HOTRC DS-600 RC Controller

The HOTRC RC Controller transmits radio signals which are read by a radio receiver. This radio receiver is connected to the Arduino Uno.

The 6 channel receiver connects to the Arduino Uno by powering it using 5V and GND pins. Each channel has a signal pin which is connected to a digital pins. Channels 1 and 2 require digital PWM pins to read analogue input signals, Channels 3 – 6 do not require PWM pins.

Channels read on the transmitter are those inputs from the receiver.

A close-up of a remote control

Description automatically generated

Channels 1 and 2 output analogue signals which are read by the Arduino Uno using the pulseIn() function.

The pulseIn() function takes two arguments, the pin to read from, and the change of signal state to trigger the beginning of reading, this can either be HIGH or LOW.

Here is sample wiring for the receiver:

A circuit board with wires

Description automatically generated

Here is sample code for the receiver:

int channel1Pin = 11;

int channel2Pin = 10;

int channel3Pin = 8;

int channel4Pin = 7;

int channel5Pin = 4;

void setup() {

  // put your setup code here, to run once:

    Serial.begin(9600);

    pinMode(channel1Pin, INPUT);

    pinMode(channel2Pin, INPUT);

    pinMode(channel3Pin, INPUT);

    pinMode(channel4Pin, INPUT);

    pinMode(channel5Pin, INPUT);

}

void loop() {

  // put your main code here, to run repeatedly:

  int channel1Value = pulseIn(channel1Pin, HIGH); //Left/Right Thumbstick

  int channel2Value = pulseIn(channel2Pin, HIGH); //Up/Down Thumbstick

  int channel3Value = pulseIn(channel3Pin, HIGH); //Number 3 Button

  int channel4Value = pulseIn(channel4Pin, HIGH); //Number 4 Button

  int channel5Value = pulseIn(channel5Pin, HIGH); //Number 5 Button

  Serial.print("Channel 1: ");

  Serial.print(channel1Value);

  Serial.print(", Channel 2: ");

  Serial.print(channel2Value);

  Serial.print(", Channel 3: ");

  Serial.print(channel3Value);

  Serial.print(", Channel 4: ");

  Serial.print(channel4Value);

  Serial.print(", Channel 5: ");

  Serial.println(channel5Value);

}