

Gaming Keypad

Manual

AZERON

MANUAL V4.4

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INTRODUCTION

The Azeron gaming keypad is a simple Plug-and-Play controller that sets up easily with our software. It can function as a joystick or as a keyboard or in hybrid mode.

The keypad comes with 24 - 26 programmable buttons and an analog thumbstick for complete control and maneuverability over your game.

Its ergonomic wrist pad, adjustable key towers and adjustable thumb module delivers a perfect fit for your arm and minimized fatigue over extended gameplay.

The main advantage of the Azeron keypad is the ability to move in game character with one finger – the thumb (either in 360° mode or in WASD mode, depending what your game supports). All other fingers now can freely press other buttons while you are moving at the same time. The buttons are very easy to reach with a little flick of your finger, don't need to reach and stress your hand.

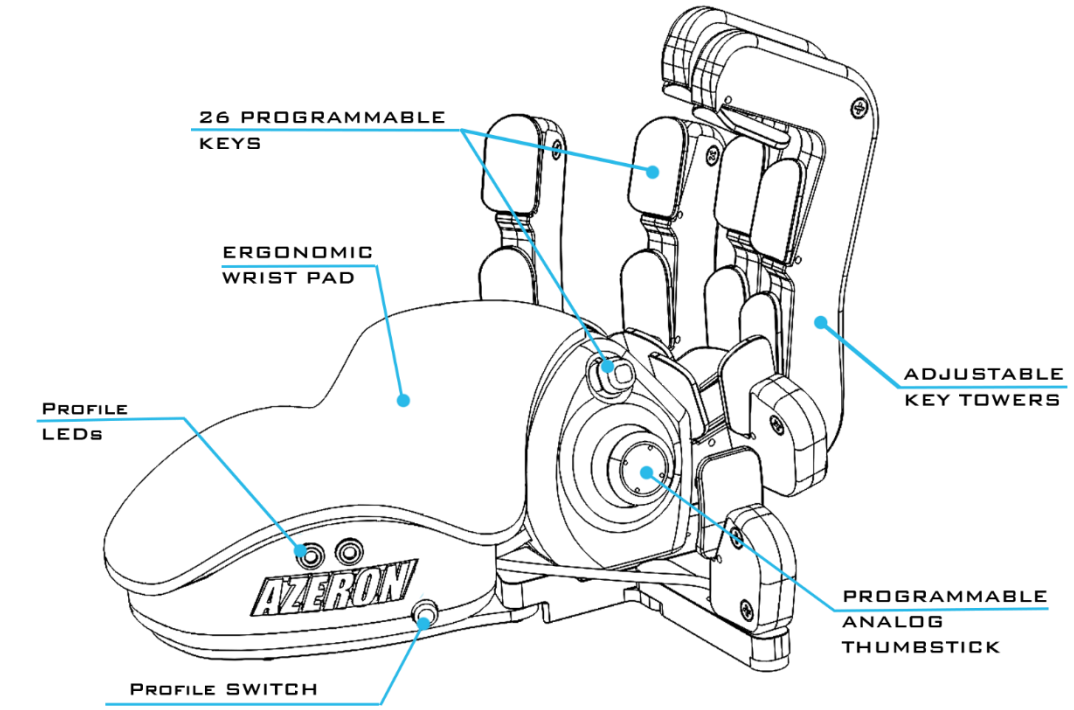
1. FEATURES

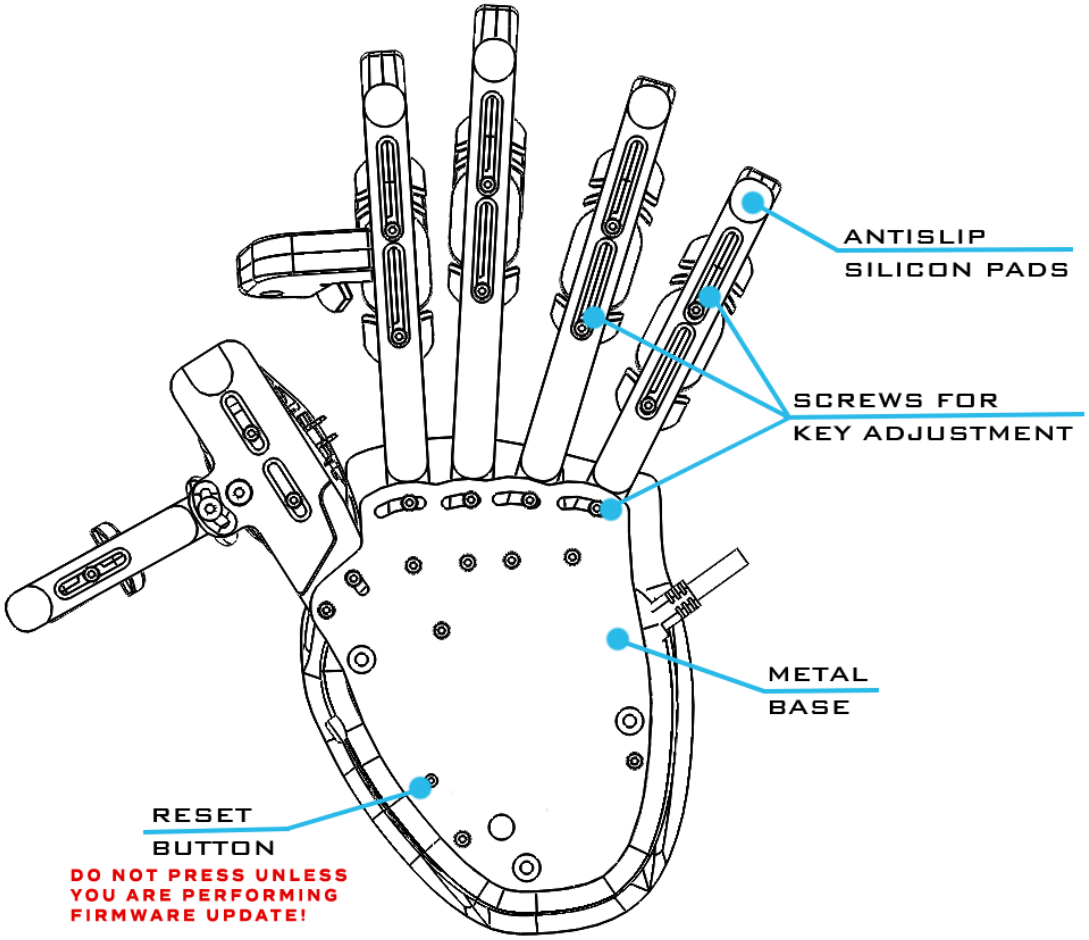
- 19 programmable buttons on towers
- 7 programmable thumb buttons
- A programmable full size analog thumbstick
- Adjustable button positions to fit your hand
- Stable metal base with antislip silicon pads
- Braided cables
- 2 meter (6.5 feet) braided USB cable
- Programmable Teensy++ 2.0 brain
- Easy accessible reset button
- Omron switches with mechanical durability 10 million keypresses
- On-board memory for your favorite keybinds

PACKAGE CONTENTS



2. DEVICE LAYOUT



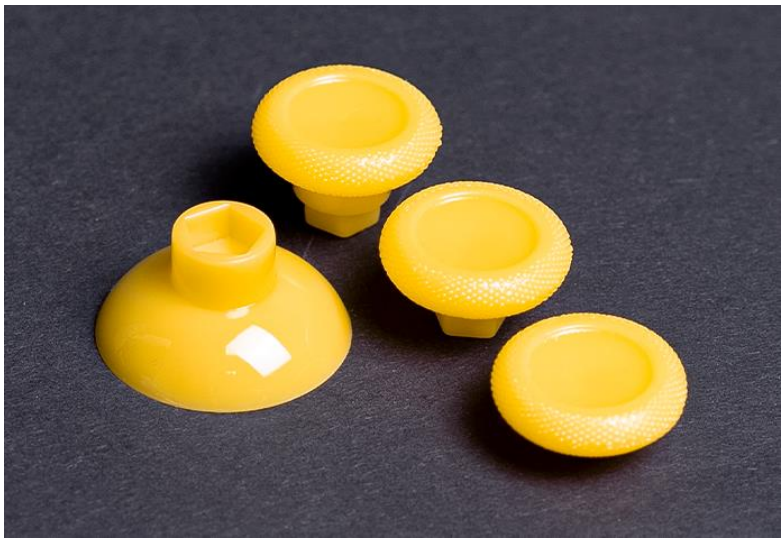


3. ADJUST YOUR AZERON KEYPAD



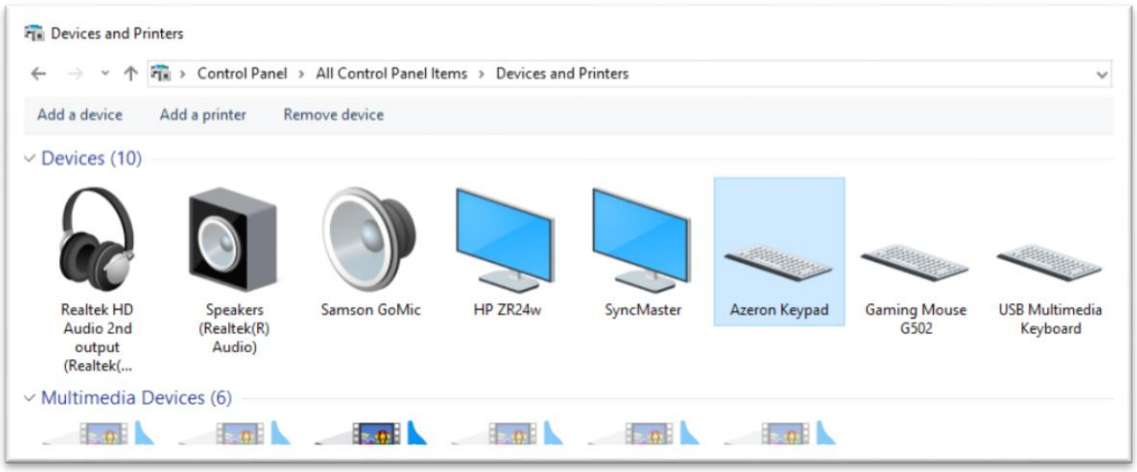
By using the included Hex screwdriver, it is possible to adjust each key tower position for your hand.

You can swap included thumbstick caps just by pulling them off with a little force:



4. INSTALLING SOFTWARE

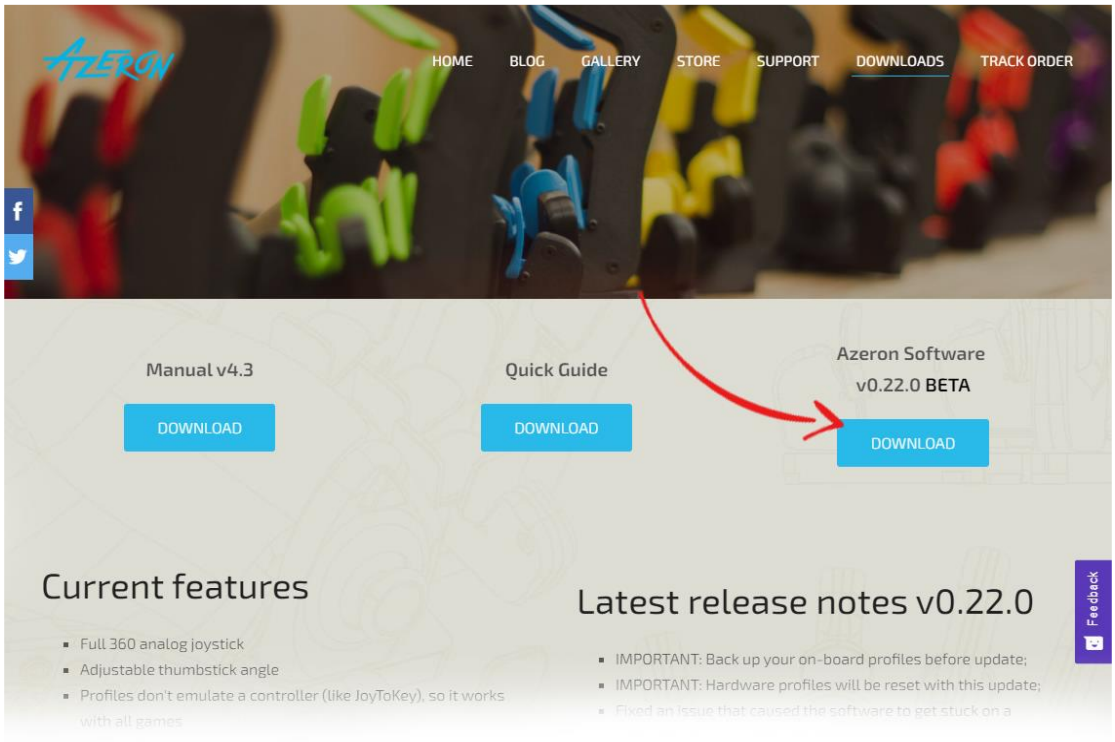
First you need to check if your computer recognizes Azeron keypad. Plug in USB cable in PC. Go to Start – Control Panel – Devices and Printers, and see if under Devices shows up Azeron keypad.



If it doesn't, and the LED lights are not turning on, make sure the USB cable is connected to the keypad properly. The USB cable should look like this when fully plugged in:



We are constantly working on new features and improvements, so make sure to go to our website (https://www.azeron.eu/downloads/) and download the latest Azeron software.



When shipping out the keypad to you, it has already pre-installed latest firmware. So by default you don't need to install that. You need it only in case you have some problems and need to reinstall the firmware. Go to **HOW TO UPDATE FIRMWARE MANUALLY** *for step by step guide.*

Go to the directory where you downloaded the software, then double click on Azeron-setup-vX.XX.X to install the software.

Sometimes Windows may prevent installation, because it is a new software it doesn't recognize:



Just click on the “More info” and then on “Run anyway”.

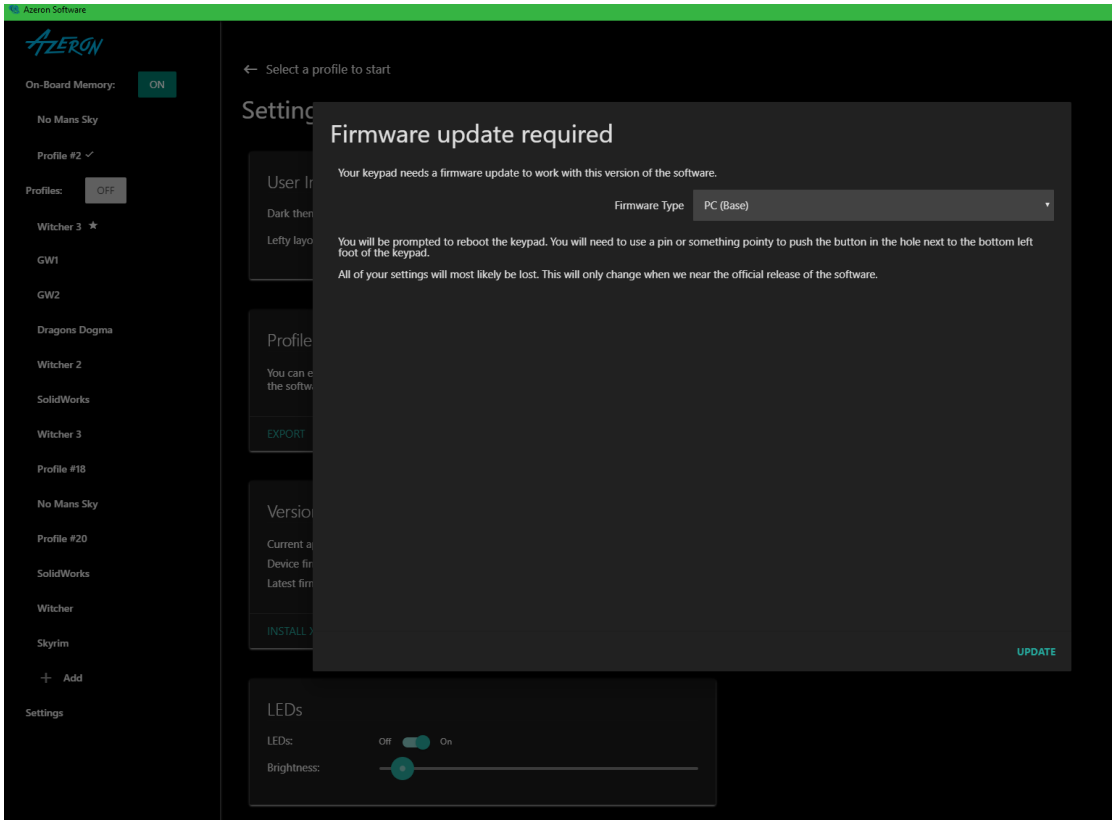
After that, the software will start to install. When it’s done, there will be a shortcut icon on Desktop and in the Start menu.

Plug in the USB cable of the keypad in PC and then launch the Azeron software.

If you are not sure if your PC has the USB3.0 motherboard drivers installed, then we would suggest to use USB 2.0 port to avoid unpredictable behavior of the keypad recognition.

When opening Azeron software, there are 3 options what could show up:

A) When opening software, it may show this screen:

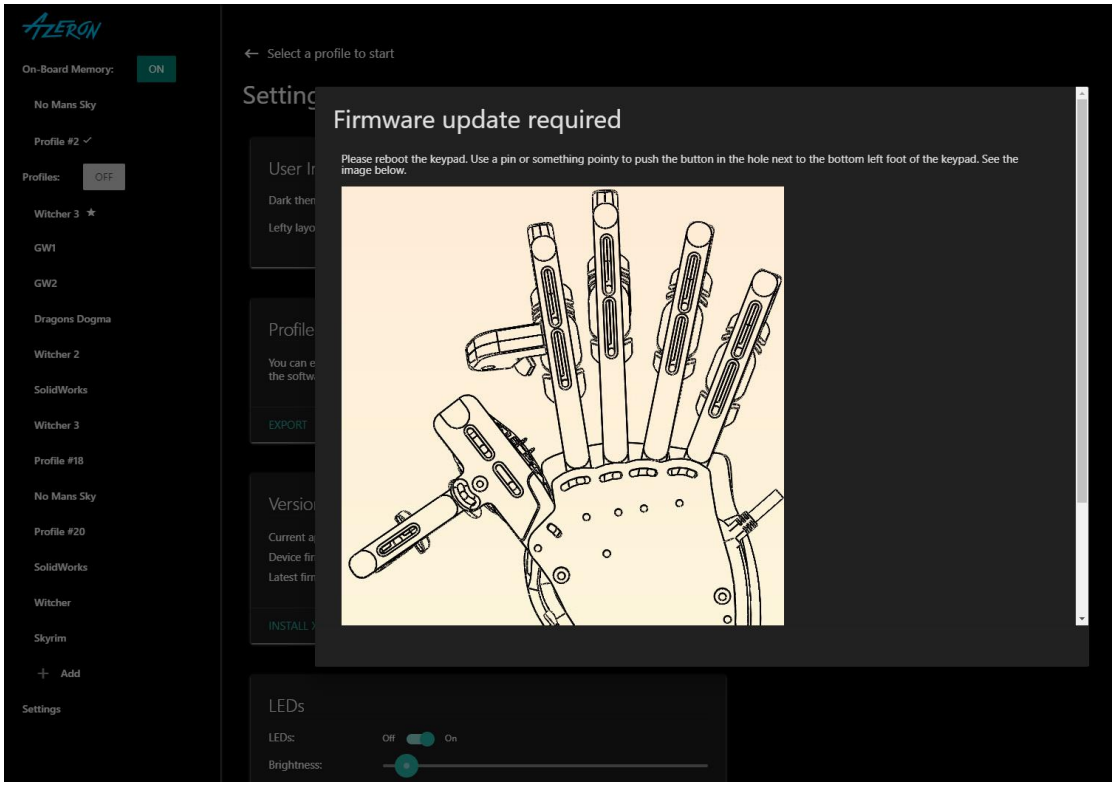


It means that the keypad requires firmware update. At the “Firmware type” dropdown choose “PC (Base)”.

PC (Base) means that it will install the latest ‘normal’ firmware version. The other option is XIM, which is a stripped down version of normal firmware for people who use the Azeron keypad only on consoles via XIM device.

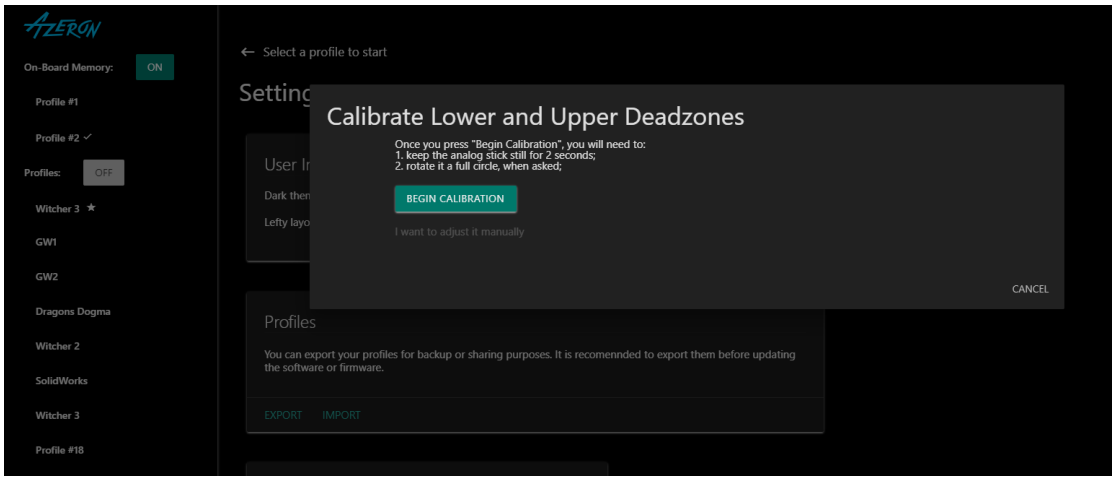
Click on “Update” at the bottom right corner.

There will be a loading animation as it downloads the newest version, wait until you see the following screen:



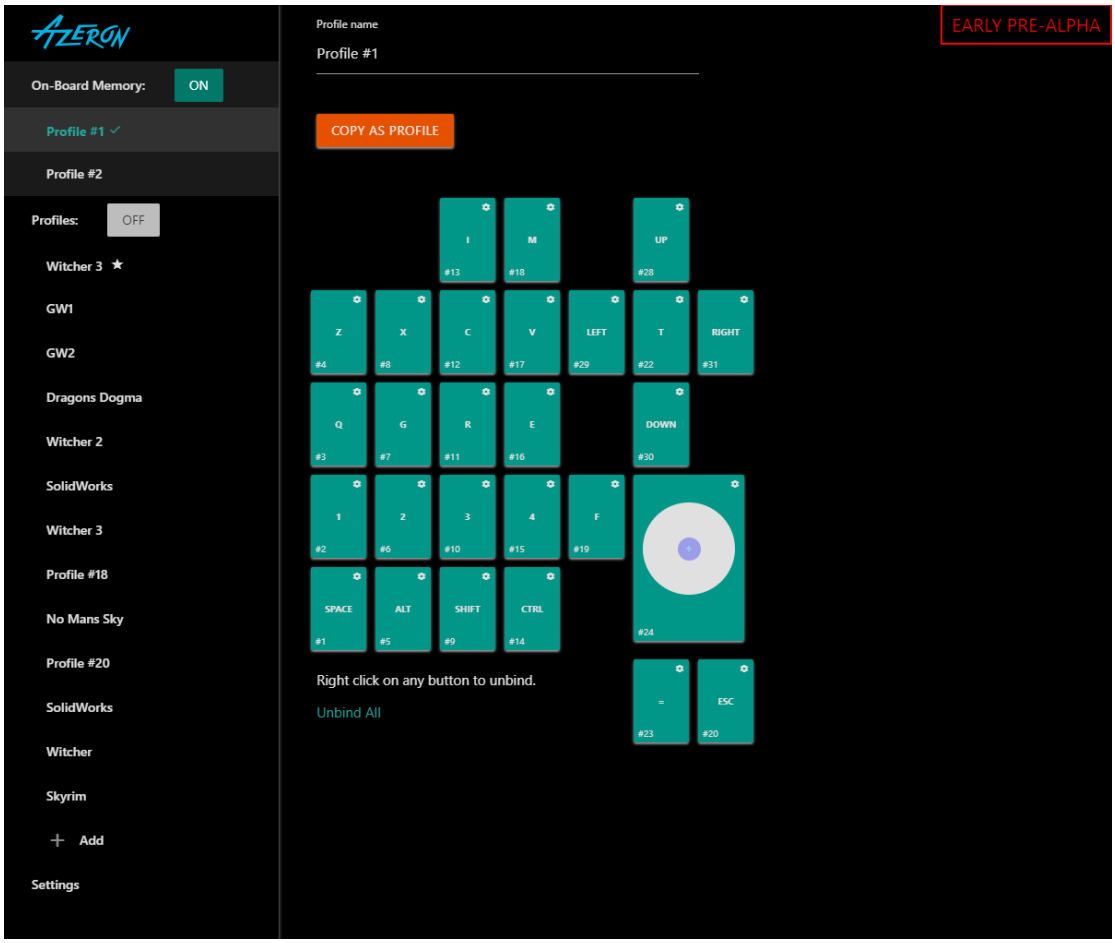
Now take the included hex screwdriver and press the reset button (see the picture on screen). The keypad will restart.

When the update is complete the software will ask you to calibrate the thumbstick. Follow the directions on screen to complete the calibration.



In case you are having any problems with installing the firmware or want to update to other version (not the latest one), then please go to **HOW TO UPDATE FIRMWARE MANUALLY** *section for step by step guide.*

B) The second possible option when software opens up will look like this:



That means that everything is ready, the software and PC recognize the keypad and everything is up to date. You are ready to configure your keypad to your liking and start gaming.

C) When opening software, it is empty



It means, that the software cannot see the Azeron keypad. First of all, make sure you have plugged in the USB cable fully in the keypad. It should look like this:



Another possible solution is to close the software, unplug USB cable, wait until Windows no longer see the keypad, then plug in back the USB cable (make sure you are plugging in the USB directly in PC and not via USB hub!), turn on software again.

If that doesn't work, you may need to do the **clean reset** process. You can find an unofficial guide here:

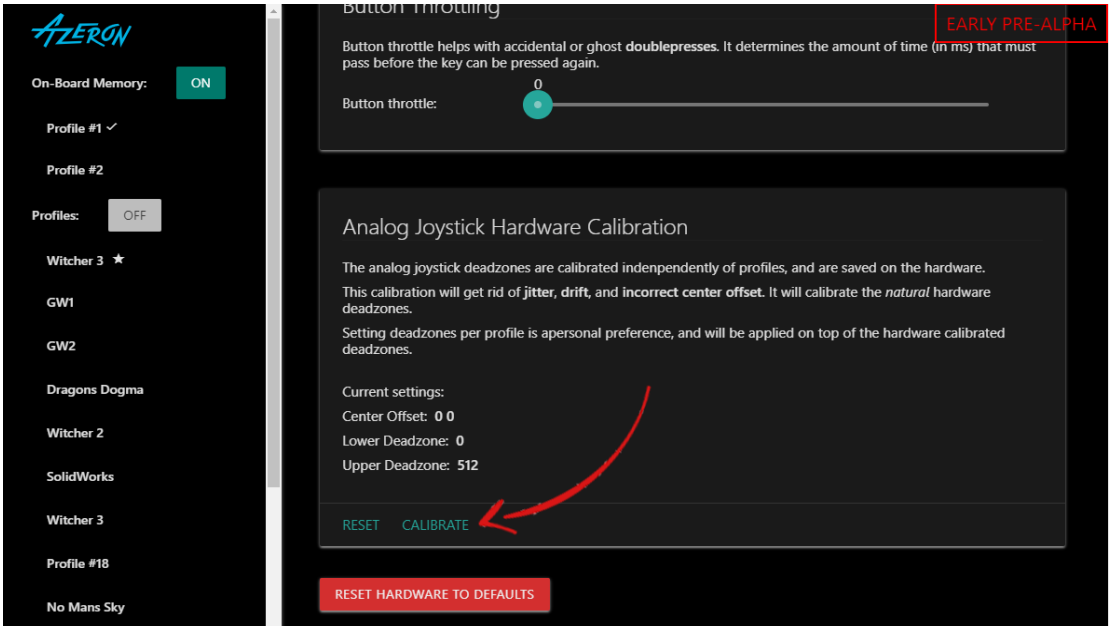
https://docs.google.com/document/d/136Ae743B7PmARTqDiwALLPVQMr1rXPrGygxB-BZPNuE/edit?usp=sharing

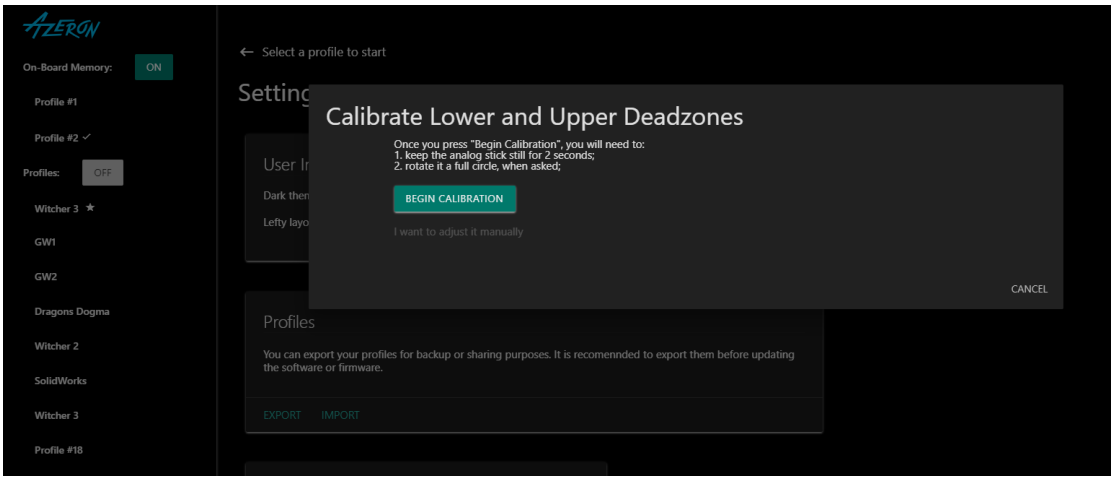
5. HOW TO USE AZERON SOFTWARE

5.1. CALIBRATING THUMBSTICK

If you will be using your keypad for first time or just recently reinstalled software or firmware, then you need to calibrate the thumbstick. Here is steps on how to do it:

Plugin the USB cable of keypad to your PC. Open the Azeron software. Go to Settings. And press on button “Calibrate” and carefully follow the instructions on screen.

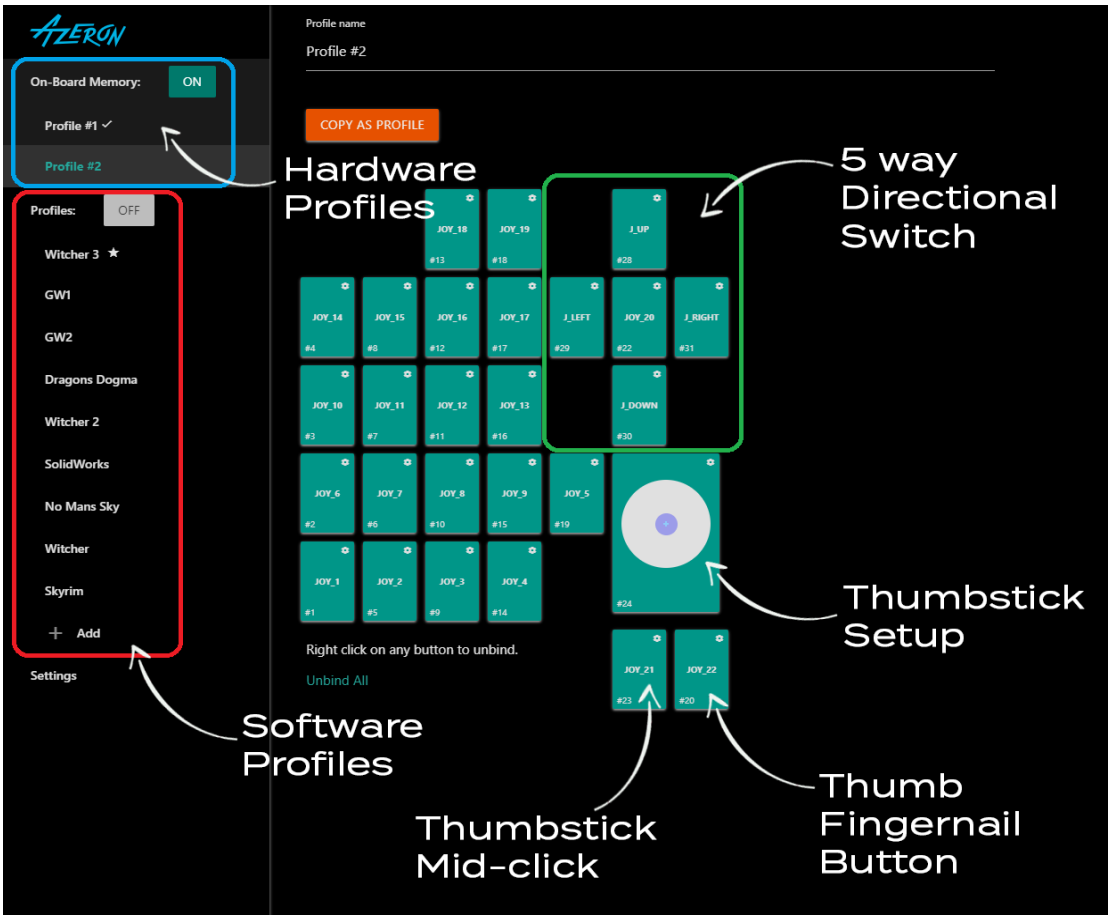




5.2. INTERFACE OVERVIEW

There are 2 profile types available - on-board and software.

On-board profiles are saved in the keypad memory (so you can use the keypad on other PC or consoles and it will work with the saved settings). If you are using only on-board profiles, then Azeron software doesn't need to run while gaming, it is used just to setup buttons. If you are using **software profile**, then the Azeron software needs to run in the background while playing the game.



5.3. BUTTON SETUP

When pressing button on the keypad, the corresponding button will light up in the Azeron software.

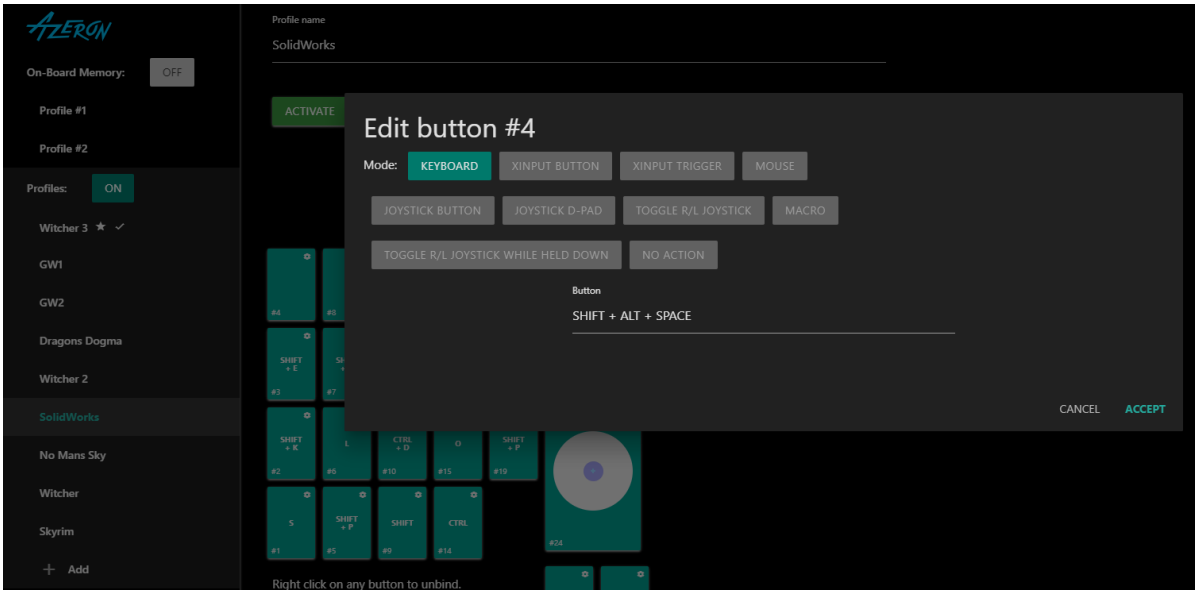
To setup buttons, with your mouse click on the button you wish to setup, then choose between several modes:

- Keyboard
- Xinput button
- Xinput trigger
- Mouse buttons
- Joystick buttons
- Toggle analog stick mode
- Macro
- No action.

5.3.1. Keyboard mode

For **keyboard** mode you can setup any keyboard button to be used on Azeron keypad. It is also possible to setup button combinations on one key press.

Only buttons not possible to setup currently are Right side modification buttons, they will always default to the Left side Shift, Ctrl or Alt. Also there is no simple way to setup special buttons, for example F13 F14 etc. But this will be included in the future software updates.



5.3.2. Xinput button and Xinput trigger

Xinput allows the Azeron keypad button to act as an Xbox controller button or trigger.

Under **Xinput button** it is possible to setup:

- Home
- Start
- X, Y, A, B
- Right Bumper, Left Bumper
- Push Right analog stick
- Push Left analog stick
- Back
- D-pad right, left, down and up

Under **Xinput trigger** it is possible to setup:

- Right trigger
- Left trigger

5.3.3. Mouse mode

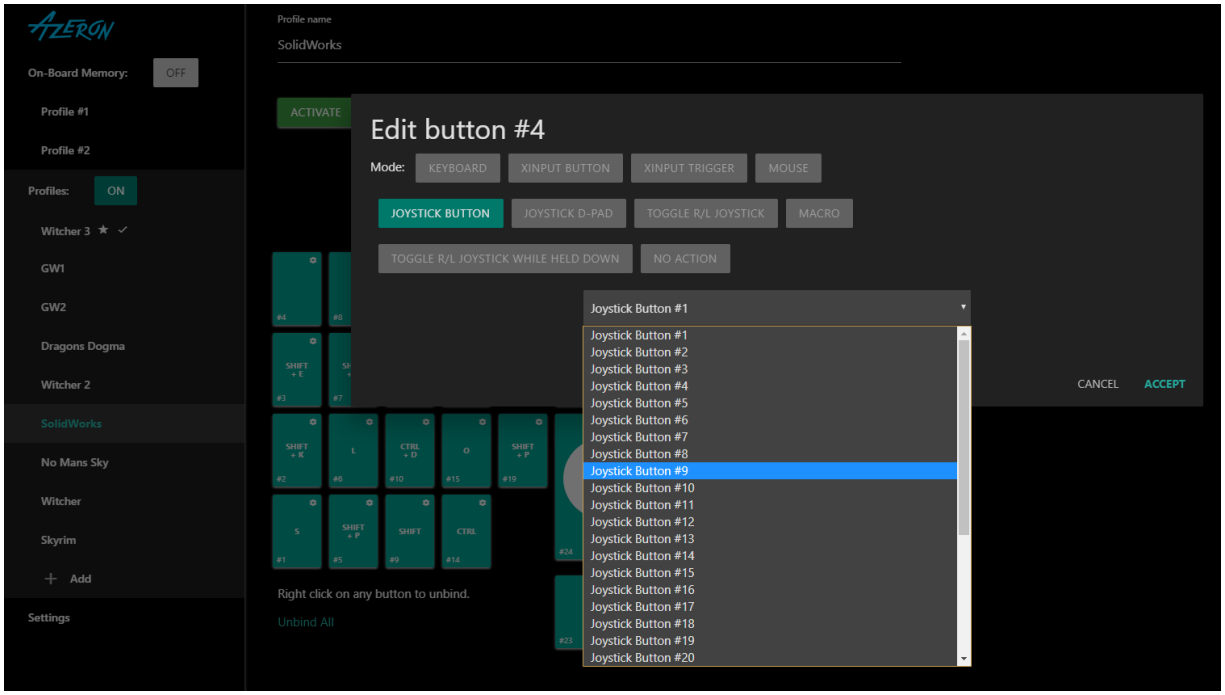
Under **mouse** mode the Azeron keypad button can act as a mouse buttons:

- Left click
- Right click
- Middle click
- Back
- Forward

5.3.4. Joystick button

In **joystick button** mode the keypad will act as a joystick button (direct input of generic gaming controllers). If you are using Azeron keypad on consoles through XIM device, then you need to setup all buttons as joystick buttons.

Upon receiving your Azeron keypad or after reinstalling firmware by default the second profile in on-board memory will have all buttons setup as joystick buttons. So you can use Azeron on console via XIM adapter straight out of box.



5.3.5. Joystick D-pad mode

In **Joystick D-Pad** mode the button can be setup as any function of the D-Pad (Up, Right, Down Left, Left, and also diagonally, for example Right Up or Left Down). This also will act as direct input of generic gaming controllers.

5.3.6. Toggle analog stick mode

On the keypad there is only one thumbstick, but you can setup a button to switch between two thumbstick settings. In **Toggle R/L Joystick mode**, a button press will toggle between 2 settings in the **5.4. THUMBSTICK SETUP**.

If thumbstick is setup as an analog stick, then it will switch between Left and Right analog stick of controller.

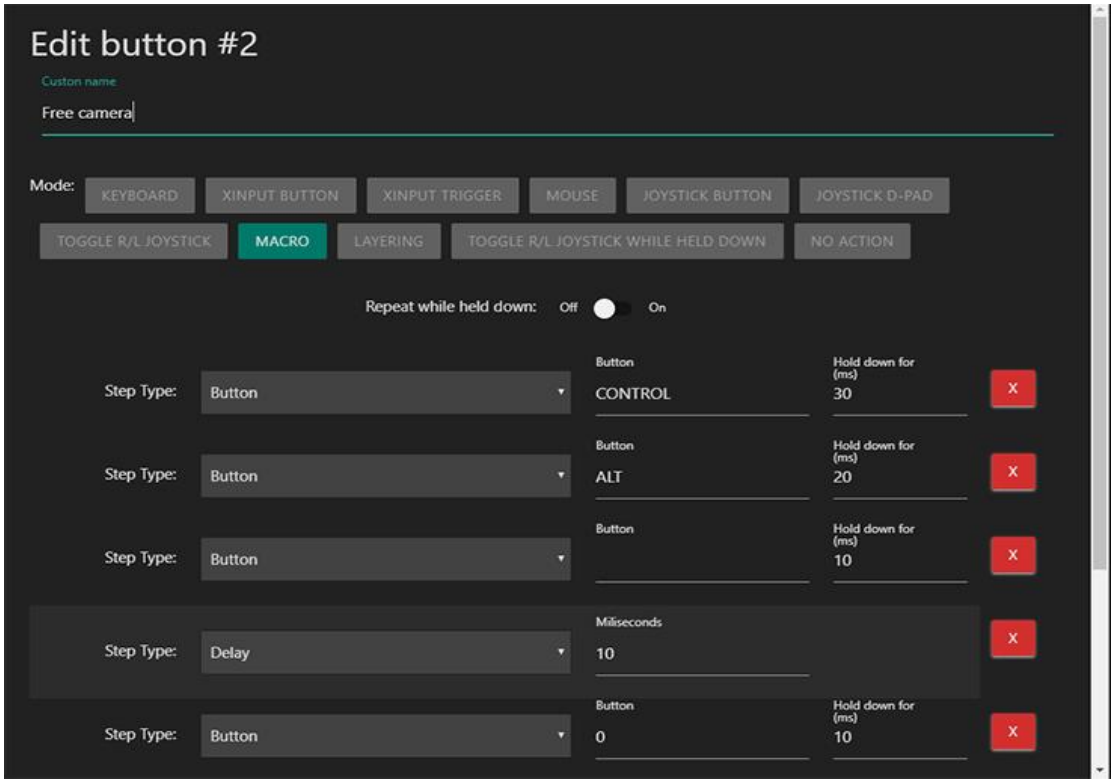
If thumbstick is setup as a keyboard (WASD for example), then you can setup also what keyboard buttons will be on the second thumbstick (for example QWES).



Mode **Toggle R/L joystick while held down** works the same as mode above, but the second thumbstick settings will work only while button is held down.

5.3.7. Macro

It is possible to setup macros on keypad buttons. When choosing **Macro** mode for the button, it is possible to program several keyboard keypresses, mouse buttons and delays in the sequence you wish. You can also choose how long is the keypress and delays in milliseconds. It is also possible to turn on a repeat for the macro while the button is held down.

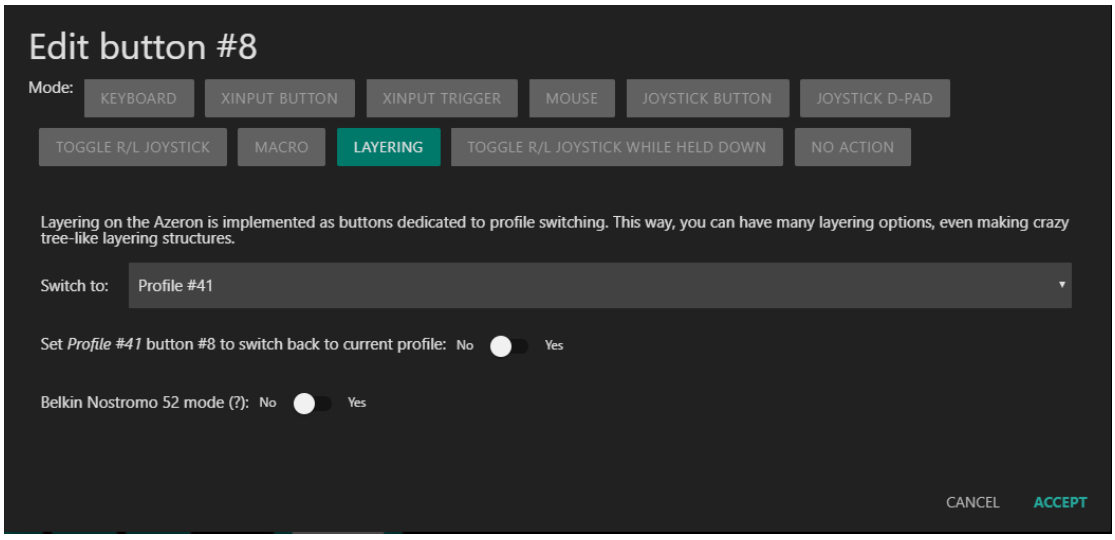


Macro function is available only in software profiles! Currently it is not possible to save Macro in on-board memory due to the Teensy PCB limitations.

We are planning to add more advanced macro functionality in future software updates.

5.3.8. Button layering

Any of the buttons can be programmed as a shift button to switch between several button layers on the fly thus increasing the number of functions that can be programmed into the other buttons by several times.



For example, in the picture above, we are editing button #8 as a shift button and we will set it up to switch to another software profile, which is called “Profile #41”. Now when pressing button #8 on the keypad, the keypad will switch to Profile #41 and will use the keybinds that are stored there.

If we want that by **releasing** button #8 we switch back to the previous profile, then we need to choose YES at the option “*Set Profile #41 button #8 to switch back to current profile*”, otherwise you will not be able to switch back to previous layer of buttons and will be stuck in Profile #41.

If we choose YES at the option “*Belkin Nostromo 52 mode*” then the held keys from the current profile binds will be released and the new profile binds for the pressed keys will automatically be pressed on profile change.

5.3.9. No action mode

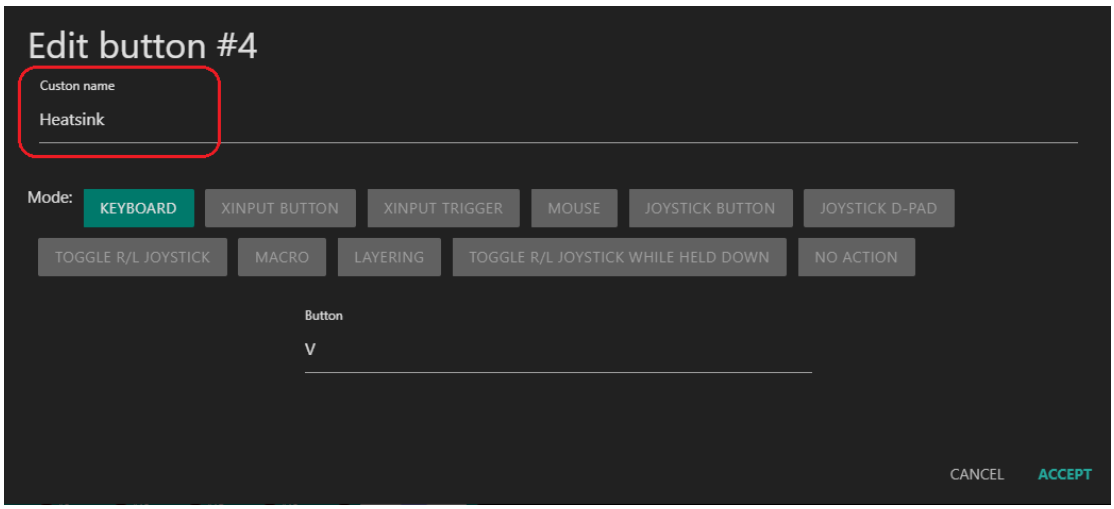
In **No action** mode the button will be “empty” and do nothing. You can also remove the keybind by right clicking on the button.

5.3.10. Button labels

You can setup custom names for each button for easier overview of your keybinds. Similar to this (white color is keybinds, yellow color is custom button names):

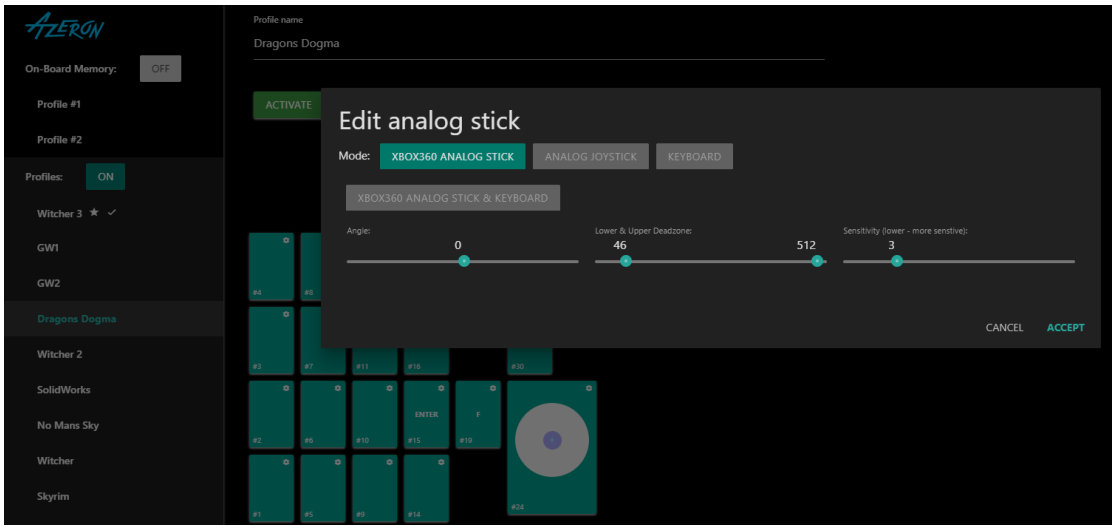


To setup custom name - click on the button and then write the name in field “Custom name”:



5.4. THUMBSTICK SETUP

Thumbstick has several modes – it can act as analog stick or as a keyboard buttons or a mix of both.



Xbox360 analog stick will work the same as an Xbox controller analog stick. It has 360° movement and analog capabilities like if you move the thumbstick a little, then a character in video game will walk slowly, but if you move it to the outer edge, then character will start running.

This mode will work with any game that support Xbox controller and in the same time can work together with mouse and keyboard binds. You can see the list of games that support such simultaneous input here: https://www.pcgamingwiki.com/wiki/List_of_games_that_support_simultaneous_input

If a game doesn't support simultaneous input or is supported only partially, then the game user interface may flicker between Xbox controller and keyboard&mouse interface when trying to use Azeron keypad together with mouse. In that case you can setup analog stick with keyboard keybinds, such as WASD to have better gaming experience.

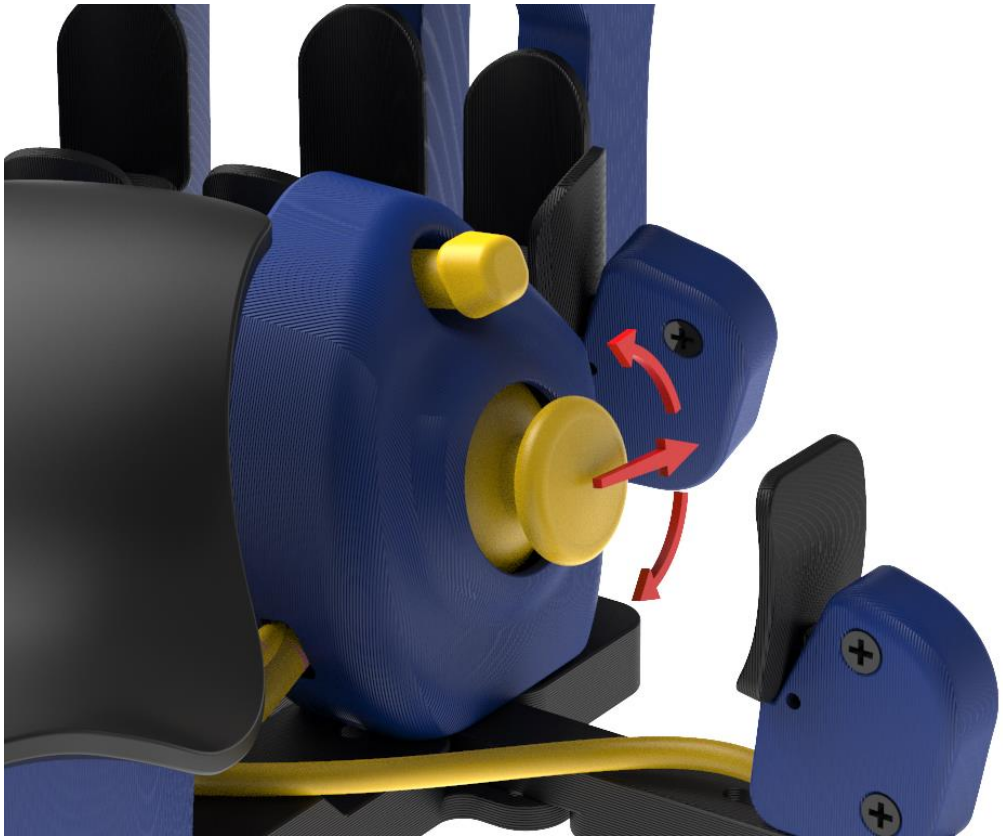
Analog joystick mode will work as generic joystick analog stick with a direct input. It will work in games that are compatible with any controller, not only Xbox controller, but the same as with **Xbox360 analog stick** mode, the game has to support simultaneous input.

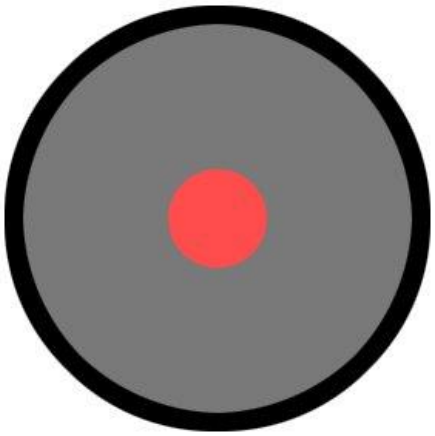
In **Keyboard** mode analog stick will work in 8 directions with keybinds provided for 4 directions, such as WASD or similar. It is possible to setup 2 separate keybinds on thumbstick and switch between them on the fly (see more information at 5.3.6. Toggle analog stick mode)





It is possible to change the forward direction for thumbstick with **angle slider** up to 180° in each direction.





Lower deadzone is an area in the center of the thumbstick that won't recognize input if the stick is moved within it. The higher the value, the bigger the circle is in the center where thumbstick movement won't register.

If a **lower deadzone** is set to 0 or very low value, then the thumbstick may be too sensitive to every micro movement (even your cat sneezing) and it may have a flickering motion in Azeron software and a character in video game may move around even if you are not touching the thumbstick. In that case you need to set the **lower deadzone** value higher until it stops moving by itself (for example something between 10 – 65 is a good value).

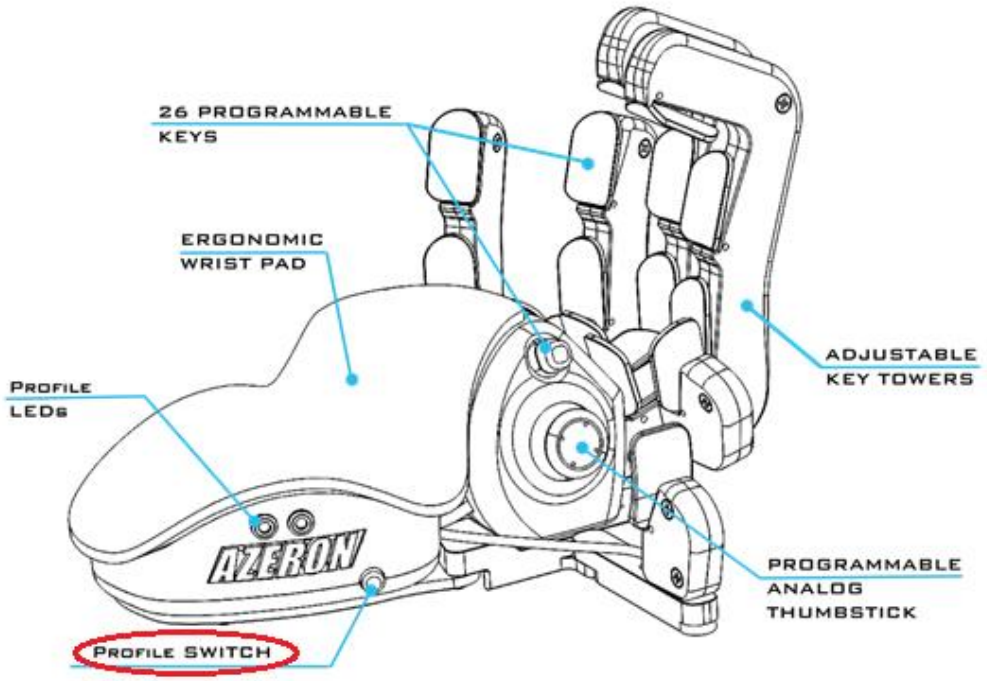
Upper deadzone determines how far is the outer diameter of the thumbstick travel zone. The lower the value the smaller the circle.

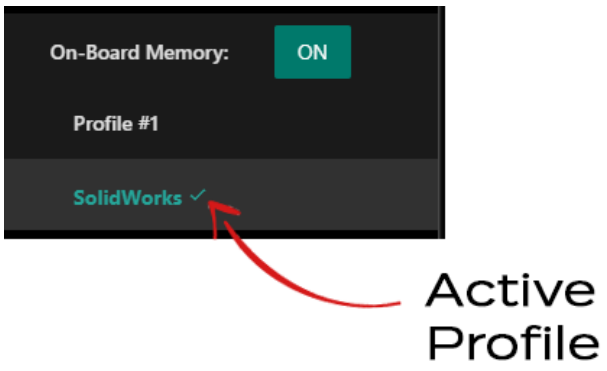
If you are not sure what deadzone settings you should use, just go through the Calibrate Deadzones wizard, and the software will choose the best settings for your thumbstick. See 5.1. CALIBRATING THUMBSTICK

Sensitivity setting controls how sensitive thumbstick feels. The lower the value the more sensitive is the thumbstick. Most of the time good values are 3-10.

5.5 PROFILES

To switch between the two on-board memory profiles, you need to press Profile switch on the side of the keypad. If you are using first profile, then there will light up one Profile LED, for second profile it will light up both Profile LEDs.

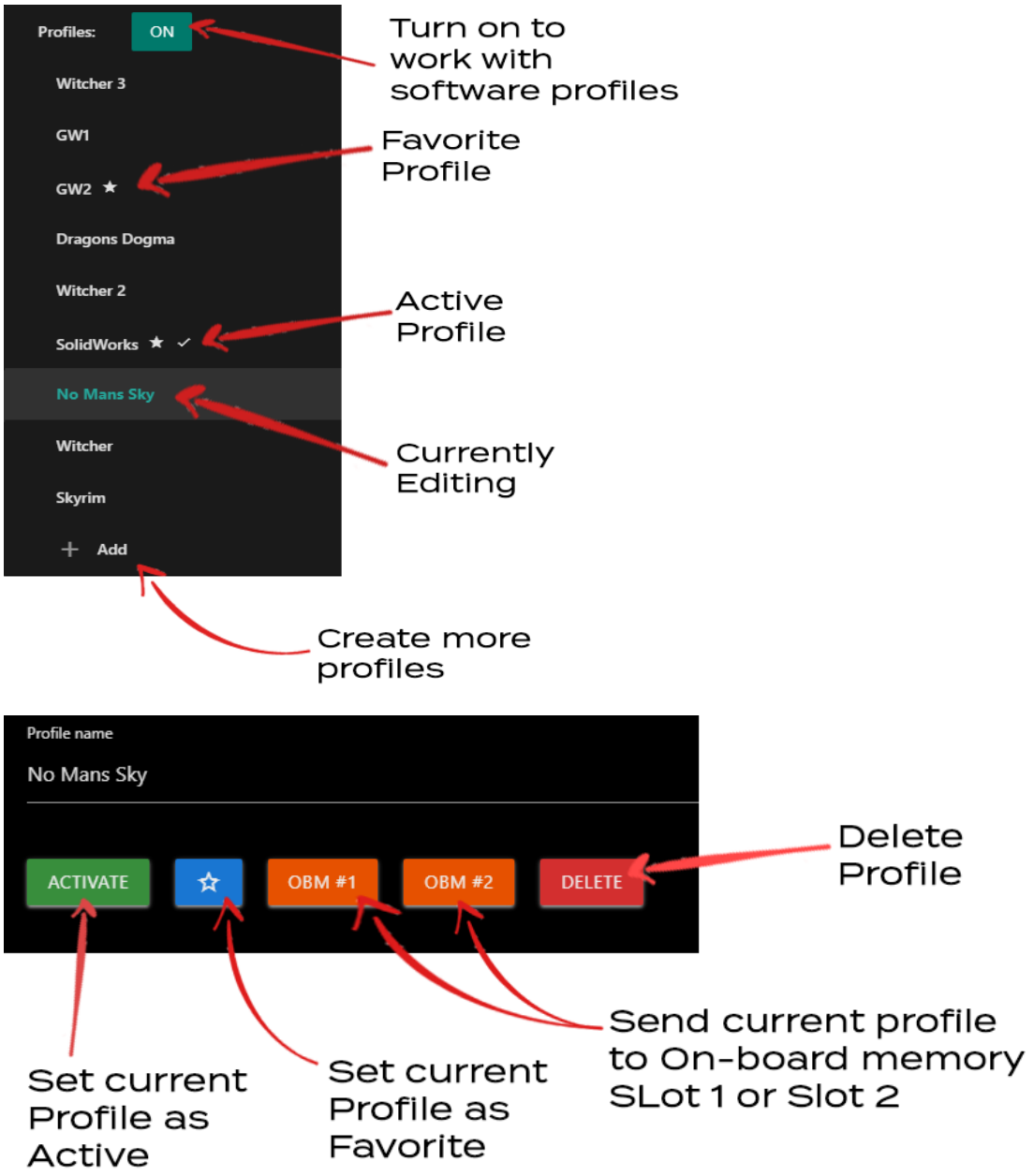




To work with software profiles, you need to turn them on by pressing ON button near “Profiles:”.

Note! When using software profiles, the Azeron software must be running in the background while playing the game.

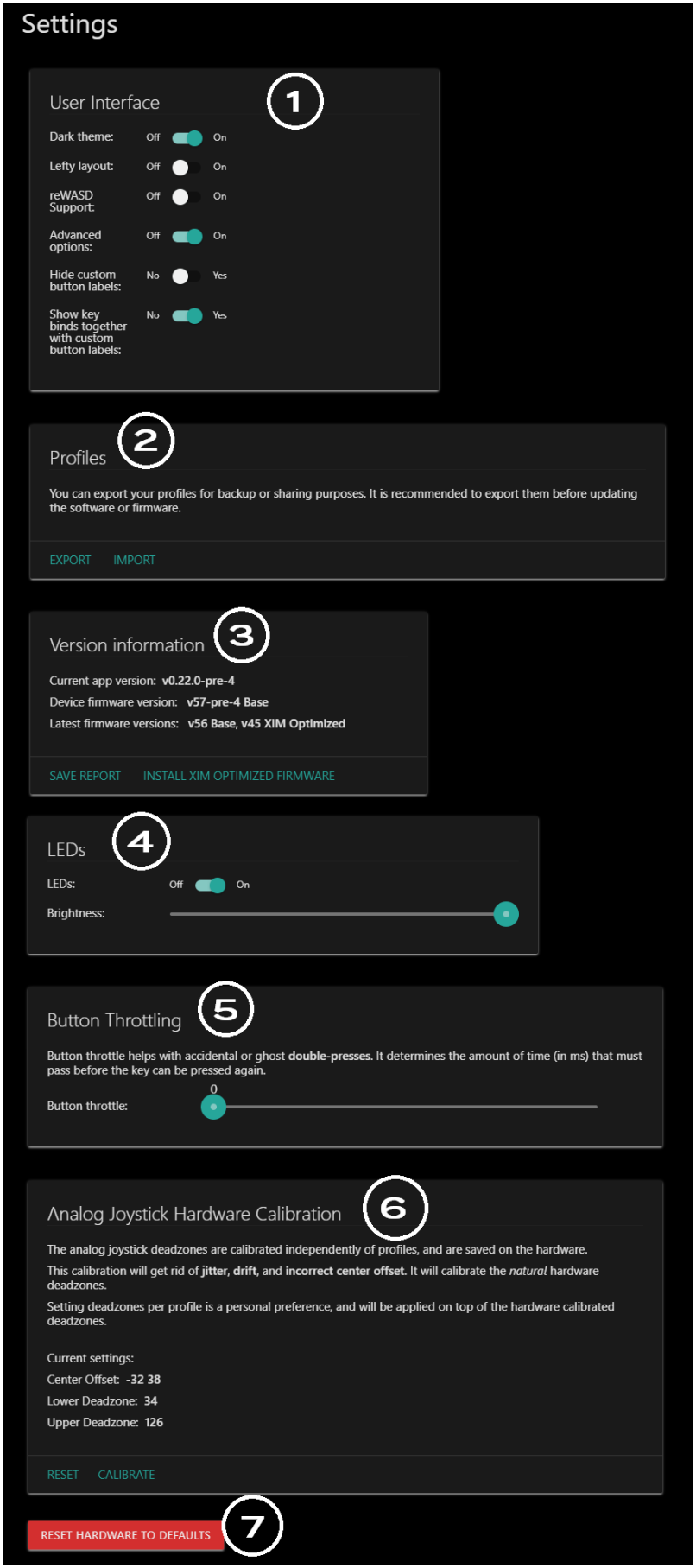
If you are using Software profiles, it is possible to choose 2 profiles as favorite and then switch between them with **Profile switch** similar as on-board memory profiles. Or you can activate any selected profile with **Activate** button.



Any software profile can also be sent to On-board memory, by pressing **OBM#1** or **OBM#2**. Note that Macro will not work in on-board memory profiles.

At the bottom of the profile list is button **+ Add**, which will create a new profile by copying already selected profile.

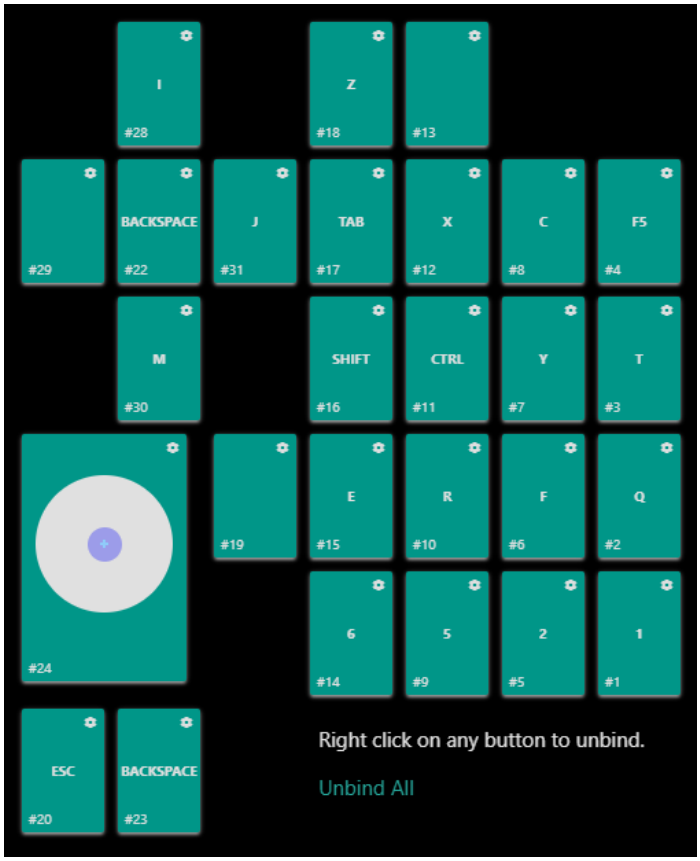
5.6 SETTINGS


Settings
User Interface
1
Dark theme: Off On
Lefty layout: Off On
reWASD Support: Off On
Advanced options: Off On
Hide custom button labels: No Yes
Show key binds together with custom button labels: No Yes
Profiles
2
You can export your profiles for backup or sharing purposes. It is recommended to export them before updating the software or firmware.
EXPORT IMPORT
Version information
3
Current app version: v0.22.0-pre-4
Device firmware version: v57-pre-4 Base
Latest firmware versions: v56 Base, v45 XIM Optimized
SAVE REPORT INSTALL XIM OPTIMIZED FIRMWARE
LEDs
4
LEDs: Off On
Brightness:
Button Throttling
5
Button throttle helps with accidental or ghost double-presses. It determines the amount of time (in ms) that must pass before the key can be pressed again.
Button throttle: 0
Analog Joystick Hardware Calibration
6
The analog joystick deadzones are calibrated independently of profiles, and are saved on the hardware.
This calibration will get rid of jitter, drift, and incorrect center offset. It will calibrate the natural hardware deadzones.
Setting deadzones per profile is a personal preference, and will be applied on top of the hardware calibrated deadzones.
Current settings:
Center Offset: -32 38
Lower Deadzone: 34
Upper Deadzone: 126
RESET CALIBRATE
RESET HARDWARE TO DEFAULTS
7

(1) At the top of the Settings you can see the interface options:

Dark theme option will turn on dark background for the software. By default, it's ON.

Lefty layout will switch the button interface for keypad that is meant for left handed people (keypad in right hand, mouse in left hand). The button layout will look like this:



reWASD support allows to use 3rd party software with more advanced options, called reWASD. By turning this setting ON, Azeron keypad will use older version communication protocol to be compatible with reWASD.

Advanced options will hide/show more advanced settings.

Hide custom button labels will hide the labels for each button you have created, only keybinds will be visible.

Show key binds together with custom button labels (visible only if Hide custom button labels is OFF) will allow to switch between 2 modes – having visible only button labels or visible labels together with keybinds.

(2) At the **Profiles** option it is possible to **Export** and **Import** your profiles. You can back up all of your profiles in .JSON file, to prevent any accidental

deletion when reinstalling software or Windows, updating firmware, etc. Note that it will save only profiles that are in the software and not in the On-board memory!

(3) **Version information**. Here you can see what software and firmware you are using and if there are any updates available. If there will be newer version available, then **Update** button will be visible. To update to newer firmware version, just press the button **Update** and follow the instructions on the screen.

(Advanced option) If you are using Azeron keypad on consoles through XIM device, then it is possible to **Install XIM optimized firmware**, which removes all unnecessary features, leaving only one profile in the on-board memory with joystick settings, but still keeping possibility to adjust thumbstick angle, deadzones and sensitivity.

(4) **Turn LEDs OFF or ON** will completely turn off the Profile LEDs on the side of the keypad. **LED brightness** slider adjusts the Profile LEDs. The higher the value, the brighter the LEDs will glow.

(5) **Button throttle.** In case one or more of the buttons are starting to make double clicks (switch debounce), you can setup button throttle here in milliseconds. That is the time that must pass between keypad will register next keypress on the same button.

Note! The button throttle currently works on all buttons in the same time, it can't be setup separately for each button.

(6) **Analog joystick hardware calibration**. Here you can **reset** the deadzones to zero values or **Calibrate** the thumbstick to optimal settings. When calibrating, carefully follow the instructions on screen. See more information at 5.1. CALIBRATING THUMBSTICK

(7) **Reset hardware to defaults**. This option will delete all on-board memory profiles, restores everything to default settings. It is the same as reinstalling firmware in the keypad.

6. HOW TO UPDATE FIRMWARE MANUALLY

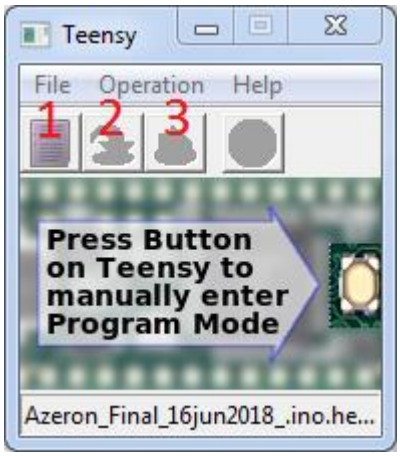
Warning! By updating the firmware, you may lose your saved profile settings. Export them before flashing firmware!

Step 1:

Connect keypad to USB slot (don’t connect to USB 3.0 if you don’t have USB 3.0 drivers installed)

Step 2:

Open teensy.exe software

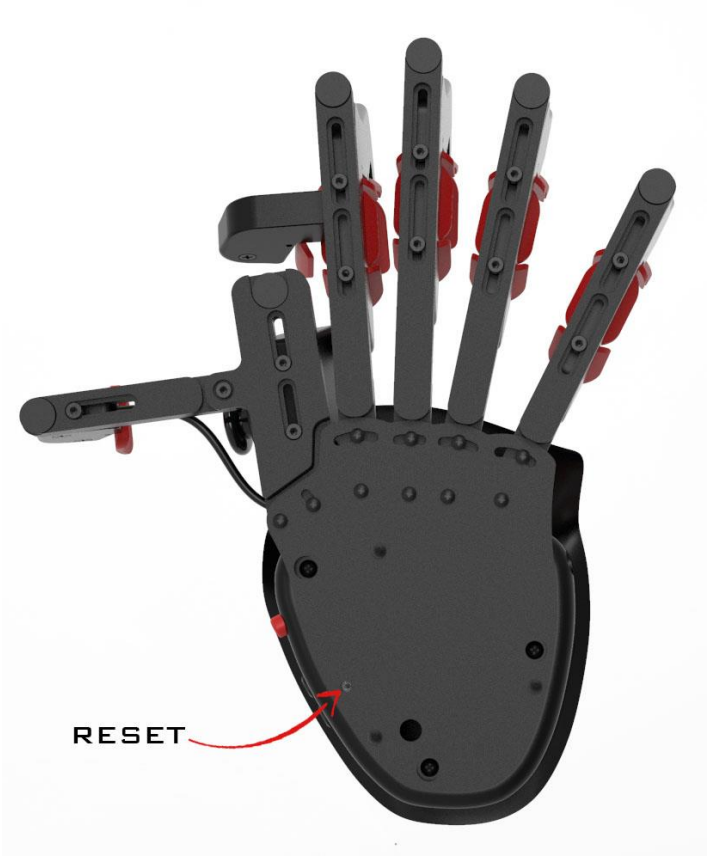


Step 3:

Press on first button to load hex file (for example, “Firmware.hex”)

Step 4:

Reset Azeron keypad by pressing reset button in the hole shown in the picture (you can use the included hex screwdriver):



Step 5:

Wait until button 2 is available in Teensy software. Then press button 2 to upload firmware.



Step 6:

After that, press button 3, to restart Teensy. Wait until at least one Profile LED has turned on at the side of the keypad (that means, keypad is on and running).

Now unplug and replug the USB cable in PC, before launching Azeron software.

Done!

7. TIPS AND TRICKS

- It is recommended to setup space bar button on the mouse, so the running and **jumping** in the same time is effortless
- It is possible to setup **button combinations**, by putting Shift (or Ctrl, or Alt) on the mouse and combine it with buttons on the keypad, to setup more than 22 commands. For example, Shift + 1, Shift + A, Ctrl + W etc. Or you can use Layering feature in software profiles to get more keybinds.
- To make it easier to get used to the keybind setup – we recommend creating a new character in the game and **learn new skills** one by one together with your character or start with games that doesn't have a lot of keybinds
- It is known that using **lizard skin** grip tape on the buttons feels premium :) Pick 0.5mm thickness
- It is possible to change **thumbstick caps** to Elite xbox magnetic caps
- Our Discord community is the best place where to solve problems, search keybinds, get ideas and find likeminded people
- To get access to more **advanced macros** and other options– it is possible to setup Azeron keypad as generic joystick and then use 3rd party software JoyToKey to setup more advanced macros on each button.

WARNING! Do not keep the keypad near heat sources or in hot places!

Contact us for more information: info@azeron.eu

Discord community and support: https://discord.gg/9tw9pju

Webpage: azeron.eu