## **Motion Assitant manual**

# Catalogue

| 1. Download and unzip file:         |
|-------------------------------------|
| 2. Launch software                  |
| 3. Simple process                   |
| 4. Detailed setting introdution     |
| 4.1 Profile                         |
| 4.2 Input                           |
| 4.3 Simulation4                     |
| 4.4 Enable                          |
| 4.5 Advance                         |
| 5 Steam virtaul controller tutorial |

# Tutorial

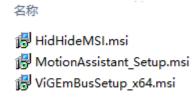
MotionAssistant is a kind of gyro data simulation tool, able to receive various gyro date and simulate them as output to Aiming aid or other original motion sensing.

The inputting which it support: USB gyro(GY-USB002), Handheld console gyro which built in, Mobile Phone gyro(through Motion Source/apk, for streaming using).

The simulation output: Mouse motion, Xbox stick motion, DS4 original motion sensing.

Tutorial:

### 1. Download and unzip files



Install virtual gamepad drivers and exe files from necessary environment package, no sequence required.

Virtual gamepad drivers contain: HidHideMSI.msi and ViGEmBusSetup\_x64.msi, all default installation and please reboot after inst allation done. Only 64bit OS supported

Necessary environment package contain: VC++ 2015-2022-x64\_14.31.31103.exe and netcorecheck\_x64.exe(Those files already per set in WIN Max 2), if your system had VC++ runtime library and .Net runtime library then you can jump this step off; a nd once you get crash and error please reinstall again.

Att: Virtual gamepad drivers and enviroment files just need one time installing at beginning.

#### 2. Launch software

Open MotionAssistant folder and MotionAssistant.exe then software will be lauched as following:

| 🔮 MotionAssistant 体   | 惑助手 V1.1.2           |                  | – 🗆 ×               |
|-----------------------|----------------------|------------------|---------------------|
| Profile               |                      |                  |                     |
| Current: default      | .ini Save            | Load Defau       | ult 🗌 Start         |
| Input Simulate        | Enable TDP A         | dvance           |                     |
| - Select Gyromet      | er                   |                  |                     |
| O Internal            | ● USB Gyro 〇         | DSU Client       |                     |
| - Physical Contro     | ller                 |                  |                     |
|                       | ~                    | Check            | Uncloak             |
| State:                | Uncloaked            | Vibration:       | 100                 |
| - USB Gyro Settir     | ngs                  |                  |                     |
| ● Up                  | $\bigcirc$ Up Invert | ○ Down           | $\odot$ Down Invert |
| СОМ                   | COM1 ~               | Close            | Check               |
| Gyro Filter           |                      |                  |                     |
| Moving                | 5                    | Gyro Data Debug  | 9                   |
| - DSU Client Sett     | ings                 |                  |                     |
| IP 127.0.0.           | .1 Port 2            | 26760 Connec     | ct Disconnect       |
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Motion Assistant UI

### 3. Simple process

- 3.1 "Input" Select the gyro source(USB or built-in or DSU external).
- 3.2 "Simulate" Select simulate model(Mouse or Xbox stick or PS4 motion.
- 3.3 "Enable" Set how to enable gyro(Hold trigger button or customized button.
- 3.4 Click start to turn simulator on(Main switch, launched by  $\sqrt{}$ ).

Att: Next section is the tutorial of detail setting, that's tedious and just for who want to understand MotionAssistant deeper.

#### 4. Detailed setting introduction

| Profile              |      |      |         |         |
|----------------------|------|------|---------|---------|
| Current: default.ini | Save | Load | Default | 🗌 Start |
|                      |      |      |         |         |

Profile

### 4.1 Profile

For save current profile, load exist profile and default setting restoring, as well general switch. If the "Automatic saving" (which belongs to advance) is enabled, then changes will save automatically to current profile. Software will load the profile which in last sa ving when it launching. You can also change the profile name to save current setting as a new profile.

| Input Simulate Enable TDP Advance                                 |
|---|
| Select Gyrometer  |
| O Internal  |
| Physical Controller   |
| Check Uncloak   |
| State: Uncloaked Vibration: 100                                   |
| USB Gyro Settings   |
| Up O Up Invert O Down O Down Invert                               |
| COM COM1 V Close Check  |
| Gyro Filter   |
| Moving 5 Gyro Data Debug  |
| DSU Client Settings<br>IP 127.0.0.1 Port 26760 Connect Disconnect |
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#### 4.2 Input

**4.2.1 Gyro selection:** Select the gyrometer, USB gyro is for who bought USB gyro, internal is for who has built-in gyro, DSU Cli ent is for who want to use cell phone to streaming.

**4.2.2 Physical controller:** Select your controller. MotionAssistant function base on real controller which like Xbox and PS4 simula tion. So physical controller will be shielded once simulation launched, to avoid conflicting. If you find the physical controller can't be used, that might because they are still locked by each other, please click unlock to remove the connection. Virtual controller is a ble to tweak vibration strength 0-100, 0 is off, 100 is maximum.

**4.2.3 USB gyro setting:** USB gyro use CH340 series data trasmission, so please install CH340 driver which attached in folder, th en insert USB gyro into USB-A(adaptor and cable extend allowed), back to USB gyro you will see software is automatically searching available series port and open it. If your unit has multiple series ports, please check the CH340 seires number in device manager a

nd chosse the suitable one in software and open it.

About USB gyro directivity: Support up port and bottom port, and it's invertiable. Please invert it if you get weird feeling.

**4.2.4 Gyro Filter:** Base on smoothing filtering, default is 5, means that output the average value from 5 sets of datas. Bigger n umber means that more datas involved averaging calculation, motion will be more steady meanwhile latency will get bigger. The s moothing filtering could decrease jitter but increase latency, so if you want to 0 latency please set it as 1 to shut smoothing filter off.

Gyro data tweaking will open a new window to show the original data of the current gyro, that could verify whether gyro conn ected well.

**4.2.5 DSU Client:** DSU Client is made particular for mobile streaming gamer, install MotionSource.apk, keep mobile and PCunder same LAN or VLAN, launch Montion Source and enable server on mobile, insert mobile IP and port number to PC software, click "connect", the data will be catched if everything connected well. Att: suggest disable firewall, please use VLAN tool if you are in public Internet, and please ensure the controller date could be catched by moonlight correctly.

| ⊕ MotionAssistant 体感助手 V1.1.2 - □ × |                  |                       |                      |
|-------------------------------------|------------------|-----------------------|----------------------|
| Profile                             |                  |                       |                      |
| Current: defaul                     | t.ini Save       | Load Defa             | ult 🗌 Start          |
| Input Simulate                      | Enable TDP A     | dvance                |                      |
| - Gyro Simulate I                   | Mode             |                       |                      |
| Mouse                               | Xbox360 (JoyStic | k) O DS4 (P           | S4 Motion)           |
| Mouse<br>Sensivity                  | 3.5              | Mouse<br>Threshold    | 1                    |
| Joystick<br>Sensivity               | 3.5              | Joystick<br>Threshold | 0.2                  |
| Axis Select                         | ● XY             | ○ xz                  | ○ XYZ                |
| Invert                              | 🗌 Horizontal     | Vertical              |                      |
| Vertical Gain                       | 1                | Horizontal Gain       | 1                    |
| Xbox Joystick                       | ○ Left           | Right                 | Excess Move          |
| Joystick Range                      | 0.2 ~ 2          | Only Joystick         | (Only for Fallout 4) |
| Custom Gain<br>Button               | None ~           | 1                     |                      |
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Simulation UI

#### 4.3 Simulation

Choose type of simulation and date setting

#### 4.3.1 Gyro simulation type: 3 type supported: Mouse, Xbox360 joystick, DS4(PS4 Motion)

Mouse: Simulate gyro data to mouse motion, use angular velocity to control relative movment of mouse, suitable for game whic h support keyboard and mouse but need joystick as well

Xbox: Simulate gyro data to Xbox joystick motion, there's a new virtual Xbox will be created after enable this function, Montio

nAssistant will use the virtual controller to control the angle of view accord to data which be set.

DS4: The gyro data and physical controller data will be packed together as DS4 controller(original motion sensing but not joysti ck simulation), most emulators support DS4 body sense directly. You can also use Steam gyro mapping to map DS4 controller to m ouse and joystick and what else.

Att 1: Xbox and DS4 simulation need physical controller, so please connect physical controller first and then use simulation.

Att 2: Simulation might not available for DS4 controller if the button can't be selected but only able for Mouse and Xbox360

Att 3: Simulation has compatibility difference, for example some games don't support mouse and joystick work together, then mouse model is inv alid in this game; some games has forceful decision on virtual controller, then such game will not compatible with Xbox simulation; So if you got incompatible with all simulation model, 2 ways to solve:

(1) Mouse simulation, use rewasd or controller partner tool to remap controller to keyboard and mouse, then you will get keyboard and mouse simulation in game.

(2) Use Steam controller, force virtual controller legal in gaming.

**4.3.2 Sensivity:** Sensivity control mouse and joystick moving speed, as bigger as faster, please set it as your own habit, thisfunc tion is suitable for mouse and Xbox simulation

**4.3.3 Threshold:** For anti jitter, data which lower than threshold will be flitered out, data which over than threshold is valid. The lager threshold, the less jitter, but meanwhile the tiny shift also harder detected. If you feel the jitter strong please increase the thre shold accoringly. Suitable for mouse and Xbox simulation.

**4.3.4 Axis select:** XY, XZ, XYZ optional, XY like left zoom and right zoom, XZ like wheel rotating, please selecte accordingly.

4.3.5 Invet: invert horizontal axis or vertical axis.

**4.3.6 Horizontal gain/vertical gain:** Set horizontal and vertical motion gain of sensitivity respetively, set number over than 1 to speed up and lower than 1 to slow down, gain horizontal sensitivity is good for some FPS gaming.

**4.3.7 Xbox joystick:** Choose the regular joystick as your view controller, attention, left joystick can't be used in race gaming.

**4.3.8 Joystick Range:** For joystick simulation range setting, the minimum setting is for avoid deadzon, so you have to set it to nearby deadzone, default is 0.2; maximum setting is for simulate the control range, default is 2, means 2 times joystick range. If so me games have view acceleration, then you can set the range as 0.9.

**4.3.9 Only Joystick:** Only available for Fallout4. Fallout4 will receive physical data and virtual data same time so the button pres sing will be read twice, so just enable this selection and reboot software if you met similar issue.

**4.3.10 Customized gain button:** You can customize a button as speed up or slow down, set number over than 1 to speed up and lower than 1 to slow down. This function suitable for some game which movement quite slow when sighting telescope opened.

| ④ MotionAssistant 体感助手 V1.1.2 ー ロ ×      |                          |  |
|--|--------------------------|--|
| Profile                                  |                          |  |
| Current: default.ini Save                | Load Default Start       |  |
| Input Simulate Enable TDP A              | dvance                   |  |
| HotKeys                                  |                          |  |
| ○ Ctrl+Alt+W(pressed)                    | ○ Trigger+DPad (switch)  |  |
| Octrl+Alt+W(switch)                      | state: On                |  |
| Triggers Enable                          |                          |  |
| ○ Left Trigger ○ Right                   | ○ Left or Right          |  |
| Trigger+DPad Setting                     |                          |  |
| • Left Trigger                           | ○ Right Trigger          |  |
| DPad-Up O DPad-Down                      | O DPad-Left O DPad-Right |  |
| Customized Enable Buttons                |                          |  |
| Button 1 None V                          | Button 2 None ~          |  |
| Button 3 None ~                          | Button 4 None ~          |  |
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### 4.4 Enable

For enable function buttons and hot buttons

**4.4.1 Hotkeys switch:** There are two model: clicking and holding, works in different scenarios, if your unit has customizing back key(WIN 3 and Win max 2), you can set it as Ctrl+Alt+W then you can press the button to switch gyro on and off. If your unit has n' t customizing button, you can set trigger+D-pad button to switch gyro on and off.

**4.4.2** Tigger+Dpad setting and customized enable buttons: You can set gyro launched by press any button, usually set the trigg er as the launch key. There are 4 buttons you can select anyone you want to. If none buttons selected, then gyro will always open.

| ⊕ MotionAssistant 体感助手 V1.1.2 - □ ×                     |  |
|---|--|
| Profile   |  |
| Current: default.ini Save Load Default 🗌 Start          |  |
| Input Simulate Enable TDP Advance                       |  |
| Start with windows                                      |  |
|   |  |
| Minimized after Startup                                 |  |
| 🗆 Auto Start Simulate after Startup                     |  |
| Auto save profiles                                      |  |
| Auto check serial port and open                         |  |
| Enable settings apply on PS4 simulate                   |  |
| Language ~  |  |
| - DSU UDP Server for Cemu/Yuzu/Ryujinx                  |  |
| UDP Server  |  |
| IP: 127.0.0.1 Port: 26760                               |  |
|   |  |
|   |  |
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Advance UI

#### 4.5 Advance

**4.5.1 DSU Server:** For date of emulators inputting, Cemu, Yuzu etc. Please set local IP and port number then enable "USPServ er" in emulator.

Att: Most emulator already support DS4 motion sensing and they are much better than DSU Server. So we suggest emulation pl ayer simulate DS4 controller directly and enable the motion sensing function, you will get better experience.

4.5.2 Other setting: Add some easy to use settings, like start with Windows, minimized, minimized after startup, etc.

#### 5 Steam virtaul controller tutorial Steam

5.1. Please total quit Steam client, the background and taskbar.

5.2. Launch MotionAssistant.exe, select Xbox or DS4, enable simulation.

5.3. Open control panel, search "USB game controller" and open it.

**5.4.** If there's only 1 controller in "USB game controller", that means simulating succeed. Click Properties to vertify whether gyro works fine(Xbox). If there are two controllerthen please reinstall HidHideMSI and ViGEmBusSetup\_x64, reboot unit and try abov e steps again.

**5.5.** After Step 4 succeed, launch Steam client, choose the game which you want to play, please add none steam game in librar y first if you want to play that.

5.6. Click "view" -> "setting" ->" controller" ->" regular controller setting", check whether only one controller exist and enabl

- e" Xbox configuration support" / "PlayStation configuration support", please don' t enable Xbox extend support.
  - 5.7. If there is one controller in controller setting, then just launch game to get gyro function.
  - 5.8. If there are two controllers in controller setting, then you have to change the controller sequence as following:
  - (1) Login Steam Big screen
  - (2) Launch the game which you want to play
  - (3) Swtich to Steam UI after game launched
  - (4) Click controller option in game manager UI
  - (5) Click reform controller sequence
  - (6) Move the second controller to top
  - (7) Click confirm, and confirm again
  - (8) Back to gaming, try to use gyro to control game

Att: Xbox configuration support is mandatory selection, and we suggest you rename the virtual controller to easy to distinguish.