

htc®



VIVE®

VIVE Ultimate Tracker User Guide

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Trademarks and copyrights

About this guide

The following symbols indicate useful and important information.



Notes provide details on setup, answers to common questions, and information on what to do in specific situations.



Tips provide supplemental information or alternative methods you may find helpful for particular steps or procedures.



Important notes provide information needed to complete certain tasks or configure specific settings or features.



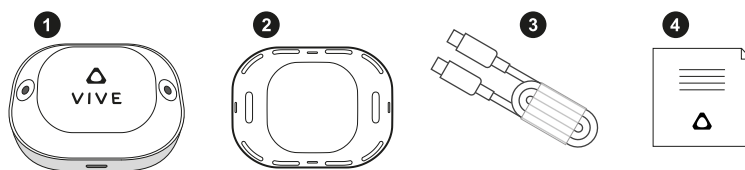
Warnings provide critical information for avoiding potential problems or preventing damage to hardware.

Introduction

What's inside the box?

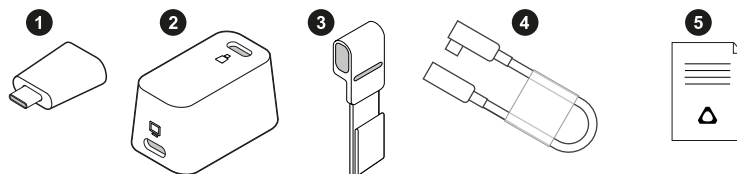
The VIVE Ultimate Tracker and VIVE Wireless Dongle packages contain the following items:

VIVE Ultimate Tracker pack



- | | |
|---|--|
| 1 | VIVE Ultimate Tracker |
| 2 | Tracker base |
| 3 | USB Type-C® cable |
| 4 | Quick Start Guide, Safety Guide, and Warranty Card |

VIVE Wireless Dongle pack



- | | |
|---|---|
| 1 | VIVE Wireless Dongle |
| 2 | Dongle cradle (when using a SteamVR-compatible headset) |
| 3 | Cable fastener |
| 4 | USB extension cable |
| 5 | Quick Start Guide, Safety Guide, and Warranty Card |

About VIVE Ultimate Tracker

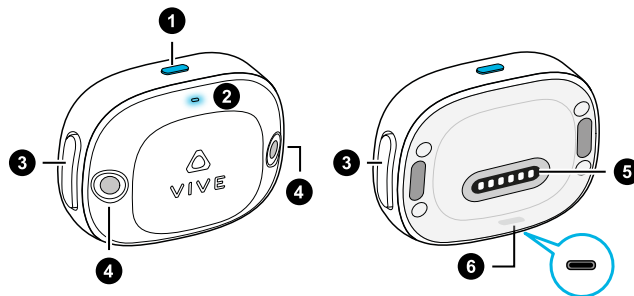
Unlock a new dimension of movement and freedom with VIVE Ultimate Tracker. VIVE Ultimate Tracker, the first standalone positional tracker, uses AI-powered self-tracking to redefine VR experiences.

Key features

- Two wide-FOV cameras and computer vision for instant spatial recognition, keeping virtual and physical movements in sync.
- Sleek, balanced design offers optimal functionality and comfort throughout use.
- No base stations needed.
- Six degrees of freedom (6DoF) inside-out tracking makes maneuvering through large-scale environments a breeze.
- Low-latency connectivity.
- Pair up to five trackers to experience controller-free full-body tracking.
- Quick release mechanism lets you attach and detach quickly.

Components

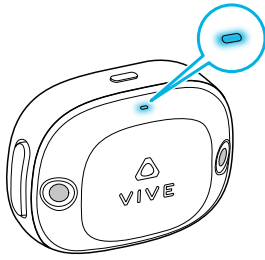
The VIVE Ultimate Tracker components are listed below.



1	Power button	4	Cameras
2	Status LED	5	Pogo pin port
3	Release buttons	6	USB Type-C charging port

Status LED

The VIVE Ultimate Tracker LED indicates the status of the tracker.



LED	Status
Flashing red	Low battery
Amber	Charging
Amber turns to previous color	Fully charged For example, amber turns to breathing blue when the tracker is fully charged and the previous tracker state is standby mode.
Flashing blue	Pairing with headset
Blue	Connecting to headset
Green	Connected to headset
Breathing blue	Standby mode
Breathing green	Synchronizing map data
Alternating red and blue	Updating firmware
Flash green five times	Identifying tracker
Off	The tracker is off



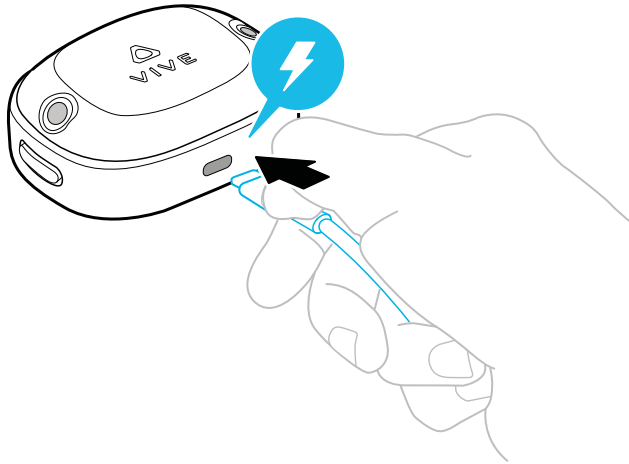
You can also check what the LED light colors mean in VIVE Manager. In VIVE Manager, go to **Devices** (if paired with VIVE XR Elite) or **Settings** (if paired with VIVE Focus 3), and then tap **Inputs > Motion trackers > ⋮ > About > Tracker LED behavior**.

Basics

Charging VIVE Ultimate Tracker

Charge VIVE Ultimate Tracker using the USB Type-C cable that comes in the box.

To charge VIVE Ultimate Tracker, connect one end of the USB Type-C charging cable to the tracker and the other end to a power source.



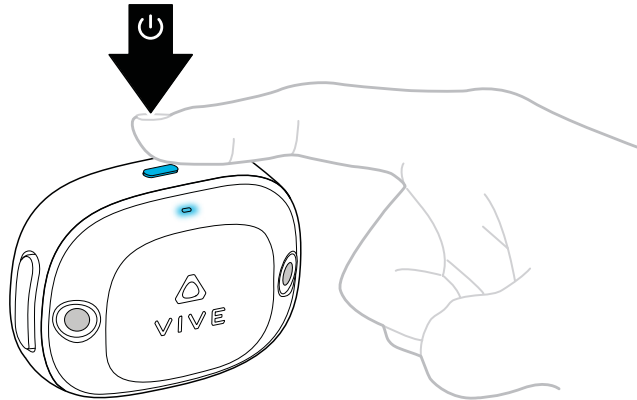
The status LED is amber when the tracker is charging. When the tracker becomes fully charged, the LED turns to either blue or breathing blue depending on the connection status of the tracker or LED is off when the tracker is turned off. For details, see [Status LED](#) on page 6.



If VIVE Ultimate Tracker is in use while connected to a power source, it won't be charged. The tracker will only maintain its current battery level (battery won't drain).

Turning VIVE Ultimate Tracker on and off

The power button is located on the top side of the tracker.

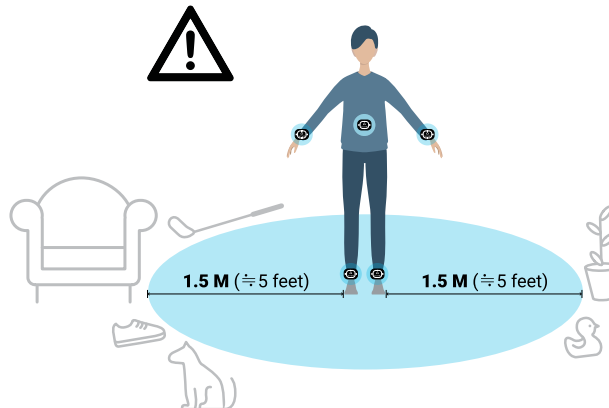


- **Turn on:** Press the power button for one second.
- **Turn off:** Press and hold the power button for five seconds.

Wearing VIVE Ultimate Tracker on your body

When using VIVE Ultimate Tracker for body tracking, keep these in mind:

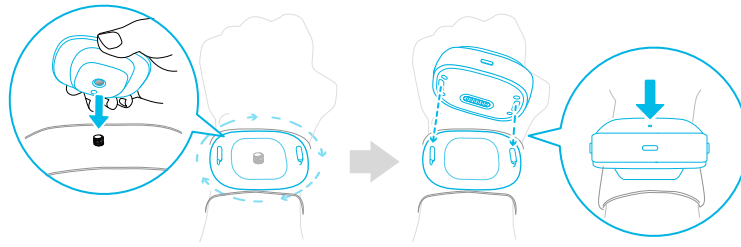
- Have a big enough play area that's free from obstacles such as objects, pets, and people. If you don't have that much space, try to have at least 1.5 m (around 5 feet) distance between you and obstacles in your play area.



- Fasten the tracker base to the trackstrap, and then put the trackstrap on your body first. After putting on the trackstrap, attach VIVE Ultimate Tracker to the tracker base.

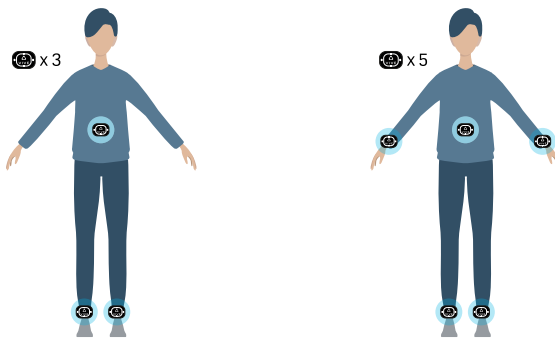


Some accessories may already have the tracker base installed. If the accessory has the tracker base, just attach the tracker to it.

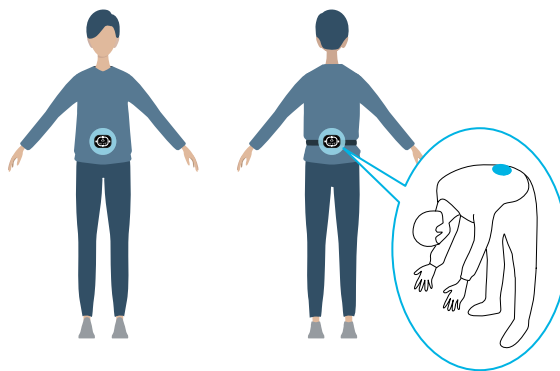


This helps prevent accidentally damaging the tracker by hitting it on something in your play area when putting on the trackstrap on your body.

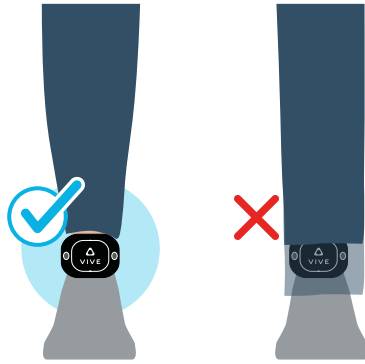
- For optimal tracking:
 - When using three trackers, we recommend putting them on your waist and ankles.
 - When using five trackers, we recommend putting them on your waist, wrists, and ankles.



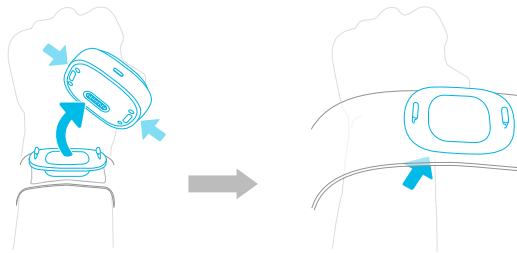
- When wearing the tracker on your waist, you can place the tracker either in the front or back. Placing the tracker on your lower back helps prevent the tracker's cameras from being blocked by your torso when you bend over.



- Make sure your clothes are not covering the trackers' cameras.



- When removing VIVE Ultimate Tracker from your body, detach VIVE Ultimate Tracker from the tracker base first before removing the trackstrap from your body.



This helps prevent accidentally damaging the tracker by hitting it on something in your play area when removing the trackstrap from your body.

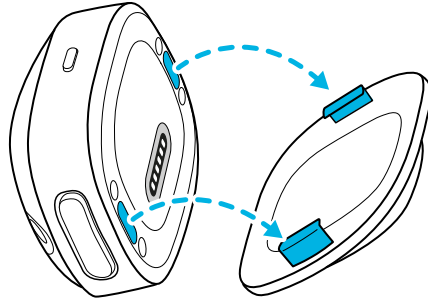
Attaching VIVE Ultimate Tracker to an accessory

Before attaching VIVE Ultimate Tracker to third-party accessories, fasten the tracker base to the accessory first before attaching the tracker.



Some accessories already have the tracker base installed. If the accessory has the tracker base, just attach the tracker to it.

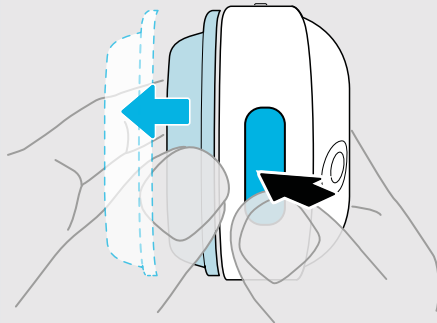
1. Align the two slots on the bottom of VIVE Ultimate Tracker to the two tabs on the tracker base.



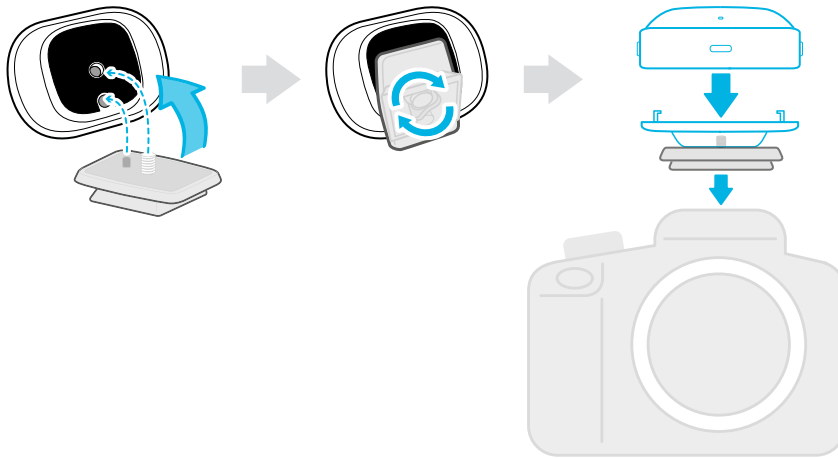
2. Gently push down VIVE Ultimate Tracker until it clicks into place.



To detach VIVE Ultimate Tracker from the base, press **both** release buttons on the sides of VIVE Ultimate Tracker.



Attaching to a standard tripod docking: Align the tripod plate's bolt and stabilizing pin with the corresponding holes on the tracker base. Turn the tab on the bottom side of the plate clockwise to screw the tracker base securely in place.

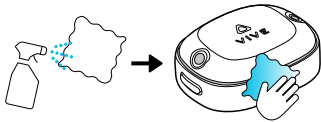


Third-party accessories are sold separately. The illustration above is for demonstration purposes only.

Cleaning and disinfecting VIVE Ultimate Tracker

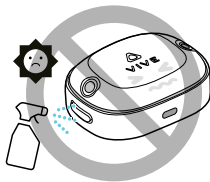
Here are a few tips to help you keep VIVE Ultimate Tracker clean and hygienic.

Do's



- Dampen a cloth with a neutral, non-acidic cleaning solution and use it to wipe the hard surfaces of the tracker clean, especially places you frequently touch with your hands.
- Using a UVC cleaner is an effective and recommended way to decontaminate trackers. Before using a UVC cleaner on your tracker, make sure to properly cover the cameras. Discoloration due to UV exposure is not covered by warranty.

Don'ts



- Don't spray or pour liquid directly on the tracker.
- Don't use any liquids or cleaning solutions on the lenses.
- Don't expose the tracker to direct sunlight.
- Don't machine wash the tracker.

Cleaning the cameras

- For optimal tracking, clean the two tracking camera lenses with a microfiber cloth.



- Never use any kind of cleaning solution on the lenses.

Updating the VIVE Ultimate Tracker firmware via the VIVE Hub

Use VIVE Hub to update the firmware of your VIVE Ultimate Tracker to keep it up to date. Here's how.



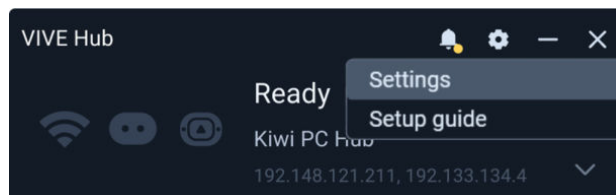
If you're using a VIVE™ headset, you can also update the tracker's firmware through the headset. See [Updating the VIVE Ultimate Tracker firmware](#) on page 26.



Before updating the VIVE Ultimate Tracker firmware, make sure:

- The VIVE Ultimate Tracker service in VIVE Hub is installed on your computer. See [About VIVE Hub services](#).
- The trackers that you want to update have been paired with the VIVE Wireless Dongle. See [Pairing the VIVE Ultimate Tracker with the VIVE Wireless Dongle](#) on page 28

1. Connect the VIVE Wireless Dongle to your computer. See [Connecting the VIVE Wireless Dongle to your computer](#) on page 27.
2. On your computer, launch VIVE Hub.
3. Open the VIVE Hub settings by clicking  > **Settings**.



4. On the left panel, click **About**.
5. On the **VIVE Ultimate Trackers** tab, click **Update** next to **Update tracker firmware**.

- Press the power button on each tracker to turn it on. Your trackers will appear on the **Update tracker firmware** window.

Tracker	Firmware	Status	Action
 Body tracker 1 5A9B000001	1.0.0	Update available - Press button to update	 
 Body tracker 2 5A9B000001	1.0.1	Up to date	 

- Under **Status**, look for **Update available - Press button to update** next to a tracker, and then click . The tracker's status LED will start flashing green.
- Pick up the tracker whose LED is flashing green and connect it to your computer using a USB Type-C cable.

Tracker	Firmware	Status	Action
 Body tracker 1 5A9B000001	1.0.1	Update available - Press button to update	 

- Click  to update the tracker's firmware. Wait for the update to finish, and then disconnect the tracker from the computer.
- Repeat steps 7 to 9 to update the firmware of your other trackers.



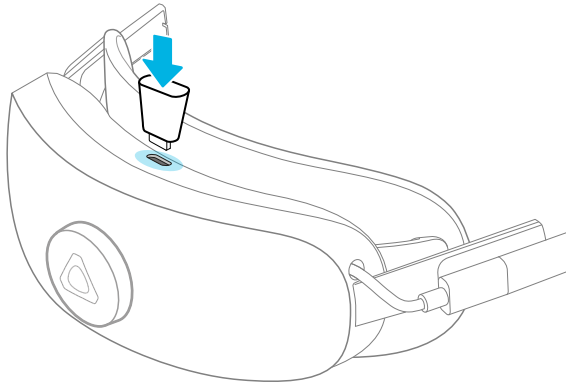
You can only update one tracker at a time.

Setup for VIVE Focus Vision, VIVE XR Elite, and VIVE Focus 3

Attaching the VIVE Wireless Dongle to VIVE XR Elite

Attach the dongle to VIVE XR Elite to use VIVE Ultimate Tracker.

To attach the dongle to the headset, plug the dongle into the USB Type-C port on the battery cradle.



Connect the dongle directly to the USB port on the battery cradle. Avoid using a USB hub or splitter, as unusual power behavior could damage the dongle.

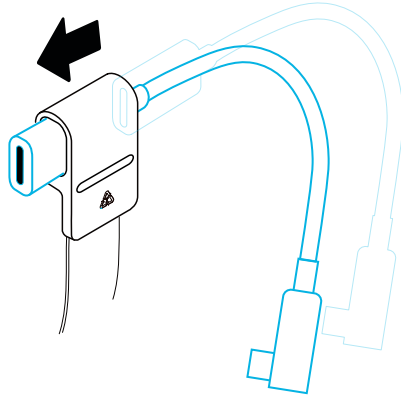
Attaching the VIVE Wireless Dongle to VIVE Focus Vision or VIVE Focus 3

Connect the dongle to the headset to use VIVE Ultimate Tracker.

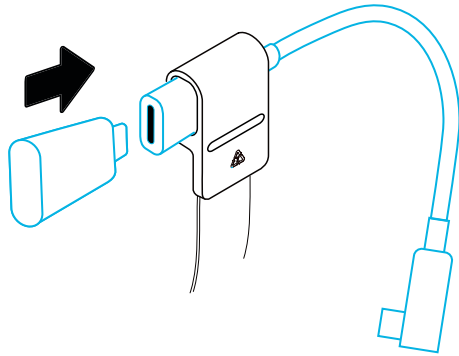


Use the extension cable and cable fastener that come in the box to attach the dongle to your headset. Don't plug the dongle directly into the USB port on the right side of the headset.

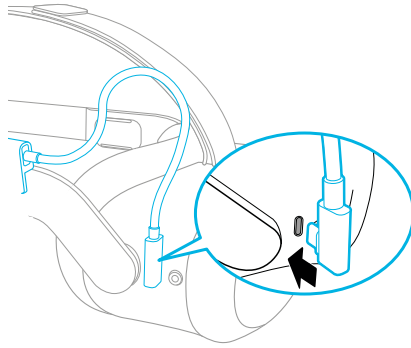
1. Thread the USB extension cable through the cable fastener.



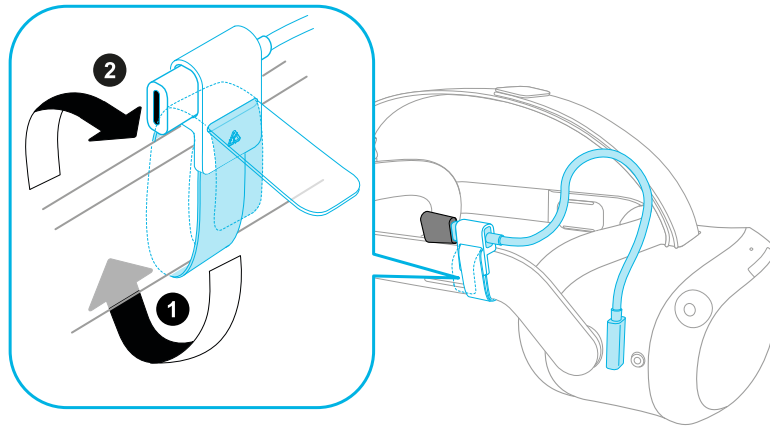
2. Connect the dongle to the USB extension cable.



3. Connect the L connector of the USB extension cable to the USB port on the right side of the headset.



4. Secure the cable by wrapping the hook-and-loop tape around the headset's right band.



Make sure the hook-and-loop tape doesn't cover the speakers.



Connect the dongle directly to the USB extension cable that comes in the box. Avoid using a USB hub or splitter, as unusual power behavior could damage the dongle.

Setting up VIVE Ultimate Tracker

Before using VIVE Ultimate Tracker, you'll need to set it up. See the following topics for ways to set up the tracker.

- [Setting up VIVE Ultimate Tracker using VIVE Manager on page 18](#)
- [Setting up VIVE Ultimate Tracker in VR on page 21](#)

Setting up VIVE Ultimate Tracker using VIVE Manager

Set up VIVE Ultimate Tracker using VIVE Manager.



Before pairing with your headset, make sure:

- The VIVE Wireless Dongle is connected to the headset and the headset is turned on and not in sleep mode. See [Attaching the VIVE Wireless Dongle to VIVE XR Elite](#) on page 15 or [Attaching the VIVE Wireless Dongle to VIVE Focus Vision or VIVE Focus 3](#) on page 16.
- VIVE Manager (version 2.0.33 or later) is installed on your phone and paired with your headset.
- VIVE XR Elite software version is 1.0.999.508 or later or if using VIVE Focus 3, software version must be 6.0.999.948 or later.
- After updating the software of VIVE Focus 3 to support VIVE Ultimate Tracker, restart the headset. If you're using VIVE Location-Based Software Suite (LBSS) with VIVE Focus 3, see [What should I do if I'm using VIVE Location-Based Software Suite \(LBSS\) with VIVE Focus 3?](#) on page 40.

1. Get your tracker accessories ready, and then do any of the following:

- For body tracking, first fasten the tracker bases to the trackstraps. Then put the trackstraps on your body, but don't attach the trackers to them yet.



For tips on how to wear the tracker accessory and tracker on your body for optimal tracking, see [Wearing VIVE Ultimate Tracker on your body](#) on page 8.

- For object tracking, fasten each tracker base to a compatible mount, but don't attach the trackers to them yet.

2. Open VIVE Manager and tap **Devices**.

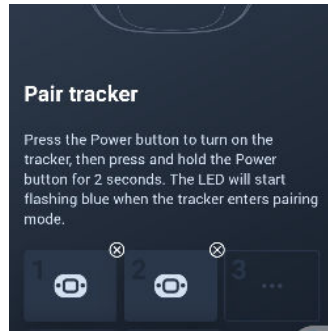


If you've paired headsets before, tap the down arrow to open the **Devices** dropdown menu and select your headset.

3. Tap **Inputs > Motion trackers**, and then tap **Pair** or **+** in the upper right.

4. Press the power button on VIVE Ultimate Tracker to turn it on.

5. Press and hold the power button on the tracker for two seconds to enter pairing mode. The status LED will start flashing blue.
6. When VIVE Ultimate Tracker is paired and connected, a tracker icon will appear in one of the slots.



You can pair up to five trackers at a time.

7. After you're done pairing your trackers, tap **Done**.
8. Go to the center of the play area and put on your headset.
9. Select **Start**, and then follow the onscreen instructions to scan your area. Scanning the low-angle areas of your environment helps improve tracking performance when using VIVE Ultimate Tracker at knee height or below.



- Make sure you're in the center of your play area before you select **Start scan**.
- Make sure you're kneeling down throughout the scanning process.
- When using the tracker in the future, you may be asked to scan your area again depending on your environment.

After scanning, check that the trackers are being tracked properly before attaching them to your body.

10. Stand up and stay in the center of your play area.

11. Hold each tracker in front of your chest with the cameras facing outward until you see the blue numbered label above the tracker in VR.



- You'll need to do this for each tracker that you've paired.
- Make sure you're not covering the tracker's cameras with your fingers while holding the tracker.

12. After confirming the trackers are working properly, attach them to your body and select **Next**.

13. Move around and see if the blue labels stay pinned to your trackers, and then select **OK**.



If the blue labels drift from the trackers, select **Trackers drifting?** to see how to fix the problem.

You'll then be taken to the **Motion trackers** settings page where you can learn about the available tracker options.

- After setting up, you can assign a role to your tracker. See [Assigning motion tracker roles via VIVE Manager](#) on page 23.
- In **Settings > Inputs > Motion trackers**, select **?** in the upper right to learn how to troubleshoot tracking issues and see tips on how to attach trackers for optimal tracking.

Setting up VIVE Ultimate Tracker in VR

Set up VIVE Ultimate Tracker in VR.



Before setting up your headset, make sure:

- The VIVE Wireless Dongle is attached to the headset. See [Attaching the VIVE Wireless Dongle to VIVE XR Elite](#) on page 15 or [Attaching the VIVE Wireless Dongle to VIVE Focus Vision or VIVE Focus 3](#) on page 16.
- VIVE XR Elite software version is 1.0.999.508 or later or if using VIVE Focus 3, software version must be 6.0.999.948 or later.
- After updating the software of VIVE Focus 3 to support VIVE Ultimate Tracker, restart the headset. If you're using VIVE Location-Based Software Suite (LBSS) with VIVE Focus 3, see [What should I do if I'm using VIVE Location-Based Software Suite \(LBSS\) with VIVE Focus 3?](#) on page 40.

1. Get your tracker accessories ready, and then do any of the following:

- For body tracking, first fasten the tracker bases to the trackstraps. Then put the trackstraps on your body, but don't attach the trackers to them yet.



For tips on how to wear the tracker accessory and tracker on your body for optimal tracking, see [Wearing VIVE Ultimate Tracker on your body](#) on page 8.

- For object tracking, fasten each tracker base to a compatible mount, but don't attach the trackers to them yet.

2. Go to your play area and put on your headset.

3. From Home, select **Settings** > **Inputs** > **Motion trackers** > **Pair new/Pair**.

4. Pick up the tracker and press the power button to turn it on.

5. Press and hold the power button for two seconds to enter pairing mode. The status LED will start flashing blue.

6. Once VIVE Ultimate Tracker is paired and connected, a tracker icon will appear in one of the slots.



You can pair up to five trackers at a time.

7. After you're done pairing your trackers, select **Done**.

8. Select **Start** and then follow the onscreen instructions to scan your area. Scanning the low-angle areas of your environment helps improve tracking performance when using VIVE Ultimate Tracker at knee height or below.



- Make sure you're in the center of your play area before you select **Start scan**.
- Make sure you're kneeling down throughout the scanning process.
- When using the tracker in the future, you may be asked to scan your area again depending on your environment.

After scanning, check that the trackers are being tracked properly before attaching them to your body.

9. Stand up and stay in the center of your play area.
10. Hold each tracker in front of your chest with the cameras facing outward until you see the blue numbered label above the tracker in VR.



- You'll need to do this for each tracker that you've paired.
- Make sure you're not covering the tracker's cameras with your fingers while holding the tracker.

- 11. After confirming that the trackers are working properly, attach them to your body and select **Next**.
- 12. Move around and see if the blue labels stay pinned to your trackers, and then select **OK**.

 If the blue labels drift from the trackers, select **Trackers drifting?** to see how to fix the problem.

You'll then be taken to the **Motion trackers** settings page where you can learn about the available tracker options.

- After setting up, you can assign a role to your tracker. See [Assigning motion tracker roles via VIVE Manager](#) on page 23.
- In **Settings > Inputs > Motion trackers**, select **?** in the upper right to learn how to troubleshoot tracking issues and see tips on how to attach trackers for optimal tracking.

Assigning motion tracker roles

The motion tracker role is the body part (for body tracking) or class of object (for object tracking) your VIVE Ultimate Tracker is attached to. You can assign roles via VIVE Manager or in the headset.

 VIVE Ultimate Tracker must be paired and connected to your headset before you can assign a motion tracker role. See [Setting up VIVE Ultimate Tracker](#) on page 17.

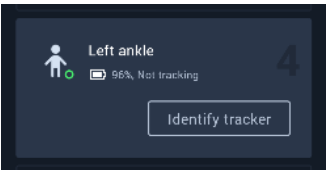
- [Assigning motion tracker roles via VIVE Manager](#) on page 23
- [Assigning motion tracker roles in VR](#) on page 25

Assigning motion tracker roles via VIVE Manager

You can use VIVE Manager to assign a role to your VIVE Ultimate Tracker.

 Make sure the tracker is turned on and connected. The status LED is green.

- 1. On the **Motion trackers** screen in VIVE Manager, tap the tracker you want to assign a role to in the screen.



If you're not on the **Motion trackers** screen:

Headset	Steps
VIVE XR Elite	Tap Devices > Inputs > Motion trackers .

Headset	Steps
VIVE Focus 3	Tap Settings > Connected > Inputs > Motion trackers .

2. Under **Type**, choose whether you want to use the tracker for object  or body  tracking.



If you selected body tracking, tap the part of the body where you'll attach the tracker to.



If you've paired several trackers, you can tap **Identify tracker** on the **Motion trackers** screen to find a specific tracker. The status LED of the selected tracker will then flash green five times.

Assigning motion tracker roles in VR

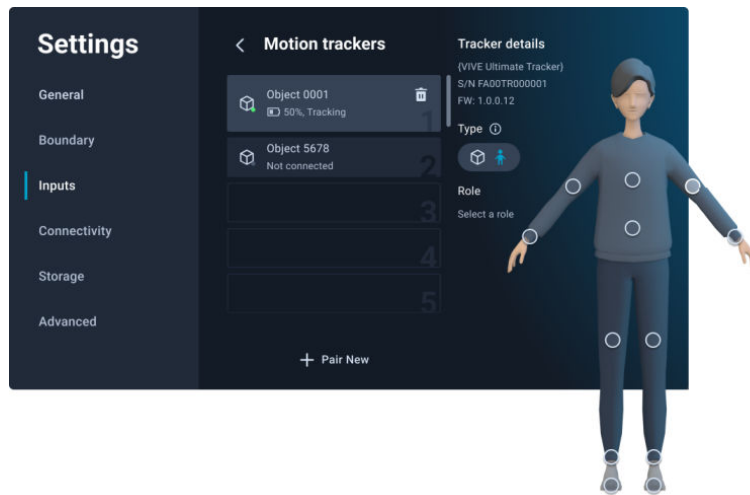
Here's how to assign a role to your VIVE Ultimate Tracker while in VR.

1. In your headset, go to **Settings > Inputs > Motion trackers**.
2. Select the tracker you want to assign a role to.



Make sure the tracker is turned on and connected. The status LED is green.

3. Under **Type**, choose whether you want to use the tracker for object  or body  tracking. If you selected body, choose where you're planning to place the tracker on the body.



Checking tracker status in the VIVE Menu

While in VR, you can check the status of your trackers in the VIVE Menu.

1. Press the VIVE button  on the right controller.



You can also use hand gestures to open the VIVE Menu. Face your right palm inward. When the VIVE symbol  appears, pinch your index finger and thumb together.

2. Select **Devices**.
3. Select the tracker button at the top of the VIVE Menu.



Select  in the upper right to open the **Motion trackers** screen where you can change tracker settings and pair new trackers.

Updating the VIVE Ultimate Tracker firmware

The firmware is updated regularly to make sure you get the best out of VIVE Ultimate Tracker.



Make sure the trackers you want to update are turned on and paired with your headset.

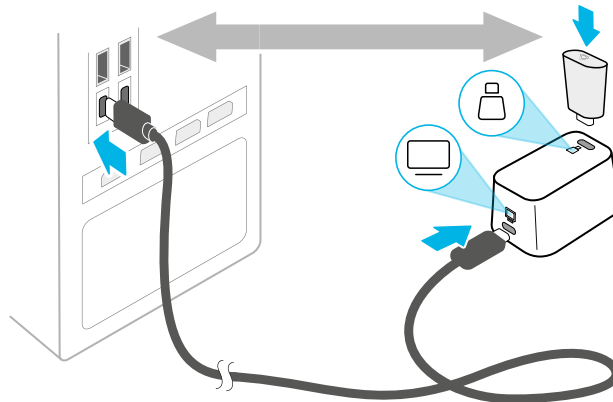
1. In your headset, go to **Settings > Inputs > Motion trackers**.
2. Select **Firmware update** in the lower right.
3. Select **Start update**.

Setup for SteamVR-compatible headsets

Connecting the VIVE Wireless Dongle to your computer

To use VIVE Ultimate Tracker when playing PC VR titles on SteamVR-compatible headsets such as Meta Quest® 3 and Meta Quest® Pro, you'll need to connect the VIVE Wireless Dongle to your computer.

1. Connect the VIVE Wireless Dongle to its dedicated USB port on the dongle cradle.
2. Connect one end of the USB Type-C cable that comes in the box to the dongle cradle's USB port for the PC.
3. Connect the other end of the USB Type-C cable to a USB port on your computer.



Keep the VIVE Wireless Dongle at least 45 cm (18 in) away from the computer and place it where it won't be moved.

Pairing the VIVE Ultimate Tracker with the VIVE Wireless Dongle

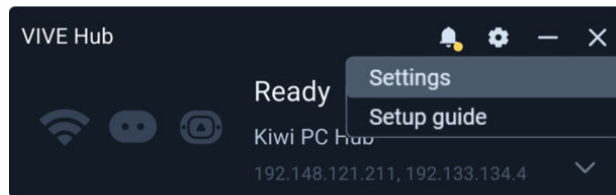
Use VIVE Hub to set up VIVE Ultimate Tracker for SteamVR-compatible headsets such as Meta Quest® 3 and Meta Quest® Pro. Here's how to pair VIVE Ultimate Tracker with the dongle.



Before pairing with the VIVE Wireless Dongle, make sure:

- You've installed the VIVE Ultimate Tracker service in VIVE Hub. See [About VIVE Hub services](#).
- The VIVE Wireless Dongle is connected to the computer. See [Connecting the VIVE Wireless Dongle to your computer](#) on page 27.

1. On your computer, launch VIVE Hub.
2. Open the VIVE Hub settings by clicking  > **Settings**.



3. On the left panel, click **VIVE Ultimate Tracker**.
4. On the **Trackers** tab, click **Pair new** next to **Pair tracker**.
5. Press the power button on VIVE Ultimate Tracker to turn it on.
6. Press and hold the power button for two seconds to enter pairing mode. The status LED will start flashing blue.
7. When VIVE Ultimate Tracker is paired and connected, a tracker icon will appear in one of the slots. You can pair up to five trackers at a time.
8. After you're done pairing your trackers, click **Done**.

After pairing, create a tracking map. See [Creating a tracking map for your play area](#) on page 29.

Creating a tracking map for your play area

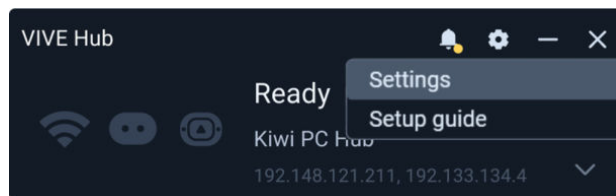
To use VIVE Ultimate Tracker, you'll need to set up your play area's tracking map. Here's how.



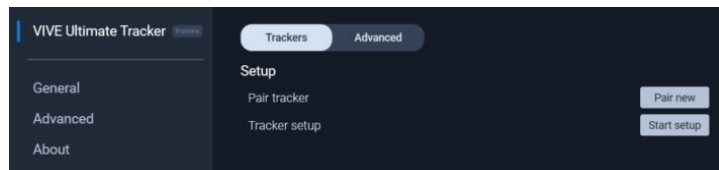
Make sure of the following:

- You've paired VIVE Ultimate Tracker with the VIVE Wireless Dongle. See [Pairing the VIVE Ultimate Tracker with the VIVE Wireless Dongle](#) on page 28.
- The PC you'll be using is in your play area.

1. On your computer, launch VIVE Hub.
2. Open the VIVE Hub settings by clicking  > **Settings**.



3. On the left panel, click **VIVE Ultimate Tracker**.
4. On the **Trackers** tab, click **Start setup** next to **Tracker setup**.



VIVE Hub will check if the dongle cradle is connected to the computer and if any paired trackers are found.

5. Click **Next** to continue.

6. You'll now scan your environment to create the tracking map. Here's how:

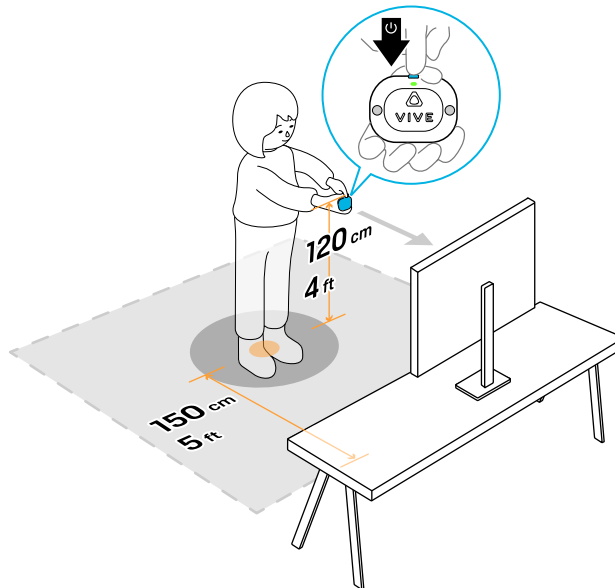
- a) Click **Create tracking map**.
- b) Pick up the tracker whose status LED is flashing green and press its power button.



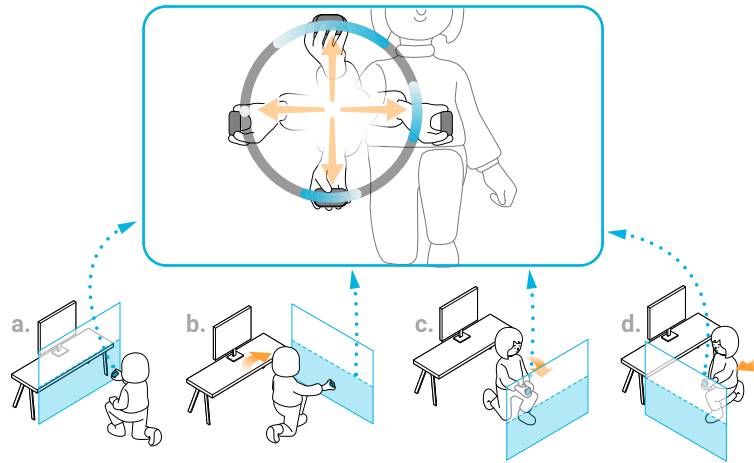
If you've paired several trackers, make sure to pick up the tracker that's been identified.

- c) Hold the tracker still with the tracker's cameras facing the computer screen.
- d) Stand up and hold the tracker 120 cm (4 feet) from the ground.
- e) With the tracker's cameras still facing your computer screen, slowly walk backwards until you're around 150 cm (5 feet) away from the computer screen. Then press the tracker's power button.

This will be set as the center of your play area.



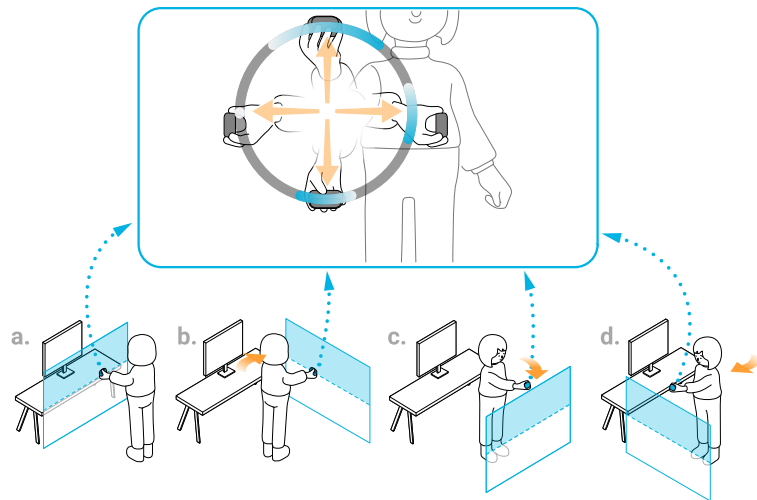
- 7.** Now scan your environment from a low angle. While in the center of your play area:
- While facing your computer screen, kneel down and point the tracker up, down, left, and right until the ring is completely filled in.
 - While still kneeling down, turn your body right (face the wall to the right of your computer screen) and repeat the scanning process.
 - While still kneeling down, turn your body right (face the wall opposite your computer screen) and repeat the scanning process.
 - While still kneeling down, turn your body right (face the wall to the left of your computer screen) and repeat the scanning process.



While scanning:

- If your computer has speakers connected to it, turn them on so you can hear audio hints.
- Glance at your computer screen once in a while to check for messages and your scanning progress.

- 8.** Next, scan your environment while standing up. While in the center of your play area:
- While standing up and facing your computer screen, point the tracker up, down, left, and right until the ring is completely filled in.
 - Turn your body right (face the wall to the right of your computer screen) and repeat the scanning process.
 - Turn your body right (face the wall opposite your computer screen) and repeat the scanning process.
 - Turn your body right (face the wall to the left of your computer screen) and repeat the scanning process.



While scanning:

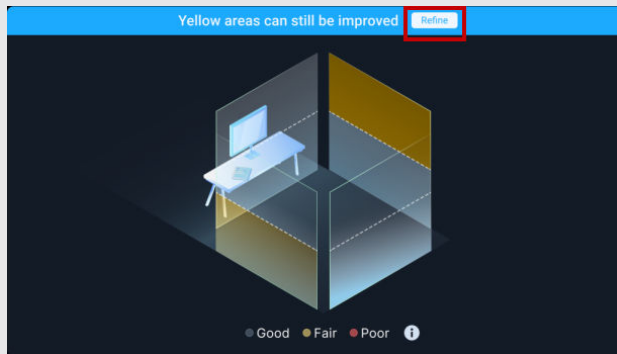
- If your computer has speakers connected to it, turn them on so you can hear audio hints.
- Glance at your computer screen once in a while to check for messages and your scanning progress.

After scanning, the map will be saved automatically.



If after scanning your environment, you see that certain sides of your environment can be refined for better tracking, we **strongly recommend** to redo the scan to improve tracking. Click **Refine** to scan again the areas that need refinement. When you rescan, yellow areas become white when scanned correctly.

Make sure to save the tracking map after refining the map.



After creating your tracking map, you'll need to calibrate the trackers using the VIVE Space Calibrator. Watch the animation onscreen to get an idea on how to calibrate the trackers. After watching the animation, click **Open SteamVR**. Then follow the steps in [Calibrating VIVE Ultimate Tracker](#) on page 33.



You'll need to run setup again if you change your play area.

Calibrating VIVE Ultimate Tracker

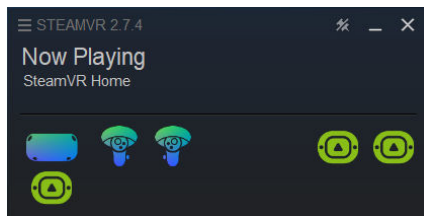
After creating a tracking map, you'll need to calibrate your trackers in VR. Here's how.



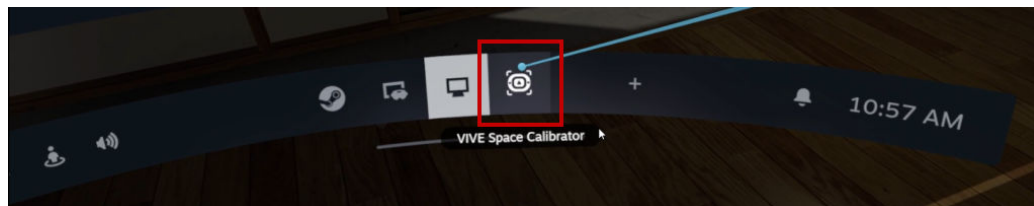
Before calibrating:

- Make sure you've created a tracking map for your play area. See [Creating a tracking map for your play area](#) on page 29.
- For Meta Quest® users, you'll need to install the [Meta Quest Link PC app](#) on your computer.

1. Connect your SteamVR-compatible headset to your computer and turn on your headset and controllers.
2. On your computer, check that your headset, controllers, and trackers are detected on the SteamVR window.

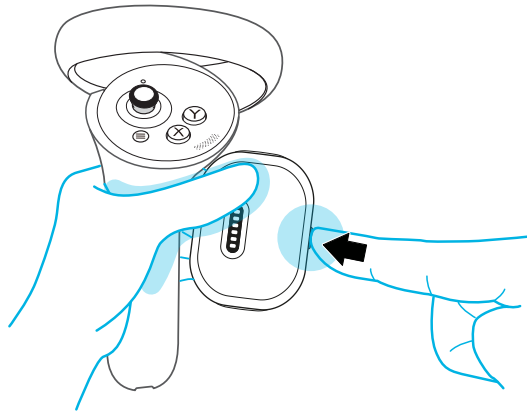


3. Put on your headset.
4. Press the Menu button on the controller to open the SteamVR dashboard.
5. Select **VIVE Space Calibrator** on the toolbar.



6. Select the controller you want to use to calibrate the tracker.

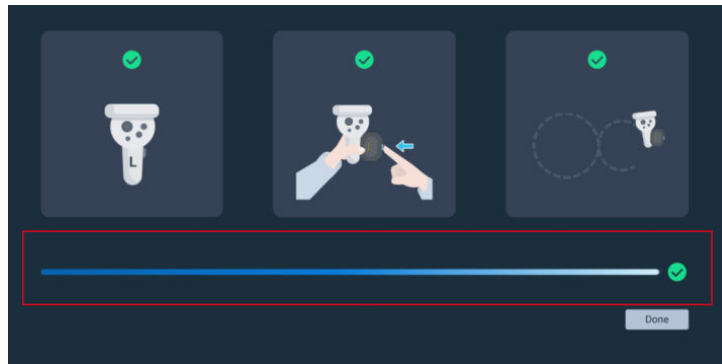
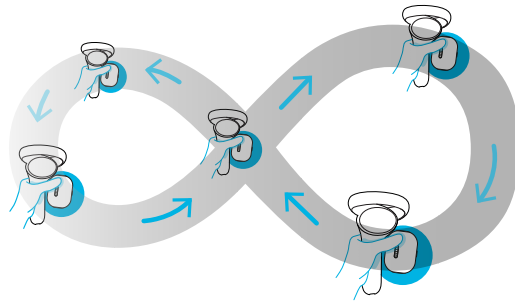
7. Grip both the controller and tracker securely in one hand, and then press the power button on the tracker.



When holding the controller and tracker, make sure:

- You're holding the controller you chose in step 6.
- The tracker's cameras are facing outwards.

8. While holding both controller and tracker firmly, trace an infinity sign in the air. Keep tracing until the progress bar is full.



- You don't need to face the computer screen while tracing.
- Make the infinity sign as big as you can.
- When tracing the infinity sign, keep a slow and steady pace.

9. Click **Done**. You'll see a virtual model of the controller and tracker you're holding. If you have other paired trackers, pick them up and you'll also see virtual models of those trackers in VR.



- If the trackers are off or are not being tracked on the SteamVR window, they won't show in VR.

For tips on how to wear the tracker on your body for optimal tracking, see [Wearing VIVE Ultimate Tracker on your body](#) on page 8.

Setting power frequency and auto-sleep options

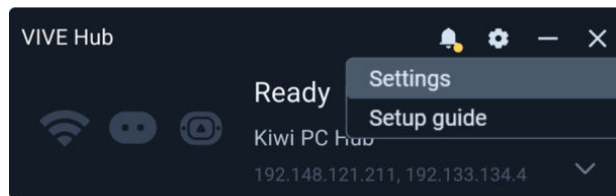
Use VIVE Hub to set the power frequency of your power outlet and make your trackers to enter sleep mode after a period of inactivity. Here's how:



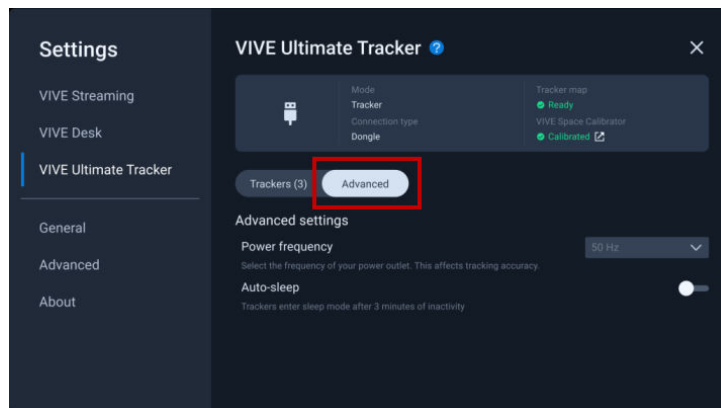
Before pairing with the VIVE Wireless Dongle, make sure:

- You've installed the VIVE Ultimate Tracker service in VIVE Hub. See [About VIVE Hub services](#).
- The VIVE Wireless Dongle is connected to the PC. See [Connecting the VIVE Wireless Dongle to your computer](#) on page 27.

1. On your PC, launch VIVE Hub.
2. Open the VIVE Hub settings by clicking  > **Settings**.



3. On the left panel, click **VIVE Ultimate Tracker**
4. On the **Advanced** tab, you can set the following:



- **Power frequency:** Select the power frequency of your region. This helps with tracking accuracy.
- **Auto-sleep:** Turn on to set your trackers to go to sleep mode after three minutes of inactivity to save power.

Solutions and FAQs

General

Troubleshooting VIVE Ultimate Tracker

If you have problems pairing VIVE Ultimate Tracker, try the following:

- Make sure VIVE Ultimate Tracker is fully charged, then turn it on and try pairing it again.
- Turn VIVE Ultimate Tracker off and back on, and then press and hold the power button for two seconds to enter pairing mode again.
- Make sure the firmware is up to date. See [Updating the VIVE Ultimate Tracker firmware](#) on page 26.

Can VIVE Ultimate Tracker enter pairing mode immediately after turning it on?

No. After turning on VIVE Ultimate Tracker, the status LED will alternately flash green and blue for a few seconds. Wait for the status LED to turn solid blue before pressing and holding the power button for two seconds to enter pairing mode.

Why can't I pair new trackers?

Make sure you're using the same VIVE Wireless Dongle that you previously attached to your headset to pair previous trackers.

Why am I experiencing stuttering in my PC VR streaming session while using VIVE Ultimate Tracker?

If you're in a VR streaming session with VIVE Streaming and the experience is not smooth while using VIVE Ultimate Tracker, connect your headset to a 5 GHz Wi-Fi® network. Avoid connecting to a 6 GHz Wi-Fi network.

Why is the status LED on the tracker continuously breathing green?

It may be because the headset doesn't have the Wi-Fi country code. The headset needs the Wi-Fi country code to synchronize the map data with the tracker. To obtain the Wi-Fi country code, just connect your headset to a Wi-Fi network. After the headset obtains the Wi-Fi country code, it will finish synchronizing the map data.

Is there a way to restart the tracker?

If the tracker has a persistent problem that can't be solved, restart the tracker. Restart the tracker by pressing the power button for five seconds to turn it off, and then pressing the power button again for one second to turn it back on.



If the tracker doesn't want to turn off, press and hold the power button for 10 seconds to force the tracker to turn off.

Why can't I see tracker information in settings?

If you can't see tracker information in **Settings > Inputs > Motion trackers**, do the following:

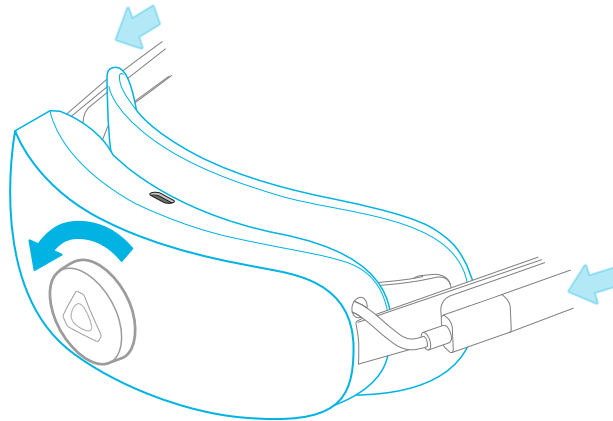
- Make sure VIVE Wireless Dongle is attached to the headset.
- Press the power button on the tracker to turn it on. If the tracker has been paired and is connected to the headset, the tracker information will show.

If you still can't see the tracker information, restart your headset.

What should I do if I'm having problems connecting VIVE XR Elite with VIVE Ultimate Tracker?

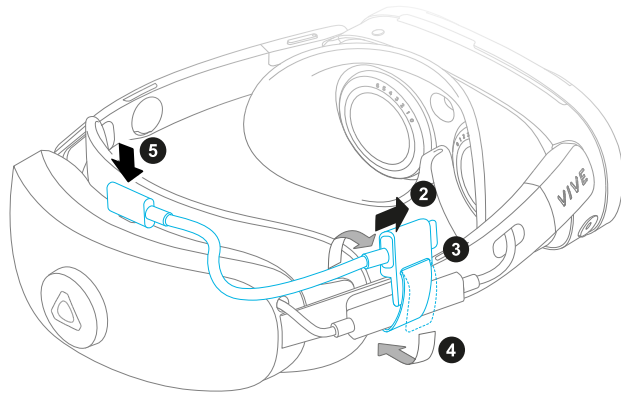
If you're having connectivity problems, it may be because there is no clear line of sight between the VIVE Wireless Dongle attached to the headset and the tracker. Try repositioning the dongle on the headset by using the USB extension cable and cable fastener that come in the box.

1. Turn the adjustment dial counterclockwise to extend the battery cradle.

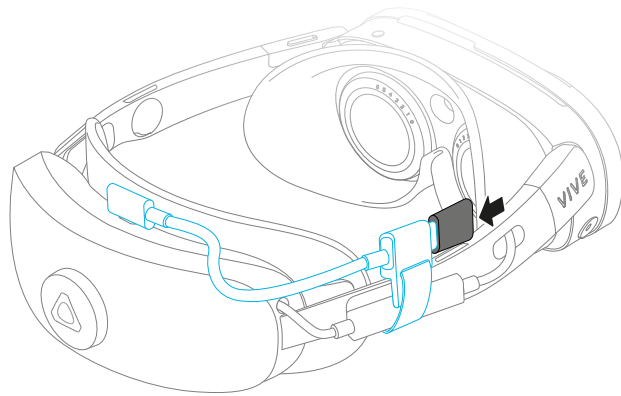


2. Thread the USB extension cable through the cable fastener.
3. Position the cable fastener on top of where the extended USB Type-C power port of the headset and extended USB Type-C cable of the battery cradle connect.
4. Secure the cable by wrapping the hook-and-loop tape around the cable and headset temple.

5. Connect the L connector of the USB extension cable to the USB port on the battery cradle.



6. Connect the dongle to the other end of the USB extension cable.



What should I do if I'm using VIVE Location-Based Software Suite (LBSS) with VIVE Focus 3?

When using the VIVE Ultimate Tracker with VIVE Focus 3 that uses VIVE Location-Based Software Suite (LBSS), do the following:

- Make sure the VIVE Focus 3 headset software version is updated to 6.0.999.948 or later. Restart the headset after updating the software.



Updating the headset's software from version 5.0.999.918 or older to 6.0.999.948 or later will delete the current map on the headset. Maps exported from headsets using software version 5.0.999.918 or older also **can't be assigned** to headsets that have been updated to software version 6.0.999.920 or later.

- Create a new tracking map. Go to the [LBSS for VIVE Focus 3 VIVE Forum](#) to download the PC tool and setup guide or reach out to your sales contact.



To view the VIVE Forum page, you need to be signed in using the HTC account that has LBSS permission.

- Set the tracking mode on the headset to either **Normal Mode (6DoF)** or **LBE Mode**. You can change the tracking mode by using VIVE Business+. See [Setting up headsets](#).



To use **LBE Mode** tracking mode, you must be subscribed to the VIVE Business+ **Pro** or **Ultimate** tier.

How do I set up full-body tracking in VRChat?

After setting up VIVE Streaming, your headset, and trackers, you can set up full-body tracking in VRChat®. Here's how:

1. On your PC, look at the SteamVR window and check that your headset, controllers, and trackers are being tracked.
2. On your headset, launch VRChat.
3. In your VRChat World, go stand in front of the full-length mirror.
4. Open the Quick Menu by pressing the Y button on the controller.
5. On the **Launch Pad** tab, select **Calibrate FBT**. You'll see your avatar in a T-pose and white balls on the avatar's body. The white balls represent the trackers attached to your body.
6. Move your body to line up the trackers with the corresponding body parts on your avatar.
7. Match up your hands to your avatar's hands and press the trigger on both controllers.



If you have VIVE Full Face Tracker attached to your VIVE XR Elite, you need to enable Open Sound Control (**OSC**) in VRChat to track facial expressions. To enable **OSC**, press and hold the Y button on the left controller to open the **Action Menu**. Then select **Options > OSC > Enabled**.

Can I use VIVE Ultimate Tracker with other headsets?

Yes, you can. Support for using VIVE Ultimate Tracker with third-party PC VR headsets (SteamVR-compatible) is now available. To learn how to set up VIVE Ultimate Tracker with SteamVR-compatible headsets, check the "Setup for SteamVR-compatible headsets" section of the user guide.

Direct standalone support with third-party headsets is currently planned for the future.

How do I set VIVE Ultimate Tracker to LBE mode?

You'll need to use the VIVE Business+ console to set VIVE Ultimate Tracker to either **Wi-Fi LBE mode** or **standard LBE mode**. Refer to the following topics to learn how:

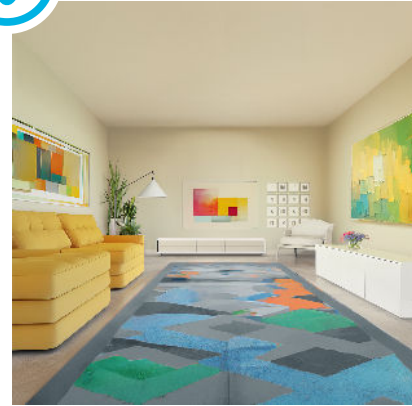
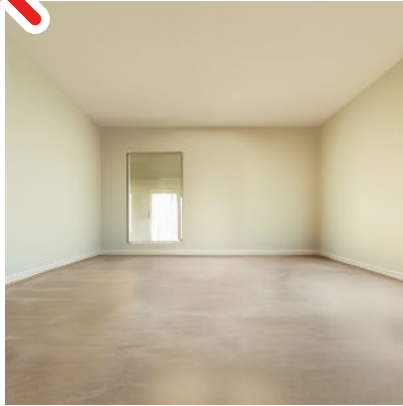
- [Required device software and app versions](#)
- [Downloading the VIVE Business+ console](#)
- [Setting the tracker to Wi-Fi LBE mode](#)
- [Setting the tracker to standard LBE mode](#)

Tracking

What can I do if VIVE Ultimate Tracker tracking is not stable or accurate?

If you're experiencing tracking issues, try the following:

- Wipe the tracker's two camera lenses with a microfiber cloth.
- Try to have at least 1.5 meter distance between the tracker and obstacles.
- Move to the center of your play area for best tracking.
- Keep these in mind for your play area:
 - Avoid direct intense light or glare in your space.
 - Your space needs to be bright enough to read a book comfortably.
 - Avoid reflective objects.
 - The walls, ceiling, and floor must not be completely blank. Add posters, hang photos, and spread out a patterned rug for better tracking.



Why can't I see the tracker in VR when it's attached to my lower body?

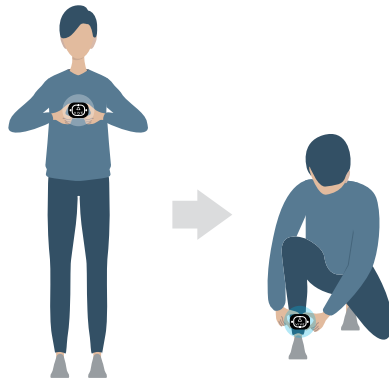
When VIVE Ultimate Tracker is attached to a lower body part such as your ankle and you can't see it in VR, try the following:

1. Detach the tracker from your body.
2. Hold the tracker in front of your chest with the tracker's cameras facing outward until you see the tracker in VR.



Make sure your fingers are not blocking the cameras while holding the tracker.

3. Lower the tracker slowly back to the tracker's position on the body and reattach it.



Make sure not to cover the tracker's cameras while lowering and reattaching the tracker.

We also recommend staying close to the spot where you kneeled down to scan your area to improve tracking accuracy.

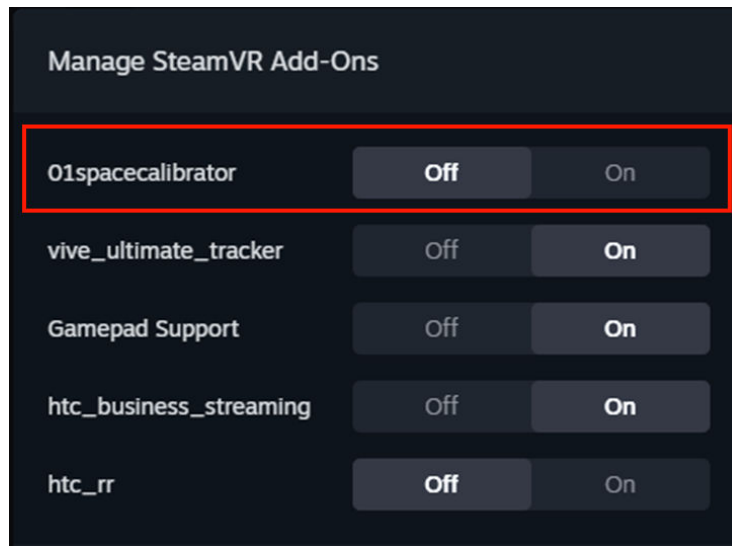
What should I do if the tracker's position in VR and the real world don't match?

Try the following:

- Hold VIVE Ultimate Tracker with one hand in front of your chest with the tracker's cameras facing outward. Make sure your fingers are not blocking the cameras. Then, block the tracker's cameras with your other hand without touching them. After five seconds, remove your hand that's covering the tracker's cameras to let the tracker recover tracking.

If doing the above doesn't solve the problem, turn the tracker off and back on.

- Check if there's a third-party space calibration tool active in SteamVR. In SteamVR, go to **Manage SteamVR Add-Ons**. If you see a space calibration tool turned on (for example, **01spacecalibrator**), turn it off. Having VIVE Space Calibrator and another space calibration tool active affects the space alignment of VIVE Ultimate Tracker.



Why is tracking jittery and jumpy when using VIVE Ultimate Tracker?

There may be wireless interference in your play area caused by other devices. If possible, temporarily turn off other wireless devices when using VIVE Ultimate Tracker.

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