

Manual of Bluetooth HC-05 module for Arduino

1. Introduce

Bluetooth is a wireless technology standard for exchanging data over short distances (using short-wavelength UHF radio waves in the ISM band from 2.4 to 2.485 GHz) from fixed and mobile devices, and building personal area networks (PANs). Range is approximately 10 Meters (30 feet).

Specifications

- 2.45Ghz Frequency
- Asynchronous Speed 2.1Mbps (max) .160Kbps
- Security: Authentication
- Profile: Bluetooth Serial Port
- Power Supply: +3.3 Vdc
- Working Temperature: >20C
- Cost : Around INR 300

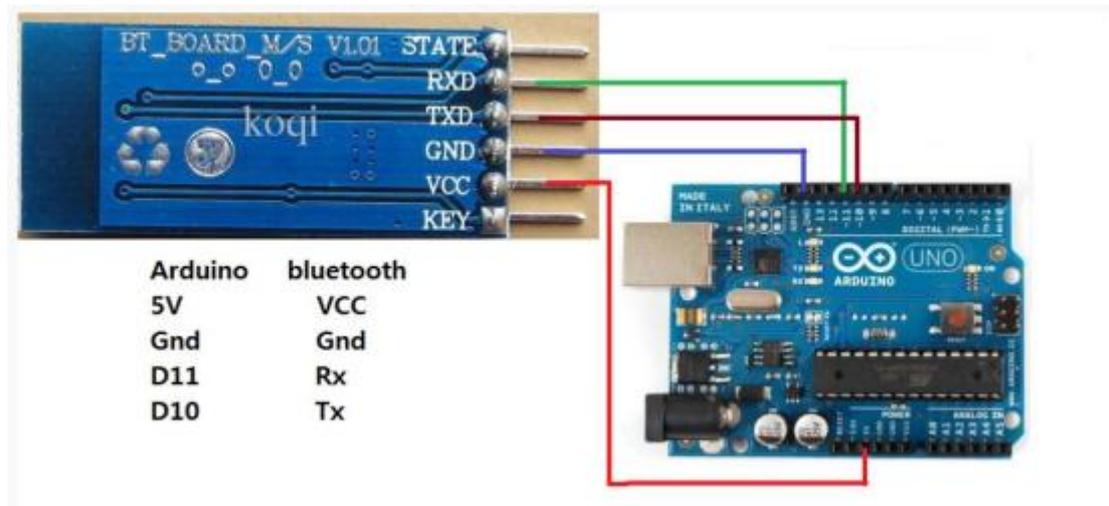
2. Pinout Instruction

This Bluetooth HC-05 module has 6 pinout, their means as below:

Pin	Content
"key"	If brought HIGH before power is applied, forces AT Command Setup Mode. LED blinks slowly (2 seconds)
"Vcc"	Power:3.6v~6V
"Gnd"	Gnd
"TXD"	Transmit Serial Data from HC-05 to Arduino Serial Receive. NOTE: 3.3V HIGH level: OK for Arduino
"RXD"	Receive Serial Data from Arduino Serial Transmit
"STATE"	Tells if connected or not

3. Example

Here is the connection.



Before you connect HC-05 to your computer, you need terminal emulator software to monitor your COM port. Such as TERA TERM.

Here the example code that allows you to control LED connected to D13 To blink on/off , by press # 1 from PC Keyboard the LED blink on , and if we press 0 LED blink off !

Code begin:

```
// This program shown how to control arduino from PC Via Bluetooth
// Connect ...
// arduino>>bluetooth
// D11 >>> Rx
// D10 >>> Tx
```

// you will need arduino 1.0.1 or higher to run this sketch

```
#include <SoftwareSerial.h>// import the serial library
```

```
SoftwareSerial Genotronex(10, 11); // RX, TX
int ledpin=13; // led on D13 will show blink on / off
int BluetoothData; // the data given from Computer
```

```
void setup() {
  // put your setup code here, to run once:
  Genotronex.begin(9600);
  Genotronex.println("Bluetooth On please press 1 or 0 blink LED ..");
  pinMode(ledpin,OUTPUT);
}
```

```
void loop() {
```

```
// put your main code here, to run repeatedly:
if (Genotronex.available()){
BluetoothData=Genotronex.read();
  if(BluetoothData=='1'){ // if number 1 pressed ....
    digitalWrite(ledpin,1);
    Genotronex.println("LED On D13 ON !");
  }
  if (BluetoothData=='0'){// if number 0 pressed ....
    digitalWrite(ledpin,0);
    Genotronex.println("LED On D13 Off !");
  }
}
delay(100);// prepare for next data ...
}
```

Code end