LOW); // Turn off electromagnet to save power
45   }
46 }
47
```