MH-DEVICE

MH-Zeta

Gaming & Working Controller



Thank you for purchasing MH-Zeta.
Please read the Safety Precautions before use.

This manual covers the names of each part, the specifications, how to use the Setting Tool, and the features specific to MH-Zeta.

September 2026 edition / for firmware v26 and Setting Tool ver.22

MH-Device
https://mh-device.com/

Safety Precautions

Please read this section and observe its contents when using the product

The following is intended to prevent injury to yourself or others and damage to property. Please be sure to read, understand and comply with it.

Warning

- When using this product, please observe the warnings and cautions indicated by the manufacturer of your PC.
- Never disassemble or modify this device. May cause fire, electric shock or device failure.
- If abnormal noise, odor or smoke occurs, immediately disconnect the cable.
- Do not apply excessive load, bending, pressing or modification to this device, as this may cause fire, electric shock or device failure.
- Do not wet this device or use it in a damp place. May cause fire, electric shock or device failure.
- If liquid or a foreign object gets inside this device, stop using it immediately and ask your dealer to investigate.
- Do not use this device in an environment above 45°C. May cause deformation or malfunction.

Caution

- Do not disassemble, modify, process or paint this device.
- Do not touch this product with wet hands.
- Do not use organic solvents or chemicals such as benzene or thinner when cleaning.
- Since there are small parts that infants could put in their mouths, please use and store this product out of the reach of infants.
- Do not use or store this device in direct sunlight, in high temperature, high humidity or dusty places, or where strong magnetic fields, radio waves or static electricity occur.
- Discharge static electricity from your body before using this device.
- Do not apply strong shock, vibration or excessive force to this device, or insert foreign objects into it.
- Do not place this product on an unstable surface.
- The seller assumes no responsibility whatsoever for any direct or indirect damage resulting from malfunction of this product or its use.
- The contents of this manual and this product are subject to change without notice due to improvements or other reasons.

Other

- We will repair the defective part at actual cost. (Please bear the shipping cost.)
- We do not accept returns other than for initial defects.
- Please contact us at the e-mail address below. We do not disclose technical information.
- MH-Device Contact : mh.device.info@gmail.com

Product overview and accessories

MH-Zeta is a USB connection device suitable for character control in FPS/TPS and 3D open world games operated with a PC keyboard. It is used by connecting it to the USB port of your PC.
With the dedicated Setting Tool, keyboard keys, mouse buttons and wheel, and gamepad buttons can be assigned to the 47 functions of the device.



Item	Details
Switches	Analog Stick + Push Switch / 22x Mechanical Key Switches / 2x 4way D-pad + Push Switch / 7x Aux Switches / 1x Wheel + Push Switch
Body size	153mm × 182mm × 43mm
Weight	Approx. 265g
PC connection	Connect with the supplied USB cable
Accessories	USB Type-C cable / Dedicated wrist rest * The height adjustment stick is an option for the made-to-order model sold on the BASE official store

▶ **MH-Zeta comes as a left-hand version (Std) and a right-hand version (Flip).**
You can tell which one you have from the name shown when it connects to the Setting Tool (MH-ZETA-(STD), for example).

Names of each part ① Exterior



Exterior and part names (Std / left-hand version shown)

Part	Qty	Notes
Mechanical Key Switches	22	Shown as 1 to 22 in the Setting Tool
Analog Stick (w/Push Switch)	1	Forward, back, left, right, deep push and the push switch can all be assigned
4way D-pad (w/Push Switch)	2	Operated with your thumb
Aux Switches	7	Shown as the Z and Y groups in the Setting Tool
Wheel (w/Push Switch)	1	Each direction of rotation can be assigned
USB Type-C Port	1	Connects to the PC with the supplied cable

Names of each part ② Key names (Std / left-hand)

How the names shown in the Setting Tool map to the device



Key names on the Std (left-hand) version

Key name	Where it is
1 – 22	The mechanical key switches
Fwd / Bwd / Left / Right	The four directions of the analog stick
Fwd2	The analog stick pushed deeply forward
P1	The push switch of the analog stick
A / B / X / Y + P2	The first thumb 4way D-pad and its push switch
AA / BB / XX / YY + P3	The second thumb 4way D-pad and its push switch
Up1–3 / Down1–3	Rotation of the wheel (three layers)
Z1 – Z3	The Aux switches beside the wheel
Z4	The push switch of the wheel
Y1 – Y4	The Aux switches at the near side

Names of each part ③ Key names (Flip / right-hand)



Key names on the Flip (right-hand) version

▶ **Std and Flip use physically different boards, mirrored left to right.**
The Setting Tool detects which one it is on connection and shows the key map and the button order to match. Only the left-right directions are swapped in the factory settings (A↔Y, AA↔YY, and Left↔Right on the stick). The up and down directions are the same.

Connecting the device

Using it for the first time

・Connect the device to your PC with the supplied USB Type-C cable.
・The LED lights up and the device is ready. Nothing needs to be installed just to use it as a keyboard.
・To control the device from the Setting Tool, a USB driver has to be installed (see the next page).
・It works with the factory assignments. Use the Setting Tool to change them.

Connected to	What you can use	Notes
Windows PC	Everything	Recommended environment
macOS	Keyboard and mouse functions	Pad mode is not available. The Setting Tool is a beta version
iPad / iPhone	Keyboard and mouse functions	Turn on MacOS・iOS Mode in Other Setting
Consoles and others	Devices that accept a USB keyboard	Depends on what the host supports

▶ **We recommend connecting directly to a USB port on the PC rather than through a USB hub.**
Settings are stored inside the device, so it behaves the same way on any other PC.

⚠ **MacOS・iOS Mode is for connecting to an iPad or iPhone, and for using mouse functions on macOS.**
The gamepad (Direct-Input) function stops while it is on. Turn it off to use it on a PC.

Installing the USB driver

Do this if the Setting Tool does not find the device, or if firmware update does not work

When you need this

- The device is not listed in the Setting Tool
- The version does not change after running a firmware update

Steps

- Unzip the downloaded Setting Tool file and save it to any location. No installation is required.
- Open the Setting Tool folder, then open the "renesas" folder inside the "drivers" folder.
- On a 64bit OS, run "dpinst-amd64.exe".
- On a 32bit OS, run "dpinst-x86.exe".
- Follow the instructions on screen, then reconnect the USB cable.

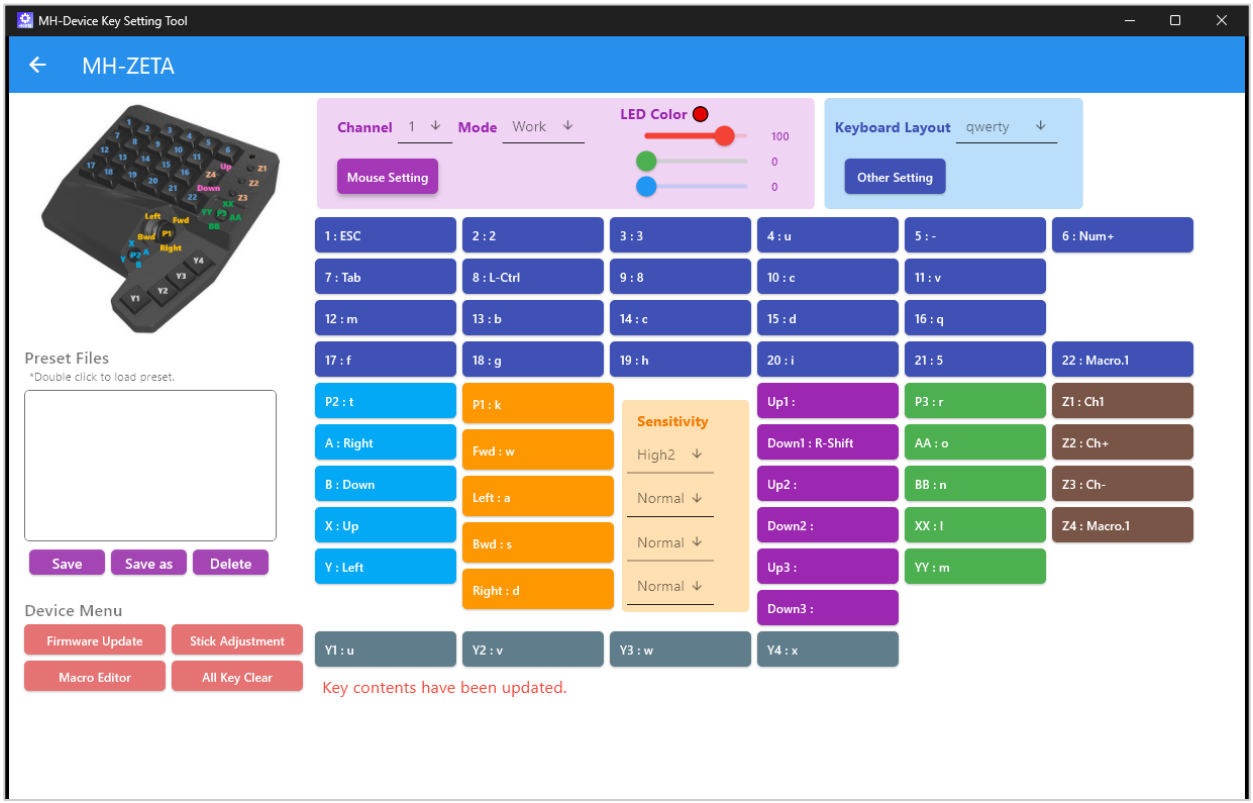
Item	Details
Folder	drivers / renesas, inside the Setting Tool folder
64bit OS	dpinst-amd64.exe
32bit OS	dpinst-x86.exe

⚠ **Installing a driver may require administrator rights.**
Choose Yes if a confirmation dialog appears.

▶ **This driver is for the microcontroller used in MH-Zeta.**
Other MH-Device products with a different microcontroller use a different driver, and some products need no driver at all.

The setting screen

What you see when you open MH-Zeta in the Setting Tool



The setting screen of MH-Zeta

Area	Contents
Top left	A picture of the product, showing which button has which name. Click to enlarge
Top centre	Channel / Mode / LED Color
Top right	Keyboard Layout, Other Setting
Centre	The assignment buttons. 47 of them, each shown as name : assigned key
Bottom left	Saving and loading Preset Files
Bottom left (Device Menu)	Firmware Update / Stick Adjustment / Macro Editor / All Key Clear

▶ **Pressing an assignment button opens the Key Select screen.**
The moment you choose a key and press OK, it is written to the device. There is no save button.

MH-Zeta specifications

The values for MH-Zeta, for every item this manual describes as differing by product

Item	MH-Zeta
Assignable functions	47
Channels	10 (Ch1 – Ch10)
Operation modes	Game / Work / Mouse / Pad, plus Sleep
Analog stick	Yes (four directions, deep-forward Fwd2, and a push switch)
Wheel	Yes (up to three layers per direction of rotation)
LED	One full-colour LED. R / G / B set from 0 to 127 for each channel
Macros	60 (Macro.1 – Macro.60)
Commands per macro	Up to 15
Macro modes	Momentary / Alternate / DualTrigger / TapHold / DoubleTap
Gamepad	32 buttons and 2 hat switches
Keyboard layouts	qwerty / qwerty-jis / azerty / qwertz
Other Setting	Yes
Auto Channel	Supported
Orientation	Std (left-hand) / Flip (right-hand)
Firmware update	Automatic, from the Setting Tool
USB driver folder	drivers / renesas (dpinst-amd64.exe for 64bit, dpinst-x86.exe for 32bit)

▶ **This manual describes firmware v26 and Setting Tool ver.22.**
You can check your current versions on the start screen of the Setting Tool, to the right of the product name.

Setting up the Setting Tool

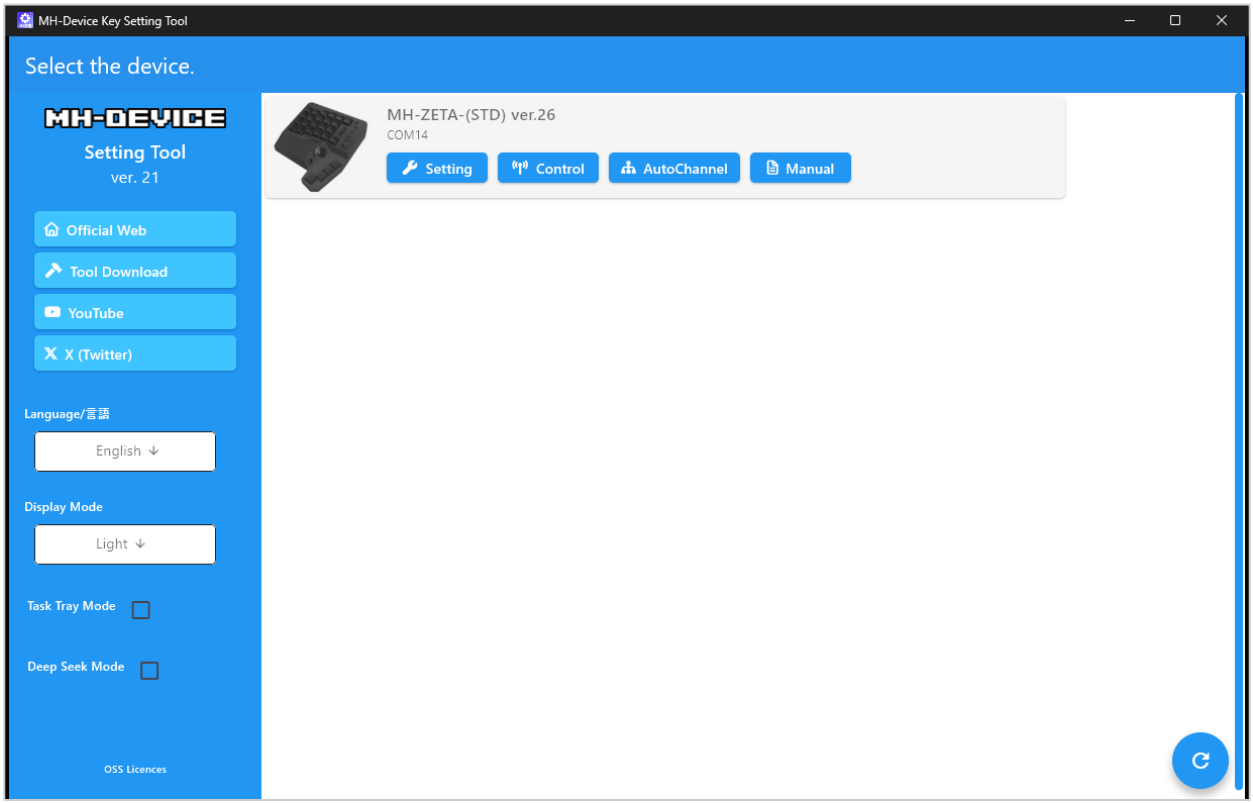
Item	Details
Supported OS	Windows 10 / Windows 11 (64bit)
macOS	Beta version. Operation is not guaranteed
What you need	A USB cable to connect the device to your PC (supplied with the product)
Where to get it	https://mh-device.com/ → Tool Download

Steps

- Unzip the downloaded file and run mhkeysetting.exe. No installation is required.
- Your settings are written into the memory inside the device. Once configured, the device keeps the same settings on any other PC or console, even without the Setting Tool running.
- If the device is not recognised, some products require a USB driver to be installed. If your product has a guide for this, please follow those steps.

▶ **To use Auto Channel (switching channels automatically to match the application in use),**
the Setting Tool has to stay running.
Turn on Task Tray Mode on the start screen to keep it resident (Windows only).

The start screen



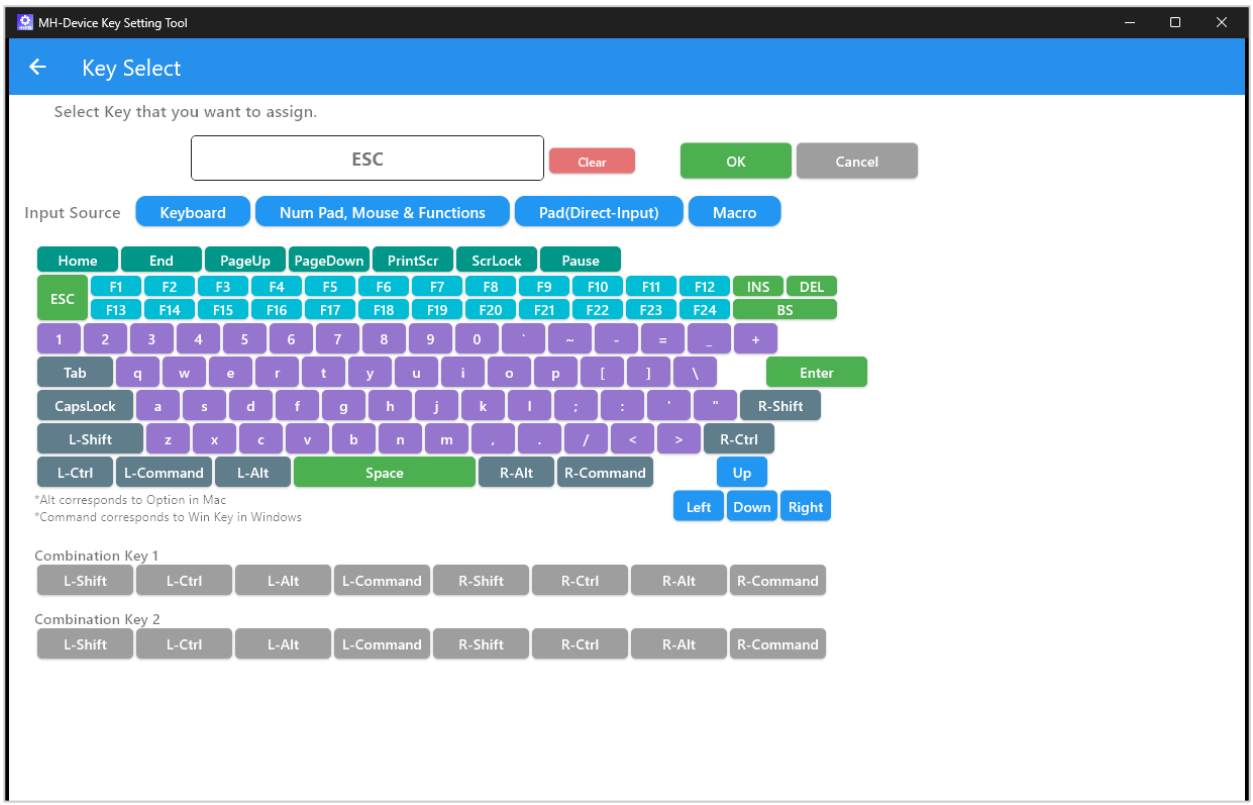
Start screen (what is shown depends on the product)

Button / Item	What it does
Setting	Opens the setting screen, where you assign keys
Control	Switches the channel straight away (supported products only)
AutoChannel	Switches channels automatically to match the application in use (supported products only)
Manual	Opens the manual
Language	Switches between English and Japanese
Display Mode	Switches the colour scheme between Light and Dark
Task Tray Mode	Keeps the tool resident in the task tray when minimised (Windows only)
Deep Seek Mode	Turn this on and reload to search connected devices more thoroughly

⚠ **If your product is not listed, first reconnect the USB cable and press the reload button** at the bottom right. Turn on Deep Seek Mode only if it still does not appear. Loading then takes longer.

Assigning keys ① Keyboard

- Press the button you want to assign on the setting screen. The Key Select screen opens.
- Choose what you want to assign from the four tabs at the top.
- Press OK to write it to the device. Cancel leaves the assignment unchanged.
- Clear empties the assignment for that button.



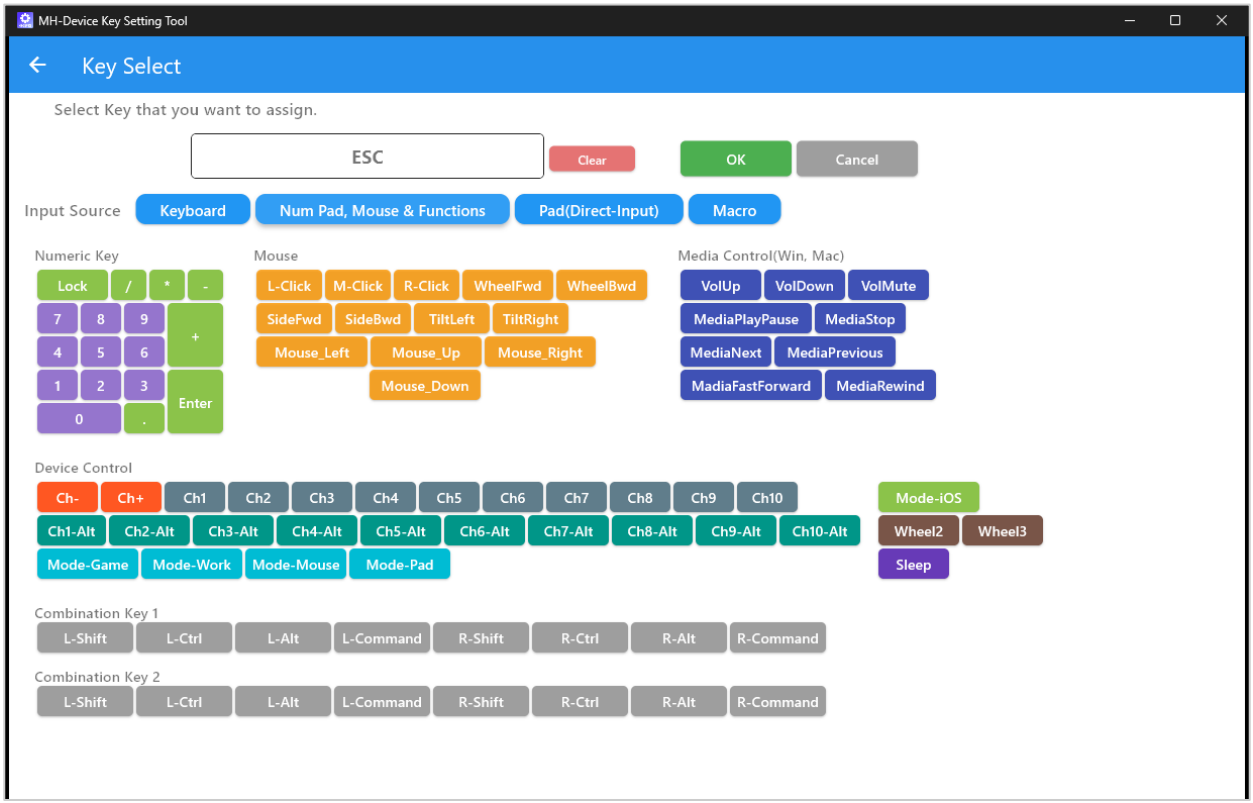
Key Select → Keyboard tab

Up to two modifiers can be combined

- Use Combination Key 1 and Combination Key 2 at the bottom to add up to two modifiers.
- Example: choose s as the main key, L-Ctrl as Combination Key 1 and L-Shift as Combination Key 2,
  and the button sends Ctrl + Shift + S.

⚠ The key labels shown here follow the Keyboard Layout setting at the top right of the setting screen.
This only changes what is displayed. The signal the device sends does not change.
Match it to the layout of the keyboard you use on your PC (qwerty-jis for a Japanese layout).

Assigning keys ② Num pad, mouse and media



Key Select → Num Pad, Mouse & Functions tab

Group	What you can assign
Numeric Key	0–9, operators, Enter, NumLock
Mouse	Left / middle / right click, wheel forward and back, side buttons, tilt left and right, cursor movement (up, down, left, right)
Media Control	Volume up / down / mute, play-pause, stop, next track, previous track, fast forward, rewind

⚠ **A button assigned to wheel forward, wheel back or tilt scrolls once per press.**
Holding it down does not scroll continuously. Use a macro if you need that.

▶ **Cursor speed and the amount each wheel step scrolls are adjusted in Mouse Related Setting.**

Assigning keys ③ Device Control

- These keys operate the device itself. They are in the lower half of the same tab.
- Nothing is sent to the PC. The state of the device changes instead.

Key	What it does
Ch+ / Ch−	Moves one channel forward / back
Ch1, Ch2 and so on	Switches to the specified channel
Ch1-Alt, Ch2-Alt and so on	Switches to that channel while held, and returns when released

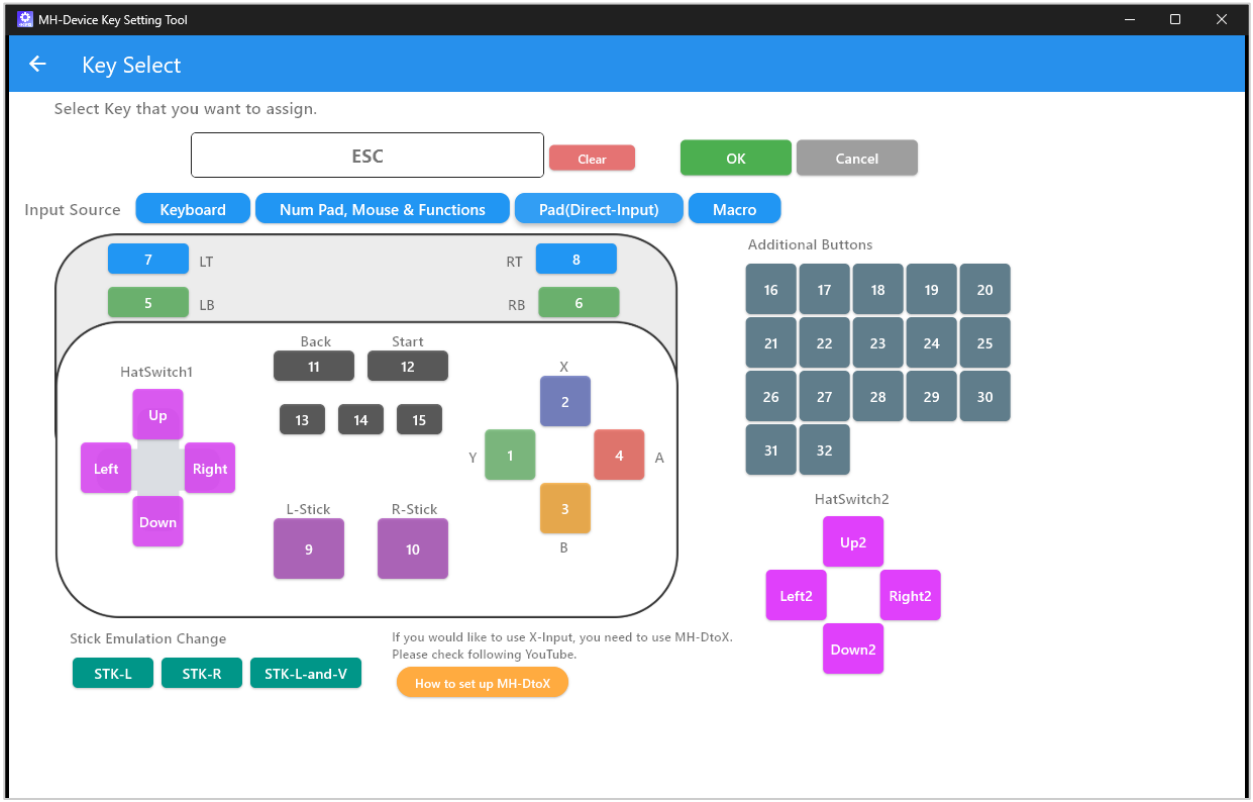
▶ **The keys listed here differ by product. Besides the number of channels, you may find keys for** the operation mode, the wheel layer, Sleep, or for operating another product — only the functions your product actually has. See the pages for your product.

⚠ **If no button is assigned to a channel key, you cannot change channels from the device itself.** We recommend keeping at least one channel key assigned.

Assigning keys ④ Pad (Direct-Input)

・Your PC also recognises the device as a gamepad, so it works directly with gamepad-ready games.

・Pad buttons (Pad1–Pad32) and two hat switches can be assigned to any button on the device.



Key Select → Pad(Direct-Input) tab

▶ On products with an analog stick you can choose which gamepad axis the stick acts as.
See the pages for your product for details.

⚠ Pad mode is not available on macOS.
Turning on MacOS・iOS Mode in Other Setting also stops the gamepad function.

Using channels

・A channel is a complete set of key assignments that you can switch between.
・Prepare one channel per game or application and you can switch with a single button on the device.
・You can switch with a Device Control key, from the Control screen, or with Auto Channel.

Stored per channel	Shared by all channels
Key assignments (main and Combination Keys 1 and 2)	The contents of macros
Operation mode	Everything in Other Setting
LED colour	Keyboard Layout
Sensitivities	Calibration values of the device (stick or trackball)

⚠ **Macros are shared by all channels. Changing channel does not change what a macro does.**
To get different behaviour per channel, create a separate macro number and assign that.

▶ **The number of channels and the default LED colour of each channel differ by product.**
See the Specifications page for your product.

Macros ① What a macro is

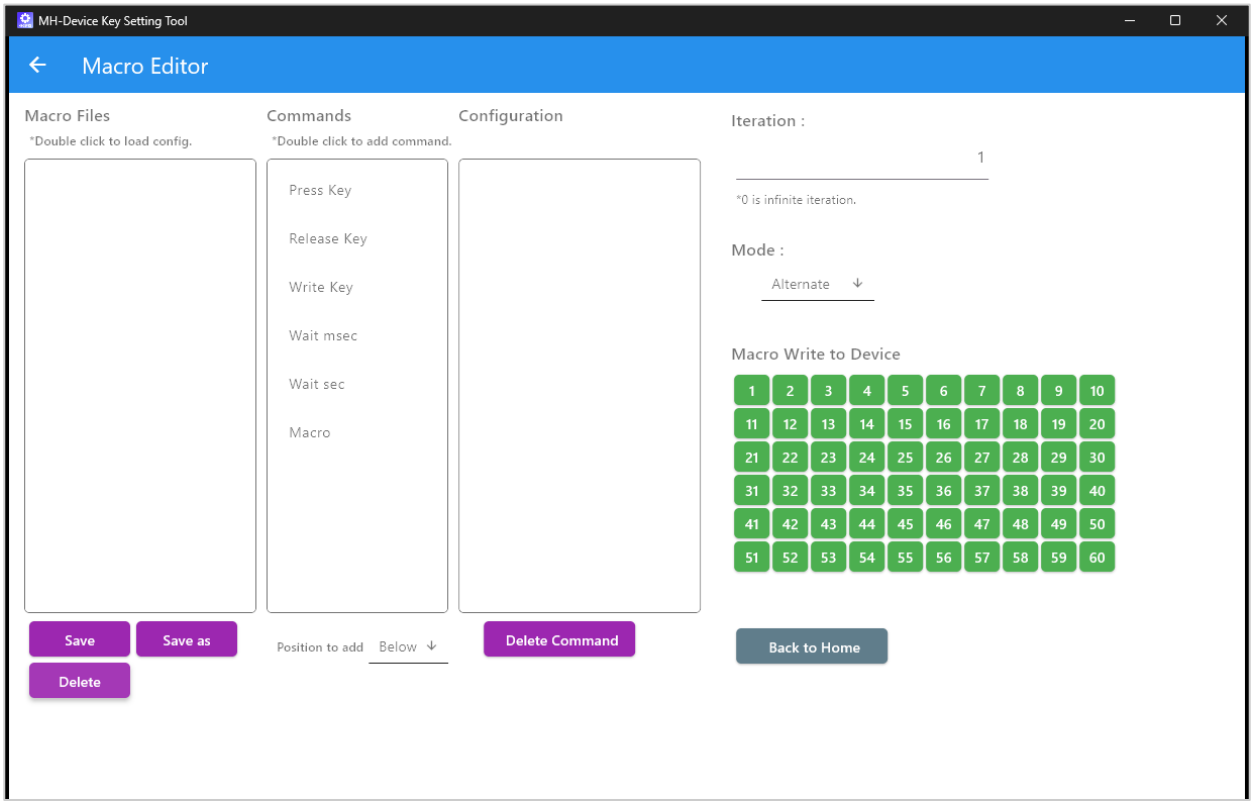
- A macro lets you put several actions into a single button.
- You build it by listing commands in order: press a key, release a key, wait, and so on.
- A macro is stored in the device and assigned from the Macro tab of the Key Select screen.

Command	What it does
Press Key	Presses a key and holds it
Release Key	Releases a key
Write Key	Presses a key, waits for a set time, then releases it
Wait msec	Waits the specified number of milliseconds
Wait sec	Waits the specified number of seconds
Macro	Moves to another macro

- You can set how many times the macro repeats. 0 repeats until you stop it.
- Only one macro runs at a time. Starting another macro stops the one that is running.
- Keys pressed during a macro are all released when the macro ends, so nothing stays held down.

⚠ **Macro moves to another macro and does not come back.**
Any command written after it is never carried out, so always put it on the last line.

Macros ② Building a macro



Setting screen → Macro Editor

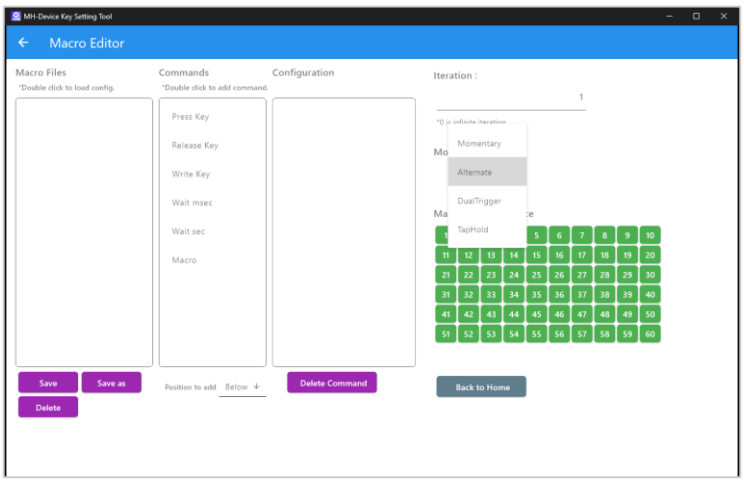
How to build one

- Double-click a command under Commands to add it to Configuration.
- Position to add decides whether it goes Above or Below the line you have selected.
- Select a line you do not need and press Delete Command.
- Enter how many times it repeats under Iteration. 0 repeats forever.
- Choose how it behaves under Mode (see the next page).
- Finally press a number under Macro Write to Device to store it under that number.

▶ **The number you write to is the Macro.1, Macro.2 ... number you pick when assigning a key.**
Writing also saves the same contents as a file in the tool folder automatically.
Save and Save as let you keep it under a name of your choice.

Macros ③ Choosing the mode

Mode	What it does	Commands you can use
Momentary	Runs only while the button is held. Stops when released	All commands
Alternate	One press starts it, another press stops it	All commands
DualTrigger	Sends one key the moment you press, and another the moment you release	Press Write and Release Write only
TapHold	Sends one key for a long press and another for a short press	Hold Write and Tap Write only
DoubleTap	Sends one key when pressed twice within a set time, and another for a single press	SingleTap Write and DoubleTap Write only



Choosing the mode (screenshot taken before DoubleTap was added)

⚠ **DualTrigger, TapHold and DoubleTap take exactly two commands, in a fixed order.**
The Iteration setting has no effect on them; they always run once.
If one of them calls another macro, that macro must be built in Momentary mode.

▶ **The time used to decide a long press or a double press is set in Other Setting.**

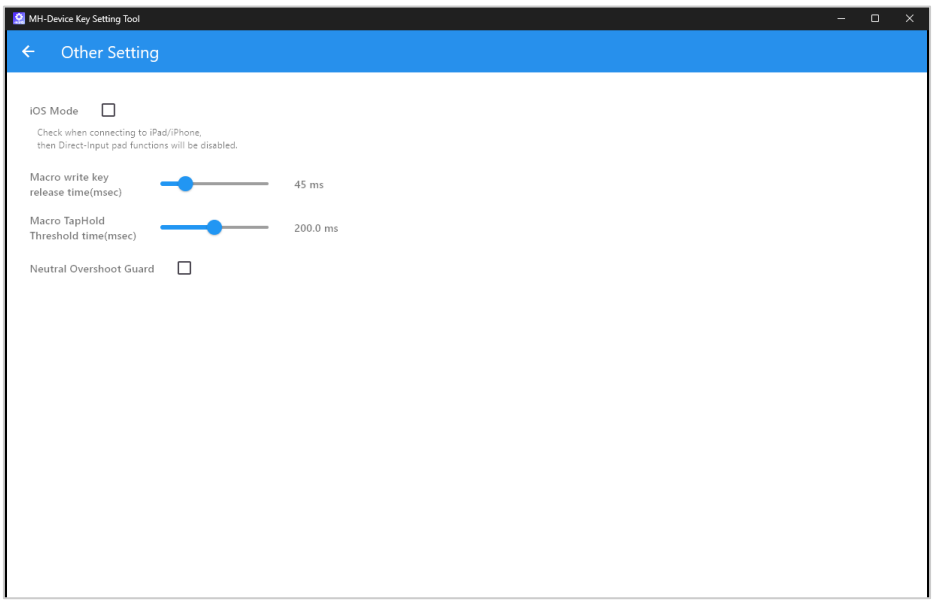
Macros ④ When a macro does not behave as expected

Symptom	Cause and what to do
An error appears when writing	One macro can hold up to 15 commands. It cannot be written with 16 or more. Split it up and join the parts with the Macro command
Commands after Macro are not carried out	Macro moves to another macro and does not come back. Put it on the last line
You want to change how long Write Key is held	Change "Macro write key / release time(msec)" in Other Setting. This value is shared by every macro and cannot be set per macro
You cannot add a modifier	Press Key, Release Key and Write Key cannot take modifiers. The DualTrigger, TapHold and DoubleTap commands can

⚠ **For a long wait, Wait sec is the more reliable choice.**
To wait three seconds, use Wait sec with 3 rather than Wait msec with 3000.

Other Setting

・Open it from Other Setting at the top right of the setting screen. Everything here is shared by all channels.

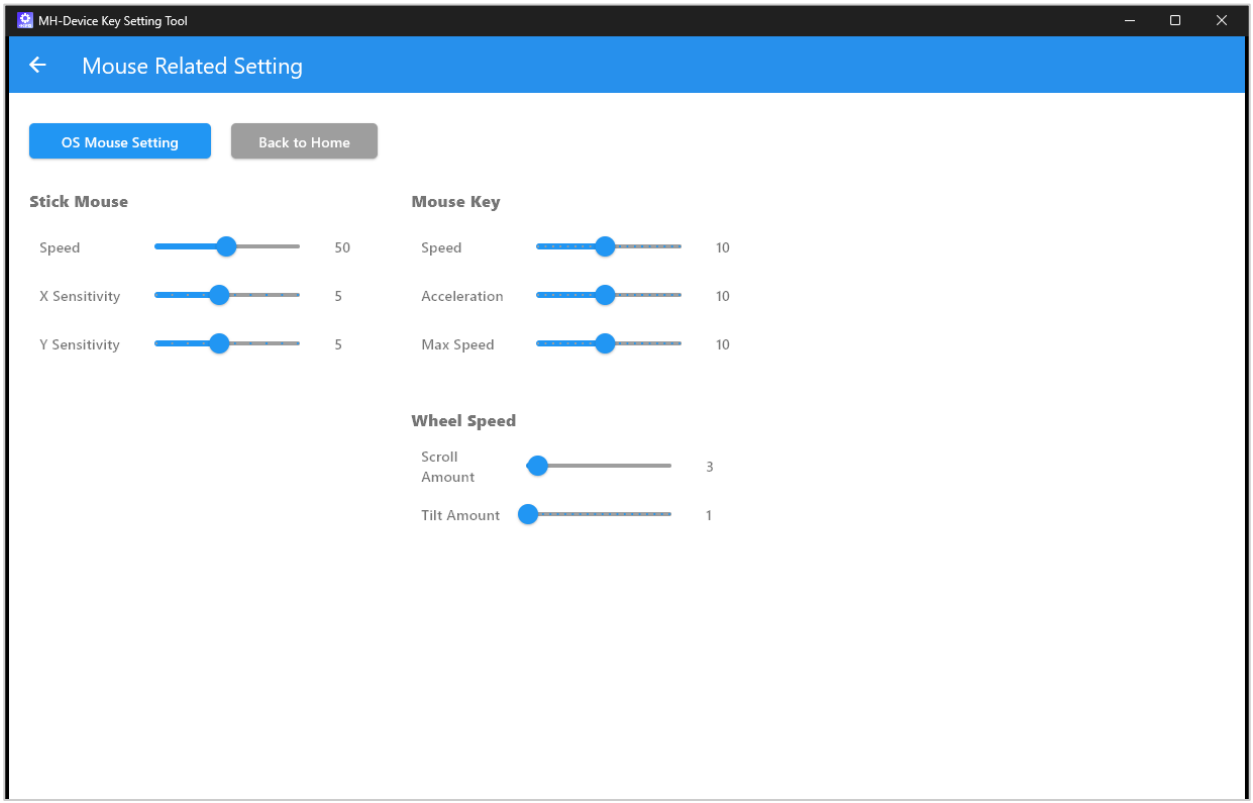


Other Setting

Item	Details	Default
MacOS・iOS Mode	Turn this on when connecting to an iPad or iPhone, and when using mouse functions on macOS. The gamepad function stops while it is on. The device restarts by itself when you change this	Off
Macro write key / release time(msec)	How long Write Key holds a key before releasing it	50 ms
Macro TapHold / Threshold time(msec)	A press longer than this counts as a long press	200 ms
Macro DoubleTap / Threshold time(msec)	A second press within this time counts as a double press	200 ms

▶ **Some products add items of their own here. See the pages for your product.**
Anything your product does not have is not shown.
None of these settings are stored in a Preset.

Mouse Related Setting



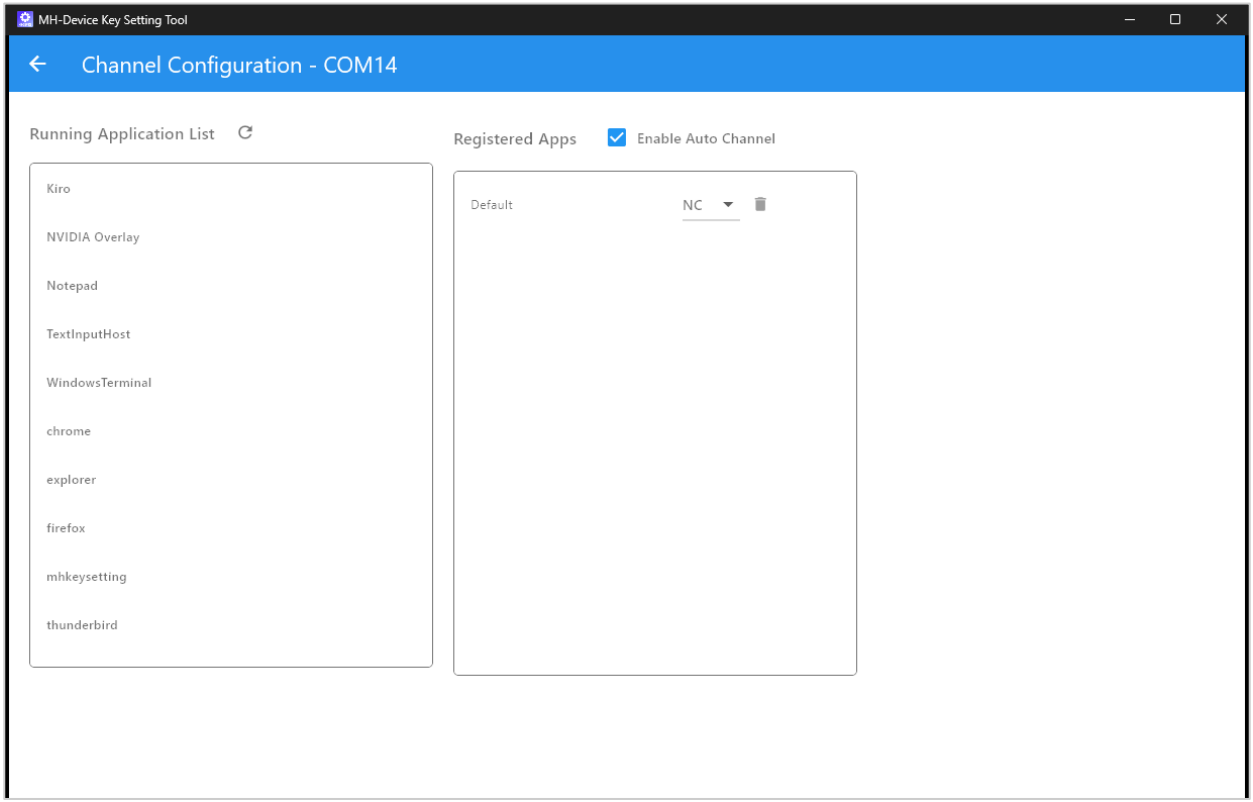
Setting screen → Mouse Setting

Group	Items	What it affects
Mouse Key	Speed / Acceleration / Max Speed	How fast the cursor moves when driven by keys such as Mouse_Up
Wheel Speed	Scroll Amount / Tilt Amount	How much one press of a wheel key scrolls

▶ **On products with an analog stick or a trackball, settings specific to that product also** appear here. See the pages for your product.
OS Mouse Setting opens the mouse settings of Windows itself.
If raising the values here is not enough, check the pointer speed on the OS side as well.

Auto Channel (switching channels automatically)

- Switches the channel automatically to match the application you are using.
- Open it from AutoChannel on the start screen.



Channel Configuration screen

How to set it up

- Pick the application you want from Running Application List and register it.
- Choose the channel to switch to for each registered application.
- Tick Enable Auto Channel to start using it.
- The bin icon removes a registration.

Item	Meaning
Default	The channel used when none of the registered applications is in front. This row cannot be deleted
NC	Means do not switch the channel

⚠ **This works only while the Setting Tool is running. Channels do not switch once you close it.**
We recommend turning on Task Tray Mode on the start screen (Windows only).

Presets (saving and loading settings)

・Keeps your current settings as a file on the PC. You will find it at the bottom left of the setting screen.

Button	What it does
Save	Overwrites the selected file
Save as	Saves as a new file under a name of your choice
Delete	Removes the selected file
(Double-click)	Double-clicking a file in the list writes those settings to the device

Stored in a Preset	Not stored in a Preset
The key assignments of the channel you have open	The settings of other channels
(including Combination Keys 1 and 2)	The contents of macros
Operation mode, LED colour and the sensitivities	Everything in Other Setting
	Keyboard Layout
	Calibration values of the device (stick or trackball)

⚠ **A Preset holds one channel only — the one you have open.**
All channels cannot be saved together, so save them one channel at a time.
Loading a Preset does not restore macros or anything in Other Setting either.

▶ **A Preset records which product it came from, and loading one from another model is refused.**

Firmware Update

Steps

- Updates the software inside the device. Open it from Firmware Update on the setting screen.
- Opening the screen checks for the latest version and downloads what is needed automatically.
- If it tells you an update is required, follow the instructions on screen.
- When it finishes, go back to the start screen and press the reload button.

⚠ Do not disconnect the USB cable while updating. The device may fail to start afterwards.

▶ If the version does not change after updating, some products need a USB driver installed.
Follow the driver installation guide shown on screen.

▶ A new feature becomes available only once both the firmware and the Setting Tool support it.
If you cannot find an item in the tool, check that the Setting Tool itself is up to date.
You can get it from Tool Download on the start screen.

Troubleshooting

Symptom	What to check
The product is not listed in the Setting Tool	・Reconnect the USB cable and press the reload button at the bottom right ・Try a different USB port (directly on the PC rather than through a hub) ・Turn on Deep Seek Mode on the start screen and reload ・Check that the Setting Tool is not already running twice ・Some products need a USB driver installed. See the pages for your product
A key was assigned but does nothing	・Check that you assigned it on the channel you are using now (it may be another channel) ・On products that have operation modes, behaviour changes with the mode
The character sent is not what you expected	・Match Keyboard Layout at the top right of the setting screen to the layout used on your PC
Not recognised as a gamepad	・Check that MacOS・iOS Mode in Other Setting is not on ・The gamepad function is not available on macOS
Settings change on their own	・Check whether Auto Channel is enabled
The LED is off	・Check that the LED setting for that channel is not off ・On products with Sleep, check whether the device is asleep (press again to return)

▶ **If none of this helps, please tell us the product name, the firmware version and** the Setting Tool version when you contact us. All three are shown on the start screen.

Appendix Glossary

Term	Meaning
Channel	A complete set of key assignments that you switch between
Function	An assignment target on the device — each button shown on the setting screen
Combination Key	A modifier such as Shift or Ctrl, used together with another key
Operation mode	A setting that changes how the stick or trackball behaves. The names and the number of modes differ by product
Momentary	Runs only while the button is held
Alternate	Each press switches between start and stop
DualTrigger	A macro mode that does one thing on press and another on release
TapHold	A macro mode that does one thing for a long press and another for a short press
DoubleTap	A macro mode that does one thing for a double press and another for a single press
Preset	Settings saved as a file on the PC
Firmware	The software running inside the device
Direct-Input	One of the ways a PC recognises a gamepad
Std / Flip	Left-hand and right-hand versions, shown as RH / LH on some products. Some products are symmetrical and have no such distinction

Operation modes

Switched with Mode on the setting screen. Set per channel

Mode	How the stick behaves	Sensitivities you can set
Game	Sends the keys assigned to forward, back, left and right. Pushing it deeply forward switches to the key assigned to Fwd2. Diagonal input is allowed	Fwd2 sensitivity (8 steps) Directional sensitivity (9 steps)
Work	Sends the keys assigned to forward, back, left and right. While up or down is held, left and right are ignored, and the other way round. Use it when you want to avoid unintended diagonals	Directional sensitivity (9 steps)
Mouse	Moves the mouse cursor with the stick. The further you push, the faster it moves	Stick Mouse in Mouse Related Setting
Pad	Acts as the analog stick of a gamepad	X / Y / Z / Rz sensitivity (9 steps)

- Assign a mode key such as Mode-Game and you can switch from the device itself.
- Mode keys toggle. Pressing again returns to the mode set for that channel.
- The Sleep key turns off the LED and stops key input. Press again to return.

⚠ **Pad mode is not available on macOS.**
While MacOS・iOS Mode in Other Setting is on, Pad mode sends no input either.

Device Control keys on this product

They are in the lower half of the Num Pad, Mouse & Functions tab

Key	What it does
Ch+ / Ch−	Moves one channel forward / back
Ch1 to Ch10	Switches to the specified channel
Ch1-Alt to Ch10-Alt	Switches to that channel while held, and returns when released (the target channel needs a return setting. See the warning below)
Mode-Game / Mode-Work / Mode-Mouse / Mode-Pad	Switches the operation mode. Pressing again returns to the mode set for that channel
Mode-iOS	Turns MacOS・iOS Mode on and off
Wheel2 / Wheel3	While held, switches the wheel assignment to the 2nd or 3rd layer
Sleep	Turns off the LED and stops key input. Press again to return

⚠ **When you use Ch-Alt, assign the return Ch-Alt to the same button on the target channel.**
Example: if Button 1 on Ch1 is set to Ch5-Alt, set Button 1 on Ch5 to Ch1-Alt.
Without this setting, releasing the button does not return you to the original channel.

⚠ **If no button is assigned to a channel key, you cannot change channels from the device itself.**
We recommend keeping at least one channel key assigned.

▶ **The mode keys are toggles. Pressing one selects that mode, and pressing it again** returns to the mode set for the channel you are on.

The analog stick and Fwd2 (walk and dash)

- In Game mode, how far you push the stick forward selects between two different keys.
- A light push sends the key assigned to Fwd, and a deep push sends the key assigned to Fwd2.
- This lets you switch between walking and dashing with a single stick.

Setting	What it does	Values
Fwd2 sensitivity	How deep you have to push before it switches to Fwd2. OFF disables Fwd2 altogether	OFF / Ex-Low / Low / Mid-Low / Middle / Mid-High / High / Ex-High
Directional sensitivity	How far you have to push before it counts as input, per direction	High4 – Normal – Low4 (9 steps)

If the stick does not read correctly

- If input is sent while the stick is centred, or pushing straight forward reads as a diagonal, use Stick Adjustment on the setting screen to correct it.
- The corrected values are shared by all channels.

▶ **Fwd2 sensitivity is OFF by default.**
To use the dash switch, assign a key to Fwd2 and set Fwd2 sensitivity to something other than OFF.

Stick Adjustment

Open it from Stick Adjustment on the setting screen. The values are shared by all channels

Item	How to do it	What it fixes
Neutral Adjustment	Take your fingers off the stick, then press Calibration	Input being sent even though you are not touching the stick
Angle Adjustment	Hold the stick straight forward, then press Set Angle	Pushing forward being read as a diagonal
Set default	Returns the values to the uncalibrated state	When you want to start over

⚠ **Neutral Adjustment takes ten readings and fails unless at least seven of them are stable.**
If it fails, put the device on a flat surface, keep your hands off the stick and try again.

▶ **Stick calibration values are not stored in a Preset.**
If the stick springs back when released, also try Neutral Overshoot Guard on the next page.

Cursor speed when driven by the stick

・How fast the cursor moves when driven by the stick (Mouse mode) is set from Mouse Setting on the setting screen, under Stick Mouse.
You can set Speed, Sensitivity X and Sensitivity Y.

Neutral Overshoot Guard

Suppresses unintended input caused by the stick springing back when released

- Push the stick hard and let go, and it can travel past the centre and spring back the other way.
- That brief overshoot can be picked up as input, sending a direction you did not intend.
- Turning on Neutral Overshoot Guard suppresses it.

Guard OFF

push right	let go	passes the centre	**overshoots the other way**	settles at the centre

→ the spring-back is picked up as input

Guard ON

push right	let go	passes the centre	**overshoots the other way**	settles at the centre

→ input that does not last 30ms is ignored, so it is not picked up

Mode	How the guard works
Game / Work	Input counts only once it has stayed past the threshold for 30ms
Pad	For 30ms after the stick crosses the centre and reverses, the opposite side is held at centre
Mouse	The guard has no effect in this mode

▶ **Where to set it: setting screen → Other Setting → Neutral Overshoot Guard. Off by default.**
The setting is shared by all channels. With it on, input is confirmed up to 30ms later.
If response speed matters most to you, it is fine to leave it off.

The wheel (three layers)

・Each direction of rotation can be assigned, and one wheel can hold three layers of assignments.
・They appear as Up1 / Down1, Up2 / Down2 and Up3 / Down3 on the setting screen.

Layer	Function name	When it is sent
1st	Up1 / Down1	When you turn the wheel normally
2nd	Up2 / Down2	When you turn it while holding a key assigned to Wheel2
3rd	Up3 / Down3	When you turn it while holding a key assigned to Wheel3

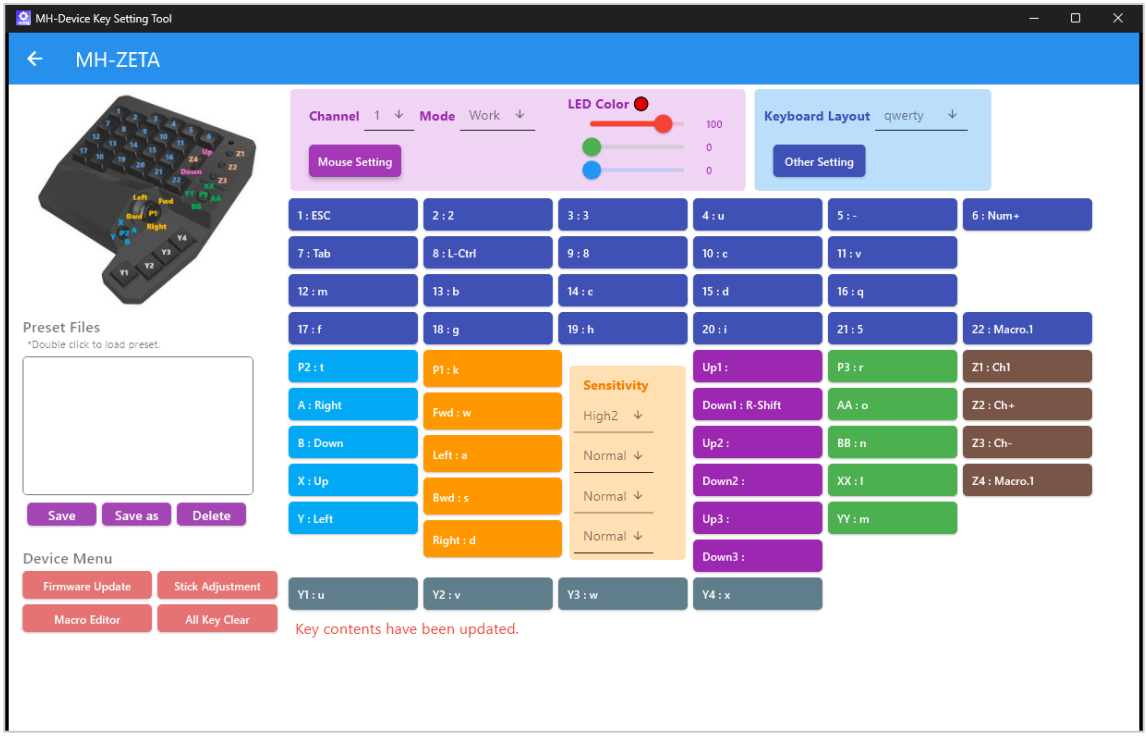
・For example: volume on the first layer, scrolling on the second, browser back and forward on the third.
・Wheel2 and Wheel3 are on the Num Pad, Mouse & Functions tab of the Key Select screen.
・The push switch of the wheel can be assigned as well.

▶ **How much each step scrolls is set under Wheel Speed in Mouse Related Setting.**

⚠ **A button assigned to WheelFwd, WheelBwd and so on scrolls once per press.**
Holding it down does not scroll continuously.

The LED

- The device has one full-colour LED.
- You can set a colour per channel, so you can tell at a glance which channel you are on.
- Set red, green and blue from 0 to 127 with the three sliders under LED Color, at the top right.



LED Color is set at the top right of the setting screen

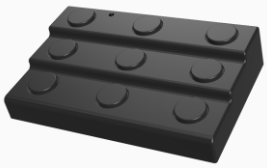
- The colour shown on screen is adjusted to look close to the real thing.
- To keep the LED off on a channel, set LED Condition to off for that channel.
- The LED is off while the device is asleep.

▶ **If the LED is off, check whether the device is asleep, and whether LED Condition** for that channel is switched off.

Combining with MH-Beta2

The MH-Beta2 foot switch can change the channel and the mode of this device with your feet

- Combine the MH-Beta2 foot switch (sold separately) with the PC application BetaHub and you can change the state of this device with your feet, hands still on the keyboard and mouse.
- Assign Hub1 to Hub10 to the switches of MH-Beta2, then decide in BetaHub which operation each one performs.



MH-Beta2
you press it with your foot

USB →

BetaHub

PC application
receives and converts it

USB →



MH-Zeta
its settings change

A switch you press becomes an operation on this device, through BetaHub on the PC.

What your feet can do	Details
Switch channels	Ch1 to Ch10 directly, or Ch+ / Ch− to step through them
A different channel while pressed	Ch1-Alt to Ch10-Alt. Lift your foot and it returns
Switch the operation mode	Mode-Game / Mode-Work / Mode-Mouse / Mode-Pad / MacOS・iOS Mode
Switch the wheel layer	Wheel2 / Wheel3
Switch the stick assignment	Left stick / right stick / left and view
Sleep	Turn off the LED and stop input

▶ **There are ten Hub keys, and up to two target devices. MH-Zeta and MH-Epsilon2 can be used together.**
BetaHub is available from Download on the official site (Windows / macOS).

⚠ **While BetaHub is not running, pressing a Hub key on MH-Beta2 does nothing on this device.**

Troubleshooting (MH-Zeta specific)

For problems with the Setting Tool in general, see the Troubleshooting page

Symptom	What to check
The opposite direction is sent for a moment when you release the stick	Turn on Neutral Overshoot Guard in Other Setting
Input is sent while the stick is centred	Run Neutral Adjustment from Stick Adjustment on the setting screen
Pushing straight forward reads as a diagonal	Run Angle Adjustment from Stick Adjustment
Dash (Fwd2) does not engage	Check that a key is assigned to Fwd2 and that Fwd2 sensitivity is not OFF. Fwd2 works in Game mode only
Diagonals are sent unintentionally	Work mode suppresses simultaneous up-down and left-right input
The wheel does not do what you expect	Check that you are not holding a key assigned to Wheel2 or Wheel3
A game does not recognise it as a gamepad	Switch to Pad mode. It does not work while MacOS・iOS Mode is on, and Pad mode is not available on macOS

▶ **Contact: mh.device.info@gmail.com**
Please tell us the product name, the firmware version and the Setting Tool version.