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Pat's IR 4WD Robot with lights- Keep finger on button for movement, off to stop.

A019-Robot Buggy-Infrared

This uses the large IR Remote M, Forwards, Backwards, Left, Right, Top Colour Buttons, Blue Front LED's, Yellow Middle LED's, Red Back LED's, Green Horn.

IN1=10, IN2=11, IN3=5, IN4=6, Front LED's Blue=3, Back LED's Red=4, Side LED's Orange=13, Active Buzzer=9, Delay Time=500.

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#include <IRremote.h>

//#include <Tone.h>

// connect motor controller pins to Arduino digital pins

// motor one`

const int in1 = 10;

const int in2 = 11;

// motor two

const int in3 = 5;

const int in4 = 6;

// LEDs

const int ledBlue = 3;

const int ledRed = 4;

const int ledYellow = 13;

//Buzzer

const int horn = 9; //buzzer to arduino pin 9

const int delayTime = 500;

const int RECV\_PIN = 2;

//int delayTime=1000

IRrecv irrecv(RECV\_PIN);

void setup()

{

// set all the motor control pins to outputs

pinMode(in1, OUTPUT);

pinMode(in2, OUTPUT);

pinMode(in3, OUTPUT);

pinMode(in4, OUTPUT);

pinMode(ledBlue, OUTPUT);

pinMode(ledRed, OUTPUT);

pinMode(ledYellow, OUTPUT);

pinMode(horn, OUTPUT); // Set buzzer - pin 9 as an output

irrecv.enableIRIn(); // Start the receiver

}

void loop()

{

decode\_results results;

if (irrecv.decode(&results)) // if there is an IR reading

{

Serial.println(results.value, HEX);

switch (results.value)

{

case 0x2F0:

Serial.println("Forwards!");

forwards();

break;

case 0xAF0:

Serial.println("Backwards!");

backwards();

break;

case 0x2D0:

Serial.println("Left!");

left();

break;

case 0xCD0:

Serial.println("Right!");

right();

break;

case 0xA70:

Serial.println("Stop!");

stop();

break;

case 0xF38:

Serial.println("LedBlue!");

LedBlue();

break;

case 0x338:

Serial.println("LedRed!");

LedRed();

break;

case 0x738:

Serial.println("LedYellow!");

LedYellow();

break;

case 0xB38:

Serial.println("horn!");

//horn();

break;

case 0xFF18E7:

Serial.println("Forwards!");

forwards();

break;

case 0xFF4AB5:

Serial.println("Backwards!");

backwards();

break;

case 0xFF10EF:

Serial.println("Left!");

left();

break;

case 0xFF5AA5:

Serial.println("Right!");

right();

break;

case 0xFF38C7:

Serial.println("Stop!");

stop();

break;

case 0xFFA25D:

Serial.println("LedBlue!");

LedBlue();

break;

case 0xFFE21D:

Serial.println("LedRed!");

LedRed();

break;

case 0xFF629D:

Serial.println("LedYellow!");

LedYellow();

break;

case 0xFF02FD:

Serial.println("horn!");

//horn();

break;

}

irrecv.resume(); // Receive the next value

}

}

void forwards()

{

// turn on motor A

digitalWrite(in1, HIGH);

digitalWrite(in2, LOW);

digitalWrite(ledBlue, HIGH);

// turn on motor B

digitalWrite(in3, HIGH);

digitalWrite(in4, LOW);

digitalWrite(ledBlue, HIGH);

delay(delayTime);

// stop both motors

digitalWrite(in1, LOW);

digitalWrite(in2, LOW);

digitalWrite(in3, LOW);

digitalWrite(in4, LOW);

digitalWrite(ledBlue, LOW);

}

void backwards()

{

// turn on motor A

digitalWrite(in1, LOW);

digitalWrite(in2, HIGH);

digitalWrite(ledRed, HIGH);

// turn on motor B

digitalWrite(in3, LOW);

digitalWrite(in4, HIGH);

digitalWrite(ledRed, HIGH);

delay(delayTime);

// stop both motors

digitalWrite(in1, LOW);

digitalWrite(in2, LOW);

digitalWrite(in3, LOW);

digitalWrite(in4, LOW);

digitalWrite(ledRed, LOW);

}

void right()

{

// turn on motor A

digitalWrite(in1, LOW);

digitalWrite(in2, HIGH);

digitalWrite(ledYellow, HIGH);

// turn on motor B

digitalWrite(in3, HIGH);

digitalWrite(in4, LOW);

digitalWrite(ledYellow, HIGH);

delay(delayTime);

// stop both motors

digitalWrite(in1, LOW);

digitalWrite(in2, LOW);

digitalWrite(in3, LOW);

digitalWrite(in4, LOW);

digitalWrite(ledYellow, LOW);

}

void left()

{

// turn on motor A

digitalWrite(in1, HIGH);

digitalWrite(in2, LOW);

digitalWrite(ledYellow, HIGH);

// turn on motor B

digitalWrite(in3, LOW);

digitalWrite(in4, HIGH);

digitalWrite(ledYellow, HIGH);

delay(delayTime);

// stop both motors

digitalWrite(in1, LOW);

digitalWrite(in2, LOW);

digitalWrite(in3, LOW);

digitalWrite(in4, LOW);

digitalWrite(ledYellow, LOW);

}

void stop()

{

// stop both motors

digitalWrite(in1, LOW);

digitalWrite(in2, LOW);

digitalWrite(in3, LOW);

digitalWrite(in4, LOW);

digitalWrite(ledBlue, LOW);

digitalWrite(ledRed, LOW);

digitalWrite(ledYellow, LOW);

// digitalWrite(buzzer, LOW);

}

void LedBlue()

{

digitalWrite(3, HIGH);

delay(delayTime);

digitalWrite(3, LOW);

}

void LedRed()

{

digitalWrite(4, HIGH);

delay(delayTime);

digitalWrite(4, LOW);

}

void LedYellow()

{

digitalWrite(13, HIGH);

delay(delayTime);

digitalWrite(13, LOW);

}

//void loop)

//{

//tone(horn, 500); // Send 1KHz sound signal...

//delay(1000); // ...for 1 sec

//noTone(horn); // Stop sound...

//delay(1000); // ...for 1sec

//}