GCW Help

Game Controller Wedge Description

By Jim Luther

[https://github.com/jamjolu/Game-Controller-Wedge <https://github.com/jamjolu/Game-Controller-Wedge>](https://github.com/jamjolu/Game-Controller-Wedge)

GCW is a tool for creating and executing macros that are triggered by pressing game controller buttons. It is very much like Joy2Key <https://joytokey.net/en/> or XPadder <https://xpadder.com/>, but it is easier and has very capable macro abilities. With GCW you type a macro into a text field, and you are ready to try it.

Is GCW useful for gamers? Maybe not. I think GCW responds too slowly for many gamers. But, it can do a lot of typing, clicking, program launching (and more) with a single button press which could be valuable to those who wish to minimize the effort to complete repetitive tasks, or as a tool for making activities more accessible and less tiring. It is possible that some gamers may find it useful.

With GCW you can compose up to 12 macros that you can save as a "profile" that you name. You can create as many profiles as you like.

Built-in commands allow you to run programs, open folders and known file types, open web pages, toggle through open windows, open active windows, and change profiles, click targets, and more.

GCW is based on Autohotkey V1.1 <https://www.autohotkey.com/>. The well known Autohotkey (AHK) scripting tool offers means for emulating keyboard and mouse actions, interacting with windows, and much more. It is frequently used to automate repetitive computer tasks.
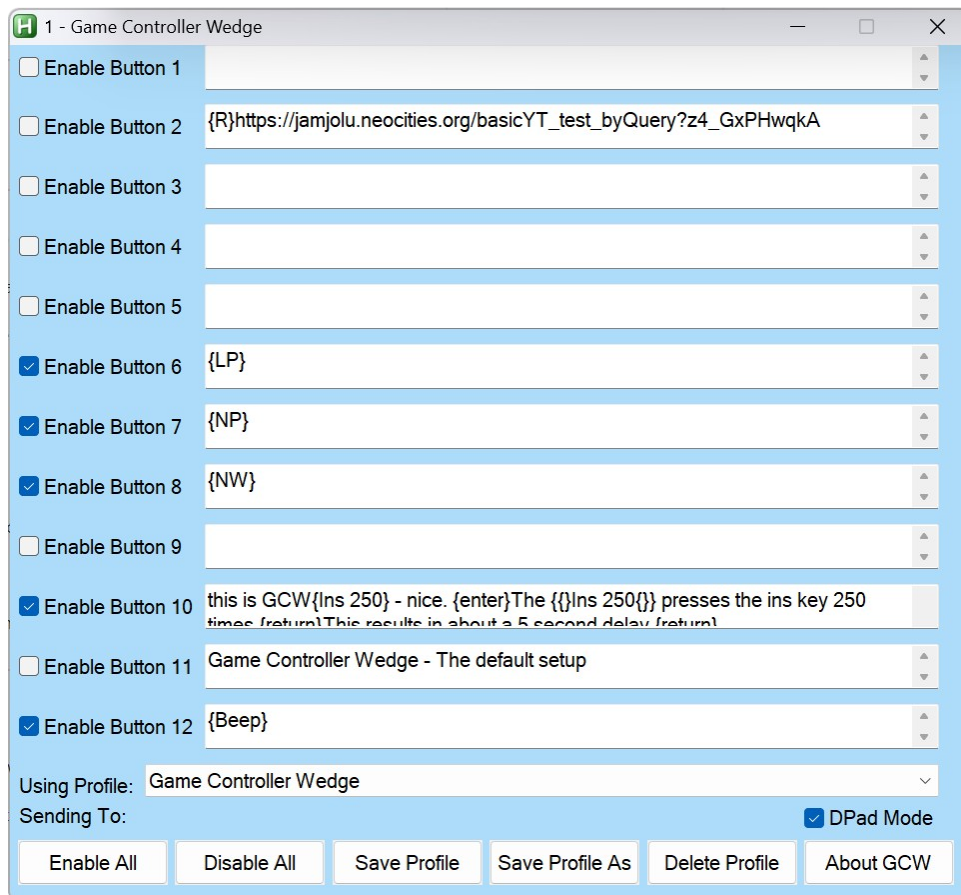
Please keep all the materials in the GCW folder together - if you don't, you will experience a ton of error messages!

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GCW Windows:

This is the main GCW window where you define your macros, or issue commands.

Game Gontroller Wedge Help

file:///C:/Users/jamjo/OneDrive/Desktop/gcw/Game-Controller-Wedge-...

GCW supports up to 12 macros you define which are triggered by joystick or gamepad buttons 1 through 12.

This smaller Test Joy Buttons window lets you test your macros/commands without a game controller. This window, when open, sits on top of other windows.

Use the Game Controller Control Panel in Windows to see how your game controller buttons are mapped. (Click the Properties button.)
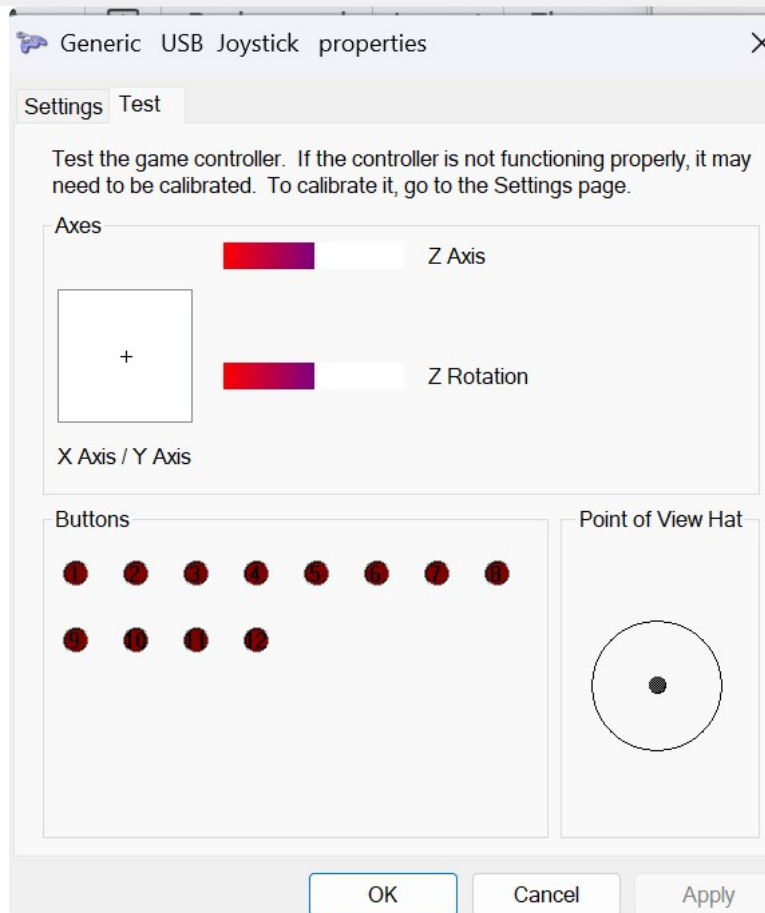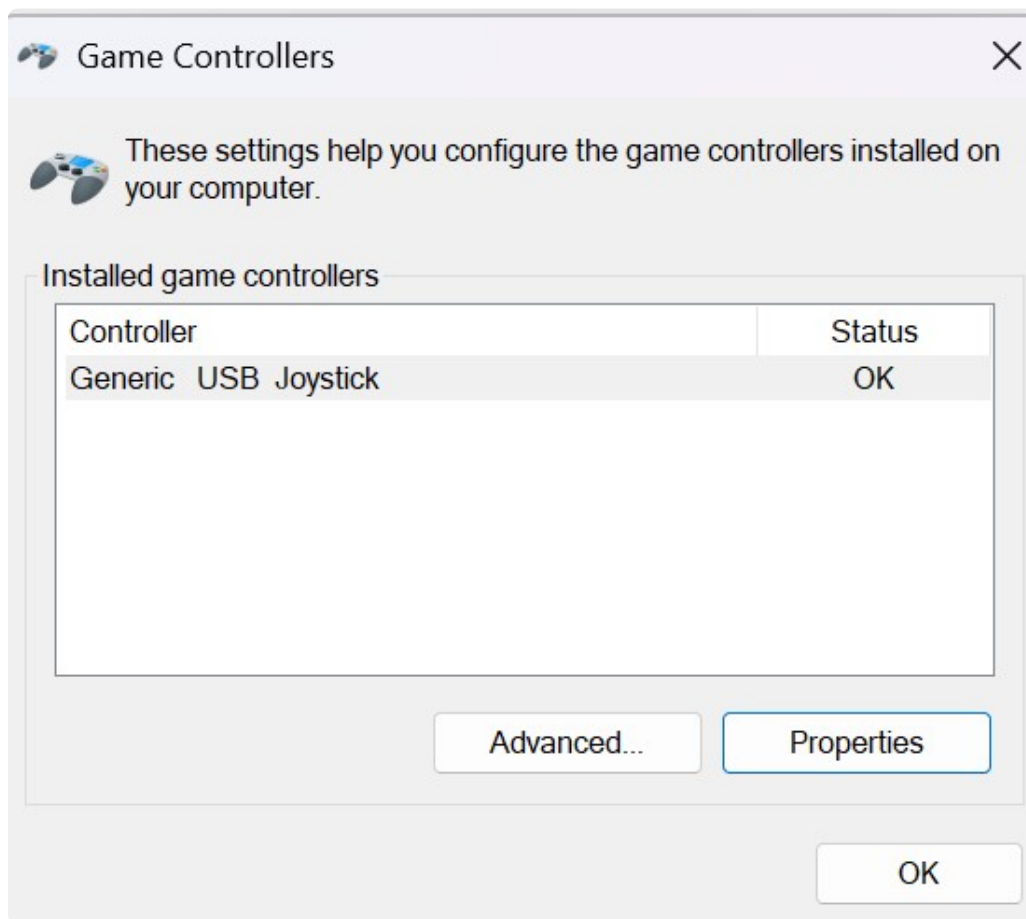
A screen capture of the main pop-up for the Windows Game Controller Control Panel

and an image of the Properties pop-up associated with the Game Controller control panel in Windows

You can see those details and test your buttons in the Properties view.

Another helpful tool is this AutoHotKey script that can give you additional information about a game controller including *which game controller number your controller identifies as:*
https://www.autohotkey.com/docs/v1/scripts/index.htm#ControllerTest
<https://www.autohotkey.com/docs/v1/scripts/index.htm#ControllerTest>
(Click "ShowCode". Click the "Download Code" button in the upper right corner of the box that opened.
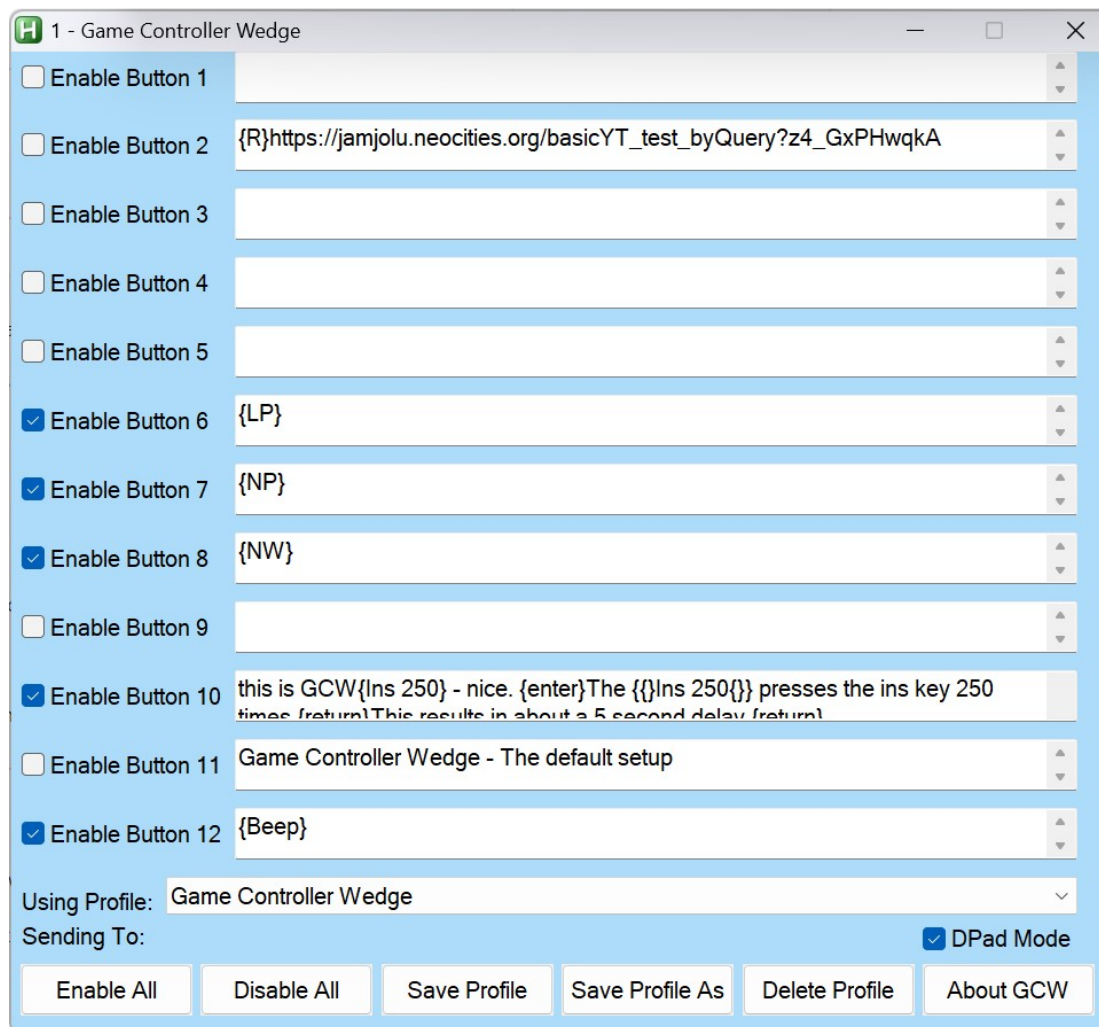This is an AutoHotKey V1.1 script.)

Why use game controller buttons to launch macros?

Because game controller buttons are unlikely to cause things to happen in typical Windows applications - other than games.

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More about the GCW Windows

- You can enable/disable any or all game controller buttons for this profile using the **Enable check boxes**, or the **Enable/Disable All** button.
- You can save changes you make with the **Save Profile** button. *Be sure to Save* any changes you want to keep before loading a new profile or exiting GCW
- You can create a new profile with the **Save Profile As** button.
- You can remove an entire profile with the **Delete Profile** button - except the default Game Controller Wedge profile
- You can select any profile from the **Using Profile:** drop down menu, or via the {GP} Special Command
- The **Sending To:** label (most times) shows the title of the application window that will receive your macros
- **About GCW** opens this help file
- The **GCW** button in the Test Joy Buttons window brings the main GCW window

into the foreground

The **DPad Mode** checkbox permits users to additionally employ the D-Pad on a game controller to activate macros 9, 10, 11 and 12 as: Up, Right, Down and Left on the DPad respectively. This allows game controllers with fewer than 12 buttons to have more macro activation options. The "POV hat" as it is shown in the Windows Game Controllers control panel is mapped to the D-pad on some game controllers. On other gamepads, you may need to activate a special mode to get it to work with GCW. The **DPad status** is shown in the "Test Joy Buttons" window where:

- **DPad Not Active** means that the DPad Mode box is unchecked.
- **No Controller Present** means DPad Mode is checked, but no there is no game controller plugged in that will work with this version of GCW.
- **DPad Status: -1** means DPad Mode is checked, and no direction button is pressed.**DPad Status: 0** means the DPad Mode is checked, and the Up button is pressed.
- **DPad Status: 9000** means DPad Mode is checked, and the Right button is pressed.
- **DPad Status: 18000** means DPad Mode is checked, and the Down button is pressed.
- **DPad Status: 27000** means DPad Mode is checked, and the Left button is pressed.

GCW responds only to Up, Right, Down and Left. button presses on the DPad. Buttons 9, 10, 11 and 12 remain active regardless of DPad Mode.
If you make a change to your DPad Mode setting and you want the change to persist between sessions, make sure to press Save Profile.

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And now there are 2 GCWs: one for Controller 1, and one for Controller 2

1 - Game Controller Wedge

- ☐ Enable Button 1
- ☐ Enable Button 2   {R}https://jamjolu.neocities.org/basicYT_test_byQuery?z4_GxPHwqkA
- ☐ Enable Button 3
- ☐ Enable Button 4
- ☐ Enable Button 5
- ☑ Enable Button 6   {LP}
- ☑ Enable Button 7   {NP}
- ☑ Enable Button 8   {NW}
- ☐ Enable Button 9
- ☑ Enable Button 10   this is GCW{Ins 250} - nice. {enter}The {{}Ins 250{}} presses the ins key 250 times {return}This results in about a 5 second delay {return}
- ☐ Enable Button 11   Game Controller Wedge - The default setup
- ☑ Enable Button 12   {Beep}

Using Profile: Game Controller Wedge

Sending To: ☑ DPad Mode

| Enable All | Disable All | Save Profile | Save Profile As | Delete Profile | About GCW |

2 - Game Controller Wedge

- ☑ Enable Button 1   {GCW}
- ☐ Enable Button 2   hello world 9.5
- ☐ Enable Button 3
- ☐ Enable Button 4
- ☐ Enable Button 5
- ☑ Enable Button 6   {LP}
- ☑ Enable Button 7   {NP}
- ☑ Enable Button 8   {NW}
- ☐ Enable Button 9
- ☑ Enable Button 10   this is GCW{Ins 250} - nice. {enter}The {{}Ins 250{}} presses the ins key 250 times {return}This results in about a 5 second delay {return}
- ☐ Enable Button 11   Game Controller Wedge - The default setup
- ☑ Enable Button 12   {Beep}

Using Profile: Game Controller Wedge

Sending To: ☑ DPad Mode

| Enable All | Disable All | Save Profile | Save Profile As | Delete Profile | About GCW |

1 - Test Joy Buttons

| Joy1 | Joy2 | Joy3 | Joy4 | Joy5 | Joy6 | Joy7 | Joy8 | Joy9 | Joy10 | Joy11 | Joy12 | GCW |

Sending to: 1 - Game Controller Wedge   DPad Status: -1

2 - Test Joy Buttons

| Joy1 | Joy2 | Joy3 | Joy4 | Joy5 | Joy6 | Joy7 | Joy8 | Joy9 | Joy10 | Joy11 | Joy12 | GCW2 |

Sending to: 2 - Game Controller Wedge   DPad Status: -1

Controller 1's settings and test buttons are in blue windows as shown here, Controller 2 windows in yellow

Launch GCW.exe or GCW.ahk for Controller 1

Launch GCW2.exe or GCW2.ahk for Controller 2

The exe versions, GCW.exe and GCW2.exe, have blue and yellow icons respectively.

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Anatomy of a Macro

GCW uses **AutoHotkey** and requires that you adhere to the AutoHotkey conventions for the **Send** command (at AHK site) <https://www.autohotkey.com/docs/v1/lib/Send.htm>

An Example: **^p{enter}**

This example opens the print dialog using the Ctrl-p key combo in many programs, followed by the Enter key which is a special character. You can also use {return} for the Enter key

Pressing and holding the Control key for the key that follows is denoted by the ^ character. Keys like Alt, Shift, Ctrl and the Windows key are referred to as modifier keys.

Special characters like tab, space (at the end or beginning of a macro), or backspace all need to be enclosed in braces as in: {left} for left arrow. Or, **{F11}** for the F11 key. **See more about including special characters in your macros here** <https://www.autohotkey.com/docs/v1/lib/Send.htm#keynames> **at the AHK site <https://www.autohotkey.com/docs/v1/lib/Send.htm#keynames>.**

Here is the list of modifier keys: (**More about modifier keys here at the AHK site**

<https://www.autohotkey.com/docs/v1/lib/Send.htm#Parameters>)

= Windows key

! = Alt

^ = Control

+ = Shift

You can combine modifiers as in: **^!{down}** which reads as Ctrl-Alt-(down arrow). This combo may turn your display upside down on some Windows computers! **^!{up}** can restore your display.

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More macro examples

A name and address fill in: **Fred{tab}Flintstone{tab}345 Cave Stone Rd.{tab}Bedrock{tab}NY{tab}12345{enter}**

You can press a special character key multiple times by adding a number to the special character: **{tab 3}** (3 tabs).

Use the insert key to create around a 3 second delay: Now**{ins 150}** Later (***Please don't use the Ins key like this**, unless you always use an even number*. The Ins key toggles between inserting text at the cursor position, versus typing over existing text at the cursor position - which users may find disconcerting. Alternatively, there is a less troublesome **{SLEEP}** command covered in the next section to introduce delays.)

GCW sends keys faster than you can type, so delays may help a program to catch up to your macro.

You can click at particular screen coordinates: **{click 150, 600}**

You can do other {click... commands} as well as seen at the AHK site.
<https://www.autohotkey.com/docs/v1/lib/Click.htm#Remarks>

To help you to determine your cursor position, GCW has a built-in hotkey sequence: **Alt-m** opens a tooltip note with the coordinates. The coordinates are also copied to the clipboard. Use **Ctrl-Alt-m** to hide the tooltip note.

Raise the volume a little bit: **{volume_up}**

Select the browser back button: **{browser_back}**

Again, there is much more about what you can send can be found here at the AHK site <https://www.autohotkey.com/docs/v1/lib/Send.htm>

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Special Commands

In addition to the standard AHK special characters, GCW offers its own special commands.

Aliased AutoHotkey Commands:

{R} - invokes the AHK Run command. The {R} command can open websites, programs, known file types and folders as long as you follow the {R} with a correct file path, or URL. Try this example: **{R}https://duckduckgo.com/**

{SLEEP} - Allows you to pause GCW activity to allow for programs to open, and other

processes to complete before reactivating GCW to continue sending macro text or commands. To do this, follow the {SLEEP} command with a number representing milliseconds. So, **{SLEEP}5000** would pause GCW activities for 5 seconds.

{AW} - Activate an open Windows window. This command allows you to jump to a window based on any text that appears in the title bar of a window. To do this follow the {AW} command with some text that matches text in the window title. The text does not have to be the complete title, just any part of it. For example, **{AW}Calc** will activate the Calculator app (if it was open). Just be sure that the text is unique to the window you hope to activate.

{S} - Suspend other GCW buttons until the macro for this button has finished. Place this special command at the beginning of your macro and it will prevent other macros from executing concurrently.

{BEEP} - Makes a short toot sound.

GCW Commands for listing existing profiles and windows:

{LW} - Displays a list of open windows.

{LP} - Displays a list of your profiles.

GCW Specific Window Management

{TJB} - Opens the Test Joy Buttons window if it was dismissed or minimized

{GCW} - Brings the main GCW window into the foreground

GCW Commands for Profile and Windows Navigation:

{GP} - Load a named profile where the exact profile name appears directly after the {GP} command. For example, **{GP}Game Controller Wedge** will load the default

profile. You could use this command to make a table of contents profile that links to other profiles.

{Home} - Return to the default Game Controller Wedge profile

{NP} - Loads the next profile on your list in the order that is shown in the {LP} command

{NW} - Brings the next open Windows window into the foreground - ready to receive macros. This works, but not always in the order you expect or hope for.

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Combining Commands and Macro Strings!

You can combine special commands and macro strings in any of the 12 macro slots by separating the commands and/or macros with the pipe character: | Commands and macro strings can be combined in any order, and you can include as many as you want (I really don't know for sure what the limit is.) The actions will be carried out in left to right order, triggered by a single button press.

For example:

{S}|{R}Calc|{SLEEP}1000|{AW}Calc|55{+}66{enter}

You can interpret this combo macro example as:
First, it prevents other macros from interfering with this one. Then it opens the Calculator app, waits 1 second, makes sure the calculator window is active, and finally it requests the result of 55 + 66.

Note that the + sign has to be enclosed in braces because it is also a *special modifier* character.

Add a comment to your macro! - You could combine macros as in: **^w|{--Close browser tab}** This macro closes the current browser tab and is followed by a pseudo command that acts as a comment. In this case, the pseudo command is ignored because it is not a known special command, special character, or special modifier. The double minus sign is not used in special commands and acts as a visual cue.

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Limitations / Contact

GCW and AutoHotkey can emulate keyboard and mouse actions and send them to most active windows, or the Windows operating system. But there are applications that it will not be able to interact with at all, or not very well.

In particular, in Windows 11 the new Notepad behaves really weirdly. If you send text to it from GCW or other AutoHotKey scripts, it frequently misses some of the sent characters. This is a quirk in Notepad I believe is related to the AI functions it now offers. I believe the AI function periodically interrupts the stream of inputs from AutoHotKey to Notepad. You can always download any one of the many Notepad alternatives to test your GCW macros.

Also, I was unable to use the {click} command to reactivate Voice Access in Windows 11 in "Microphone off" mode. Nor would GCW respond at all while Voice Access was "Listening". It seems that Voice Access will totally preempt GCW (and AutoHotKey). You can find out more at this AutoHotKey community post if you are having issues controlling or sending something to a window with GCW <https://www.autohotkey.com/boards/viewtopic.php?t=99531>.

You can contact me at:

j a m j o l u @ g m a i l . c o m

(remove the spaces) and I will attempt to suggest a solution or workaround. I also welcome comments or suggestions.

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Where can I get a gamepad with 12 buttons or 12 - 3.5mm inputs?

1. **8BitDo Ultimate 2C Wireless Controller <https://www.amazon.com /Ultimate-Wireless-Controller-PC-Joysticks-Remappable/dp/B0DNM3VGGG> -** Many USB gamepads available on Amazon will have at least 10 buttons. This wireless one looks like it has at least 12 for around $25:
2. **The XBox Adaptive Controller** <https://www.xbox.com/en-US/accessories /controllers/xbox-adaptive-controller> - 19 - 3.5 mm inputs, re-mappable, $100 - Also available at Best Buy, Target...
3. **Haute42 Leverless Controller Arcade Stick**, <https://www.amazon.com /Leverless-Controller-Arcade-Stick-Haute42-All-Button/dp/B0D14L1BQJ> buttons only controller, $48, Amazon
4. **8Bitdo Zero 2 Bluetooth Gamepad Keychain Sized Mini Controller** <https://www.amazon.com/Bluetooth-Gamepad-Keychain-Controller-Raspberry-Turquoise/dp/B081HML6MP> - Has less than 12 buttons, but includes a DPad, wireless, small game controller, $20.
5. **EG Starts DIY Game Controller Kit <https://www.amazon.com/Buttons-EG-STARTS-Joystick-Raspberry/dp/B01M2X88QP>** -Make your own arcade style game controller by putting this stuff in some kind of box with no soldering! - $26

Amazon prices change all the time, so consider the above prices as approximate. Item 1 is a wireless controller, but not Bluetooth, that has a familiar layout and a decent price.

Item 2 is the well known XBox Adaptive Controller that comes with its own remapping app to assign gamepad buttons of any of the 3.5mm inputs. The inputs are standard for common ability switches like the Ablenet Jelly Bean or the Orby Switch

Item 3 looks like it is based on the same or similar hardware as many other "Leverless" controllers. They all use swappable keyboard type keys for buttons, but no inputs for 3.5mm ability switches.

Item 5 - Carry your game controller in your pocket. It looks like it can support all 12 macro slots in DPad Mode.

Item 6 -A low cost, DIY option that lets you play with the button layout as you please. It comes with 10 buttons, a USB controller board, wires with connectors to connect switches and the USB board, and a digital joystick.

I have to admit that I have not tried any of them.

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How can I get GCW?

Go to the Github page: https://github.com/jamjolu/Game-Controller-Wedge <https://github.com/jamjolu/Game-Controller-Wedge>
Click the green "**Code**" button.
Click the "**Download ZIP**" option
Once downloaded, **extract the zip file** (right-click and choose "Extract all".)
Look inside the folder "**Game Controller Wedge-main**".
Copy the inner folder "**Game Controller Wedge-main**" and paste it wherever you like.
Inside the inner Game Controller Wedge-main folder you will find everything needed to run GCW. GCW does not require installation. Inside the folder you will find both executable applications: GCW.exe and GCW2.exe. If you double-click either of them you will likely see:
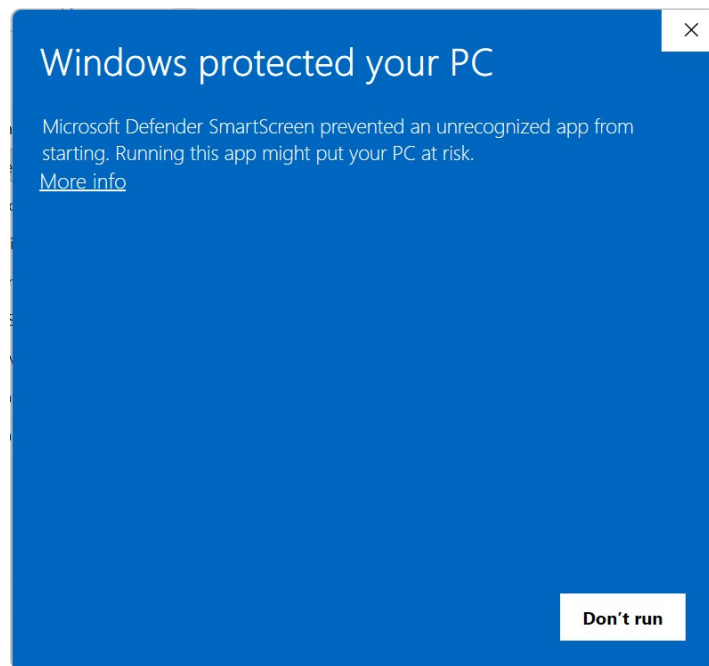
To be safe you can use your virus protection software to scan the contents of Game Controller Wedge-main to reassure yourself that it is OK to run the executable. Then click the "More info" link, followed by clicking the "Run anyway" button.

-OR- for no worries--

Download AutoHotkey V1.1 installer from https://www.autohotkey.com/ <https://www.autohotkey.com/>
Once downloaded, open the installer. Then choose the **Express installation**.
After that, you can double-click either of the **GCW.ahk** or **GCW2.ahk** files to use GCW and not get the worrisome Windows warning.

Always keep everything in the Game Controller Wedge-main folder together.

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