

**BlueRetro**

# Wireless Controller Adapter For PS1&PS2



PS3



PS4



WII & WIIU PRO



8BITDO



RETRO-BIT



XBOX ONE S



XBOX SERIES X/S



SWITCH JOYCON



SWITCH PRO



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This device is a wireless controller adapter for PS1 & PS2 consoles, compatible with the best-selling Bluetooth controllers on the market.

Based on the open source project [\[darthcloud\]](#)

(<https://github.com/darthcloud/BlueRetro>), built-in the popular ESP32 chip.

Support PS3 / PS4 / PS5 / Xbox One S / Xbox Series X|S / Wii / Wii U Pro / Switch Pro / Switch Joycon / 8bitdo / Retro-Bit Wireless Controller, etc.

## Features

- 1) Suitable for PS1/PS2 console.
- 2) Support firmware updatable.
- 3) Almost zero latency, the PS4&PS5 controller less than 6ms of latency using Blueretro.
- 4) Support PS3 / PS4 / PS5 / Xbox One S / Xbox Series X|S / Wii / Wii U Pro / Switch Pro / Switch Joycon / 8bitdo / Retro-Bit Wireless Controller, etc.
- 5) Support Keyboard/ trackball / mouse console accessories.
- 6) The key value of the buttons can be configured through the web bluetooth port of the Google Chrome.

# Instruction

## LED Status

- SYNC led fully on: Bluetooth failure
- SYNC led off: Bluetooth connected successfully
- SYNC led pulsing: Searching wireless controller
- POWER led fully on: Power on

## Buttons

- RESET: Reset Blueretro
- PAIR:
  - 1) Short press:  
Disconnect all Bluetooth devices and start the new pairing.
  - 2) 10 sec hold:  
Restore to default configurations and clear BT pairing keys.



## Pairing with PS4 or PS5 controller

### First time pairing

- 1) Boot up BlueRetro and make sure adapter is in inquiry mode("SYNC" LED pulsing).
- 2) Hold down "Share" button (PS4) or "Create" button (PS5) and "PS" button of the controller simultaneously until the light bar flash blink.



Press and hold "Share" or "Create" & "PS" button  
(Bluetooth Inquiry Mode Enable)

## Successful pairing

- 1) For BlueRetro adapter: The “SYNC” LED light off.
- 2) For PS4 or PS5 controller: The light bar fully on.



## Reconnect

Simply hold down the "PS" button on the PS4 or PS5 controller until the Bluetooth function is activated. Then it will reconnect to BlueRetro adapter automatically.

## Pairing with Xbox One S, Series X|S controller

As of v1.2.1 the minimum required Xbox FW for controller are:

Xbox One S: 4.8.1923.0      Adaptive: 4.5.1680.0      Series X|S: 5.9.2709.0

Update via the [Xbox accessories Win10 app](#).

(<https://apps.microsoft.com/store/detail/9NBLGHH30XJ3?hl=en-us&gl=US>)

For details of the update procedure, please visit on:

(<https://support.xbox.com/en-US/help/hardware-network/controller/update-xbox-wireless-controller>)

### First time pairing

- 1) Boot up BlueRetro and make sure adapter is in inquiry mode ("SYNC" LED pulsing).
- 2) Power on controller via "Xbox" button and then hold the black "SYNC" button until the LED of "Xbox" button flash rapidly.



Press and hold Black "SYNC" button  
(Bluetooth Inquiry Mode Enable)

"SYNC" button

## Successful pairing

- 1) For BlueRetro adapter: The “SYNC” LED light off.
- 2) For Xbox One S, Series X|S & Adaptive controller:  
The LED of “Xbox” button comes to constant.



## Reconnect

Simply hold down the “Xbox” button on the controller to power on. Then it will reconnect to BlueRetro adapter automatically.

## Pairing with Wii & WiiU Pro controller

### First pairing

- 1) Boot up BlueRetro and make sure adapter is in inquiry mode("SYNC" LED pulsing).
- 2) Press red "SYNC" button, then the four lights flash.
- 3) LEDs will stop blinking on controller once pairing is complete.



Press and hold red "SYNC" button  
(Bluetooth Inquiry Mode Enable)

## Successful pairing

- 1) For BlueRetro adapter: The “SYNC” LED light off.
- 2) For Wii & WiiU Pro controller: The first light fully on.



## Reconnect

Simply press any button on the controller. Then it will reconnect to BlueRetro adapter automatically.

# Pairing with Switch Pro & Joycon

## First time pairing

- 1) Boot up BlueRetro and make sure adapter is in inquiry mode("SYNC"LED pulsing).
- 2) Press and hold the "SYNC" button on the top of the gamepad until the indicator on the underside of the pad starts flashing back and forth.

Press and hold black "SYNC" button  
(Bluetooth Inquiry Mode Enable)



## Successful pairing

- 1) For BlueRetro adapter: The “SYNC” LED light off.
- 2) For Switch Pro & Joycon controller: The first light on the left fully on.



## Reconnect

Simply press any button on the controller. Then it will reconnect to BlueRetro adapter automatically.

## Pairing with 8bitdo controller

As of v1.2.1 the minimum required 8bitdo FW for controller are:

SF30: v1.37      Gbros adapter: v2.25

Update via the [8bitdo Win10 app](#).

(<https://apps.microsoft.com/store/detail/9NBLGGH30XJ3?hl=en-us&gl=US>)

For details of the update procedure, please visit on:

(<https://support.8bitdo.com/firmware-updater.html>)

### First time pairing

- 1) Boot up BlueRetro and make sure adapter is in inquiry mode ("SYNC" LED pulsing).
- 2) Power up 8bitdo controller in Xinput mode, then LED 1 will start to blink.  
("Start + X" button or set switch to X) **(Only supported in Xinput mode!)**.

Set switch to X  
(Turn on Xinput mode)



3) Press and hold "SYNC" button until LED starts flashing back and forth.

Press and hold "SYNC" button  
(Bluetooth Inquiry Mode Enable)



## Successful pairing

- 1) For BlueRetro adapter: The “SYNC” LED light off.
- 2) For 8bitdo controller: The first light on the left fully on.



## Reconnect

Simply press start button on the controller. Then it will reconnect to BlueRetro adapter automatically.

## Pairing with Retro-Bit controller

### First time pairing

- 1) Boot up BlueRetro and make sure adapter is in inquiry mode ("SYNC"LED pulsing).
- 2) Power up Retro-Bit controller in Xinput mode ("Home + X"), then LED starts flashing back and forth. **(Only supported in Xinput mode!).**



Press and hold "HOME+X" button  
(Bluetooth Inquiry Mode Enable)

## Successful pairing

- 1) For BlueRetro adapter: The “SYNC” LED light off.
- 2) For Retro-Bit controller: The LED fully on.



## Reconnect

Simply press “Home” button on the controller. Then it will reconnect to BlueRetro adapter automatically.

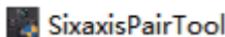
# Pairing with PS3 controller

NOTE: Only official PS3 controllers are supported.

## First time pairing

### Windows

- 1) Download and install [Sixaxis Pair Tool](https://sixaxispairtool.en.lo4d.com/windows).  
(<https://sixaxispairtool.en.lo4d.com/windows>)



- 2) Connect BlueRetro adapter to PC with USB cable to obtain BD ADDR (MAC address).
  - Open (<https://blueretro.io/>) in a chrome web browser. (Windows PC)
  - Navigate to "BlueRetro System Manager".
  - Click on "Connect BlueRetro".  
(Make sure your PC had built-in Bluetooth compatibility or a Bluetooth dongle plugged in.)

- The BD ADDR of your BlueRetro will be displayed when connected. Write it down.

# Bluetooth System Manager

[Index](#) | [View on GitHub](#)

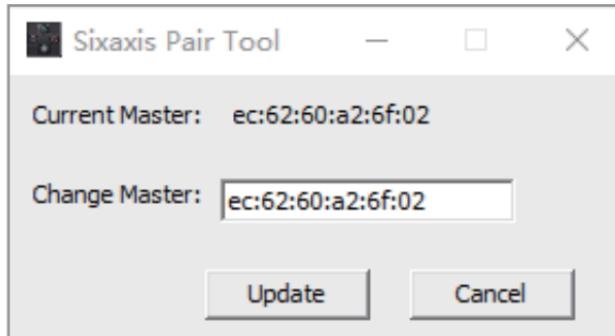
[Connect BlueRetro](#)

*Disconnect all controllers from BlueRetro before connecting for update.*

## Live Output

```
Requesting Bluetooth Device...
Connecting to GATT Server...
Device name: BlueRetro_PS2_6F02
Device id: ZrNNXEBXGN1MpAGHSaC+SQ==
Getting BlueRetro Service...
Get BD_ADDR CHRC...
Reading BD_ADDR...
BD_ADDR: ec:62:60:a2:6f:02
Get Api version CHRC...
Reading App version...
App version: v1.7 psx_external
Init Cfg DOM...
> Bluetooth Device disconnected
```

- 3) Use USB cable to connect your PS3 controller to PC .
- 4) Launch Sixaxis pair tool and enter BD ADDR into the Change Master.
- 5) Click update. (Once the update is complete the controller can be disconnected from the PC.)



- 6) Insert your BlueRetro adapter into your PS1 or PS2 console to boot up BlueRetro. (Make sure adapter is in inquiry mode ("SYNC" LED pulsing)).

7) Hold down the "PS" button on your controller until the four red lights on top of the DualShock 3 flashing.



Press and hold the "PS" button  
(Bluetooth Inquiry Mode Enable)

## Successful pairing

- 1) For BlueRetro adapter: The "SYNC" LED light off.
- 2) For PS3 controller: The four red lights on top of the DualShock 3 fully on.

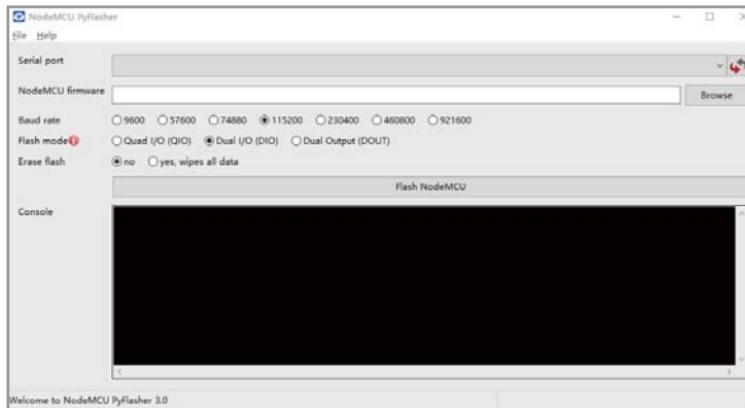


## Reconnect

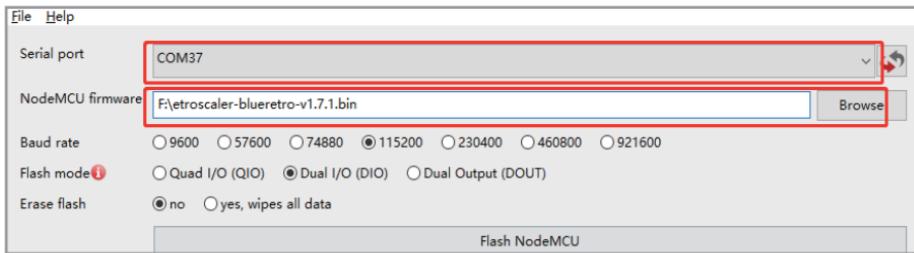
Simply hold down the "PS" button on the PS3 controller until the Bluetooth function is activated. Then it will reconnect to BlueRetro adapter automatically.

## Firmware update

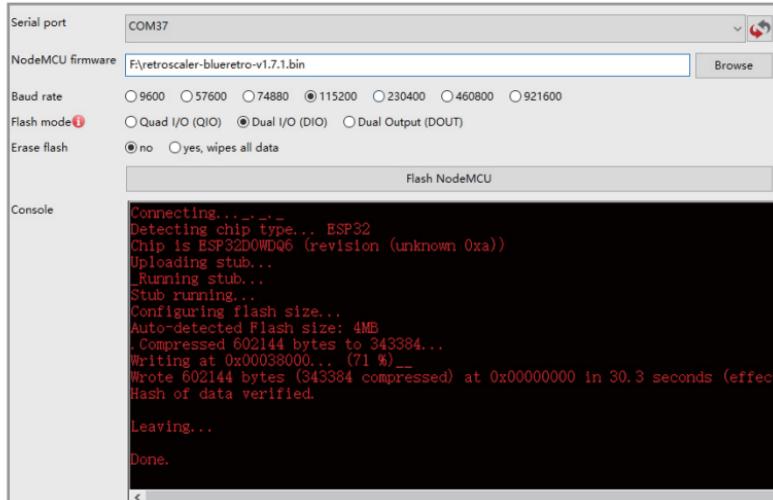
- 1) Download the [NodeMCU-PyFlasher and Blueretro firmware](https://www.retroscaler.com/archives/415).  
(<https://www.retroscaler.com/archives/415>)
- 2) Execute NodeMCU-PyFlasher.exe .



3) Connect Blueretro to computer using micro usb cable. Select proper COM port for your computer. And choose the latest BlueRetro firmware.



4) Click Flash NodeMCU. Then wait for the burning to complete.



Can visit on (<https://www.retroscaler.com/archives/415>) for an alternative method of operating the firmware update.

## Buttons mapping reference

PSX/PS2	PS3	PS4/PS5	Xbox One S/XS	8bitdo/
Left stick left	Left stick left	Left stick left	Left stick left	Left trackpad left
Left stick right	Left stick right	Left stick right	Left stick right	Left trackpad right
Left stick down	Left stick down	Left stick down	Left stick down	Left trackpad down
Left stick up	Left stick up	Left stick up	Left stick up	Left trackpad up
Right stick left	Right stick left	Right stick left	Right stick left	Right trackpad left
Right stick right	Right stick right	Right stick right	Right stick right	Right trackpad right
Right stick down	Right stick down	Right stick down	Right stick down	Right trackpad down
Right stick up	Right stick up	Right stick up	Right stick up	Right trackpad up
D-pad left	D-pad left	D-pad left	D-pad left	Stick left
D-pad right	D-pad right	D-pad right	D-pad right	Stick right
D-pad down	D-pad down	D-pad down	D-pad down	Stick down
D-pad up	D-pad up	D-pad up	D-pad up	Stick up
Square	Square	Square	X	X
Circle	Circle	Circle	B	B
X	X	X	A	A
Triangle	Triangle	Triangle	Y	Y
Start	Start	OPTIONS	Menu	Start
Select	Select	SHARE	View	Back
Analog	PS	PS	Xbox	Home
L2	L2	L2	LT	Analog LT
L1	L1	L1	LB	LB
L3	L3	L3	Left stick click	LG
R2	R2	R2	RB	Analog RT
R1	R1	R1		RB
R3	R3	R3	Right stick click	RG

PSX/PS2	WiiU Pro	Switch Joycon	Switch Pro	Saturn
Left stick left	Left stick left	Stick left (H)	Left stick left	Stick left
Left stick right	Left stick right	Stick right (H)	Left stick right	Stick right
Left stick down	Left stick down	Stick down (H)	Left stick down	Stick down
Left stick up	Left stick up	Stick up (H)	Left stick up	Stick up
Right stick left	Right stick left		Right stick left	
Right stick right	Right stick right		Right stick right	
Right stick down	Right stick down		Right stick down	
Right stick up	Right stick up		Right stick up	
D-pad left	D-pad left		D-pad left	D-pad left
D-pad right	D-pad right		D-pad right	D-pad right
D-pad down	D-pad down		D-pad down	D-pad down
D-pad up	D-pad up		D-pad up	D-pad up
Square	Y	B or D-pad up	Y	X
Circle	A	X or D-pad down	A	B
X	B	A or D-pad left	B	A
Triangle	X	Y or D-pad right	X	Y
Start	"+"	"+" or Capture	"+"	Start
Select	"-"	"-" or Home	"-"	
Analog	Home		Home	
L2	ZL	SL	ZL	Analog L
L1	L	L or R	L	Z
L3	Left stick click	Stick click	Left stick click	Analog R
R2	ZR	SR	ZR	C
R1	R	ZL or ZR	R	Digital R
R3	Right stick click		Right stick click	

For details on how to configure the buttons, please refer to the tutorial:

(<https://www.retroscaler.com/archives/415>)









RetroScaler



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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction