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Bluetooth HID Gamepad Controller for Android

SmarterDevices.org

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1. Introduction

Thank you for choosing our Bluetooth Gamepad Pro App. This manual provides comprehensive instructions on using the app's features to their fullest potential. We tried to make it as intuitive, accessible and gaming friendly as possible.

This app turns your phone into a Bluetooth gamepad which you can connect to your computer or emulator to be used as controller.

We tried to create the lowest latency possible using the available Android APIs. However, please note that due to vendor specific implementations, some devices may not support all Bluetooth capabilities or features offered by the Android API.

Features:

- No additional software or driver required
- Support for Android, Windows, Mac OS, Linux
- 2 Analog XY Controls
- 1 Digital Control
- 10+ Buttons with haptic feedback
- Switch between analog and digital mode
- Adjustable latency
- Gyroscopic input mode with adjustable axis to simulate a wheel
- Overlay graphics for simple button assignments

2. Requirements

Prerequisite: Enable the Bluetooth visibility of your PC or remote device. The app must be capable to read the remote Bluetooth device's name. (Can be found at *More Bluetooth options* menu). There is an Expert

Windows 10 requires the following checkbox to be enabled. Otherwise another Bluetooth connection attempt will be rejected even after a successful initial pairing process. It can be unchecked after a successful consecutive connection.

8 Bluetooth Settings					
Options	COM Ports Hardware				
Discovery					
Allow Bluetooth devices to find this PC					
A	Bluetooth devices will see the name of this PC.				
Notifications					
Alert me when a new Bluetooth device wants to connect					
Show the Bluetooth icon in the notification area					
	Restore Defaults				
	OK Cancel Apply				

Please remove any previous BT device entries from your smartphone on your PC (*in case the device has been paired before*) as the app needs to install a new Bluetooth gamepad profile.

In Windows 10 / Windows 11 it is possible to use the Joystick properties page to test the device input and functionality.

Press "Windows key" + "R" and type "joy.cpl" into the input field or type "joy.cpl" in the windows search area.

🤛 Gamepad properties			\times
Settings Test			
Test the game controller. If the need to be calibrated. To calibr	controller is not functi ate it, go to the Settin	oning properly, it ma gs page.	y
Axes	Z Axis		
+	Z Rotation		
X Axis / Y Axis			
Buttons		Point of View Hat	
	• • •	•	
	OK Can	cel <u>Apply</u>	

If the Gamepad Pro app is working properly the following controls do appear on the Gamepad properties panel.

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3. Pairing

There are basically two separate ways how to connect the Gamepad Pro app to a PC on the first startup. If you have already paired smartphone and PC AND did run the App before you can simply select the PC name in the initial connection configuration dialog screen.

Connection Configuration				
Do you intend to use Gamepad Pro with any of the devices listed below? If Gamepad Pro has already been paired with your smartphone, you can establish a direct connection. Ensure that all Bluetooth adapters are visible. Alternatively, you can skip this step and connect to the Gamepad Pro app from your PC. In this case, if the device is already listed in the paired device panel on your PC, please remove it, as you won't be able to detect a device that is already paired.				
BeatsPillL (30:22:42:01:5A:8A)				
DESKTOP-23QVBVH (00:00:E0:4C:12:DB)				
DESKTOP-SFAD1HK (3C:15:C2:B7:A0:E1)				
οκ				

The second more reliable method is connecting from your PC by scanning for available bluetooth devices.

Wait until the app is asking to scan for the device.

The phone will usually demand to enable visibility in the bluetooth network during the initial pairing phase.

 \rightarrow You can only discover the phone if it is not already paired. In this case you have to delete the entry in the paired bluetooth device list of windows. You should see either a "Gamepad" entry or the bluetooth device name of your phone/tablet.

Selecting the device should bring up the pairing dialog. Here you need to confirm the pin on PC and on the phone.

If everything went fine you should see the connection symbol and the name of your PC on the apps main screen.

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4. Main Screen



Available Functionality

- (1) Corner buttons
- (2) Control buttons
- (3) Start button
- (4) Select button
- (5) Home button
- (6) Gyro movement
- (7) XY control Pad (analog/digital)
- (8) Connection status and settings button
- (9) Gyro active indicator
- (10) XY control pad small (analog/digital)
- (11) XY control pad small (analog)

Currently there are 11 buttons accessible

Single click on the Settings button (8) will open the Settings screen.

Long click will toggle between Analog and Digital output to be used with the XY control pads (7) and (10).

5. Settings Screen



Gamepad pro will store the connected remote device and autoconnect on the next start. If you want to connect to a different device click the connectivity status icon to disconnect.

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6. Steam / Windows games

First step: Check Gamepad is paired and recognized in Windows.





Open "**joy.cpl**" in a command or run window and press the properties button. Make sure that input actions do work.

If "**joy.cpl**" properties are working then Steam can be configured – if not visit the troubleshooting section. If "**joy.cpl**" is working the device connected successfully.

Open the Steam software, goto Settings, Controller. Controller Name **Gamepad** should be already discovered and present in Steam.

If so go to **Test Device Inputs** and press **Setup Device Inputs** to setup the controller layout – if not you can try activate generic controller support or run steam in Administrator mode.

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Now configure the Gamepad for Steam and Skip non existing buttons by pressing A.

Finally the movements should match with the controller image. The layout gets automatically stored and we are ready to start. (*Controller Setup in Steam has only to be performed once*)

7. Troubleshooting: Device cannot connect

Possible solutions:

- 1. End the App. Disable Bluetooth, enable Bluetooth. Restart.
- Try to disconnect by clicking the connection status icon ✗ on the bottom of the Settings page and reconnect if the remote system is available in the menu.
 You need to confirm the visibility permission if it is requested.
- 3. Unpair the device, check that the Bluetooth visibility is enabled on PC (and phone) then try to pair again.
- 4. Before pairing delete any previous connection to the device persisting on the PC, or from other present devices in case the device has been connected before.
- 5. Uninstall the App turn Bluetooth Off, turn Bluetooth On, Restart phone. Reinstall the App.
- 6. A bluetooth device entry for the PC must be created in the list of paired devices on the smartphone/tablet. You can also try to manually pair the PC to the smartphone from within the smartphone's bluetooth Interface once the App was started. Within the PC Bluetooth settings a paired device entry has to be deleted prior to pairing the Bluetooth Gamepad.
- 7. Don't forget to activate Bluetooth visibility on the remote PC Bluetooth adapter available within "More Bluetooth options". Otherwise the device might have issues reconnecting after a successful initial pairing.

Bluetooth & other devices	
+ Add Bluetooth or other device	Related settings Devices and printers
Bluetooth	Sound settings
On On	Display settings
Now discoverable as "DESKTOP-CDD4FV9"	More Bluetooth options
Mouse, keyboard, & pen	Send or receive files via Bluetooth
GalaxyS9 Connected	

- 8. As the Bluetooth API implementation are in parts vendor specific there might exist few devices which are unsupported and do not work. For development we have been using Samsung, Oppo and even devices with lineageOS, on several different Android versions for testing.
- 9. Older Bluetooth classic devices can only handle 1-4 active peripheral connections and devices in parallel. If multiple Bluetooth devices are already in use these might interfere with the Bluetooth Gamepad functionality.
- 10. Devices in use should be capable of at least Bluetooth Version 4.2 (LMP 8+)
- 11. Download HID Device Test if available for your phone and verify support. https://play.google.com/store/apps/details?id=com.rdapps.bluetoothhidtester
- 12. Always verify if "joy.cpl" properties do work in that case windows recognized the Gamepad controller successfully.

Location Permission

The Bluetooth permission request may ask for location permission on Android13+. There are Bluetooth devices which can be accessed which do evaluate the current or a relative location, therefore Android 13 is showing a default warning which was not present in prior versions. No location is requested by the Gamepad Pro app.

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Windows Expert knowledge:

Press Windows+R Key to open the Run Window

(Shortcuts do also work in a command window)



- Type joy.cpl in the Run Window to open the Game Controller Window
- Type bthprops.cpl to open the Bluetooth Device Window
- Type control in the Run Window to open the System Control Panel
- Type devmgmt.msc in the Run Window to open the Device Manager

You can remove Bluetooth devices directly within Windows Device Manager

Warranty disclaimer:

The services and content are provided "as is" without warranty of any kind whether express or implied. In case of errors or improvements you may use the following email contact <u>support@smarterdevices.org</u> please use Bluetooth Gamepad Pro as subject.

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