Two-wheel balancing Robot Test

Software

1. Arduino 0022 IDE

http://arduino.cc/en/Main/Software
2. Testing Software

DFrobot.com

3. Testing code: Device_Test and Main_Code

Device_Test.txt can test the hardware connection and main code can run the robot
**Arduino installation guide**

If you are flash player for the Adruino. Please follow this website
If you have any problem please contact us by email: pepin.xia@dfrobot.com

**Upload the codes**

1. Open the first code: Device_Test.txt. Copy and paste it on your Adruino IDE

2. Connect the robot with your computer
ATTENTION: SWITCH 6DOF-SHIELD TO PROG MODE
3. Choose Arduino Uno, and the correct serial port.
4. Upload the code to Arduino Uno R3

Chick this

Hardware Testing

Do not break the USB connection, close IDE, open RobotTester.exe
1. Choose the bode wide (9600) and serial port. Chick Open button

2. Put the robot on the ground. Connect the Battary(14.4v), turn on the switch button on the
3. Click these buttons and follow the following picture to test the robot.

**Correct:**

```
----------Welcome!----------
Balance Robot Sigma_1 Tester v1.0
Design by Kent
2013.2
----------
Baud Rate: 9600
Port: COM4
The Port is open now!
Right Encoder OK
Left Encoder OK
```

**Wrong:**

```
----------Welcome!----------
Balance Robot Sigma_1 Tester v1.0
Design by Kent
2013.2
----------
Baud Rate: 9600
Port: COM4
The Port is open now!
Right Encoder ERROR!
Left Encoder ERROR!
```

1. Check the power, switch and connection
2. Check the + of the encoder and the motor

4. Click the Sensor button:
Chick the Sensor button and check the value of these sensor.

**Main code upload**

Copy and upload the main_code.

Upload

Put the battery on the robot, turn on the switch and change location of the battery made sure the robot can keep balance.
If you want to control the robot

You can use the RobotTester.exe to control the robot.
1. Put the Xbee on the robot like this.

2. Switch the 6DOF to RUN mode. The another Xbee connect with computer and install the software

2. Open RobotTester.exe. Change the Bode wide (9600). Use the U L S R D button to control the robot
Technology support: Pepin
DFRobot

Designed by Kent