

DIY Interactive Whiteboard

for less than \$100

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Hardware setup

Required Hardware list:

Hardware



Descriptions

Bluetooth adapter (\$2.44)

http://www.amazon.com/Tiny-Bluetooth-Adapter-Dongle-Black/dp/B001EBE1LI/ref=pd_sim_dbs_op_2

Infrared pen (\$16.99)

<http://www.iwiiboard.com/buyirpens.html>



http://www.amazon.com/Classroom-Infrared-Remote-Interactive-Whiteboard/dp/B002MC6X46/ref=pd_sbs_op_4

DIY Infrared pen:

http://www.clinik.net/wiimote/wiimote_info_my_pen_2.php



Wii remote controller (\$34.99)

http://www.amazon.com/Nintendo-Remote-Wiimote-Jacket-Xbox-360/dp/B0010ZPZAO/ref=pd_sim_e_2



Microphone holder(\$1.47)

http://www.amazon.com/Musicians-Gear-Clip-Type-Microphone-Holder/dp/B0002E3MS6/ref=pd_sim_MI_7



Microphone stand(\$12.99)

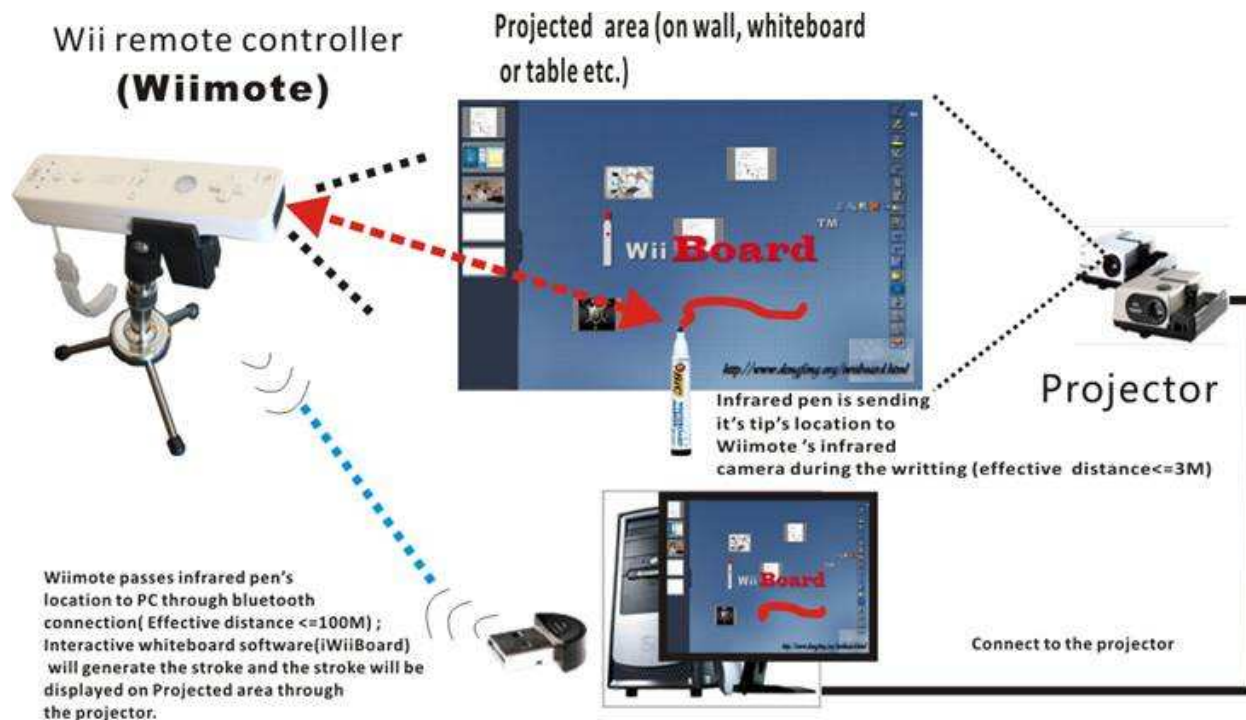
http://www.amazon.com/Musicians-Gear-Die-Cast-Stand-Black/dp/B0018TAITA/ref=pd_cp_MI_3



Projector



PC computer

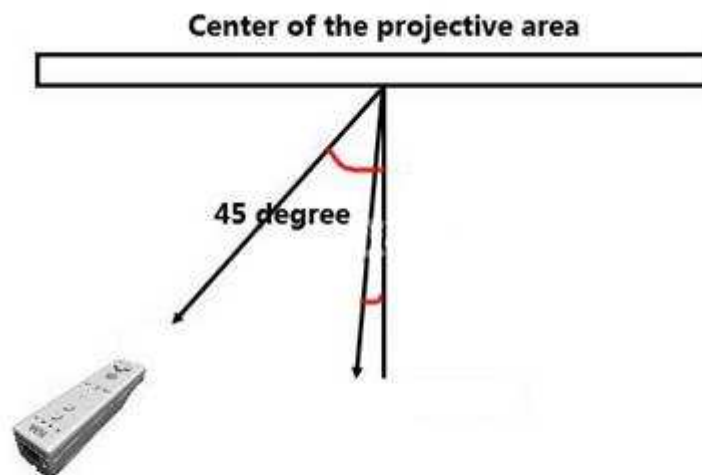
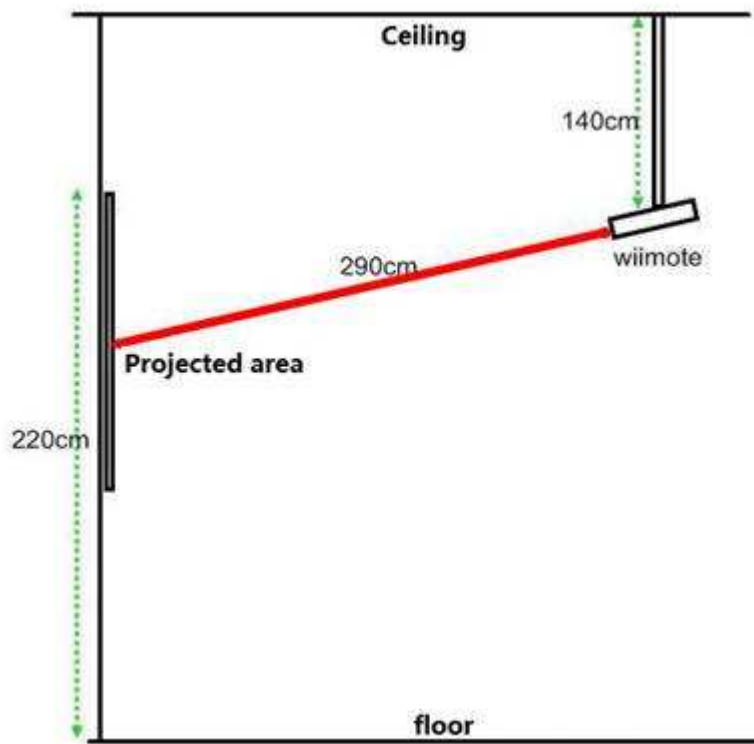


Now let's put them all together and see how they work.

Set up steps

1. Setup your projector properly and connect your projector to your PC computer; we recommend you fix your projector's position, in that case you don't have to do the calibration next time;
2. Setup your Wiimote controller and make the infrared camera size (black rectangle) points to the projective area;

We recommend the distance and position as the following:



(45degree to the projective area)

3. Plug your Bluetooth adapter into your PC
Most of the Bluetooth adapters don't require a driver.
(check the [compatibility list](#) for the wiimote :
http://wiibrew.org/wiki/List_of_Working_Bluetooth_Devices)

Now you've done all the hardware's setup!
For ceiling mounted Wiimote, we strongly recommend you to
read this useful article by [shaggymook](#) .

<http://www.instructables.com/id/Ceiling-Mounted-Wiimote-Whiteboard/>

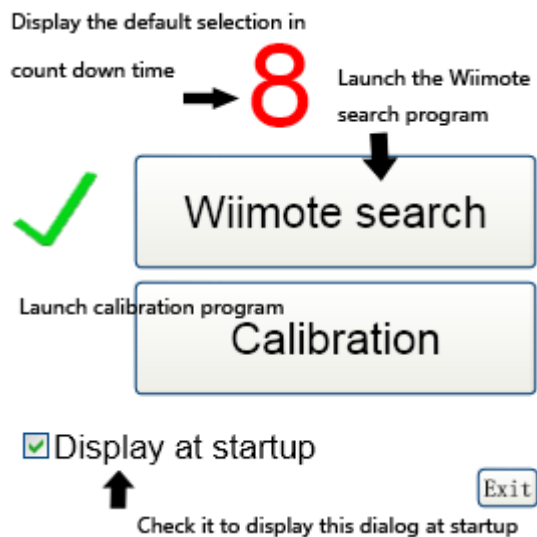
There is a solution for how to replace wiimote's battery with a
3v transformer! The way he handles Button 1 and 2 will save
you a lot of time on wiimote connection configuration.

Software configuration

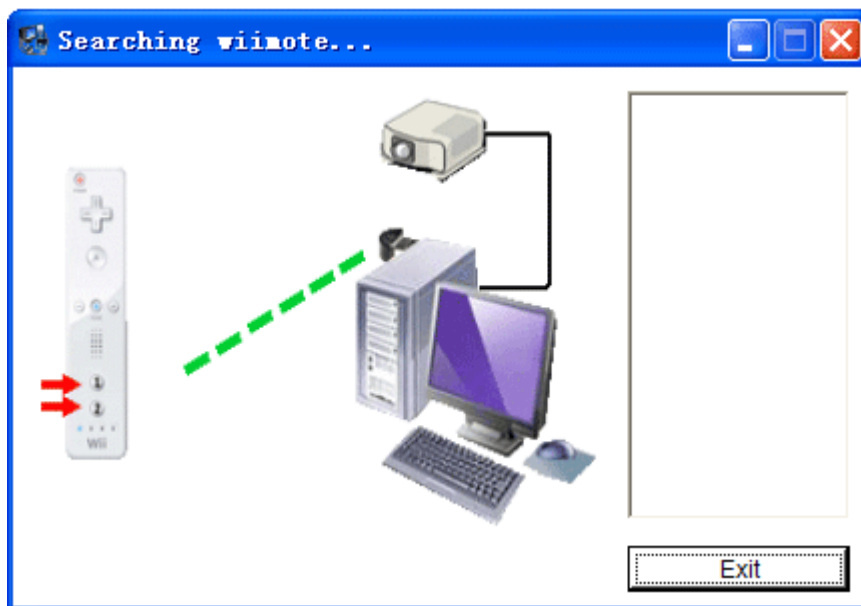
Required software list:
iWiiBoard (Current version: 4.0) \$29.99
Interactive whiteboard software
Publisher: <http://www.iwiiboard.com>



Use iWiiBoard's built-in automated Wiimote connect to search and connect your wii remote



1. Click Wiimote search button to launch Wiimote search program to search and add Bluetooth service for your Wiimote; The search program will be launched in 9 seconds automatically;



The search program will automatically search and add your Wiimote; Please make sure you have your Bluetooth adapter plugged into your PC's usb slot before run the program; after the search is completed, iWiiboard will launch *Calibration* program automatically;

Important:

- **Make sure your computer is bluetooth enabled and your bluetooth hardware is working properly; (check the [compatibility list](#))**
- **As iWiiboard uses *Microsoft bluetooth stack*, you have to remove other bluetooth softwares such as BlueSoleil, Widcomm, Dell/HP/ect Laptop Inbuilt Stack, Toshiba, Logitech Stack from *Control Panel* to avoid conflicts;**
- **Please make sure you use iWiiboard searching your wii remote in your wii remote's DISCOVERY mode. (You have to press 1 and 2 button)**

Calibration [minimize] [maximize] [close]

Wiimote Battery
 121%

Tracking Utilization
 29

Visible IR dots:
 Cursor Control

Smoothing: 4

Calibrate Location (Wiimote A)

Minimizing dialog in 4 seconds

2. Whiteboard calibration

ANY visible IR source will trigger mouse events and manipulate your computer.

Any unintentional IR sources may result in undesired behavior. BE CAREFUL where you point the wiimote.

Click the button "Calibrate Location" or press the A button on the wiimote to begin touch calibration.

Use your IR light pen to touch each crosshair and activate the LED (as if pressing your mouse button to click).

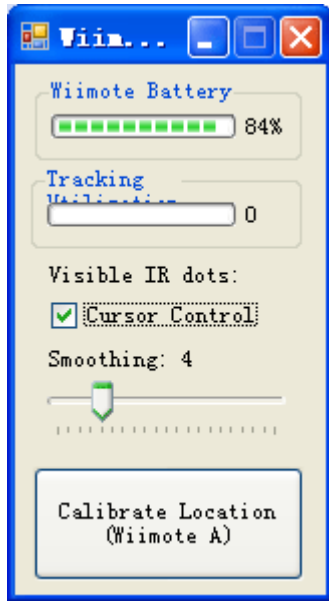
After 4 points are calibrated, the touch screen should be ready to use.

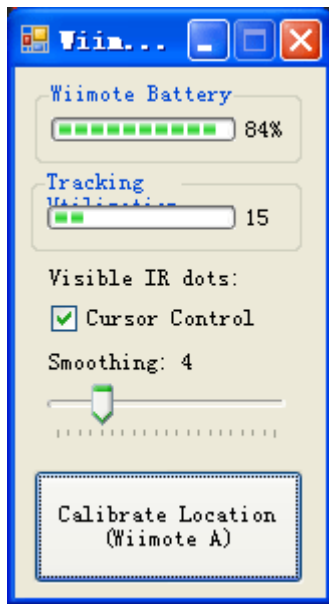
Recalibration (and auto-loading last calibration)

To recalibrate, simply press the calibration button again (note the mouse control may not work yet if the calibration was poor) or press your wiimote A button. When the program is launched, it will reload the last calibration. If your wiimote and display configuration has not changed, re-calibration may not be necessary.

Controls

1. Pressing the A button on the wiimote will activate the calibration once the whiteboard application is running. If the calibration is already running, this will restart the calibration with the 1st point.
2. Pressing the esc will exit the calibration screen.
3. "Cursor Control" will enable or disable mouse control of the stylus
4. "Smoothing" will average the cursor movement over several samples creating smoother lines, but in exchange for slower tracking.





Please check [iWiiBoard User's Guide](#) for iWiiBoard's detail usual manual.