

## Wireless Gameboy/GBA Controller v1.0

Wireless Gameboy/GBA Controller ([wirelessgbc.com](http://wirelessgbc.com)) allows you to use your Gameboy, MGB, GBC, GBA, GBA SP, GB Micro, DS and DS Lite as a wireless controller. Play games on your PC, laptop, RPi, etc, use it to play games on a Gamecube, Wii or Super Nintendo wirelessly using any supported Gameboy of your choice.

You will need a cart and receiver as a minimum to get started. Each cart needs its own receiver, you can have multiple receivers per cart. Any receivers/transmitters you purchase will be paired together.

### Receivers available:

- USB receiver – Use on any device accepts a USB HID Joystick/Gamepad interface such as a PC (Windows/Linux), Raspberry Pi (e.g running RetroPie), etc. Users have reported it works on the Game Boy core on the MiSTer and Android through USB OTG. The USB receiver refresh time is 8ms or 125 times a second (tested on Windows 7 & Ubuntu 18.04).
- Gamecube receiver – Plugs into the Gamecube controller port. You could play Gamecube games that only need the B/A buttons but even more useful is if you would like to play Gameboy games on the Game Boy Player or Gamecube games/Virtual Console games the Wii. Buttons have a 1:1 mapping apart from the select button which is mapped to the Y button on the Gamecube (hold select at start-up to map it to the Z button). The Gamecube receiver refresh changes between 8 & 20ms which is controlled by the Gamecube itself. The Game Boy Interface software has a refresh of 1ms.
- Super Nintendo receiver - Plugs into the Super Nintendo controller port. Buttons have a 1:1 mapping. For the Gameboy cart there is no L, R, X, Y button support. Refresh rate is 20ms which is controlled by the Super Nintendo itself. The controller receiver has the 2 resistors to make it the PAL version which I believe should work on all SNES consoles.



### Transmitters available:

- Gameboy TX cart – The keys that are transmitted are: Up, Down, Left, Right, Start, Select, B, A.

Supports the Gameboy, Gameboy Pocket, Gameboy Colour, Gameboy Advance and Gameboy Advance SP.

The range has been tested indoors to be at least 8 metres line of sight. Every 2ms, the keys are checked and a packet is transmitted to the receiver.

- GBA TX cart: The keys that are transmitted are: Up, Down, Left, Right, Start, Select, B, A, L & R.

Supports the Gameboy Advance, Gameboy Advance SP, Gameboy Micro (untested but should work), DS (untested but should work) and DS Lite.

The range has been tested indoors to be at least 4 metres line of sight; you can increase the PPK to improve it slightly but it also depends on how the cart is oriented when playing (there can be some dead zones) and if your fingers/body is close to the wireless module. Every 2ms, the keys are checked and a packet is transmitted to the receiver.

There are some hidden options when booting - check out the How To Use section.

Please note that there is no encryption or security available for this device, while this should pose no issue for home users, it would be possible for an attacker to potentially take over your controls or block your control.

The Gameboy TX cart comes in a generic clear or grey Gameboy cartridge. The GBA TX cart comes in a dark grey GBA cartridge. Each unit is assembled in house and is tested on a Gameboy Advance. The PCB finish is ENIG, Gold fingers (on the edge connector) with a 45 degree bevel to give the maximum life for insertion/removal of the cartridge.

You may hear some buzzing sounds coming from the speaker which is normal, it's just the wireless packets being sent; it seems to sound louder on an original Gameboy.

## How to Use

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If you order the cart and receiver in one order, they will come paired. All you need to do is insert the cart, plug in the receiver, configure your software (if using a USB receiver) and you're good to go.

Under normal operation you should see the LED on the cart and the receiver light up, this shows that data is being transmitted/received. With the latest receiver firmware, it will automatically search for a Gameboy or GBA cart when powered on, you will see it blink once a second or so.

### Software setup examples

BGB: Go to Options > Joypad and configure the game controller.

VBA: Go to Options > Joypad > Configure > 1... and then press the buttons on the Gameboy.

### Hidden Options – Cart

Select button held at boot – You can turn off the screen and save a bit of power.

B button held at boot – Instead of seeing a “.” when any key is pressed, you'll see the actual key.

A button held at boot (GBA TX cart only) – Switch to GB mode (no L & R), useful if you haven't updated your receivers firmware

### Hidden Options – Gamecube Receiver

Down button held when plugged in – Outputs data as if you were pressing the Gamecube DPad. By default, it outputs the data as you if you were moving the analog stick.

Select button held when plugged in – maps the Gameboy select button to the Gamecube's Z button as the GameBoy Interface's default setting for the select button when playing on the GameBoy Player is the Z button.

R button held when plugged in (GBA cart only) – Simulates the L/R buttons being pressed like on the Gamecube controller and if held down for 1-2 seconds it triggers the L/R button pushed. By default, if L/R are pressed, it triggers the L/R buttons.

### Hidden Options – Super Nintendo Receiver

A button held when plugged in – maps Gameboy B key to Super Nintendo Y button and Gameboy A key to Super Nintendo B button.

L button held when plugged in (GBA cart only) – maps GBA L key to Super Nintendo A button.

R button held when plugged in (GBA cart only) – maps GBA R key to Super Nintendo A button.

## Changing RF Channel/Address/Packets per Refresh

If you find that your key presses aren't working well you may wish to change channels or increase the packets per refresh. You would see the USB receiver LED begin to flicker quite a lot if that's the case.

If your cart/receivers aren't synced anymore, you should also follow these steps.

You can also use a single cart with multiple USB receivers by having all USB receivers be on the same channel/address.

1. Power up your Gameboy and hold down the Start button and you will see the configuration screen.



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--- Options ---
> RF Channel: 1
  RF Address: 1
  Pcks/Refresh: 1

Press A to transmit
Power on receiver
Wait 2-3 seconds
Power cycle Gameboy
```

2. Use the cursor keys to change the RF channel, address or packets per refresh (every 2ms) to your liking then press the A button on the Gameboy.

3. Plug in the USB receiver and you should see two blinks of the LED.

4. Power cycle the Gameboy and then you should see the USB receiver LED turn on and stay on.

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