

BlueRetro

Wireless Controller Adapter For Nintendo 64 console



PS3



PS4



PS5



WII & WIIU PRO



8BITDO



RETRO-BIT



XBOX ONE S



XBOX SERIES X/S



SWITCH JOYCON



SWITCH PRO



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BlueRetro

This device is a wireless controller adapter for Nintendo 64 console, compatible with the best-selling Bluetooth controllers on the market.

Based on the open source project [\[darthcloud\]](https://github.com/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) Only suitable for Nintendo 64 console.
- 2) Support Firmware updatable.
- 3) Support Rumble and memory pak (virtual).
- 4) Almost zero latency, the PS4&PS5 controller less than 6ms of latency using Blueretro.
- 5) Compatible Xbox One S/Xbox Series X|S /Wii / Wii U Pro/Switch Pro / Switch Joycon /8bitdo /Retro-Bit PS3/PS4/PS5 Wireless Controller.
- 6) Supports Keyboard/trackball/mouse console accessories.
- 7) The key value of the buttons can be configured through the web Bluetooth port of the Google Chrome.

Instructions

Button Usage

- "BOOT" Button:
 - Under < 3 sec hold: Disconnect all Bluetooth devices.
 - 3sec~6sec hold: Start the new pairing.
 - 10 sec hold: Restore to default configurations and clear BT pairing keys.

SYNC LED Status

- "RED LED" FULLY ON: Bluetooth failure
- "RED LED" Pulsing: Searching wireless controller
- "BLUE LED" FULLY ON: Bluetooth connected successfully



Pairing with PS4 or PS5 controller

First time pairing

- 1) Boot up BlueRetro and make sure adapter is in inquiry mode("SYNC" RED 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" BLUE LED fully on.
- 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/9NBLGGH30XJ3?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" RED 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)

Successful pairing

- 1) For BlueRetro adapter: The "SYNC" BLUE LED fully on.
- 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" RED 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" BLUE LED fully on.
- 2) For Wii & WiiU Pro controller: The first light fully on.



Reconnect

Simply press power 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" RED 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.



Switch Joycon

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



Switch Pro

Successful pairing

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



Reconnect

Simply press power 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" RED 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" BLUE LED fully on.
- 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" RED 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" BLUE LED fully on.
- 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.

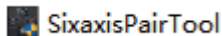
Pairing with PS3 controller

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 the BlueRetro adapter to PC or phone to get BD ADDR (MAC address).
(Make sure your converter is plugged into the console or connected to the USB cable for power)
 - 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.



BlueRetro System Manager

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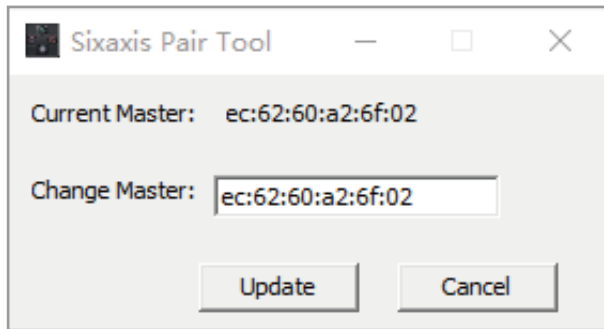
Connect BlueRetro

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 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" BLUE LED fully on.
- 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.

Memory Park introuctions

Step1 :

Plug the blueretro adapter into the Nintendo 64 console and power on the console.
Disconnect the controller that has been linked.

Step2 :

Turn on Bluetooth on your computer and type in the website (<https://blueretro.io>)

Step3 :

Select "BlueRetro Advance config"



Step4:

Click "Connect BlueRetro"

 **BlueRetro Advance config**

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Connect BlueRetro

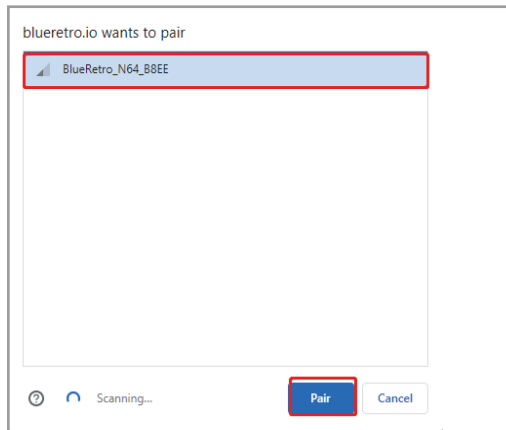


Disconnect all controllers from BlueRetro before connecting for configuration.

Live Output

Step5:

A window pops up to search for your blueretro device. When it's done, select youradapter and click Pair.



Step6:

After the connection is successful, change the parameters as shown in the figure, then save and restart, and you can use memory park in the console.

BlueRetro Advance config
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Connected to: BlueRetro_N64_B8EE (0c:8b:95:62:b8:ee) [v1.7.3 n64_external]

Global Config
 System: Auto
 Multitap: None
 Inquiry mode: Auto
 Memory Card Bank: Bank 1

Output Config
 Select output: Output 1

Mode: ACCESSORIES
 GamePad Memory

Mapping Config
[BlueRetro v1.4+ mapping reference](#) (legacy < v1.3 map [here](#))
 Select Bluetooth device: Device 1

Src label: N64
 Dst label: Default

Src	Dest	Dest ID	Max	Thres	Deadzone	Turbo	Scaling	Diagonal
Stick left	GP: LX Left	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru
Stick right	GP: LX Right	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru
Stick down	GP: LY D	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru
Stick up	GP: LY U	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru
C-Left	GP: RX L	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru
C-Right	GP: RX R	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru
C-Down	GP: RY D	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru
C-Up	GP: RY U	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru
D-pad left	GP: LD L	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru

(FIG. 1)

KB	RP	D	Output	1	100%	50%	0.0135%	Disable	Linear	Passthru
KB: R D	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru			
KB: R LAlt	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru			
KB: R Ctr	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru			
KB: R Shi	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru			
KB: R Alt	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru			
KB: R Wht	Output 1	100%	50%	0.0135%	Disable	Linear	Passthru			

Save

Live Output

```

Requesting Bluetooth Device...
Connecting to GATT Server...
Getting BlueRetro Service...
Get BD_ADDR CHRC...
Reading BD_ADDR...
BD_ADDR: 0c:8b:95:62:b8:ee
Get Api version CHRC...
Reading App version...
App version: v1.7.3 n64_external
Get Api version CHRC...
Reading Api version...
Api version size: 1
Api version: 2
Init Cfg DOM...
Get Global Config CHRC...
Reading Global Config...
Global Config size: 4
Get Output 0 CTRL CHRC...
  
```

(FIG. 2)

Step7:

Enter "BlueRetro N64 controller pak manager", Can export, import, format saves.

 **BlueRetro N64 controller pak manager**

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Connected to: BlueRetro_N64_B8EE (0c:8b:95:62:b8:ee) [v1.7.3 n64_external]

Select BlueRetro controller pak bank: Pak 1 ▼

Read

Format

Write Select .MPK file to write: Choose File No file chosen

Use <https://bryc.github.io/mempak> (by [bryc](#)) to manage content of .MPK files.

Live Output

```
Requesting Bluetooth Device...
Connecting to GATT Server...
Getting BlueRetro Service...
Get BD_ADDR CHR...
Reading BD_ADDR...
BD_ADDR: 0c:8b:95:62:b8:ee
Get Api version CHR...
Reading App version...
App version: v1.7.3 n64_external
Init Cfg DOM...
```

Firmware update

- 1) Plug the blueretro adapter into the Nintendo 64 console and power on the console.
- 2) Disconnect the controller that has been linked.
- 3) Turn on Bluetooth on your computer and type in the website (<https://blueretro.io>)
- 4) Select "BlueRetro OTA FW update" as instructed.



BlueRetro Web config

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[BlueRetro System manager](#)

[BlueRetro Advance config](#)

[BlueRetro Presets config](#)

[BlueRetro OTA FW update](#)

[BlueRetro N64 controller pak manager](#)

- 5) PLUG the blueretro adapter into the console.
- 6) Click "Connect BlueRetro"

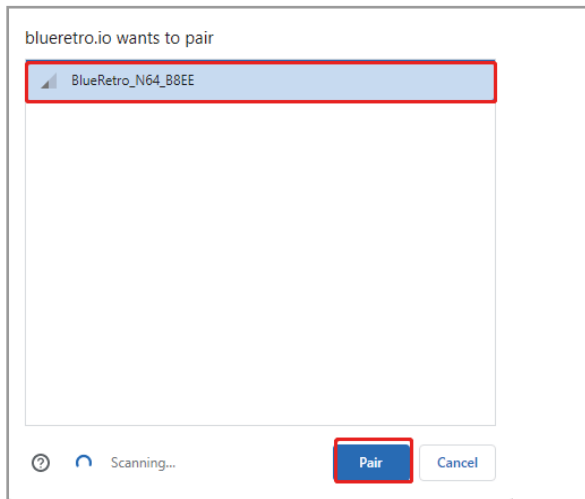
 **BlueRetro OTA FW update**
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Connect BlueRetro

Disconnect all controllers from BlueRetro before connecting for update.

Live Output

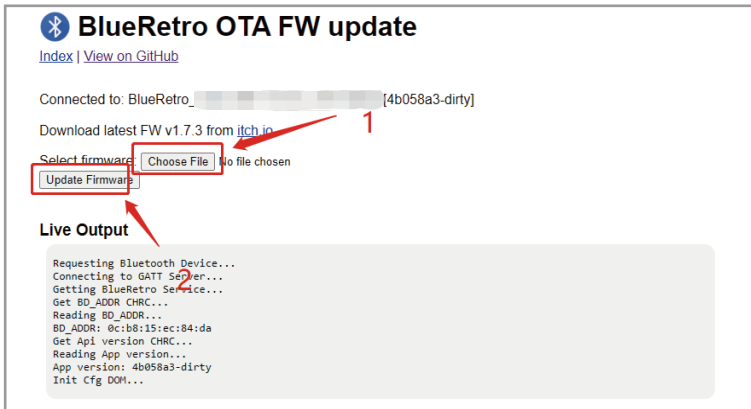
- 7) A window pops up to search for your blueretro device. When it's done, select your adapter and click Pair.



- 8) Once the connection is complete, select the latest firmware, then click the Update button, and the device will start updating automatically.

(the latest firmware: <https://darthcloud.itch.io/blueretro>)

NOTE: (To upload the latest firmware, just select the BlueRetro_N64.bin file)





BlueRetro OTA FW update

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Connected to: BlueRetro [redacted]:2a.73:53:76) [4b058a3-dirty]

Download latest FW v1.7.3 from [itch.io](#)

99%



Cancel

Live Output

```
Requesting Bluetooth Device...
Connecting to GATT Server...
Getting BlueRetro Service...
Get BD_ADDR CHRC...
Reading BD_ADDR...
BD_ADDR: a8:03:2a:73:53:76
Get Api version CHRC...
Reading App version...
App version: 4b058a3-dirty
Init Cfg DOML...
```

- 9) After the firmware update is completed, the connection will be disconnected automatically, and a message will be displayed indicating that the update has been completed. At this time, just switch on the power again and you can use it.

 **BlueRetro OTA FW update**

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Connect BlueRetro

Disconnect all controllers from BlueRetro before connecting for update.

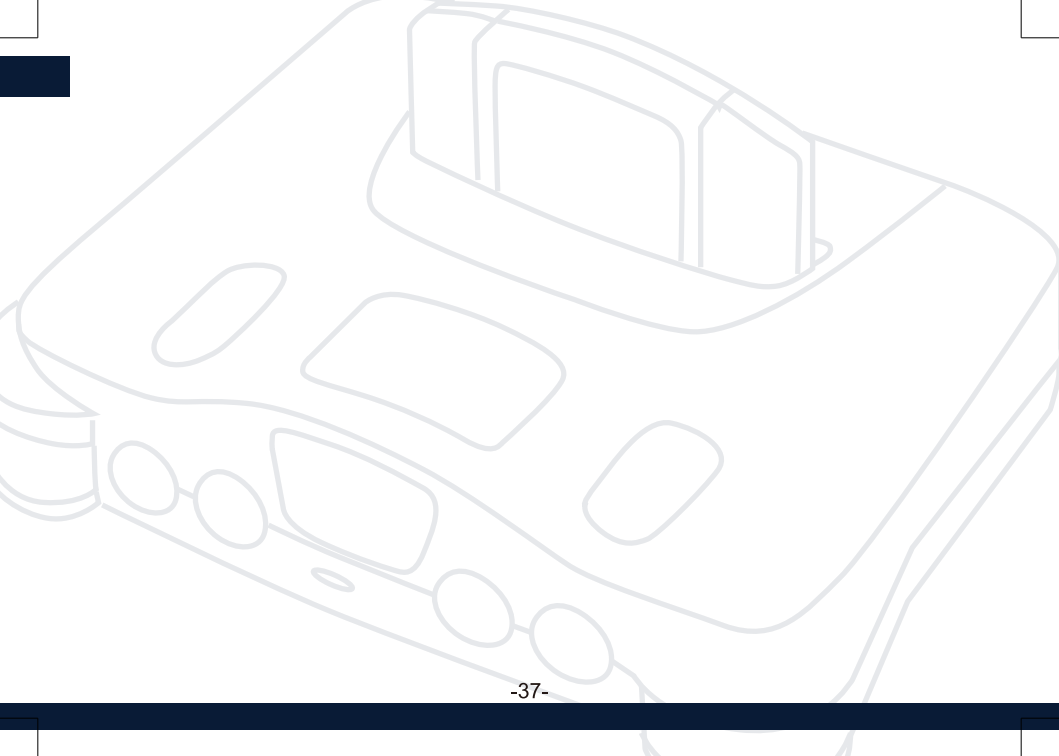
Live Output

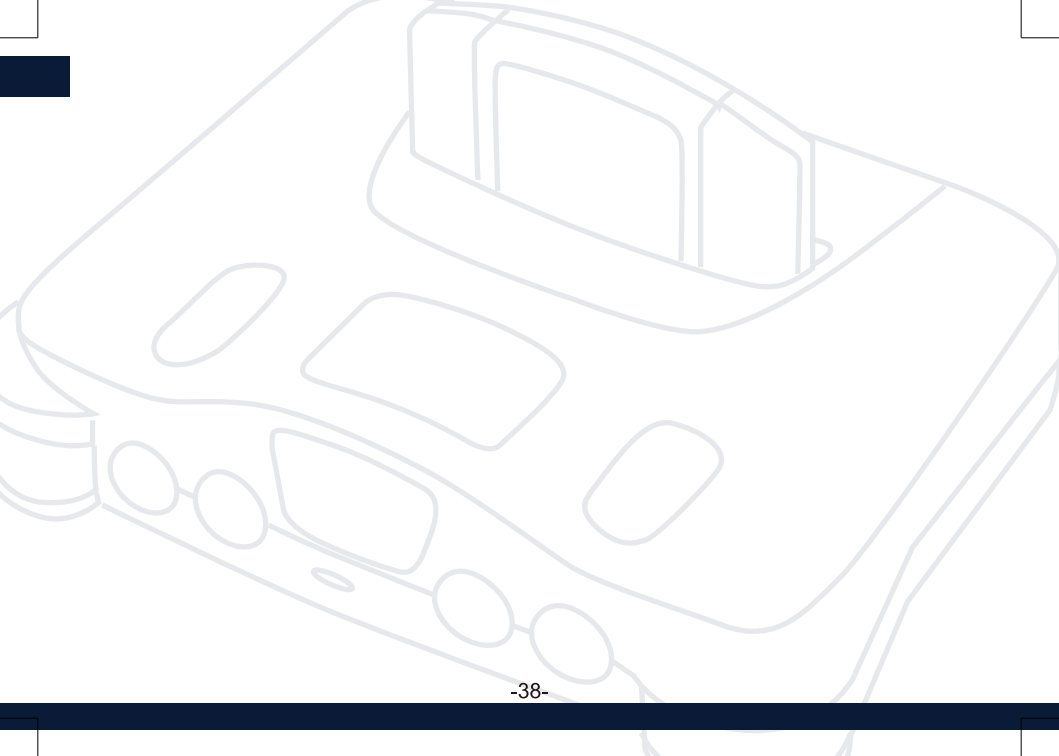
```
Requesting Bluetooth Device...
Connecting to GATT Server...
Getting BlueRetro Service...
Get BD_ADDR CHRC...
Reading BD_ADDR...
BD_ADDR: a8:03:2a:73:53:76
Get Api version CHRC...
Reading App version...
App version: 4b058a3-dirty
Init Cfg DOM
FW upload done. Took: 457.1605999999994 sec
> Bluetooth Device disconnected
```

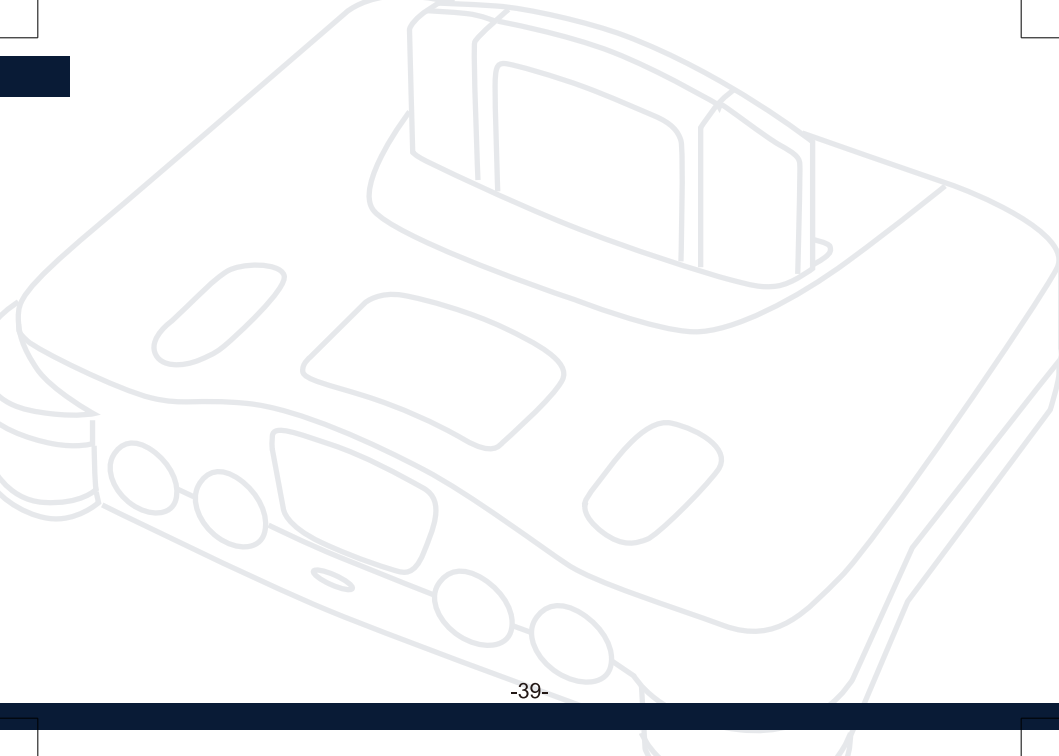
Buttons mapping reference

N64	PS3	PS4/PS5	Xbox One S/XS	Steam
Stick left	Left stick left	Left stick left	Left stick left	Left trackpad left
Stick right	Left stick right	Left stick right	Left stick right	Left trackpad right
Stick down	Left stick down	Left stick down	Left stick down	Left trackpad down
Stick up	Left stick up	Left stick up	Left stick up	Left trackpad up
C-Left	Right stick left	Right stick left	Right stick left	Right trackpad left
C-Right	Right stick right	Right stick right	Right stick right	Right trackpad right
C-Down	Right stick down	Right stick down	Right stick down	Right trackpad down
C-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
B	Square	Square	X	X
C-Down	Circle	Circle	B	B
A	X	X	A	A
C-Left	Triangle	Triangle	Y	Y
Start	Start	options	Menu	START
Toggle Pak	PS	PS	Xbox	Steam
Mem Bank		touchpad	Share	Stick click
Z	L2	L2	LT	Analog LT
L	L1	L1	LB	LB
Z	R2	R2	RB	Analog RT
R	R1	R1		RB

N64	WiiU Pro	Switch Joycon	Switch Pro	8BitDo Pro2
Stick left	Left stick left	Stick left (H)	Left stick left	Left stick left
Stick right	Left stick right	Stick right (H)	Left stick right	Left stick right
Stick down	Left stick down	Stick down (H)	Left stick down	Left stick down
Stick up	Left stick up	Stick up (H)	Left stick up	Left stick up
C-Left	Right stick left		Right stick left	Right stick left
C-Right	Right stick right		Right stick right	Right stick right
C-Down	Right stick down		Right stick down	Right stick down
C-Up	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
B	Y	B or D-pad up	Y	Y
C-Down	A	X or D-pad down	A	A
A	B	A or D-pad left	B	B
C-Left	X	Y or D-pad right	X	X
Start	"+"	"+" or Capture	"+"	Start
Toggle Pak	Home		Home	
Mem Bank			Capture	
Z	ZL	SL	ZL	L2
L	L	L or R	L	L
Z	ZR	SR	ZR	R2
R	R	ZL or ZR	R	R









 RetroScaler

 @RetroScaler

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