Wireless Communication with Arduino

Created by Thomas Preece for the Technology Volunteers

Warwick Volunteers

Task

1. Create the circuit shown on last page
2. Disconnect battery and the TX and RX pins from the arduino
3. Open the Arduino IDE program on your computer
4. Copy and paste the code below into the Arduino IDE
5. Upload code to arduino.
6. Unplug Arduino from computer, reconnect battery and TX and RX pins
7. Load up BlueTerm application on an android device
8. Click menu within the application and connect, select the bluetooth device available
9. Type 'o' or 'f' to turn LED off or on

Extensions

1. Use all you have learnt to make a remote control robot, using two motors.

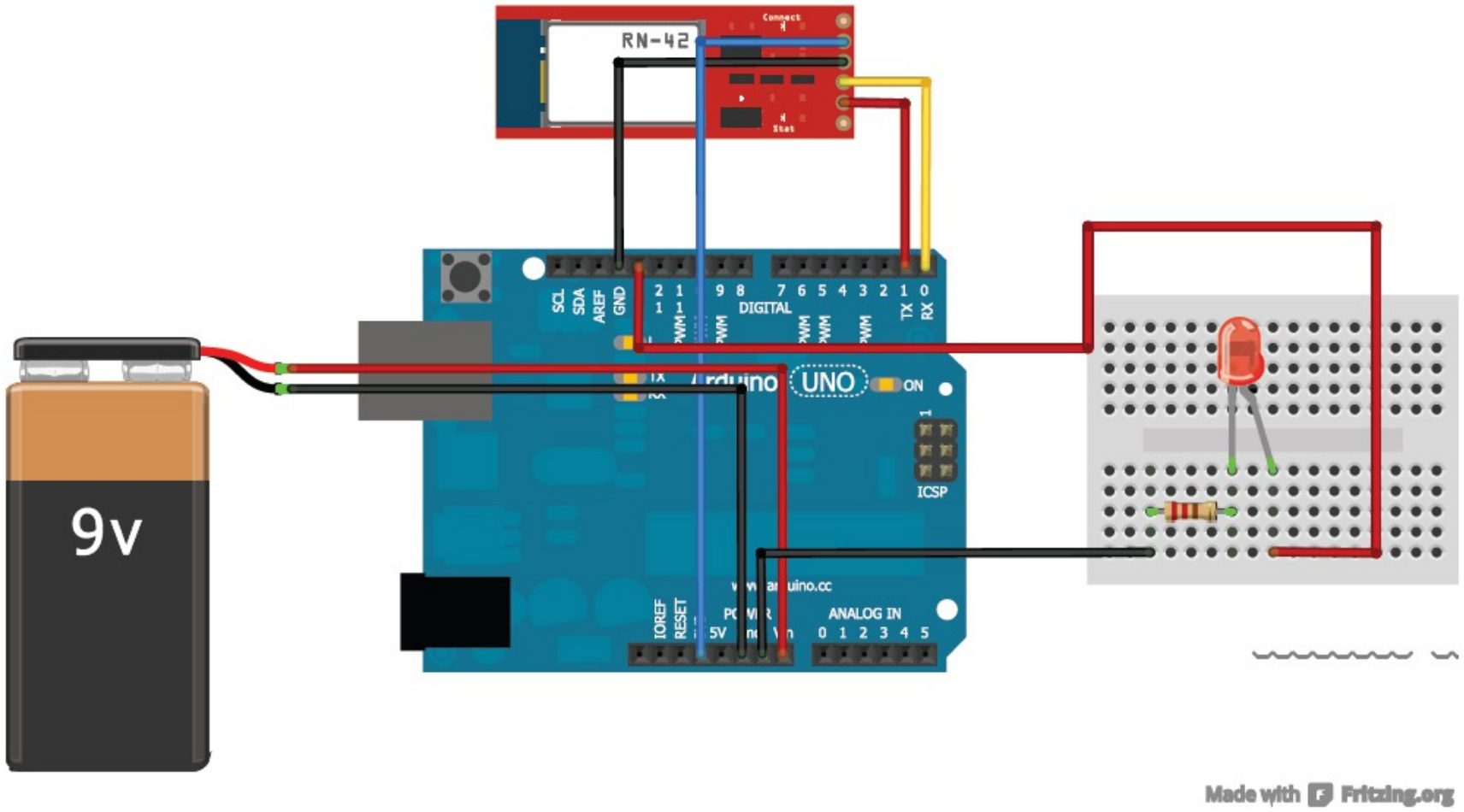
Program Code: (Copy and Paste)

```
char val;         // variable to receive data from the serial port
int LEDPin = 13;  // LED connected to pin 2 (on-board LED)

void setup()
{
  pinMode(LEDPin, OUTPUT);  // pin 13 (on-board LED) as OUTPUT
  Serial.begin(9600);       // start serial communication at 115200bps
}

void loop() {
  if( Serial.available() )       // if data is available to read
  {
        val = Serial.read();
        if( val == 'o' ){
              digitalWrite(LEDPin, HIGH);
              Serial.println("LED ON!");
        }
        if( val == 'f' ){
              digitalWrite(LEDPin, LOW);
              Serial.println("LED OFF!");
        }
  }
}
```

Circuit Diagram



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