Mobile Motion Capture
QM-SS1

Quick Startup Guide

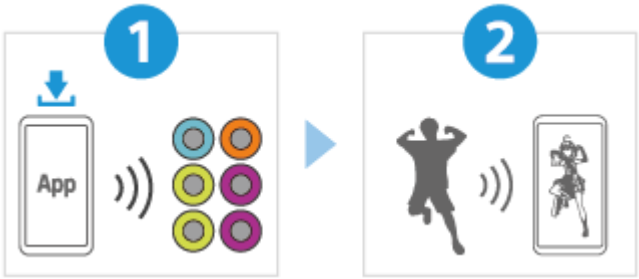
Download the mocopi app

GET IT ON Google Play

Download on the App Store

The mocopi app is an application that allows Mobile Motion Capture to be used on smartphones.
Download the version of the app for your smartphone.

Let’s start use



Pairing the sensors

When you are using the device for the first time, pair the sensors using the mocopi app to prepare for motion capture.
Follow the on-screen instructions to connect the sensors, install the sensors, attach the sensors to your body and perform calibration.

Performing motion capture (Overview of the motion capture screen)

Attach the sensors to your body and make movements to move an avatar, convert movements into motion data or record movements on the mocopi app.

Related information

Charging
Connecting the sensors
Recording in Video mode
Recording in Motion mode

Mobile Motion Capture
QM-SS1

About this Help Guide

This is the Mobile Motion Capture QM-SS1 Help Guide.

Note

- System and application updates can present the features in your device in another way than described in this Help Guide.

Notes on use

Please be sure to read the supplied “Reference Guide”.

Overview of the device

Attach the sensors of the device to your body and make movements. You can move an avatar and save it in MP4 format or record the motion data in the BVH file format with the mocopi app on your smartphone.
Refer to “Specifications” on the support page for the smartphones compatible with the device.

Mobile Motion Capture
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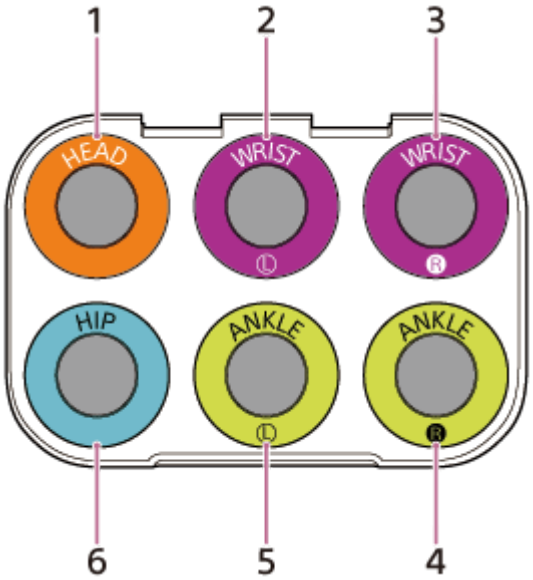
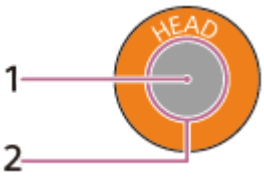
Device unit parts

Sensor



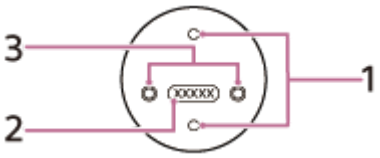
1. HEAD (Head) sensor
   Attached to your head.
2. WRIST/L (Wrist/left) sensor
   Attached to your left wrist.
3. WRIST/R (Wrist/right) sensor
   Attached to your right wrist.
4. ANKLE/R (Ankle/right) sensor
   Attached to your right ankle.
5. ANKLE/L (Ankle/left) sensor
   Attached to your left ankle.
6. HIP (Hip) sensor
   Attached to your hip.

Front of the sensor (same for each sensor)



1. Button
2. Indicator (blue/orange/green)
   The indicator flashes in blue when the power is turned on. When the battery level is at approximately 15% or lower, the indicator flashes in orange.
   To turn the sensor off, press and hold the button and then release your finger when the indicator lights up in green. If you long press the button (5 seconds), the indicator lights up in green again and the sensor force restarts.
   While the sensor is charging, the indicator flashes slowly in orange. When the battery level reaches over approximately 80%, the indicator on the sensor lights up in green.
   When the sensor is connected via Bluetooth® using the mocopi app, the indicator flashes in green.

Back of the sensor (same for each sensor)



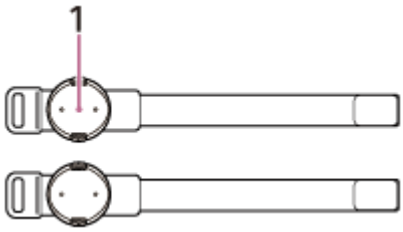
1. Indented parts for attachment
   Attaches the sensor to the protruding parts of the socket or the charging case.
2. Serial number
   This is the sensor number.
3. Charging port
   Fits the sensor onto the charging pins on the charging case.

Head strap (for the head)

1. Socket
2. Strap adjuster
   Adjusts the length and fit of the head strap.

Wrist straps (for the wrists/x2)

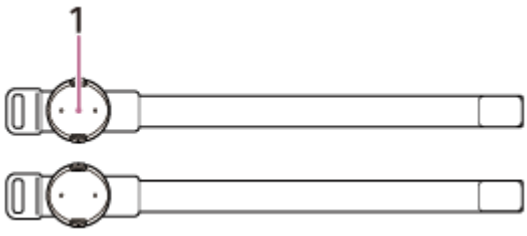
The short straps are for the wrists.



1. Socket

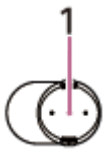
Ankle straps (for the ankles/x2)

The long straps are for the ankles.



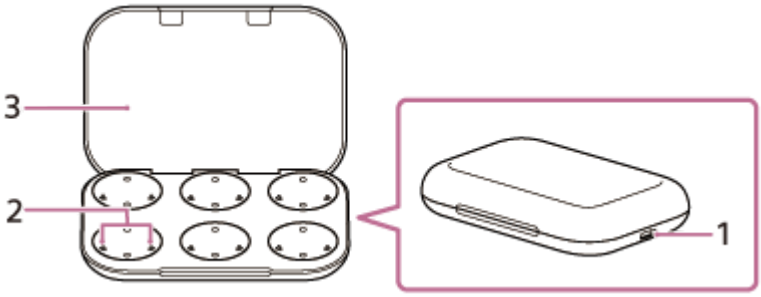
1. Socket

Clip (for the hip)



1. Socket

Charging case



1. USB Type-C® port
   Use a separately sold USB Type-C cable and AC adapter to connect the charging case to a power outlet and charge the sensors.
2. Charging pins
3. Lid

Related Topic

- Charging
- Pairing the sensors
- Installing the sensors
- Removing the sensors

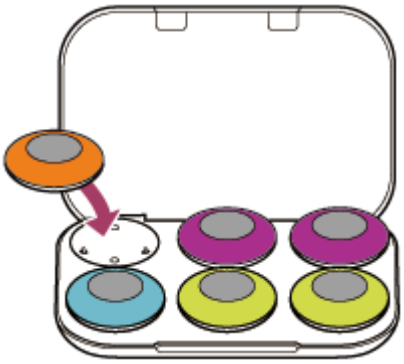
Charging

The sensors contain built-in lithium-ion rechargeable batteries. Always use the following Sony-branded charger (sold separately), as other types of chargers can increase charging time, not charge your device at all, or even damage your device.

- Fast Charger XQZ-UC1

1 Set the sensors into the charging case.

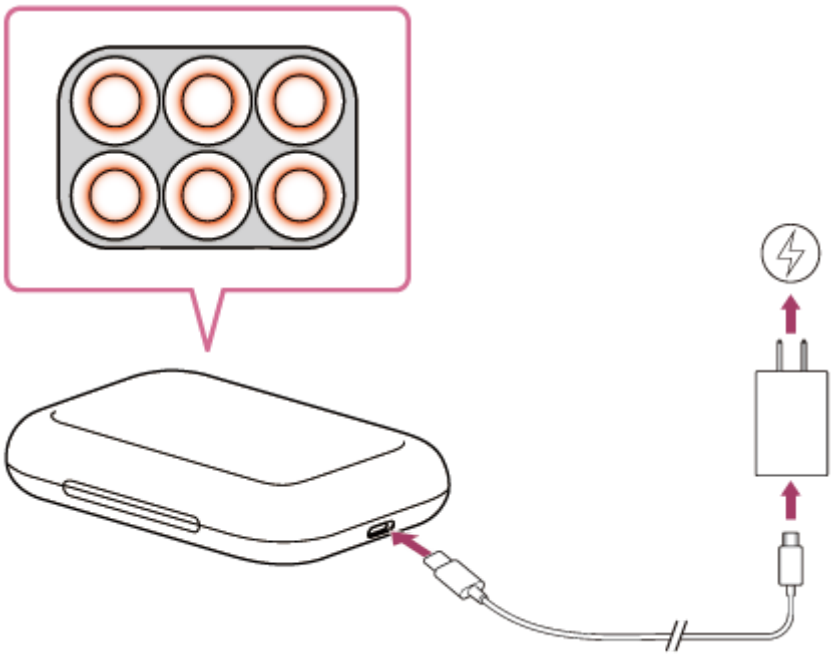
Put each sensor into a concave part of the charging case. Each sensor will be set to the correct position in the charging case by the built-in magnet.



Close the lid of the charging case.

2 Connect the charging case to an AC outlet.

Use a separately sold USB Type-C cable and AC adapter.



The indicator on each sensor slowly flashes in orange and charging starts.
When the sensors are charged at 80% or higher in battery level, the indicator on each sensor lights up in green.

Disconnect the USB Type-C cable.

Note

- Before charging, wipe away any moisture on the sensors and charging case and then set the sensors into the charging case.
- Make sure there is no dust or foreign material adhered to the sensors or the concave parts of the charging case when you set the sensors in the case.
- If the sensors are not set into the charging case correctly, charging may not start, or you may not be able to close the lid. Make sure that the sensors are not rotated. Charge with all the sensors set in the case correctly and check that the indicator on every sensor lights up.
- The rate the rechargeable battery is consumed may vary among the sensors depending on the settings or usage conditions. Therefore, the charging time of the rechargeable battery may vary for each sensor. However, this is not a malfunction.
- If you are storing the sensors for a long period of time, charge the battery once every 6 months to avoid over-discharge.
- If the sensors have not been used for a long time, it may take longer to charge the battery.
- If there is a problem with the rechargeable battery on the sensor, an error is detected during charging and the indicator on the sensor flashes in red.
  It is recommended to charge in a place with an ambient temperature between 15 °C and 35 °C (59 °F - 95 °F). Efficient charging may not be possible beyond this range.
  If the problem persists, consult your nearest Sony dealer.
- If the sensors have not been used for a long time, the indicators on the sensors may not immediately light up when charging. Wait a moment for the indicators to light up.
- Avoid exposure to extreme temperature changes, direct sunlight, moisture, sand, dust, and electrical shock. Never leave the device in a parked vehicle.
- The sensors and the charging case may become warm during charging or for a while after charging. However, this is not a malfunction.

Related Topic

- Device unit parts

Installing the mocopi app

You can perform all the Mobile Motion Capture operations with the mocopi app installed on your smartphone. Make sure to install the mocopi app on your smartphone.

1. **Download the mocopi app from the Google Play Store or App Store and install it on your smartphone.**

   The mocopi app is an application that allows Mobile Motion Capture to be used on smartphones. Download the version of the app for your smartphone.

   Download from the Google Play Store: https://###############
   Download from the App Store: https://###############

Hint

- Updates for the sensor firmware are available via the mocopi app.

Pairing the sensors

When using the device for the first time, pair the sensors with the mocopi app.

1. **Find and tap the mocopi app on your smartphone to launch the app.**

2. **On the initial setup screen, tap [SET UP].**

   Follow the on-screen instructions to proceed with the setup.

3. **On the [Pairing the sensors] screen, tap [NEXT].**

   Follow the on-screen instructions to set up the pairing.
   When the [Pairing request] screen appears, tap [PAIR & CONNECT] > [PAIR].
   When pairing is complete, the [Connecting the sensors] screen appears.

Hint

- If the [Pairing request] screen disappears, swipe down on the screen to display the message.

Note

- Check that the Bluetooth function for your smartphone is enabled before pairing the sensors.
- If the pairing of the sensors failed, check the following.
  - If the sensors are turned off, turn them on.
  - If another Bluetooth device is connected to your smartphone, disconnect it.
  - If the sensors are connected to another smartphone, disconnect them.
  - Turn off the sensors, wait for about 10 seconds, and then turn them on again.
  - If the sensors have previously been paired with your smartphone, delete them on the Bluetooth device list on your smartphone.
  - Restart your smartphone.
  - Reset the sensors. To reset a sensor, press the power button 10 times. The reset is complete when the indicator flashes in red and blue alternately. The Bluetooth device information registered to the sensor is erased by the reset.
- If you cannot turn on the sensor, check the following.
  - The battery level may be low. Charge the sensor.
  - If the sensor is charged but you cannot turn on the power, press and hold the button on the sensor for 5 seconds to restart.

Unpairing the sensors

1. On the [Sensor status] screen, tap ⋮ (menu icon) for the sensor you want to unpair.
2. Tap [UNPAIR].

Related Topic

- Connecting the sensors
- Installing the sensors
- Removing the sensors

- Attaching the sensors to your body
- Performing calibration
- Charging
- Device unit parts

Connecting the sensors

To perform motion capture, first connect the sensors with the mocopi app.

1. **Find and launch the mocopi app and tap [START MOTION CAPTURE].**

2. **Press the button on each sensor to turn the sensor on and place it on a flat surface.**

   The indicator on each sensor flashes in blue.
   If the indicator does not light up or if it flashes in orange, charge the sensor before connecting it to the app.

3. **On the [Connecting the sensors] screen, tap [CONFIRM].**

4. **On the [Sensor status] screen, tap [CONNECT SENSORS].**

   The sensors begin connecting with the app.
   When the connection is established, the indicator on the sensor flashes in green.

5. **On the [Turning on the sensors] screen, tap [CONFIRM].**

   The [Securing the sensors] screen appears.

Note

- Make sure to turn on the Bluetooth function on your smartphone before connecting the sensors.
- Once you start connecting the sensors, check the information displayed on the screen and do not move the sensors until they are all connected with the app.
- When connecting the sensors, avoid placing vibrating devices (for example, a laptop PC) near the sensors.
- If [Could not find sensors] appears, check the following.
  - If the sensors are turned off, turn them on.
  - If another Bluetooth device is connected to your smartphone, disconnect it.
  - If the sensors are connected to another smartphone, disconnect them.
  - Turn off the sensor, wait about 10 seconds, and then turn it on again.
  - Delete the sensor on the Bluetooth device list on your smartphone and then try pairing it again.
  - Restart your smartphone.
  - Reset the sensor. To reset the sensor, press the power button 10 times. When the reset is complete, the indicator flashes in red and blue alternately. The Bluetooth device information registered to the sensor is erased by the reset. Try pairing the sensor again.
- If you cannot turn on the sensor, check the following.
  - The battery level may be low. Charge the sensor.
  - If the sensor is charged but you cannot turn on the power, press and hold the button on the sensor for 5 seconds to restart.
- If a firmware update starts when you are connecting the sensors, wait until it ends. Firmware cannot be updated while the sensors are charging in the charging case because Bluetooth is disconnected at this time.

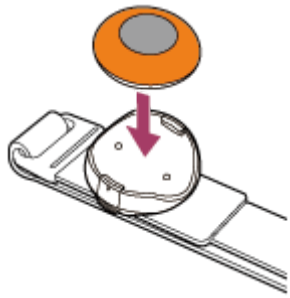
Related Topic

- Pairing the sensors
- Installing the sensors
- Attaching the sensors to your body
- Performing calibration
- Overview of the motion capture screen
- Charging
- Device unit parts

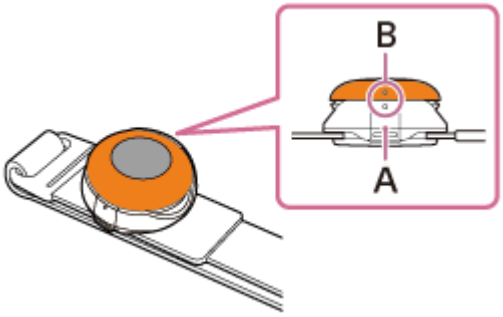
Installing the sensors

1. **Refer to [Straps and sockets] on the [Securing the sensors] screen to see the strap type.**

2. **Set the sensor onto the socket.**



Hold the sensor close to the socket. The built-in magnet fits the sensor into the correct position on the socket, and the sensor is locked into place on both sides by the clips (A). You can check if the sensor is set correctly on the socket by seeing whether the marks on the sides (B) are aligned.



3. **Once all the sensors are installed and secured in place on the sockets, tap [NEXT] on the [Securing the sensors] screen.**

The [Attaching the sensors] screen appears.

Hint

- All the sensors can be installed in the same way.

Note

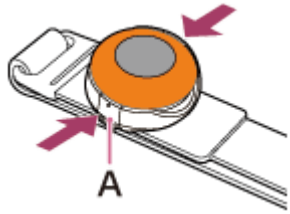
- Before installing the sensors, make sure that there is no dust or foreign material adhered to the sensors or the sockets.
- After installing the sensors, make sure that the sensors are not rotated on the socket and that the clips of the sockets are locked in place. If the sensors are not secured properly, they may fall off during motion capture and become damaged or harm those in your surroundings.

Related Topic

- Attaching the sensors to your body
- Removing the sensors
- Device unit parts

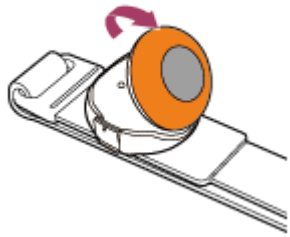
Removing the sensors

1 **Pinch the clips on both sides of the socket to open up the clips.**



A : Clip

2 **With the clips pinched open, carefully remove the sensor from the socket.**



Hint

- Carefully tilt the sensor to gently remove it from the socket.
- All the sensors can be removed in the same way.

Note

- Carefully remove the sensor from the socket while taking care not to drop the sensor.
- When removing a sensor, first undo the sensor strap or the clip for the hip sensor and take it off your body before removing the sensor.

Related Topic

- Installing the sensors
- Device unit parts

Attaching the sensors to your body

1. **Following the instructions on the [Attaching the sensors] screen, attach the sensors.**

2. **When you are finished attaching the sensors, tap [CONFIRM].**

   The [Calibration] screen appears.

Note

- Tighten the straps so that they do not come loose.
- Wear the wrist straps (for the wrists) directly against your skin. Avoid wearing the straps over clothing.
- Wear the ankle straps (for the ankles) directly against your skin or above your socks. Avoid wearing the straps over clothing.
- Firmly insert the clip (for the hip) into the top of your pants or belt and make sure the clip is secure. Attaching the sensor to your shirt or outerwear may cause the clip to come loose or fall off during intense movement.
- If the sensor falls off during use, your movements may not be recognized correctly. If a sensor sustains an impact after falling off, etc. after it is connected to the app, reconnect it.

Related Topic

- Performing calibration
- Device unit parts

Performing calibration

Calibration is the detection of the orientation of the sensors on your body by the app for correct motion capture. The position of a sensor changes even when the same user is reattaching the sensor. Perform calibration every time you put on the sensors before starting motion capture.

1. **On the [Calibration] screen, select the user's height and tap [NEXT].**

2. **Tap [START CALIBRATION] and stand up straight.**

   Hint

   - While standing up straight, keep your feet shoulder-width apart and your arms relaxed and down at your sides.

3. **After the sound and vibration signals from your smartphone, take one step forward and then stand up straight again.**

   [Successfully calibrated] appears on the screen and the motion capture screen appears.

Note

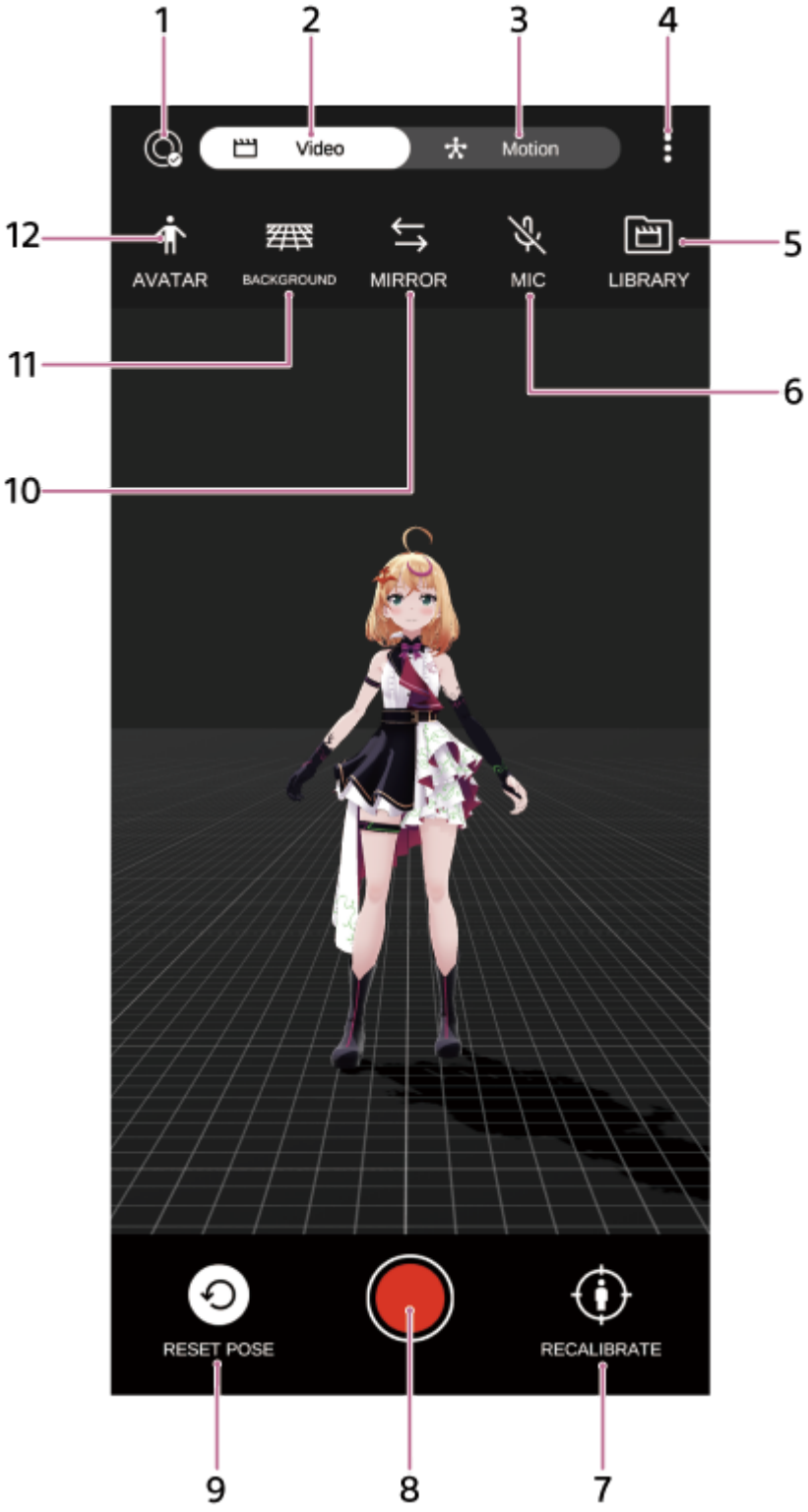
- Do not hold your smartphone while you are standing up straight. Stand still without moving your body.
- Do not look at your smartphone screen during calibration. Doing so shifts your head sensor and prevents the sensors from being calibrated accurately. After you start the calibration, take one step forward with the sound and vibration and then stand up straight again.
- If the calibration fails, you may have incorrectly taken one step forward after you stood up straight the first time. Tap [WATCH AGAIN] in the center of the [Calibration] screen to check the movement.
  You can also watch a video of the calibration movements by accessing ⋮ (menu icon) > [Tutorial video].
- If calibration fails even after you perform the steps correctly, reconnect the sensors. Take the sensors off your body, remove them from their sockets, place them on a flat surface and then reconnect them.
  Tap ⋮ (menu icon) > [Return to start menu].

Related Topic

- Overview of the motion capture screen
- Resetting the pose
- Recalibration

Mobile Motion Capture
QM-SS1

Overview of the motion capture screen



1. Check the sensors
   You can check the connection status or battery level of each sensor.
2. Video
   Record the avatar's movements as a video.

3. Motion
   Save recorded motion data in the BVH file format to the local storage of a smartphone, or send the data to an external device, etc.
4. Menu icon
   Open the menu.
   [Fix camera]: Turn this on to move the camera position and lock it in one place on the screen. Turn this off to enable the camera to automatically track the avatar. The avatar is always displayed in the center of the screen.
   [Lock hip]: Turn this on to lock the hip position in one place when recording while sitting, etc. to keep the avatar's movements steady. Sit in a chair, etc. to keep your hip in one position before turning on this setting.
   [Settings]: Display the [Settings] screen.
   - [Change unit]: Select Meters or Inches.
   - [Pose reset sound]: Select ON or OFF.
   - [PC connection settings]: Set the IP address, outbound port settings and transfer format for the transmission of recorded data to an external device.
   [Tutorial video]: Start the tutorial video.
   [Return to start menu]: Return to the start menu.
   [About this app]: Display the app information.
5. LIBRARY
   Check the recorded data. The icon changes depending on whether the app is in Video mode and Motion mode.
6. MIC (Video mode)
   Turn the microphone on/off. When MIC is on, avatar lip-syncing is enabled. This function does not work with Bluetooth headsets.
   SAVE/SEND (Motion mode)
   Select [SAVE] to save data to the local storage on a smartphone. Select [SEND] to send data to an external device.
7. RECALIBRATE
   Perform recalibration when changing the user or when an attached sensor has shifted.
8. Record button (red/blue)
   Start or stop recording motion capture. The color of the button and the inside of the icon change according to the selected mode.
9. RESET POSE
   Reset the pose to fix any inconsistencies between the avatar's movements and your actual body movements.
10. MIRROR
    Flip the avatar orientation.
11. BACKGROUND
    Change the background of the screen.
12. AVATAR
    Select an avatar to use.

Related Topic

- Charging
- Connecting the sensors
- Recording in Video mode
- Recording in Motion mode
- Setting up an external device
- Sending motion data to an external device
- Recalibration
- Resetting the pose
- Changing the background
- Changing avatars

Recording in Video mode

In Video mode, you can move an avatar to record the movements in MP4 format.

1. **On the motion capture screen, tap [Video].**
2. **Tap the record button (red) to start motion capture.**

   Recording starts after the countdown.
3. **Tap the record button (red) to stop the motion capture.**

   The video data is saved to your smartphone.

Hint

- Recorded data can be played with a video player application, etc. on your smartphone. You can also play the data from [LIBRARY] on the motion capture screen.
- You can select your preferred avatar from [AVATAR] on the motion capture screen.

Note

- When using a custom avatar, depending on the avatar, this can lower the performance of the motion capture. When the [Low performance. The avatar quality may be too high.] message appears, it is recommended to lower the avatar data quality.

Record button on the screen

The record button on the screen changes as follows according to the shooting mode.

- (Start recording button)
- (Stop recording button)

Related Topic

- Overview of the motion capture screen
- Changing avatars
- Importing a custom avatar
- Changing the background
- Resetting the pose
- Recalibration

Changing avatars

You can change the avatar you wish to use on the motion capture screen.

1. **On the motion capture screen, tap [AVATAR].**

   The [Select avatar] screen appears.
   When you tap [AVATAR] for the first time on Android smartphones, the Documents folder is displayed. Tap [USE THIS FOLDER]. Custom avatars are saved to the Documents folder.

2. **Select an avatar.**

   You can select a preinstalled avatar or custom avatar in the VRM file format.

Related Topic

- Overview of the motion capture screen
- Importing a custom avatar
- Recording in Video mode

Importing a custom avatar

You can import a custom avatar (VRM file) from an external device to your smartphone.

Importing from Windows to an Android smartphone

1. Connect an external device (Windows) and a smartphone with a USB cable.
2. On File Explorer in Windows, copy a VRM file to the Documents folder on the smartphone.

Note

- If you selected a folder other than “Documents” after you tapped [AVATAR] on the motion capture screen for the first time, copy the VRM file to the folder you selected at that time.

Importing from macOS to an Android smartphone

1. Connect an external device (macOS) and a smartphone with a USB cable.
2. On Android File Transfer, copy a VRM file to the Documents folder on the smartphone.

Note

- Android File Transfer must be installed on the external device (macOS) in advance.
- If you selected a folder other than “Documents” after you tapped [AVATAR] on the motion capture screen for the first time, copy the VRM file to the folder you selected at that time.

Importing from macOS to an iPhone

1. Connect an external device (macOS) and a smartphone with a USB cable.
2. On Finder, select “iPhone”.
3. Select [Files] on Finder.
4. Copy a VRM file into the mocopi folder.

Importing from Windows to an iPhone

1. Connect an external device (Windows) and a smartphone with a USB cable.
2. On the iTunes app, select “iPhone” and select [File Sharing].
3. Select the mocopi app.
4. Drag and drop a VRM file to copy.

Note

- The iTunes app must be installed on the external device (Windows) in advance.

Related Topic

- Changing avatars

Changing the background

You can change the background of the motion capture screen.

1. **On the motion capture screen, tap [BACKGROUND].**

   The [EDIT BACKGROUND] screen appears.

2. **Select the background.**

   The screen background changes.

Related Topic

- Overview of the motion capture screen

Recording in Motion mode

In motion mode, you can record motion data in the BVH file format.

1. **On the motion capture screen, tap [Motion].**
2. **Tap [SAVE/SEND] and then select [SAVE].**

   The motion mode icon appears in the record button (red).
3. **Tap the record button (red) to start motion capture.**

   Recording starts after the countdown.
4. **Tap the record button (red) to stop motion capture.**

   The data (BVH file) is saved to the local storage on your smartphone.

Hint

- The data (BVH file) is saved to the following location on your smartphone.
  iPhone: In “MotionData” in the “mocopi” folder
  Android: In the folder specified by the user when data is saved for the first time.
- You can also play back the recorded data (BVH file) by accessing [LIBRARY] on the motion capture screen.
- For the procedure to sending the data recorded in motion mode to an external device, see “Sending motion data to an external device”.

Record button on the screen

The record button on the screen changes as follows according to the shooting mode.

- (Start recording button)
- (Stop recording button)

Related Topic

- Overview of the motion capture screen
- Setting up an external device
- Sending motion data to an external device

Setting up an external device

Set the IP address, outbound port number and transfer format for the external device to receive data.

1. **Tap the menu icon on the motion capture screen.**

   The menu appears.

2. **Tap [Settings].**

   The [Settings] screen appears.

3. **Tap [PC connection settings].**

   The [PC connection settings] screen appears.

4. **Set the [IP address] and [Outbound port settings], and select the [Transfer format] for the external device to receive data.**

5. **Tap [OK].**

   Allows data to be sent from the mocopi app to the external device.

Hint

- To send motion data to VRChat, select [VRChat (OSC)]. The default port number for VRChat is 9000.

Note

- The motion capture data transmission function is designed to be used on a local network, and therefore, the data is not encrypted. If the data is transmitted via the internet, the communications data may be intercepted and leaked.

Related Topic

- Overview of the motion capture screen
- Sending motion data to an external device
- Recording in Motion mode

Sending motion data to an external device

Send motion data to an external device with the mocopi app.

1. **Connect your smartphone to an external device.**
2. **On the motion capture screen, tap [Motion].**
3. **Tap [SAVE/SEND] to select [SEND].**

   The icon used to send data to an external device appears in the record button (green).
4. **Tap the record button (green) to start motion capture.**

   Motion data transmission starts after the countdown.
5. **Tap the record button (green) to stop the motion capture.**

   Motion data transmission stops.

Note

- If data cannot be communicated to an external device, check for the following.
  - The IP address, outbound port settings and transfer format set on the [PC connection settings] screen are correct.
  - Data reception at the specified port number (UDP) is not being blocked by a firewall, etc. on the external device.

Record button on the screen

The record button on the screen changes as follows according to the shooting mode.

- (Start recording button)
- (Stop recording button)

Related Topic

- Overview of the motion capture screen
- Setting up an external device
- Recording in Motion mode

Resetting the pose

When the avatar’s movements do not follow your actual movements while you are recording motion capture, try resetting the pose to remove any inconsistencies between your movements and motion capture.

1. **On the motion capture screen, tap [RESET POSE].**

   Follow the on-screen instructions to reset the pose.

Hint

- If the inconsistencies between your movements and the avatar’s movements persist after you reset the pose, try recalibrating.

Related Topic

- Overview of the motion capture screen
- Recalibration

Recalibration

Recalibrate after you reattach a sensor during motion capture or when changing the user.

1. **On the motion capture screen, tap [RECALIBRATE].**

   [Motion capture will end.] appears.

2. **Tap [CONTINUE].**

3. **Tap [START CALIBRATION] and stand up straight.**

   Hint

   - When standing up straight, keep your feet shoulder-width apart and your arms relaxed and down at your sides.

4. **After the sound and vibration signals from your smartphone, take one step forward and then stand up straight again.**

   [Successfully calibrated] appears on the screen and then the motion capture screen appears.

Hint

- If you notice an inconsistency between the avatar’s movements and your own while performing motion capture over an extended period of time, perform “RESET POSE”.

Note

- Do not hold your smartphone while you are standing up straight. Stand still without moving your body.
- Do not look at your smartphone screen during calibration. Doing so shifts your head sensor and prevents the sensors from being calibrated accurately. After you start the calibration, take one step forward with the sound and vibration and then stand up straight again.
- If the calibration fails, you may have incorrectly taken one step forward after you stood up straight the first time. Tap [WATCH AGAIN] in the center of the [Calibration] screen to check the movement.
  You can also watch a video of the calibration movements by accessing ⋮ (menu icon) > [Tutorial video].
- If calibration fails even after you perform the steps correctly, reconnect the sensors. Take the sensors off your body, remove them from their sockets, place them on a flat surface and then reconnect them.
  Tap ⋮ (menu icon) > [Return to start menu].

Related Topic

- Overview of the motion capture screen
- Resetting the pose

Precautions

Notes on motion capture

- The AI-based estimation technology is used for the motion capture function of the device. Accuracy of estimation may vary by the usage condition or user's physical constitution.
- Perform the motion capture in a wide place, taking care not to hit people or objects. Be careful not to hurt your body. Stop using the device if you feel something unusual. Otherwise, it may result in bodily injury, accident, or malfunction.
- The body height that the device can recognize body movement correctly is between 140 cm (4 feet and 8 inches) and 190 cm (6 feet and 2 inches).
- The motion capture function may not work correctly depending on the communication environment for connecting the device to a smartphone or other surrounding conditions.

Note on attaching the devices

- Be careful not to pinch your finger with the clip. It may cause bodily injury.

Other notes

- Do not allow medicament such as insect repellent spray, sunscreen, or body cream to adhere to the device. This may deform or discolor the device. When such medicament is adhered, wipe it off.
- Do not splash water on the charging case. The charging case is not waterproof. Avoid using in a humid place such as in a bathroom, or exposing to rain drops. Note that malfunctions caused by water is out of warranty and repair may be refused. If the repair is available, it is acceptable for a fee because it is out of the warranty.
- Do not leave the sensors, clip, sockets on the straps or charging case in places where they are exposed to high temperatures and keep them away from objects that reach high temperatures.
- Do not charge or use the devices in places with the following properties.
  - Extremely high or low temperature, or high humidity
  - Damp, dusty, or with excessive vibration
- Charging may stop to protect the battery or take more time in an area with high or low temperature. Avoid areas with high or low temperatures to restore the normal charging.

Cleaning the device

- If the surface is dirty, wipe it clean with a soft dry cloth. If you wipe it using detergent, etc., this can cause discoloration on the surface of the device units. Do not use solvents such as thinner, benzene, or alcohol, as they may damage the finish on the surface of the device units or cause other damages. For details, see the “Maintenance” section.

Do not use the sensors, clip, and the sockets on straps and charging case near medical devices

- Radio waves can affect cardiac pacemakers and medical devices. Do not use the device units and charging case in crowded places or inside a medical institution.
- The sensors, clip, and the sockets on straps and charging case have magnets which may interfere with pacemakers, programmable shunt valves for hydrocephalus treatment, or other medical devices. Do not place the sensors close to persons who use such medical devices. Consult your doctor before using the sensors if you use any such medical device.

Keep the sensors, clip, and the sockets on straps and charging case away from magnetic cards

- The sensors, clip, and the sockets on straps and charging case contain magnets. If you bring magnetic cards close to them, the magnetism may change, and the cards may become unavailable.

Related Topic

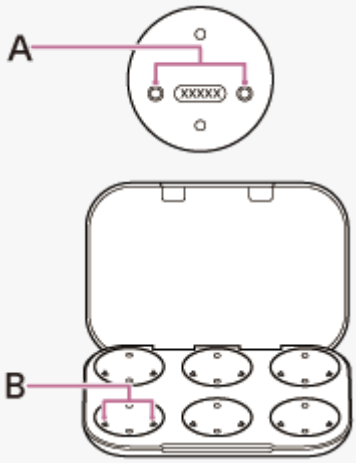
- Maintenance

When you have finished using the device units

When you have finished using the sensors, be sure to set the sensors in the charging case.
Close the lid of the charging case.

Note

- If perspiration or water is left on the charging ports of the sensors, it may impair the ability to charge the sensors. Immediately wipe off any perspiration or water on the charging ports after use. If the charging ports of the sensors or the charging pins of the charging case get dirty, wipe them clean with a soft dry cloth.



A:Sensor charging ports
B:Charging case charging pins

- When perspiration or dirt is adhered to the straps, wipe it with a soft, dry cloth.

When the sensors get wet

When the sensors get wet, wipe any moisture with a soft, dry cloth.

Maintenance

Perform regular maintenance by following the procedures below.

1 Clean the surfaces of the device units.

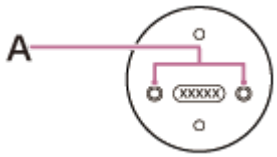
If the surfaces of the sensors, clip, sockets on the straps or charging case become dirty, wipe them clean with a soft dry cloth. If you wipe them down using detergent, etc., this can cause discoloration on the surfaces of the device units. Do not use solvents such as thinner, benzene, or alcohol, as they may damage the finish on the surfaces of the device units.
When the sensors get wet, wipe any moisture with a soft, dry cloth.
Do not allow the device units to remain with water droplets attached in a cold environment as the water may freeze.

2 Clean the charging ports and charging pins.

If foreign matter or moisture, such as perspiration, etc., is left on the charging ports of the sensors or the charging pins of the charging case, corrosion may occur in the charging ports or charging pins and prevent charging.
When you have finished using the device units, make sure to gently clean the charging ports and charging pins with a soft dry cloth or cotton swab.
When the sensors cannot be charged, it may help to try thoroughly cleaning the charging ports and charging pins.

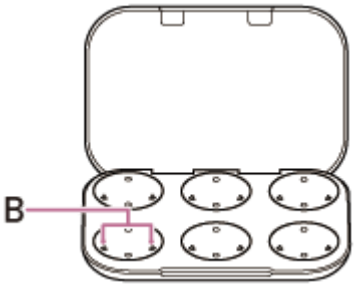
Charging ports and charging pins that need maintenance

- Sensor



A:Sensor charging ports

- Charging case



B:Charging case charging pins

3 Dry the device units.

After cleaning is complete, leave the device units to dry thoroughly in room temperature.

4 Set the sensors in the charging case.

> After maintenance as well as after cleaning and drying the sensors, set the sensors in the charging case and put them away.

Note

- Do not wash the straps in a washing machine. Doing so may damage the straps.

If the sensors or charging case gets wet

About the water and dust resistance of the sensors

- The sensors have water resistance specifications with an approximate IPX5 or IPX8 rating and dust resistance specifications with an approximate IP6X rating. The sensors cannot be used in water.
  Unless the sensors are used correctly, water may get into the sensors and cause fire, electric shock, or malfunctions. Note the following cautions carefully and use the sensors correctly.
  IPX5: Specifies that the sensor functions are protected against low pressure streams of water from any direction.
  IPX8: Specifies that the sensor functions are protected against prolonged submersion in water under conditions agreed upon by the parties involved.
  IP6X: Specifies that the sensors are protected against the types of dust used in the dust resistance tests (less than 75 µm in diameter) and that this dust cannot enter the sensors.

Liquids that the water resistant performance specifications of the sensors apply to

Applicable:	Fresh water, tap water
Not applicable:	Liquids other than those above (examples: soapy water, detergent water, water with bath agents, shampoo, hot spring water, hot water, pool water, seawater, etc.)

The water resistant performance of the sensors is based on measurements performed by Sony under the conditions described above. Note that malfunctions resulting from water immersion caused by customer misuse are not covered by the warranty.

To protect the sensors and charging case from being damaged

Carefully note the precautions below to ensure proper use of the sensors and charging case.

- The charging case is not waterproof or dustproof.
- Do not allow the sensors or charging case to remain wet in a cold environment, as the water may freeze. To prevent malfunction, make sure to wipe off any water after use.
- Do not place the sensors in water or use them in a humid place such as a bathroom.
- Do not drop the sensors or expose them to mechanical shock. Doing so may deform or damage the sensors, resulting in deterioration of water and dust resistance performance.
- Use a soft dry cloth to wipe off any water that gets on the sensors.
- Charging the sensors or charging case while they are wet with perspiration, etc. can corrode the charging ports and charging pins. Before charging, wipe off any moisture with a soft dry cloth and leave to dry in room temperature. Repairs in case of a malfunction without care are not covered by the free warranty.
- When the charging ports of the sensors or the charging pins of the charging case get dirty, wipe them clean with a soft dry cloth.
- Do not wash pants or shirts with the device units left in the pockets.
- If the device units are cracked or deformed, refrain from using them near water, or contact your nearest Sony dealer.

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Mobile Motion Capture
QM-SS1

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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.