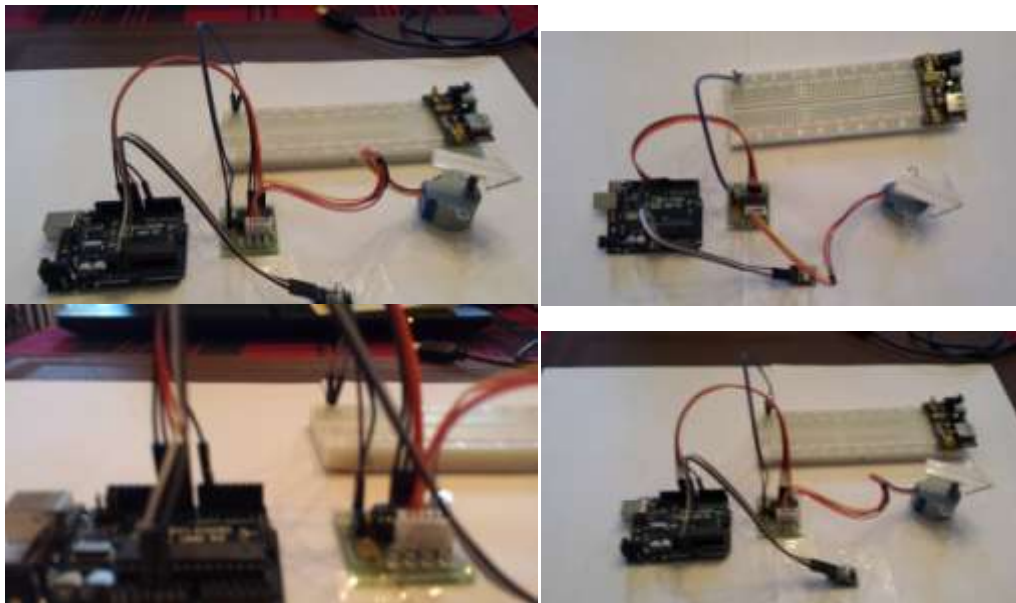


IR Remote Controlled Stepper Motor

Components:

1. Stepper Motor
2. Stepper Motor Driver
3. Arduino Uno with USB Cord
4. IR Receiver
5. Remote Controller
6. Bread Board
7. Bread Board Power supply Module
8. Jumper wires
9. Wall Charger

STEPS:



1. Connect the Stepper Motor to the Stepper Motor Controller
2. Connect two wires from the negative and the positive of the Motor Drive to the positive and negative rails of the Bread Board.
3. Using the Female/Male wires, connect IN1, IN2, IN3, and IN4 on the Stepper Motor Driver to digital pins 8, 9, 10, and 11 on the Arduino Board.

4. Using the Female/Male wires connect the positive (middle) and negative (-) on the IR Receiver to 5V and GND on the Arduino Board. Connect the signal (S) on the IR Receiver to digital pin 6 on the Arduino Board.
5. Connect the Bread Board power supply module onto the Bread Board. Make sure the Power Supply is set to 5V not 3.3V.
6. Connect the Arduino to the Computer and upload the program written below.
7. Connect the Bread Board power supply to the outlet.
8. With the Remote use the UP (VOL+) and DOWN (VOL-) to control the Stepper Motor to go 360 deg forward and 360 deg backwards.

PROGRAM:

```
#include "Stepper.h"
#include "IRremote.h"

/*----- Variables, Pins -----*/

#define STEPS 32 // Number of steps per revolution of Internal shaft

int Steps2Take; // 2048 = 1 Revolution

int receiver = 6; // Signal Pin of IR receiver to Arduino Digital Pin 6

/*-----( Declare objects )-----*/

// Setup of proper sequencing for Motor Driver Pins
// In1, In2, In3, In4 in the sequence 1-3-2-4

Stepper small_stepper(STEPS, 8, 10, 9, 11);

IRrecv irrecv(receiver); // create instance of 'irrecv'

decode_results results; // create instance of 'decode_results'

void setup()
{
  irrecv.enableIRIn(); // Start the receiver
}

void loop()
{
  if (irrecv.decode(&results)) // have we received an IR signal?
```

```
{
switch(results.value)
{
case 0xFF629D: // UP button pressed
small_stepper.setSpeed(500); //Max seems to be 700
Steps2Take = 2048; // Rotate CW
small_stepper.step(Steps2Take);
delay(2000);
break;

case 0xFFA857: // DOWN button pressed
small_stepper.setSpeed(500);
Steps2Take = -2048; // Rotate CCW
small_stepper.step(Steps2Take);
delay(2000);
break;

}

irrecv.resume(); // receive the next value
}

}/* --end main loop -- */
```