HARITORAX 2

User Manual

For HaritoraX / HaritoraX 1.1 / HaritoraX Wireless, move to there.

Shiftall

Return to product page

. Introduction

Thank you for purchasing the HaritoraX 2.
Please read this manual carefully, follow the precautions, and enjoy a correct and safe FBT (Full Body Tracking) life.
Please make sure to read [Safety Instructions] before using.

※HaritoraX 2 does not require Bluetooth pairing operation with a PC. It may not be possible to connect, so please do not pair it.

2. Setup Guide

If you set up according to the procedure, you can use HaritoraX 2 right away.

- **STEP 0**

First, check the button locations and names in the "Name of sensor parts" section.

- **STEP 1**

Assemble the sensor and strap while referring the "Put on "HaritoraX 2" " section.
After assembly, turn on the power by pressing the main button of each sensor for 3 seconds and put on the sensor to the body.

- **STEP 2**

Download the "Shiftall VR Manager" from Steam.

- **STEP 3**

Please set up "Shiftall VR Manager" and each part.
When using the GX dongle, please refer to the GX6/GX2 online manual to switch the communication mode before use.

That's all. HaritoraX 2 is ready now.

. Preparation / Before You Use

3.1. Requirements

To use HaritoraX 2, you need those items:

- PC with Windows 10(only 64bit ver.)/11 / SteamVR 2.8.8 or later
- VR headset that able to connect to SteamVR
  MeganeX / MeganeX superlight 8K / VIVE / VIVE Pro / Vive Pro2 / Valve index / Meta Quest 3S / Quest 3 / Quest Pro / Quest 2 / PICO 4 / PICO 4 Ultra
- Bluetooth function

A PC with a built-in Wi-Fi and Bluetooth combo adapter is required, or you will need to separately purchase a Bluetooth USB adapter to connect to a USB port.

- Operation confirmed PC built-in Wi-Fi / Bluetooth combo adapter
  - Intel AX201

- Operation confirmed USB Bluetooth adapter
  - TP-Link UB500
  - TP-Link UB400
  - TP-Link UB4A
  - TP-Link UB5A
  - ASUS USB-BT400
  - Plugable USB-BT4LE
  - Buffalo BSBT5D200BK
  - Buffalo BSBT5D205BK

- USB charger with output of 5V/2.0A or more per port

Required to charge the HaritoraX 2 sensor.

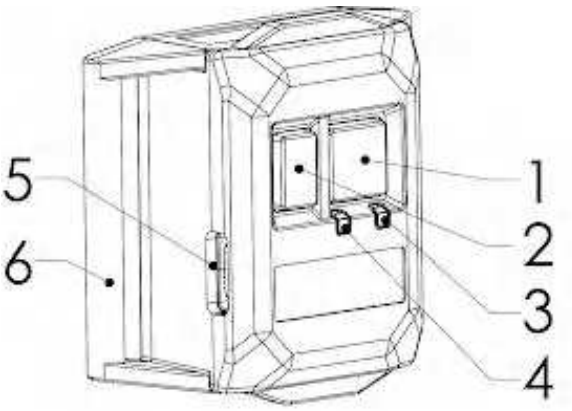
If you use a USB charger with an output of less than 5V/2.0A per port, Failure to do so may result in failure to charge the battery, malfunction, overheating, or fire of the USB charger. **Be sure to charge with a USB charger with an output of 5V/2.0A or more.**

3.2. Included items

Sensor	6
Strap	6
Cable Fixing Strap	2
USB Cable for Charging (For HaritoraX 2 and HaritoraX Wireless only)	1
Safety Precautions/Warranty	1

3.3. Name of Sensor Parts

This is the name of each part of the sensor attached to the body.



1. Main button
2. Sub botton
3. Red LED
4. Green LED
5. USB port for charging
6. Belt loop
7. Distance sensor
8. Knee sensor

3.4. Important Safety Information

Please ensure strict compliance with the following instructions.

⚠ Danger: High risk of death or serious injury

- Use the supplied USB cable for charging to charge the product as specified in the online manual to avoid battery leakage, overheating, or rupture. This could result in fire or explosions and death or serious injury.
- Only use the product for its original purpose. Doing otherwise may result in damage to the equipment, accidents, or injury.
- When using the product be sure to provide sufficient play space. Using the product with clutter around may result in damage to the equipment, accidents, or injury.
- Exposing the product to water may result in electric shock. Do not use it in a kitchen, laundry room, bathroom, outside in the rain, etc. Electric shock can result in serious injury of death.
- The product contains a rechargeable battery. Do not expose it to fire. Do not charge, use, or leave it at high temperatures. Do not heat in a microwave, oven, or dryer. Overheating may cause the battery to catch fire or explode.
- The USB cable for charging is only for the product. Do not use it for any other purpose. Doing otherwise may cause accidents due to damage or malfunction to the cable or connected equipment.

⚠ Warning: Risk of death or serious injury

- In the event of the following abnormalities or malfunctions immediately unplug the USB cable for charging and discontinue use. If you continue to use the product it may cause a fire or electric shock. If there are any problems with the product contact the Shiftall support desk.
  Beware of:
  - Smoke or unusual smells or sounds.
  - Water or foreign matter inside the product.
  - Damage to the sensors or USB cable for charging.
- Do not damage or modify the USB cable for charging or charging connector.
  Do not forcibly bend, twist, pull, or place heavy objects on cables. Do not allow cables to overheat. Using cables in a damaged condition may cause a fire due to short-circuiting.
- Do not disassemble or modify the product. Modifications, including placing metal objects inside the product, may result in malfunction, burns, or fire.
- Use a USB charger that can output 2.0A or more when connected to the USB cable for charging. Insufficient output may cause failure of charging, malfunction/overheating of the USB charger or fire.
- Do not allow foreign objects, including water and other liquids, to enter the product. A short circuit or overheating may cause a fire, electric shock, or malfunction. Be especially careful with children.
- Do not use the product near automatic control devices such as automatic doors or fire alarms. Radio waves from the product may affect the automatic control devices causing accidents due to malfunction.
- Do not use it in hospitals or places where electrical medical equipment is located. Radio waves from the product may affect electrical equipment causing accidents due to malfunction.
- The radio waves from the product may affect the operation of cardiac pacemakers. Please keep the product at least 15 cm (6 inches) away from any pacemaker.

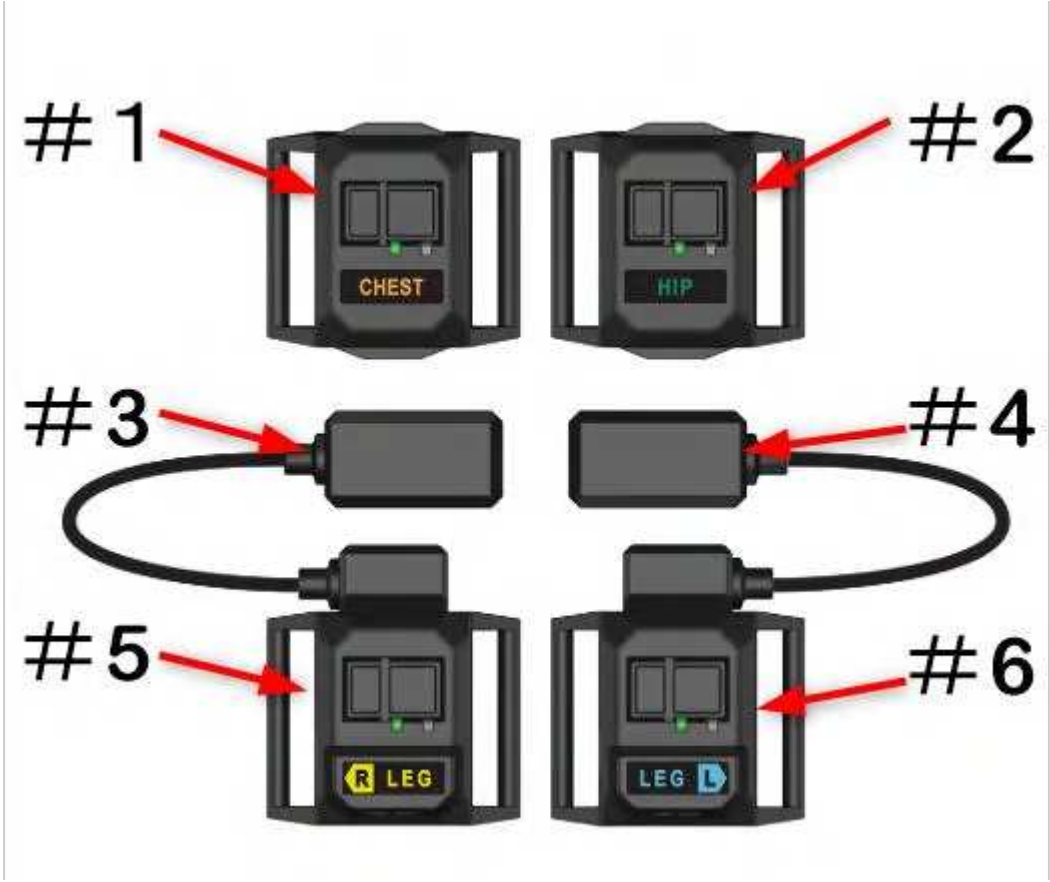
⚠ Caution: May result in minor injury or property damage

- Do not use the product in any place with high humidity, steam, oil smoke, or dust. Doing so may cause fire or electric shock.
- Do not place heavy objects on top of the product or the USB cable for charging. It may fall and cause injury.
  Also, it may deform the outer case or the plug of the cable and damage the internal parts and cause a fire or malfunction.
- Do not use the product while sleeping. Doing so may result in damage to the equipment, accidents, or injury.
- Wear the product over clothing or underwear to avoid direct contact with the skin as it may cause irritation or rashes.
- Do not place the product where infants or children can reach it. It may cause unexpected accidents or injury.
- Do not leave the product in a place where the temperature is abnormally high. Do not leave it inside of a car or the trunk of a car, especially in hot weather. Doing so may result in a fire. Undue heat may cause deterioration of the outer case and internal parts.
- Over-tightening the straps may cause blood congestion. Be careful not to tighten the straps too much when wearing the product for a long time.
- Be careful not to let the hook-and-loop fastener (nylon tape) touch your clothing. If the hook-and-loop fastener touches clothing such as knitwear, it may damage the fabric.
- Since the strap is elastic, be careful that the sensor or hook does not hit surrounding objects or people due to the force of contraction when it is released.

4. Put on ''HaritoraX 2''

Be sure to attach the sensor to the strap before putting on his product . This chapter describes how to assemble the strap and how to put it on your body.

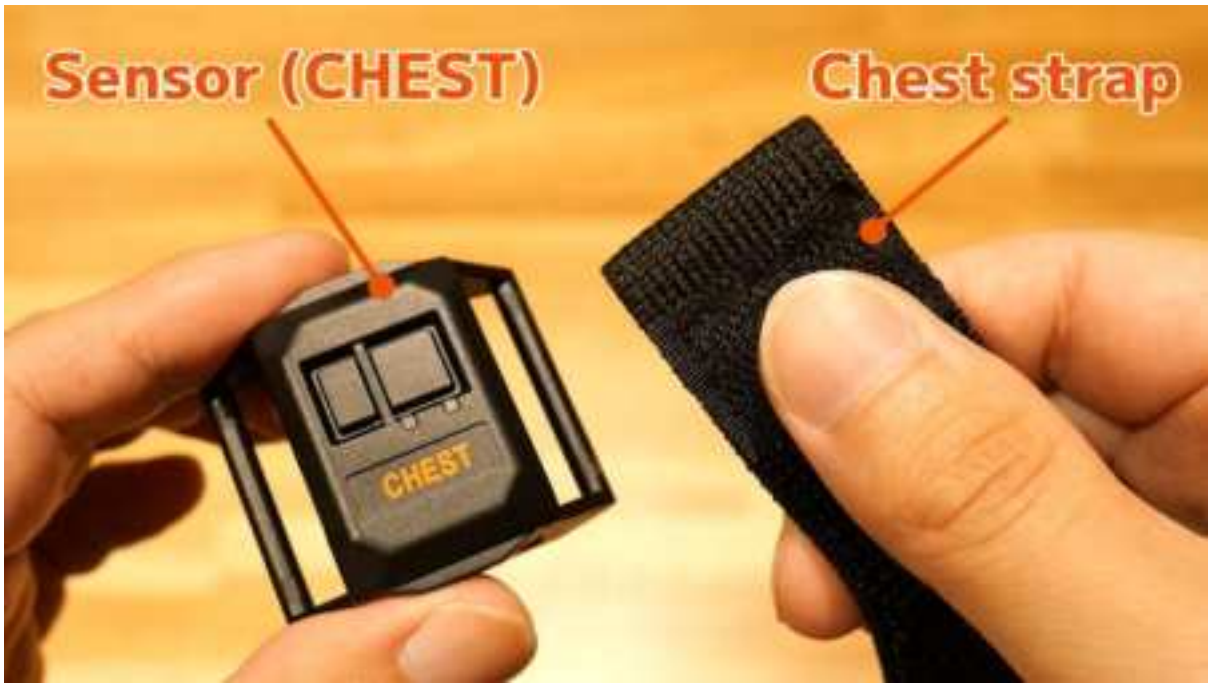
4.1. Put the straps through the sensors


#1
#2
CHEST
HIP
#3
#4
#5
#6
R LEG
LEG L

No.	Name	Quanti ty
#1	Sensor (CHEST)	1
#2	Sensor (HIP)	1
#3	Right knee sensor	1
#4	Left knee sensor	1
#5	Right leg sensor (LEG R)	1

#6	Left leg Sensor (LEG L)	1
#7	Chest strap/Hip strap (Common)	2
#8	Knee strap	2
#9	Leg(Ankle) strap	2
#10	Cable Fixing Strap	2

1. Pass the longest straps (Chest strap/Hip strap) through the CHEST and HIP sensors. Pass the strap through the belt loop on the right side of the sensor (the side opposite to the one with the charging terminal). Pass the strap from the back of the sensor with the hook-and-loop fastener side facing outward.




CHEST


HIP
CHEST

2. Pass the shortest straps (Leg(Ankle) straps) through the leg sensors.
The position and direction of passing the strap are the same as above.

3. Attach the Left and Right knee sensors to the middle length straps (Knee straps).

4. Attach the cable fixing strap to the cord connecting the knee sensor and the leg sensor.

[Completed sensors & straps]

4.2. Power on the sensor

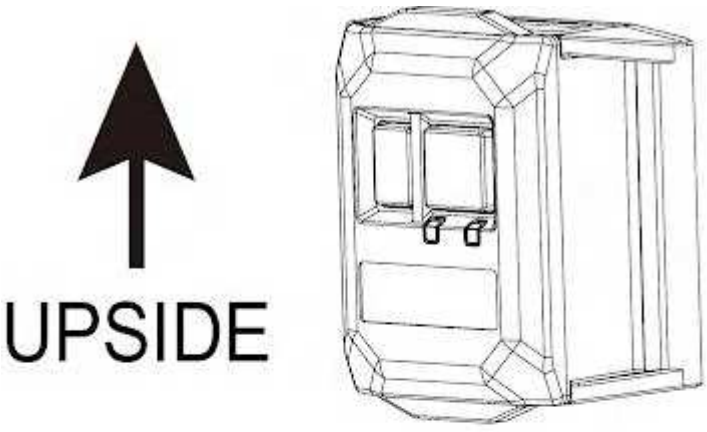
Press and hold the main button (large button) on the sensor for more than 3 seconds to turn on the power. The red LED and green LED light for 2 seconds. After that, the green LED starts blinking slowly. It will be in "Connection standby mode".

4.3. Put on the sensors

Attach the strap with the sensor that was assembled from the "Put the straps through the sensors" section to your body.

1. Prepare the strap belt from the "Put the straps through the sensors" section. Adjust the length of the strap with the adjuster according to your body size.

2. Put each sensor on your body. Ensure the sensor is positioned correctly and oriented vertically. Note that it will not function properly if placed in the wrong position or direction.


UPSIDE


UPSIDE
LEFT


Shiftall

Place the chest sensor as high as possible, and the hip sensor as close to the pelvis as possible.

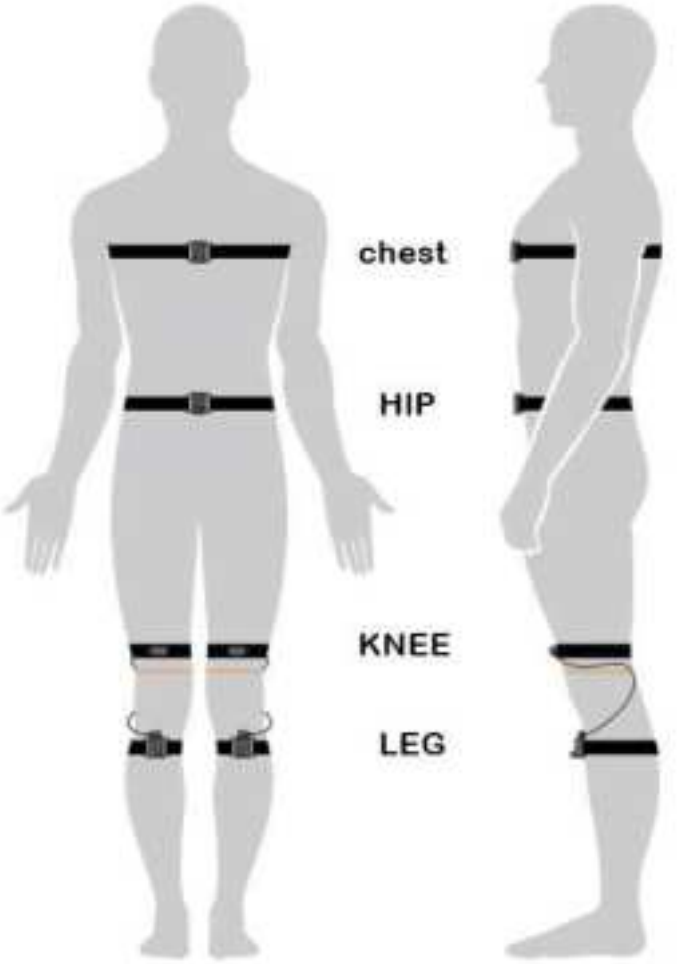
You can attach the leg sensors anywhere between below the knee and the ankle.
Make sure to align the height on both sides, though it doesn't need to be exact.

You can attach the knee sensors anywhere between the thigh and the knee.
Choose a position where the strap is less likely to slip, depending on your body type.
As with the previous instructions, ensure the height is aligned on both sides.

Once you have attached the leg and knee sensors, attach the cable fixing strap last.

*The leg sensors have a distance sensor to detect the movement of the ankle.
Ankle motion detection may malfunction if objects such as trouser hems, shoelaces, or slippers are between the top of the foot and the sensor.

[Picture with all sensors put on]



3. If the strap is loosely tightened, hold down the sensor and the hook part, peel off the hook-and-loop fastener on the other side once and pull it, adjust the strap tightening and fix it again.

* Notice *

If the hook is removed while the strap is tightened, or if the hook part is pushed in while the strap is being worn, the tension of the strap may cause the sensor to come off forcefully, which may lead to injury or damage to the sensor. When removing the strap, loosen the hook-and-loop fastener and slowly remove the hook.

5. How to use

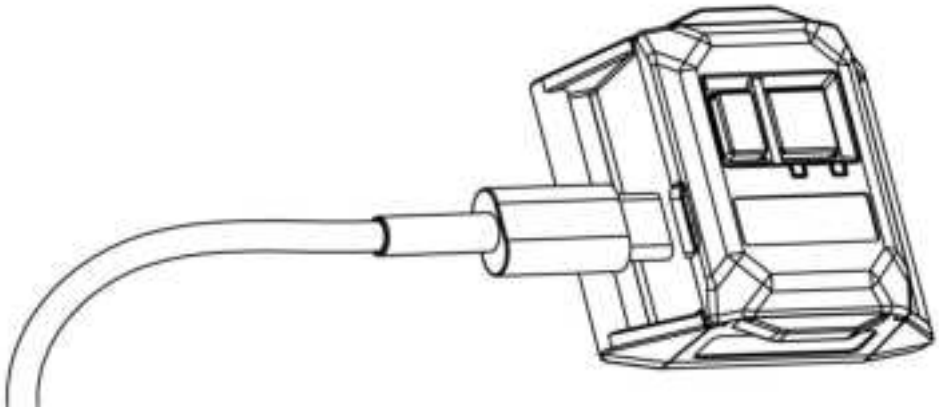
Instructions on how to use the sensors.

5.1. Charging

5.1.1. How to charge

Please charge the battery before use.

Use the included USB charging cable to charge the sensor.



- Red LED lights up while charging.
- It takes about 2 hours and 30 minutes from empty to fully charged (with power off).
- Red LED turns off when charging is complete.

[Notes about USB cable]

- Hold the USB plug in your hand and insert/remove it straight.(If you pull it out while moving it sideways or insert it diagonally, the connector may become deformed, leading to potential malfunction.)
- If you use a USB charger with an output of 5V/2.0A or less per port,It may not be able to charge, or may cause the USB charger to malfunction, overheat, or catch fire. **Be sure to charge with a USB charger with an output of 5V/2.0A or more.**

[Notes when charging]

- Charge the battery in a location with an appropriate ambient temperature (10°C to 30°C / 50°F to 86°F).
- Please read [Important Safety Information] also.

5.2. How to operate the sensor

2.1. Power ON

Press the main button of the sensor for 3 seconds or more, and turn the power on. Red LED and Green LED lights up for 2 seconds. After the green LED starts blinking slowly. It will be in a "waiting for connection" state.

Video: https://youtu.be/XeZru6vBuXw

When the connection is established, the green LED will quickly blink twice in succession and then turn lights off for 1 second.

Video: https://youtu.be/5fDOAcpy8lE

2.2. Power OFF

If you press and hold the main button for more than 3 seconds, the power will turn off.

Video: https://youtu.be/eON2UULv8sQ

*If the sensor unit is not connected to the Shiftall VRManager and left on for 20 minutes, the sensor unit will automatically turn off.

2.3. Power OFF (Forced shutdown)

If you press and hold the main button for more than 15 seconds. the power will be forcibly turned off.
If the device is forced to shut down while it is being charged via USB, remove the USB charging cable and then turn on the power again.

6. WindowsPC Settings

This is a description of the settings for using HaritoraX 2 with a PC.

HaritoraX Wireless supports Shiftall VR Manager.
If you are already using the HaritoraX series, please update to the latest version and read from "Setting up sensor addition".

6.1. Steam と SteamVR

"SteamVR" is software provided by Valve that is required to connect "HaritoraX 2" and a VR headset to a PC. For information on how to operate Steam/SteamVR, please contact Valve.

6.1.1. Install Steam

1. Access the website and create an account.

2. Download the Steam installer from the download website.

3. Run the downloaded file and install Steam.

6.1.2. Install SteamVR

1. To start Steam, search for "SteamVR" in the App Store and install it. Windows MR users should install Windows Mixed Reality for SteamVR.
*Oculus Quest users should configure the Quest Link and Air Link settings.

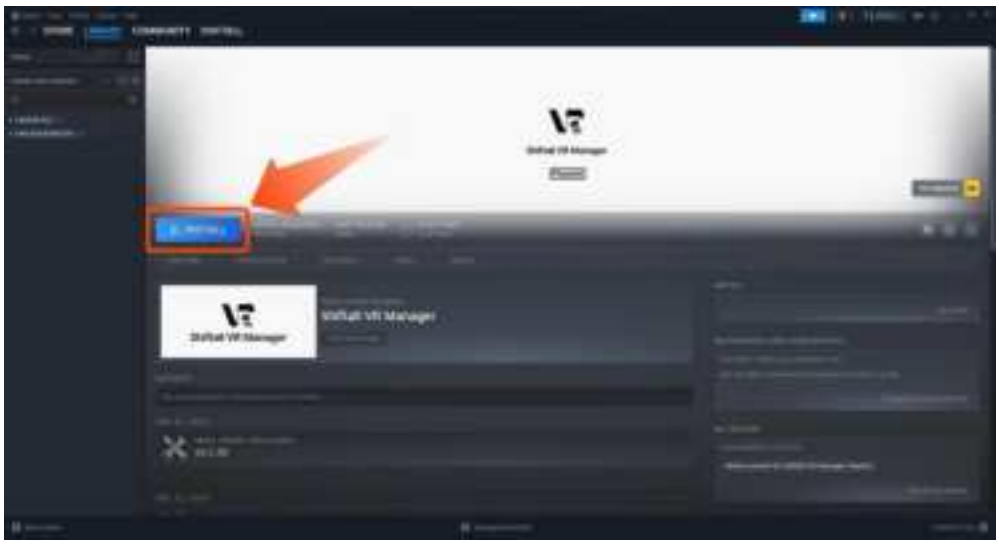
2. Start SteamVR and make sure your VR headset and controller icons are visible and recognized in the SteamVR window as shown.

6.2. Shiftall VR Manager

This is the installation and setup guide for the necessary software to use "HaritoraX 2."

2.1. Install Shiftall VR Manager

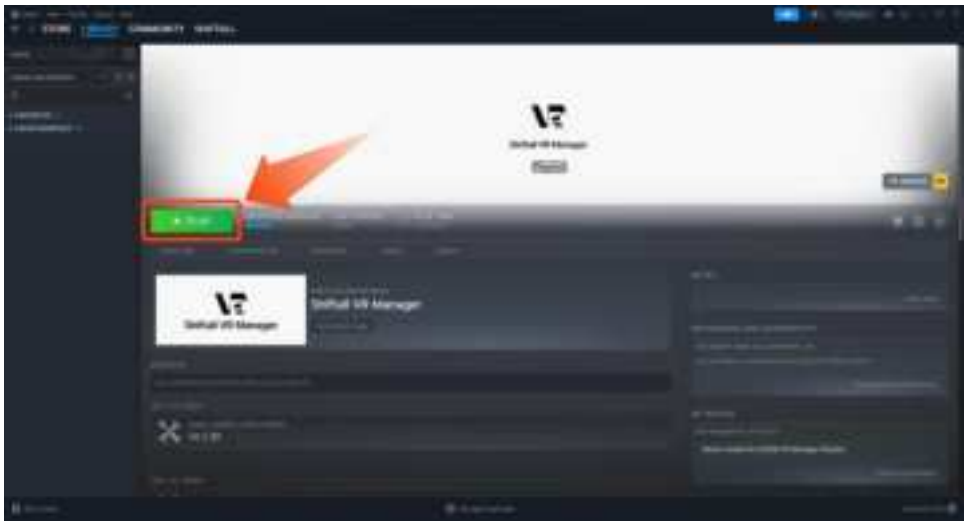
1. Choose the “Shiftall VR Manager” install button from Steam store page.
→Install URL



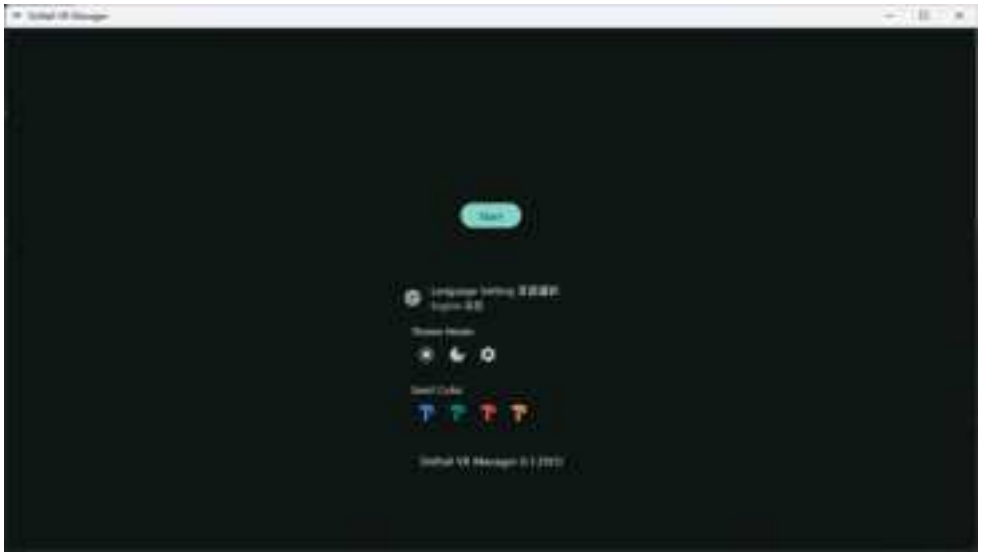
2.Specify the installation destination and proceed with the installation.

2.2. Launching and Initial Setup of Shiftall VR Manager

1. Click the "Play" button from the Shiftall VR Manager page to launch it.



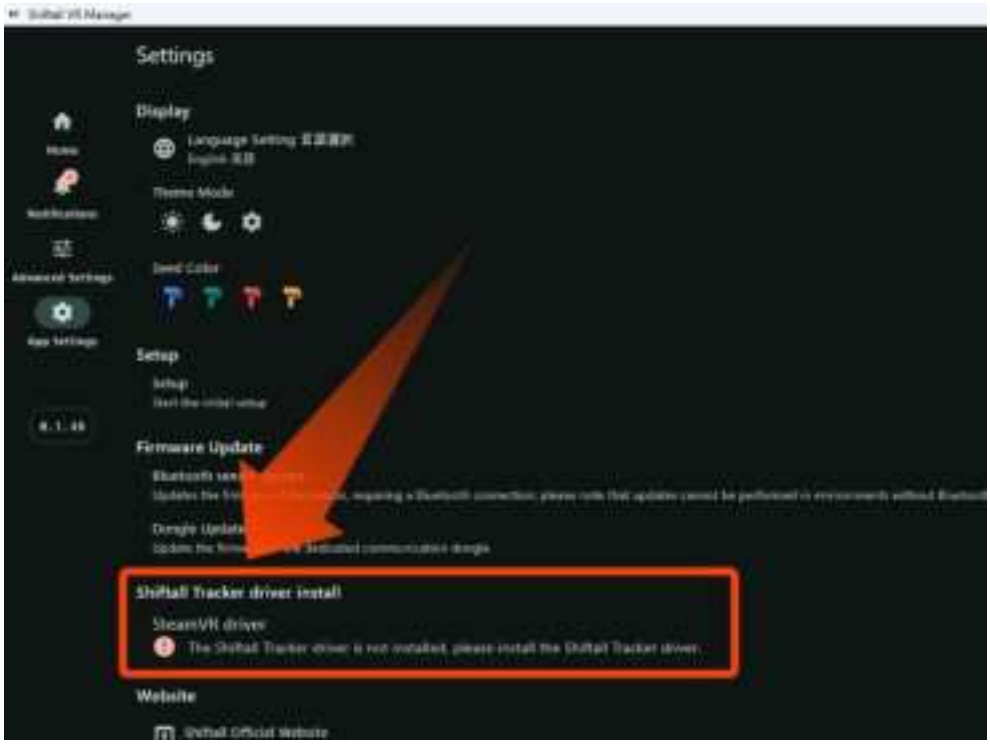
2. Select your preferred language, then click "Start."

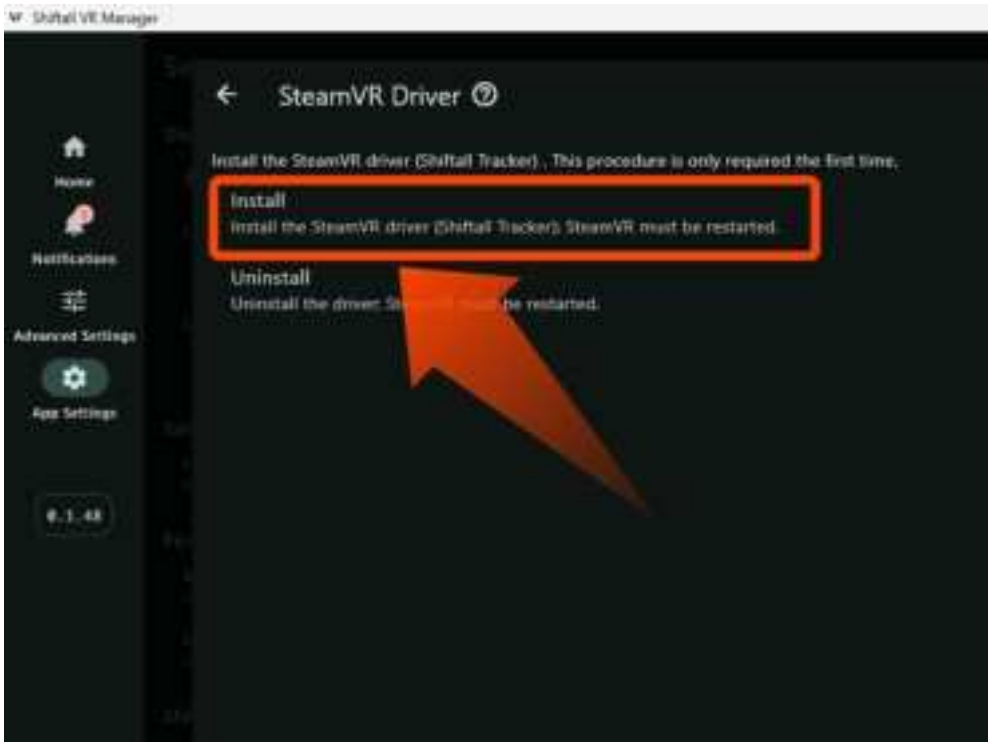


3.After agreeing to the terms of use, the home screen of Shiftall VR Manager will be displayed.

4.Next, to install the "Shiftall Tracker Driver Installation," select "App Settings" from the home screen.

5. Choose "Shiftall Tracker Driver Installation" and proceed with the driver installation.





2.3. Setting up sensor addition

This is the explanation for setting up Bluetooth communication.

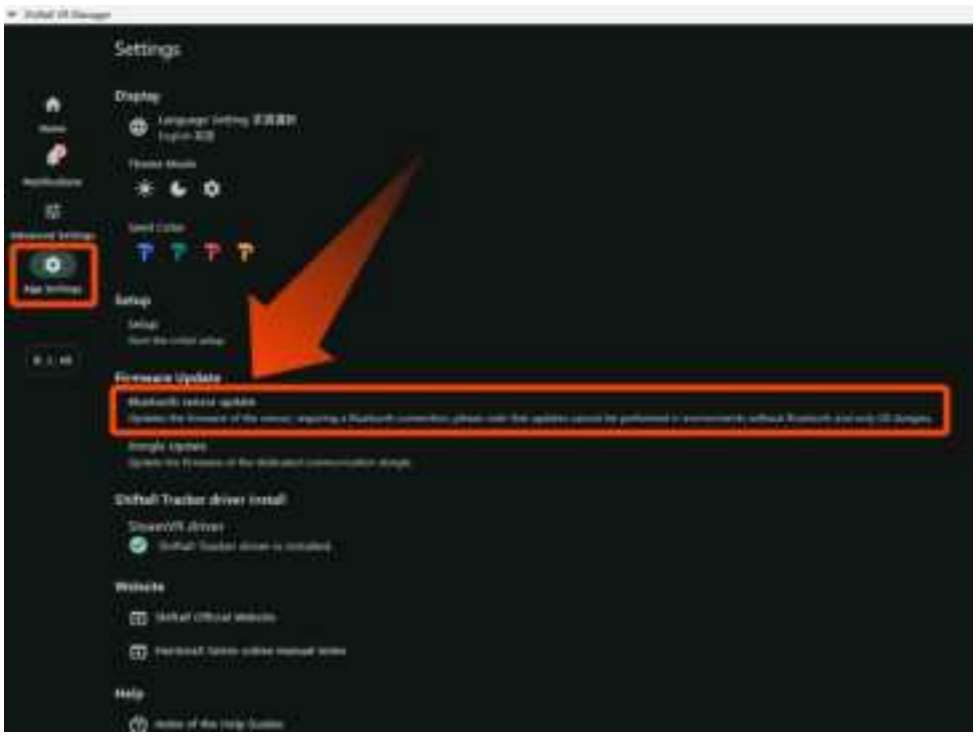
Here, we explain how to set up communication using a USB Bluetooth adapter.
If you are using the dedicated communication dongle GX6/GX2, please proceed to configure communication settings from here.

1. Open the "Bluetooth Settings" screen from the home screen.

2. Select "Connect" to establish a Bluetooth connection. Once the four green checkmarks "✓" are displayed as shown in the image below, and the "HaritoraX 2" tracker icon appears blue within the SteamVR window, the

connection is complete.

3. Next, select "App Settings" and then choose "Sensor Update."



4.A pop-up window will appear regarding Bluetooth switching; click "OK" to proceed.

5.Select "HaritoraX 2" for the device that requires a firmware update.

6.Click the checkbox next to the sensor you want to update, then select "Update."

[Important Points for Firmware Update]

Please use either the built-in Bluetooth adapter of your PC or a USB Bluetooth adapter that has been confirmed to work by our company for the update.

The dedicated communication dongles GX6/GX2 cannot perform firmware updates, so please be aware of this.

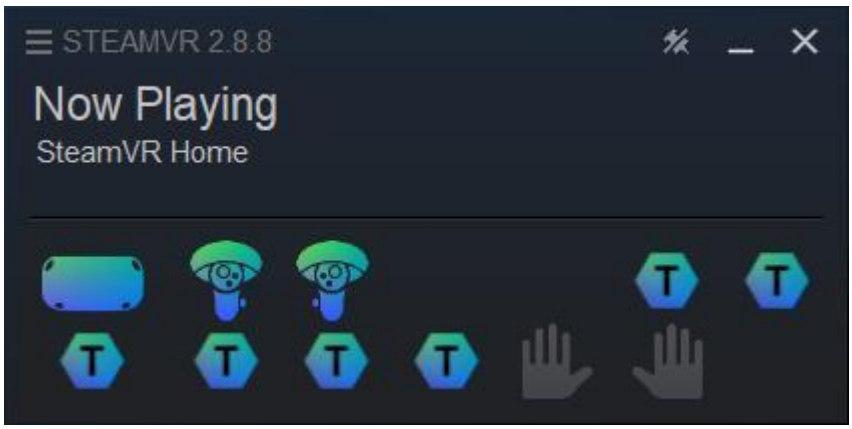
Ensure that the sensor is set to "Bluetooth Communication Mode" for the update. It cannot be updated in "Dedicated Communication Dongle Mode." (For information on how to check and switch communication modes, please refer to this guide.)

<What is Firmware?>

Firmware is the software embedded in the sensor itself. It may be updated along with the Shiftall VR Manager update, but it requires manual updating.

Always use the latest version of firmware. If the version of the firmware does not match that of Shiftall VR Manager, operation may become unstable.

6. Once the firmware update for all sensors is complete, reconnect Shiftall VR Manager and "HaritoraX 2" to finalize the setup.



If the sensor information is not displayed after selecting "Connect" or if a total of 6 green checkmarks "✓" are not shown, please refer to this guide to verify that "HaritoraX 2" is properly connected.

【When the icon does not appear】

The tracker icon may not appear if the VR headset is not connected to SteamVR, or if the driver is blocked on SteamVR.

*※If **"shiftall_tracker"** is not listed in the SteamVR add-ons, the installation is incomplete. Please reinstall it.*

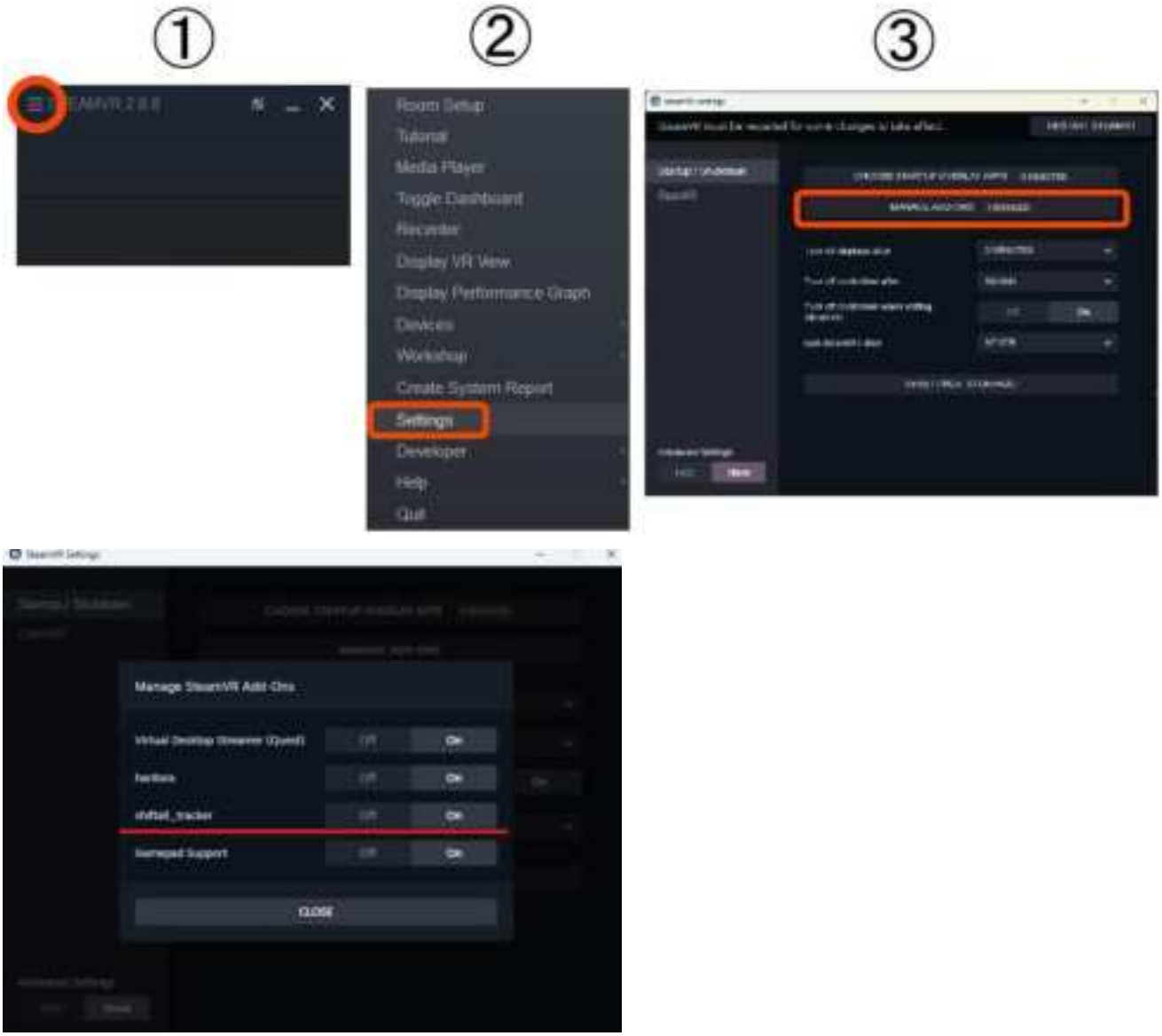
How to Check Add-ons

①In the small SteamVR window displaying VR and tracker connections, click the three-line icon.

②Click "Settings."

③Click "Manage Add-ons."

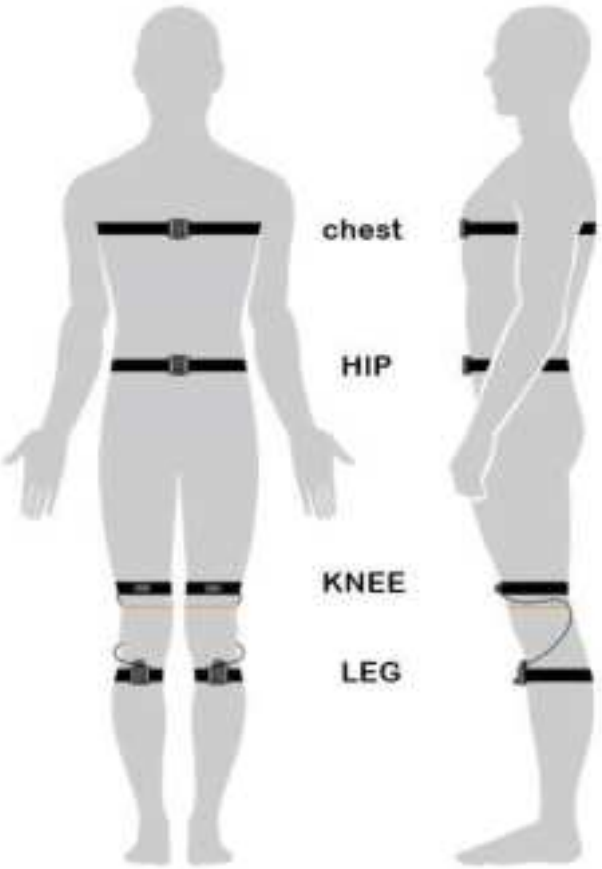
④Confirm whether "shiftall_tracker" is listed.



2.4. Set Your Height

1. Confirm the attachment positions of the knee and leg(ankle) sensors.

※If using the "Ankle motion detection" feature, the trackers must be attached to the front side of your body.



2. Set your height from the "Player Proportion" on the home screen. Please enter your actual height, not your avatar's height.

3.For more precise adjustments, go to Player Propotion in Advanced Settings.

For details on the calibration process, refer to the Calibrate.

7. Calibration

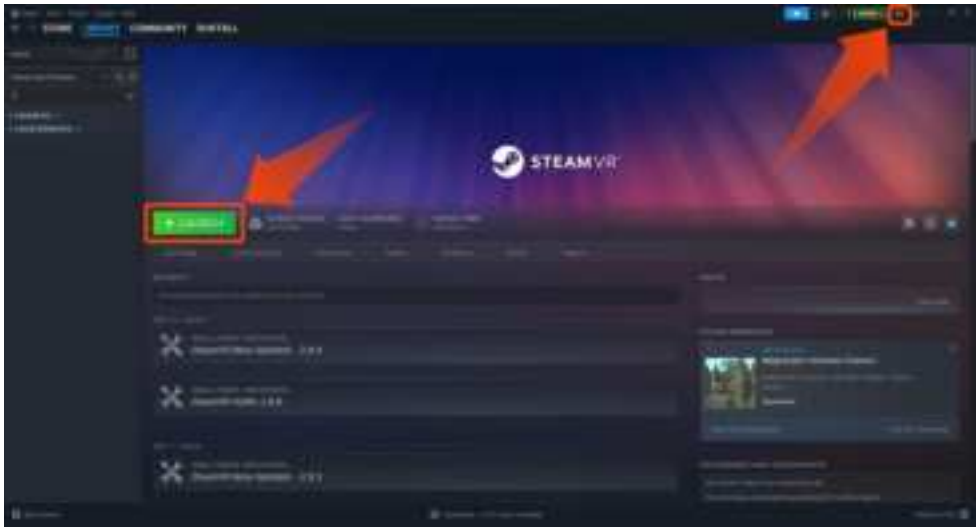
Calibration is the process of "re-setting the correct orientation and direction" on the device, which is always required for IMU-based full-body tracking devices.
Calibration using "Shiftall VR Manager" should be performed regularly while using VR applications.
***The calibration frequency may vary depending on the environment.**

This section explains how to calibrate.
Note: The video shows the calibration process using HaritoraX, but the same procedure can be followed for "HaritoraX 2".

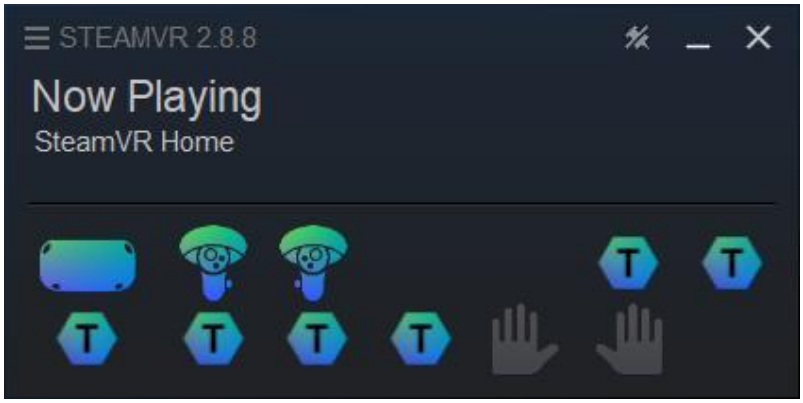
Movie： HaritoraX クイックキャリブレーションのやり方

7.1. Preparing for Calibration

1. Launch "SteamVR" from the top right of the Steam window or from your library.



2. Ensure that your VR headset and the "HaritoraX 2" are recognized within the SteamVR window.



3. Launch **Shiftall VR Manager** and select **Calibration** from the home screen.

7.2. Calibrate

Wear the "HaritoraX 2" and VR headset, and calibrate within VR applications such as VRChat.

Please note that calibration will not work if the Steam or Oculus menu is displayed in the VR view.

The calibration process involves performing the following two actions consecutively.

1. Standing Calibration

Stand upright with your feet together, and point both controllers **straight down**. Press the trigger on one controller **three times in a row**. You can hear the sound if the calibration is successful.

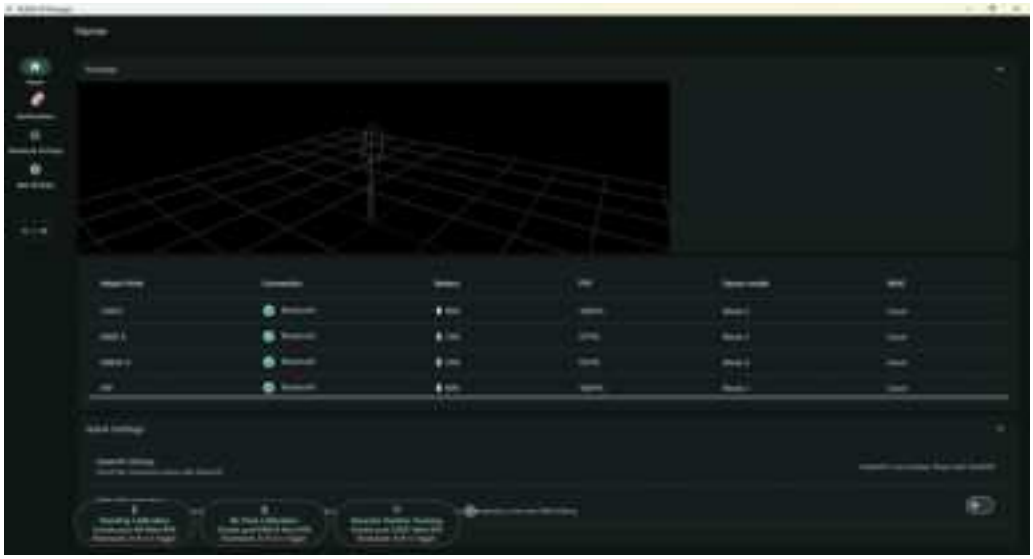
Note: The calibration will not respond if you press the triggers on both controllers simultaneously or if the controllers are not pointed straight down.

If no sound effect is heard, try adjusting the speed at which you press the trigger.

2. Bend your upper body forward and lower your hips by bending your knees while keeping them closed. Point both controllers **straight down** and press the trigger on one controller **three times in a row**. A different sound effect from the first one will play if the calibration is successful. (Bend your knees enough to lower your hips by about 30–40 cm.)

Note: Performing only the standing calibration may cause knee overlap when sitting on a chair.
Be sure to complete both calibrations consecutively.

In Shiftall VR Manager, make sure that your actual body movements are reflected in the preview dummy model.
*If the tracking is misaligned, please calibrate again.



7.3. Calibrating from the screen

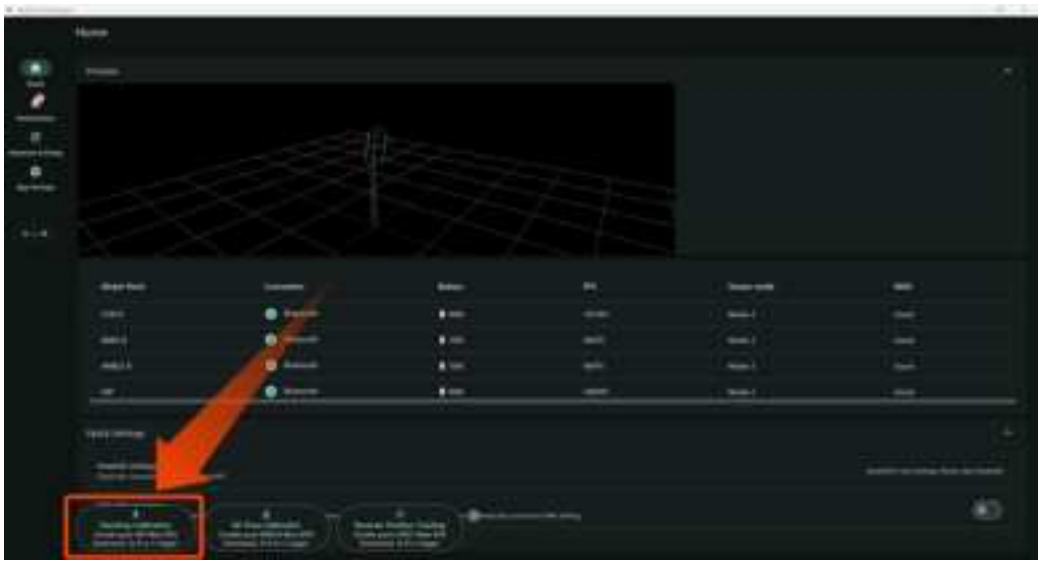
In certain environments, controller-based calibration (three consecutive trigger presses) may not be possible. In such cases, you can display the desktop screen within the VR environment and click a button to perform calibration.

*The following instructions use the Meta Quest 2 controller. If you're using other controllers, refer to the user manual for the location of the menu button.

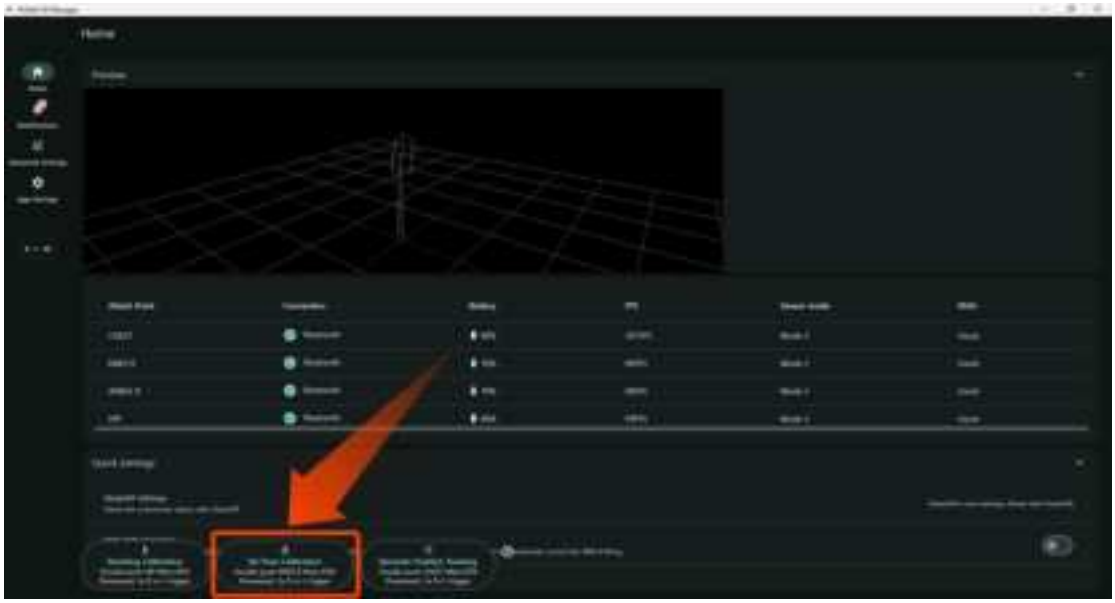
1. Press the "Menu Button" or "Oculus Button" on the controller.

2. If you press the "Menu Button," select "Desktop" from the Steam menu. If you press the "Oculus Button," select "Desktop" from the Oculus menu.

3. Once the desktop screen appears in VR, stand upright with your feet together, relax your arms, and select "Standing Calibration."



4. Bend your upper body forward, close your knees, and squat about 30-40 cm while keeping your knees together. Then, select "Ski Pose Calibration."



. Use in VR applications

8.1. Use with VRChat

1.1. Start VRChat

1. Download and install "VRChat" from Steam "Store".

2. Start "VRChat" with the HaritoraX 2 installed and the connection with the Shiftall VR Manager completed.

1.2. Calibrate within VRChat

1. Open the Quick Menu and make sure that "Calibrate FBT" is displayed in the image position.
[NOTE] If "Sit / Stand" is displayed, HaritoraX may not be properly recognized by SteamVR, please check if the settings in SteamVR and Shiftall VR Manager are correct and restart VRChat.

2. Move to the front of the mirror to calibrate it.
*VRChat allows you to use quick calibration (set of 3 triggers standing up and 3 triggers squatting down)

3. Open the quick menu in the completed calibration posture and select "Calibrate FBT".

4. Calibrate the avatar.

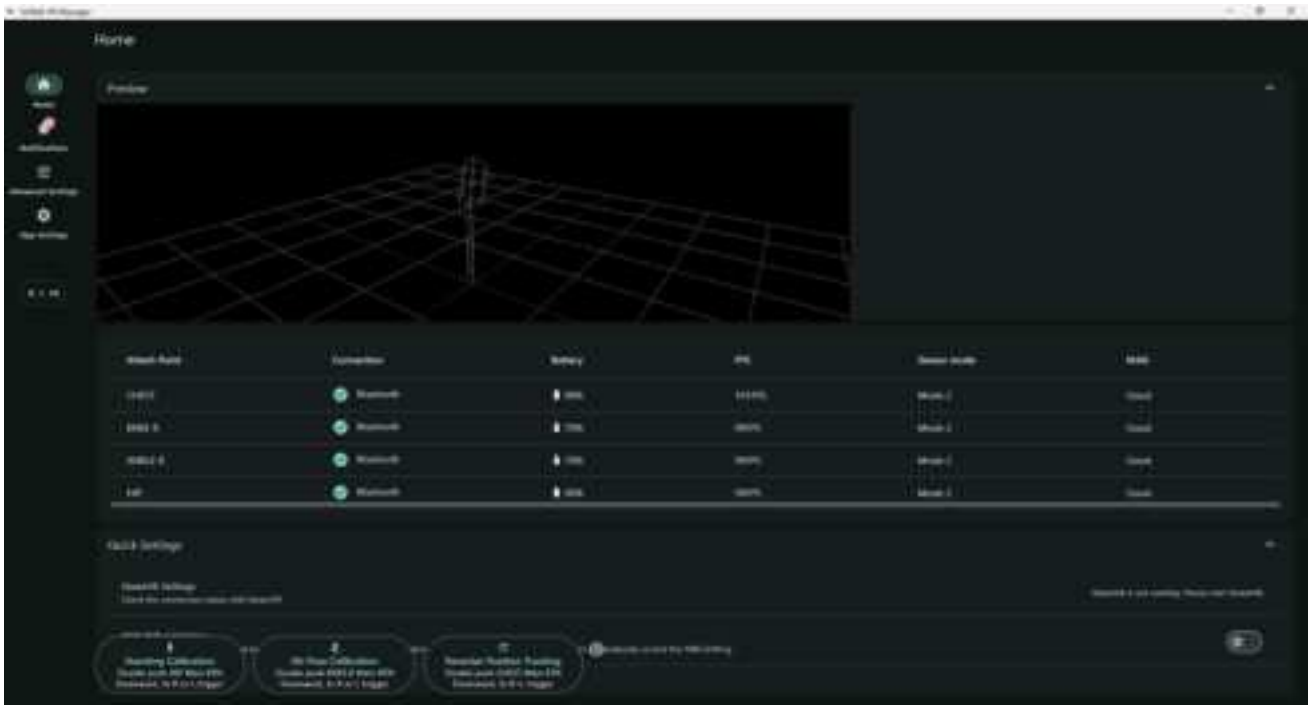
Position the white ball so that it is around the avatar's waist and the instep of the left and right foot, open the legs slightly, and press the index finger triggers on the left and right controllers simultaneously.

If you close your legs tightly, the avatar's legs may stick together.

9. Shiftall VR Manager Screens and Functions

9.1. Shiftall VR Manager Home Screen

When you launch Shiftall VR Manager, the following screen will appear. This is referred to as the "Home" screen. The Home screen displays links to various settings and status values.



The "Preview" section shows a dummy model representing the entire body movement calculated by Shiftall VR Manager. The avatar in the VR application will move in the same manner as the dummy model in the preview.

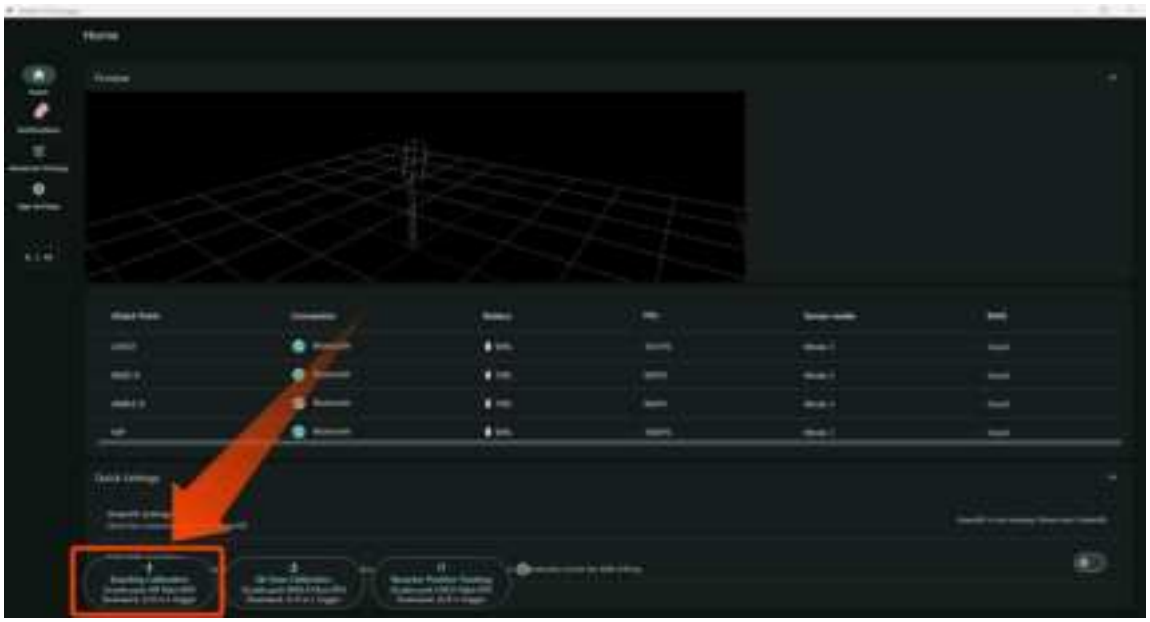
When all the buttons on the Home screen are green with a "✓", it means all settings have been completed correctly.
Calibration can also be executed from within the VR application, as described in this.

1.1. Player Proportion

This menu is used to set the player's height. Be sure to input the player's actual height, not the avatar's height.
Measure from the ground to the top of your head, and if you're wearing thick shoes, add the height of the shoes to your actual height.

1.2. Calibration Button

Typically, quick calibration is used by pressing the controller's trigger three times in succession. However, in some VR applications, quick calibration may not be available. In such cases, you can perform calibration using this button. For detailed instructions, refer to the "Calibrate from the screen" section.



For VR applications like VRChat, quick calibration is recommended for convenience.
*There is no difference in tracking performance between quick calibration and calibration using the button.

1.3. Ankle Motion Detection

This feature uses distance sensors to reflect the motion of the ankles. You can find the setup instructions on a separate page.

How to setup the ankle motion detection

9.2. Notifications

Notifications will appear regarding sensor connections and calibrations.

9.3. Advanced Settings

You can adjust detailed settings for Bluetooth, GX dongle, Shiftall Tracker, Posture Estimation, Player Proportion and Calibration.

For detailed descriptions of each setting parameter, refer to this guide.

9. Disclaimer and Regulatory Information

9.1. Bluetooth®

The radio wave range of the product is about 10 m (11 yards) in a horizontal line of sight with no obstacles. The actual operating distance may be shorter than this depending on obstacles, installation environment, computer performance, etc.

9.2. Disclaimers

- Only for use in the country/region described in this online manual. Please refer to the list below.

Sensor's Name label indication	Country/region of use
	Japan

	Japan, the United States of America, Member states of the European Union, United Kingdom

- It is not guaranteed that all Bluetooth® devices can communicate with the product.
- Bluetooth® compatible devices for wireless communication must be certified by Bluetooth SIG, Inc. Even if the device conforms to the standard it may not be able to connect depending on the specifications and settings of the device, including the operation method. Connection and operation are not guaranteed.
- We cannot be held responsible for any data or information leaks that occur during wireless communication.

0.3. Negative environment

- Product performance may be affected where the following products are used nearby:
  1. Bluetooth® devices such as cell phones, PHS phones, smartphones, or tablets.
  2. DC powered bells or motors.
  3. Home appliances such as microwave ovens, computers, office automation equipment, wireless LAN-compatible devices, or other devices that use radio waves in the 2.4 GHz band.
  4. Microwave medical treatment devices.
- When using the product near home appliances such as TVs, radios, microwave ovens, air conditioners, water heater remote controls (with intercom function), and home security related devices.
- Surrounding metal furniture or cabinets.
- A partition or other barrier blocking reception to the computer connected to the product.
- High magnetic noise.
  The product will be particularly affected if large metal objects such as metal bunk beds, large refrigerators, safes, or large noise-producing equipment such as desktop computers, audio equipment, or large TVs are located within 1 m (1 yard) of the edge of the VR play space.

0.4. Laser

The product is a Class 1 laser product under IEC 60825-1:2014 "Safety Standard for Laser Products".

0.5. Use and storage location

- Do not leave the product in direct sunlight or a high-temperature place such as in front of a heater.
- Do not place the product in a dusty area.
- Do not place the product in a place subject to high vibration.
- Do not use or place in a humid area such as a bathroom.

0.6. Disposal

The sensors contain a lithium-ion battery. Dispose of the product according to local environmental regulations. Do not dispose of it along with normal household waste.

0.7. Care and Maintenance

- Do not machine wash. Wipe the sensors with a soft and dry cloth. The straps should be hand-washed, shaped immediately, and dried in the shade. Do not soak, bleach, or scrub.
- If the sensor is very dirty, first wipe off the dirt with a slightly damp cloth, then wipe with a dry cloth.
- Do not allow contact with solvents such as paint thinner, alcohol, benzine, or kitchen detergent, or chemical cleaning cloths. Exposure to chemicals may change the quality of the sensors or cause the paint to peel off.
- When washing straps by hand with other clothes, fasten the hook-and-loop fastener and place it in a delicates laundry bag. The hook-and-loop fastener may stick to other clothes and damage them.
- The distance sensor will not operate properly if dust has accumulated on its window. Use a soft brush to clean it periodically.

. Copyright etc.

- The Bluetooth® wordmark and logo are registered trademarks owned by Bluetooth SIG, Inc. Shiftall Co., Ltd. uses these marks under license.
- Windows is a registered trademark of Microsoft Corporation in the United States and/or other countries.
- Other names, company names and product names mentioned in the text are trademarks or registered trademarks of their respective owners.
- Authentication information can be found on the sticker located on the back of the sensors.

2. Specification

Wireless	Bluetooth or GX6/GX2 Communication Dongle *Bluetooth® functionality on your PC is required for firmware updates.
Battery	Built-in lithium-ion battery
Charging Method	USB Type-C
Charging time	Approx. 2 hours 30 min. (When power off)
Continuous usage time	CHEST, HIP sensor unit: Approx. 80 hours LEG sensor unit: Approx. 50 hours (approximately 6 hou

	ON)
Size	Sensor: 44(W) × 41(H) × 17(D)mm Sensor (for lower knee): 44(W) × 49(H) × 27(D)mm Sensor (for upper knee): 32(W) × 18(H) × 19(D)mm (exc
Weight	Sensor: Approximately 17g Sensor (for lower knee): Approximately 22g Sensor (for upper knee): Approximately 9g (including the cable connected to the sensor for the lower knee)
Contents	Sensors Straps / Cable fixing straps Charging USB cable
System Requirements	Windows10(64-bit), 11 / SteamVR 2.8.8 or later

FAQ・Troubleshooting

Questions/ issues	Answers/Causes and countermeasures
What is the product warranty period?	The warranty period for this product is one year from the date of purchase. If you have made a reservation purchase, it is one year from the date of shipment of the product.
There is no store name or other information on the warranty card, is that okay?	If you purchased from the Shiftall website, we know the date of purchase, so we do not fill in the warranty card. If you purchased at a store, etc., you can receive a warranty within the warranty period without entering the store name and purchase date by presenting a document that proves the date of purchase.
Sensor can not turn on	The battery may have run out. Connect the charging USB cable and press the main button for about 3 seconds while the red LED lights and charging starts. Also, after performing a forced shutdown (press and hold the main button for

	30 seconds), connect the USB charging cable again. If the power does not turn on after forced shutdown, remove the USB cable and then turn on the power. If the above method does not improve the symptoms, please contact support.
It takes a long time to charge	If you use a USB charger with an output of 5V/2.0A or less per port,It may not be able to charge, or may cause the USB charger to malfunction, overheat, or catch fire. **Be sure to charge with a USB charger with an output of 5V/2.0A or more.**
Red LED does not light up while charging	Is the USB charging cable firmly connected? Please check "Charging". Charge the battery at a room temperature of 10°C to 30°C (50°F to 86°F). When charging is complete, the red LED will turn off. If the above method does not improve the symptoms, please contact support.
Red LED flashes fast while charging	The sensor's charging system or battery may be malfunctioning. If symptoms occur frequently, please take a video showing the sensor status and contact support.
Shorter operating time	If the charging time and operating time become shorter, the internal battery may be exhausted.
Power turns off by itself	If the power of the sensor unit continues for 20 minutes without being connected to the Shiftall VR Manager, the power of the sensor unit will automatically turn off.
Firmware update not possible	The conditions for the firmware update may not be met. ・Are you using a USB Bluetooth adapter that has been confirmed to work by our company? (Firmware updates cannot be performed with the dedicated communication dongle GX6/GX2) ・Is the sensor mode set to "Bluetooth communication mode"? (Click here for information on how to switch modes) Please check "Important points for firmware updates" again for more information.
Bluetooth connection is not possible	Please turn off Bluetooth once from Windows settings and turn it on again. 15 seconds after turning it on, try connecting with Shiftall VR Manager.

	 If you still can't connect, try restarting your PC once. When the Bluetooth surroundings are unstable, restarting is the best. If this does not solve the problem, we have prepared a troubleshooting page for when Bluetooth connection is not possible here.
Bluetooth connection is possible, but it frequently disconnects or loses connection quickly.	If the distance between the PC and the Bluetooth USB adapter is too close, the Bluetooth connection may be easily interrupted depending on the environment. Use a USB extension cable like the one below and keep the Bluetooth USB dongle away from your PC. USB extension cable here. Also, the Bluetooth connection may be interrupted in the following cases. ・The body is positioned to cover the sensor ・The Bluetooth USB adapter is covered by an object, or there is a metal object nearby. ・Multiple other Bluetooth devices are connected at the same time Connect the main unit to the Shiftall VR Manager with the main unit close to the Bluetooth adapter without wearing it on your body, and check if the same issues occur.
Bluetooth connection with Shiftall VR Manager cannot be	Regarding Bluetooth connection, we have a separate troubleshooting page, please refer to "here" and take countermeasures.

established	
I can't understand the startup order of each application	The order in which the applications are started does not matter, but it is recommended to start the Shiftall VR Manager after the VR headset is recognized by SteamVR, connect Bluetooth, and then start the final application (VRChat, cluster, etc.). You can also launch VRChat, enter the instance in VR mode, and then launch the Shiftall VR Manager to become FBT. It's useful to remember in case you need to enter the instance in a hurry.
Can't calibrate with controller trigger.	HaritoraX 2 can be calibrated only within VR applications such as VRChat. Please note that calibration cannot be performed while the SteamVR menu or Oculus menu is displayed. Please do the following within your VR application: With both hands holding the controller facing vertically downward, press the trigger on the controller 5 to 7 times in a row (calibration). Instructions in the video here.
Your legs and hips keep spinning in a certain direction after only a few minutes of use	"Drift" is the rotation of sensor tracking over time. The drift phenomenon can be suppressed by selecting the sensor reset function and appropriate tracking mode. About the sensor reset function here. Due to the characteristic of the IMU-based tracking device, it is not possible to eliminate drift entirely. Additionally, depending on the environment, there are situations where drift is more likely to occur, while in other settings, drift may be less of an issue. If the MAG status of the sensor displayed on the Shiftall VR Manager home screen is marked as "Bad" or "Very Bad," please try resetting the sensor.
If the MAG status displayed on the Shiftall	If you have not performed a sensor reset yet, especially before using the product or after changing locations, please perform a Sensor Reset.

VR Manager home screen remains "Bad" or "Very Bad," please follow these steps。	If you have already performed a sensor reset and the issue persists, check for "Negative environment" and try to avoid those conditions as much as possible.
The dummy model on Shiftall VR Manager is moving, but the virtual tracker on SteamVR is not moving	It's possible that a firewall or other security software is blocking communication between Shiftall VR Manager and SteamVR. Please run the "haritora_firewall.bat" file located in the Shiftall VR Manager folder to unblock the communication. The "haritora_firewall.bat" file can be found in the following location (if installed in the default directory C:\Program Files (x86)\HaritoraConfigurator\haritora
Ankle motion detection does not work	Please make sure you have the latest firmware. Please disable the ankle motion detection function once and then enable it again. If the above method does not improve the symptoms, please contact support.
The firmware update seems to have failed, and the green LED continues to flash quickly and at regular intervals. The only thing that works is to force power off (press the main button for about 20 seconds).	Please perform the firmware update again from the Firmware Update section in the App Settings. If the firmware update cannot be completed, please check the following. ・If you are using an adapter that has not been verified by our company, the firmware update may not proceed correctly. If you are using an adapter other than the recommended one, please use one of the verified adapters listed in the online manual to perform the firmware update. ・Since HaritoraX 2 uses BLE communication, communication cannot take place if it is paired through "Bluetooth and Devices" in Windows settings. If HaritoraX Wireless is paired, please unpair it and try again. (If the adapter used during pairing is different from the one currently in use, unpairing may not be possible. In that case, please ensure that the adapter used during pairing is connected to the PC when unpairing.)
The operation of the	For troubleshooting the ankle movement detection function, please check here.

ankle motion detection function is not stable	
When taking a posture with legs thrown forward in VRChat, the legs bend and end up in a sitting posture.	The height setting of the player is the basis, but in such a situation By adjusting the height setting in VRChat and the height setting in Shiftall VR Manager (Player Proportion), you can stretch your legs beautifully. However, this method will not work properly if the "ankle movement detection function" is ON. The manual on how to set up the ankle motion detection function is "here". Since it is affected by the avatar's leg length (strictly speaking, the head and body), it is necessary to readjust the values when using an avatar with a different head and body.
I want to know the length of each belt and the corresponding body type.	There is the length of the sensor body, the length of the size adjuster part and the sewn-on Velcro part (this does not stretch), the length of the stretchable belt part and each part, and data on the belt length alone is not disclosed as it is meaningless. The belt stretches to approximately 1.8 to 2 times its original length, so it can accommodate a wide range of body types. Please note that if you use it at a size close to the maximum body type, it may feel a little tight and uncomfortable, although this varies from person to person. CHEST Maximum 50cm HIP Maximum 150cm KNEE Maximum 100cm LEG Maximum 50cm

For all other inquiries, please contact Shiftall Customer Support.

Shiftall Support Contact Form

https://forms.gle/WMU54Jz6RN5dU84XA

3. Shiftall VR Manager Release Notes

- 2025/1/** Version*.*.*
  - Release

4. HaritoraX 2 Firmware Release Notes

- 2025/01/** Version1.0.0
  - Release

5.

FCC CAUTION:

Only for United States of America

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:
(1) This device may not cause harmful interference, and

(2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.
However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:
-Reorient or relocate the receiving antenna.
-Increase the separation between the equipment and receiver.
-Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
-Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

IC CAUTION:

Only for Canada

ICES-003 CLASS B NOTICE-AVIS NMB-003,CLASSE B
This Class B digital apparatus complies with Canadian ICES-003

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada’s licence-exempt RSS(s). Operation is subject to the following two conditions:
1.This device may not cause interference.
2.This device must accept any interference, including interference that may cause undesired operation of the device.

The device has been evaluated to meet general RF exposure requirement.
The device can be used in portable exposure condition without restriction.（Portable）

Model: SVP-AF01SB, SVP-MCAF01UB
IC: 32521-SVPAF01SB
CAN ICES-3(B)/NMB-3(B)