



LVS

Live Video Sync

Operations Manual

VERSION 1.0 (1/12/2019)

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REQUIREMENTS

TYPE-R AND LEOMO MOTION SENSORS

WI-FI CONNECTION

SMARTPHONE

- **IOS: IOS 10.0 OR LATER**
- **IPHONE 5 OR LATER**
- **ANDROID: ANDROID 5.0 OR LATER**

IPAD

- **IPAD AIR OR LATER**
- **IPAD MINI 2 OR LATER (* NOT INCLUDING IPAD4)**
- **IPAD PRO**
- **IOS : IOS 10.0 OR LATER**

Setting up LVS involves the following steps:

1. DOWNLOAD THE LVS APP FOR IPAD FROM THE APPSTORE

2. ENSURE THE TYPE-R AND LVS ARE USING THE SAME WIFI NETWORK

1. On the TYPE-R, Go to Quick Settings > Menu > WiFi, tap to enable WiFi
2. **IMPORTANT:** Check that the WiFi network name on the TYPE-R is the same as the WiFi network that the iPad is connected to.
 - On the TYPE-R, go to Quick Settings > Menu > WiFi
 - On the iPad, go to Settings > WiFi

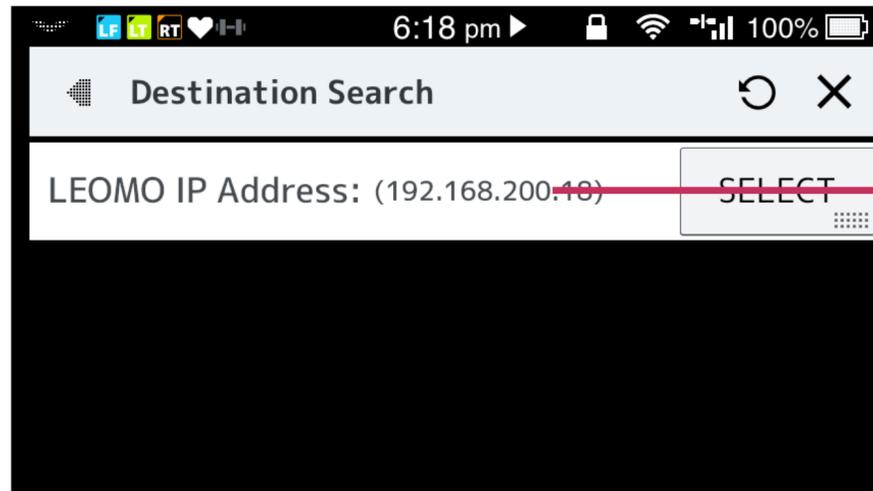
NOTE: We recommend using a dedicated router for the WiFi network that will be used for LVS

3. CONNECT THE TYPE-R TO LVS IPAD APP

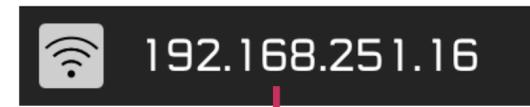
1. On the TYPE-R, Go to Menu > Live Video Sync, tap “Destination Search”.

2. A list of IP addresses will appear, select the same IP address in the list from the LVS App and tap “Select”.

TYPE-R



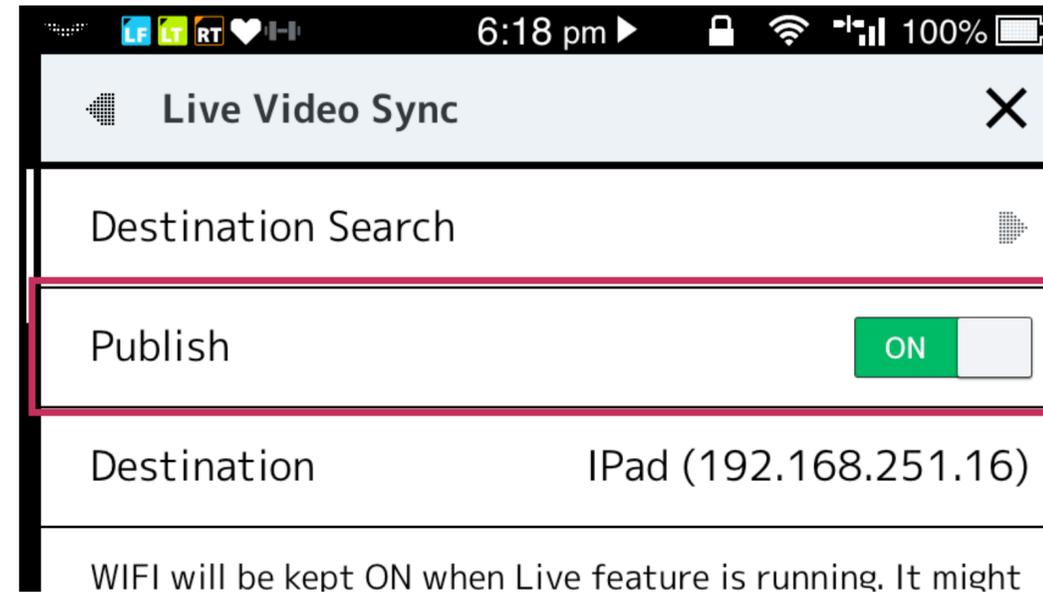
LVS App



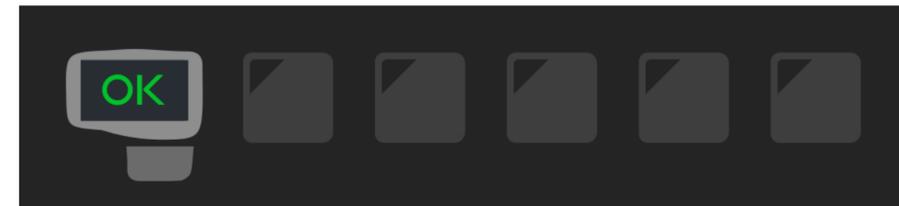
Same IP Address

3. Go back to Menu > Live Video Sync, in the “Destination” row, ensure the IP address is the same as the IP address in the LVS app.

4. In the “Publish” row, tap to enable.



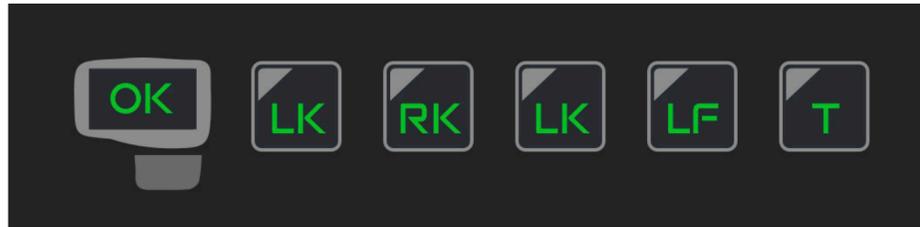
5. In the LVS app, the TYPE-R icon, will display “OK”.



6. You’re done, the TYPE-R is successfully connected to LVS.

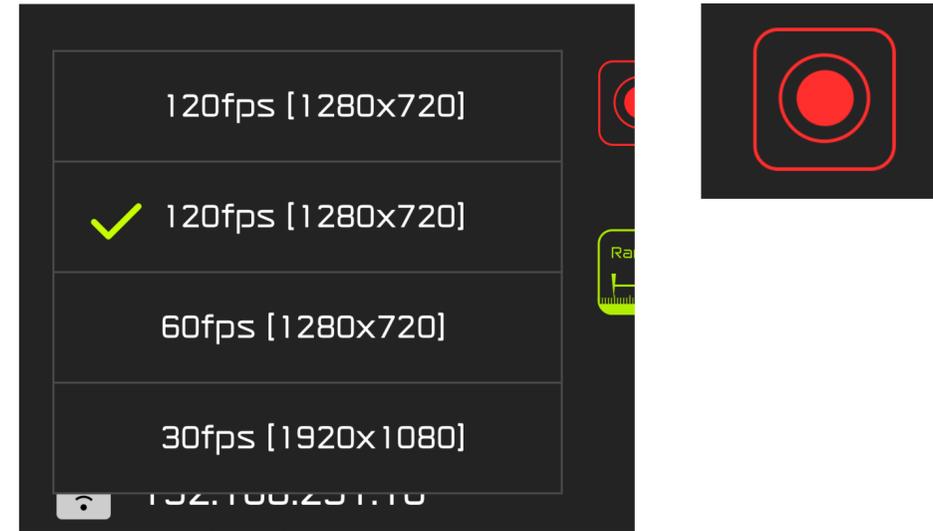
PREPARATION

1. Put on the LEOMO Motion Sensors.
2. On the TYPE-R, start the tracker.
3. Once all sensors are connected, it should look like this in LVS:



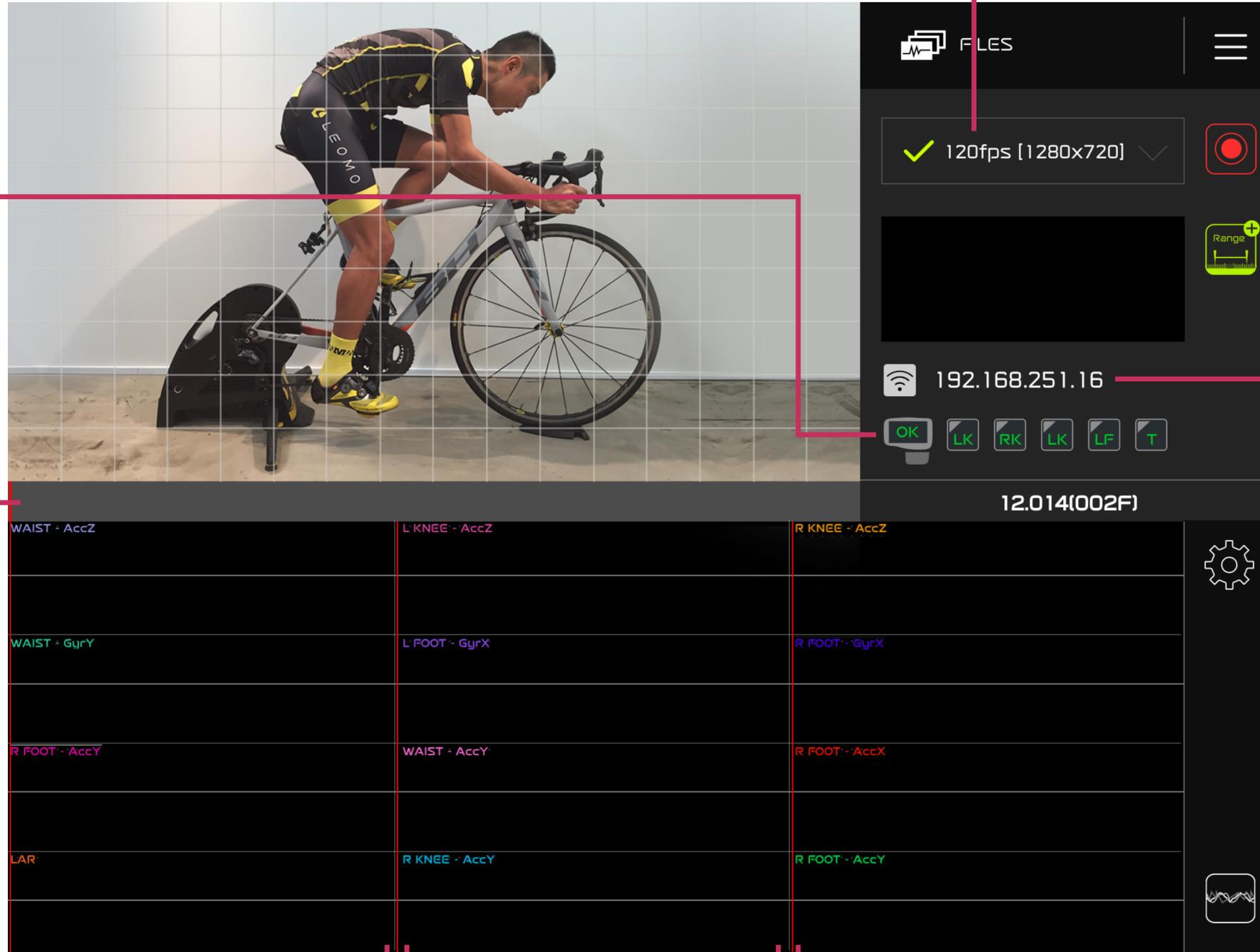
RECORDING

4. In LVS, Select a frame rate, and tap the "Record" button.



5. **IMPORTANT: Before riding, tap a motion sensor (i.e. waist sensor) three times consecutively.** This is needed to sync the video and graph data later.

6. Start riding.



TYPE-R & MOTION SENSORS CONNECTION STATUS

Notification area for TYPE-R & LEOMO Motion Sensor connection status.

TIMELINE

Video timeline

GRAPH AREA

Displays a variety of MPIs



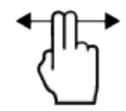
Single Tap

Open MPI selection modal



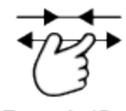
Double Tap

Enlarge/shrink graph
Double tap the graph and hold up/down



Scroll

Move graph
Scroll left or right with two fingers



Zoom In/Out

Zoom in/out
Pinch two fingers in/out

FRAMERATE

Select a framerate to record in

MENU

RECORD BUTTON

Tap to begin video recording

ADD RANGE

Add range to timeline

LVS IP ADDRESS

Make sure it is the same as displayed on Type-R

GRAPH SETTINGS

Show/hide and select specific graphs

GRAPH TOGGLE

Switch from displaying graphs combined with other graphs or separately

CURRENT-TIME INDICATOR (RED LINE)

Select and hold to drag the current-time indicator

FILES

Go to recorded videos

ADD MOMENT/RANGE

Add a point or range in the timeline.

TIMELINE

Video timeline

GRAPH AREA

Displays a variety of MPIs



Single Tap

Open MPI selection modal



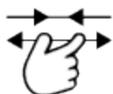
Double Tap

Enlarge/shrink graph
Double tap the graph and drag up/down



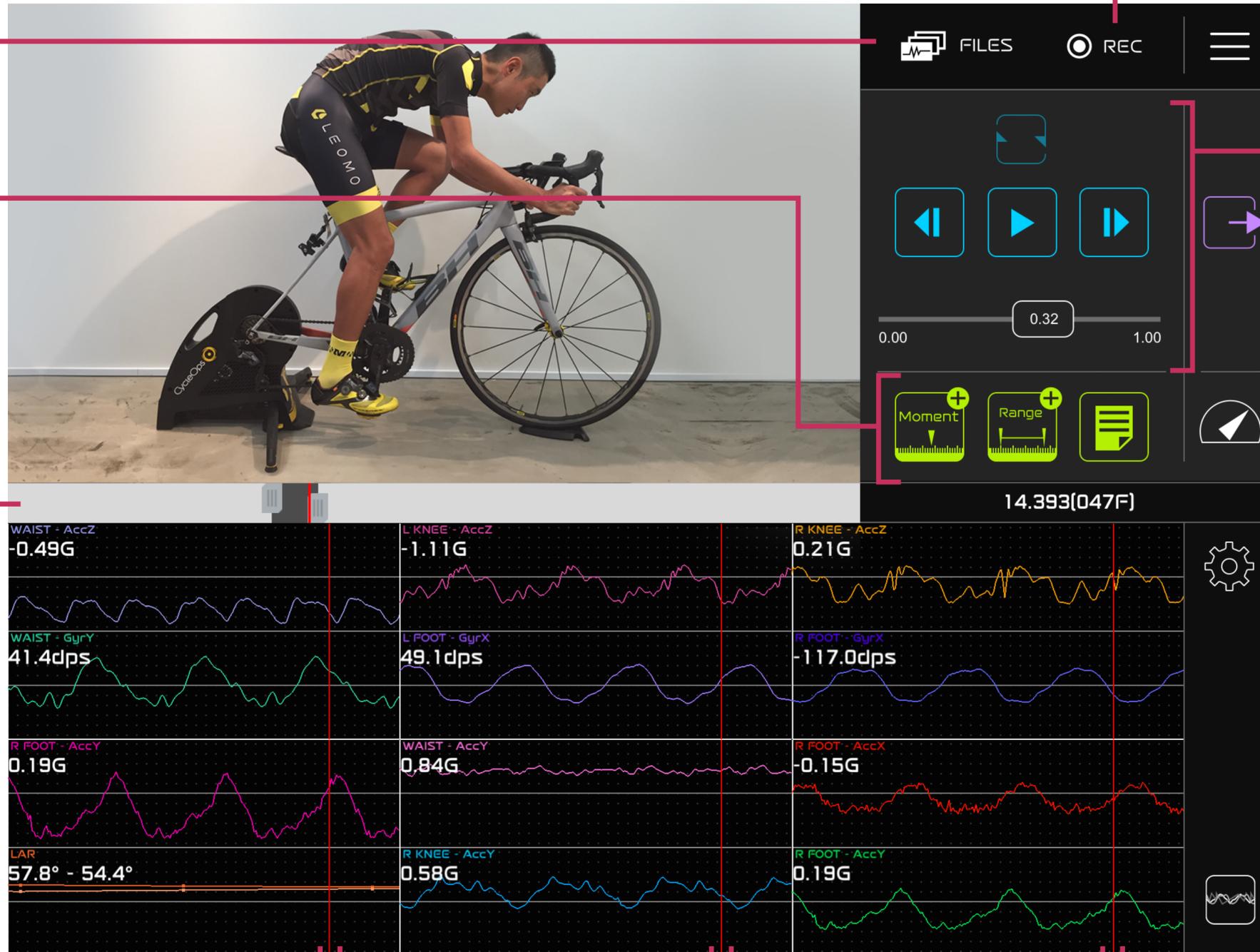
Scroll

Move graph
Scroll left or right with two fingers



Zoom In/Out

Zoom in/out
Pinch two fingers in/out



RECORD MODE

MENU

VIDEO CONTROLS

Play, step backward/forward, Repeat, playback speed.

EXPORT PAGE

Go to export page

SYNC BUTTON

Tap to enable manual syncing between video and graph data. Tap again to disable.

GRAPH SETTINGS

Show/hide and select specific graphs

GRAPH TOGGLE

Switch from displaying graphs combined with other graphs or separately

CURRENT-TIME INDICATOR (RED LINE)

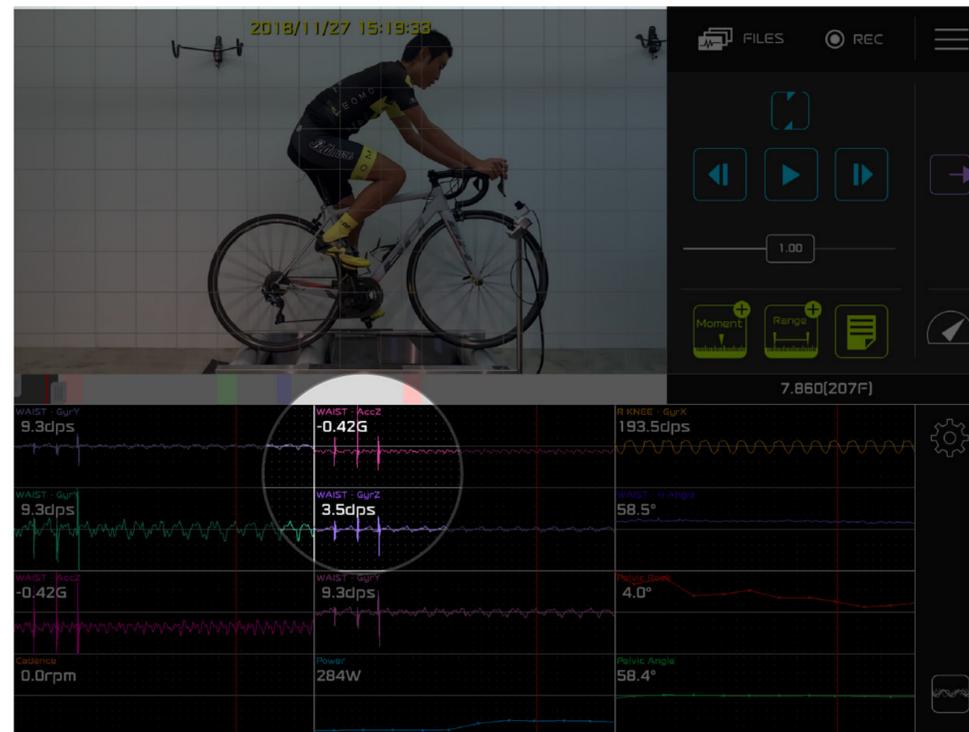
Tap and hold to drag the current-time indicator

HOW TO SYNCHRONIZE VIDEO AND GRAPH DATA

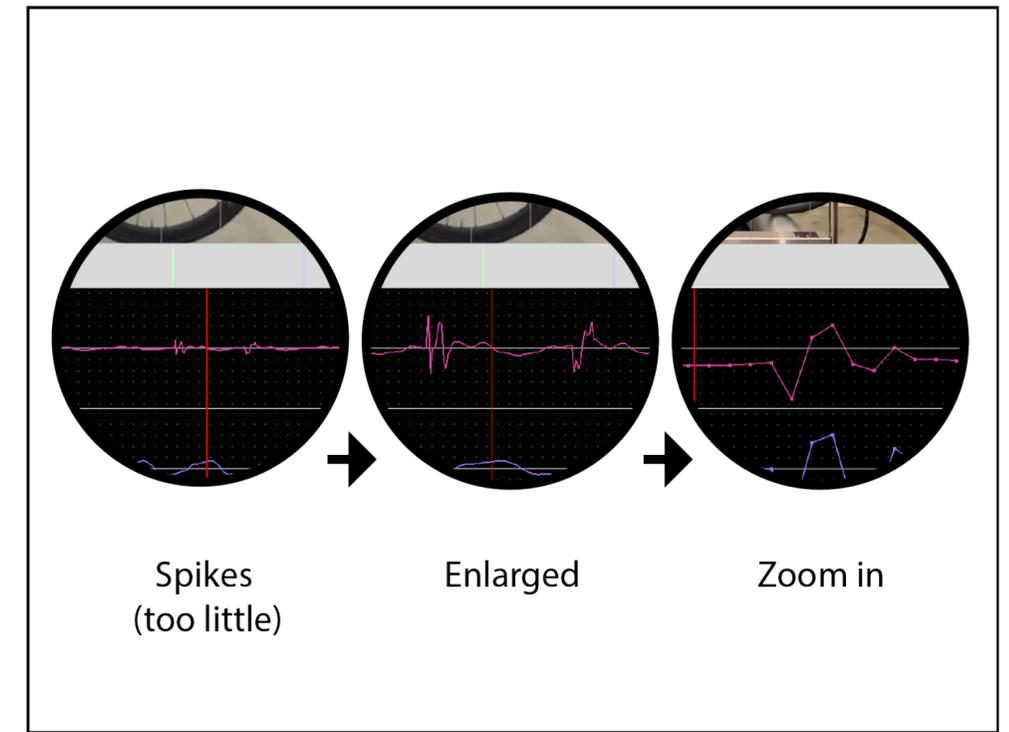
It is necessary to synchronize the iPad/tablet video and the recorded data before proceeding to the analysis, because video and data are not synchronized at the time of recording.



1. Find the sensor that was tapped in the video (e.g. Waist sensor).



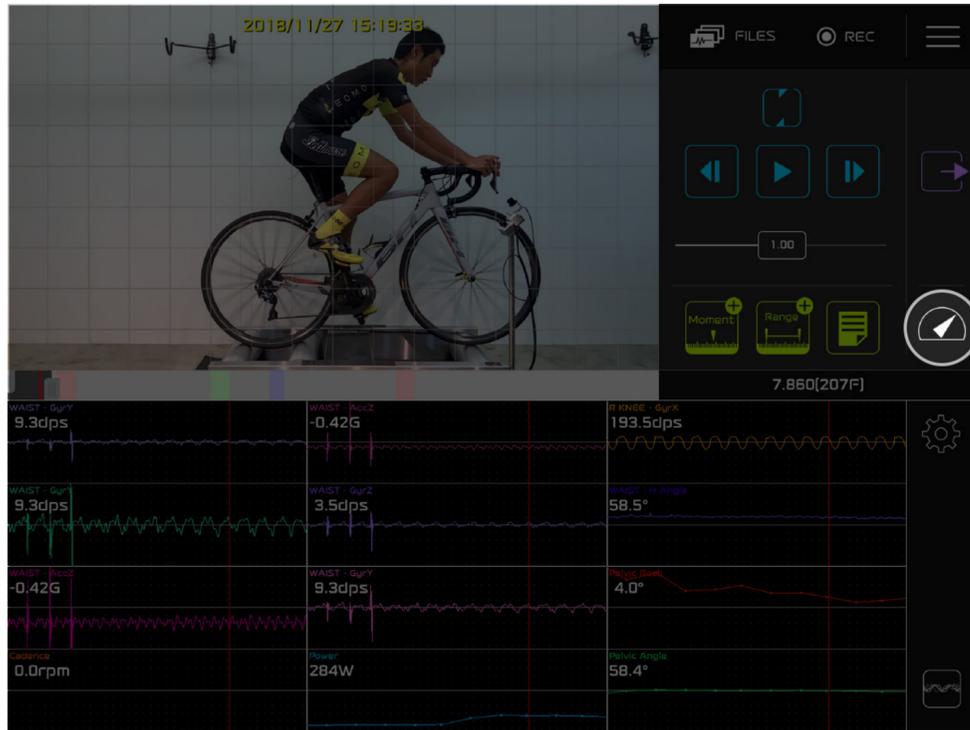
2. Identify the graph(s) for that sensor i.e. Graph Waist, it is recommended to look at AccZ (when the user taps the surface of the sensor).



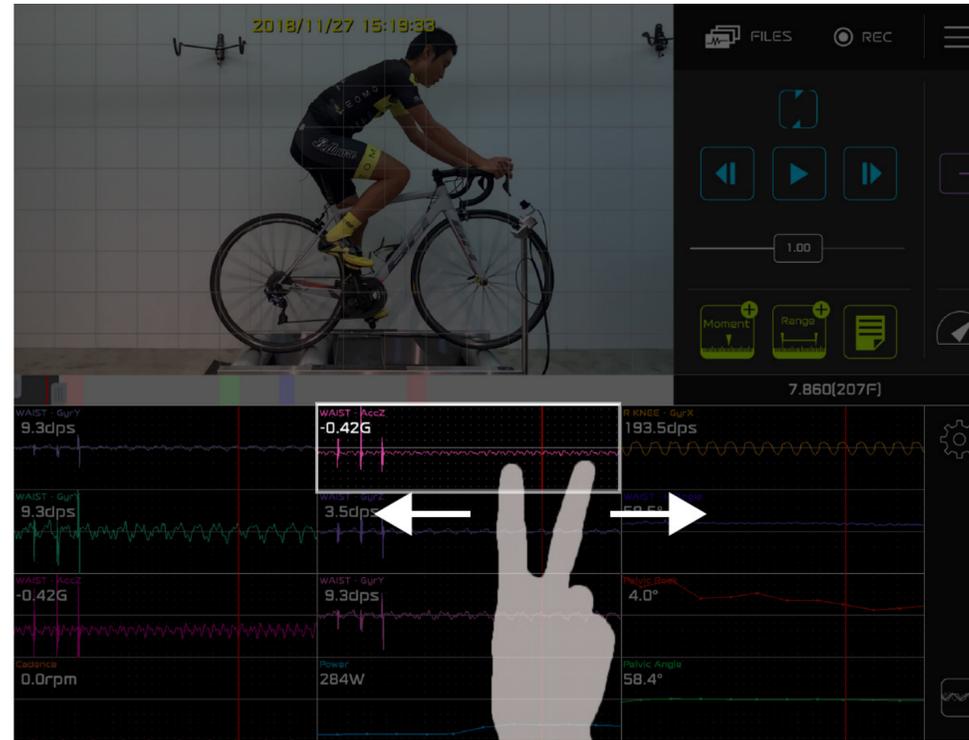
3. In that graph, zoom in and search for the taps that were recorded by the sensor, it will look something like this (i.e. spikes in the graph).

If the spike is too small to recognize, enlarge the spike by double tapping and dragging up on the graph.

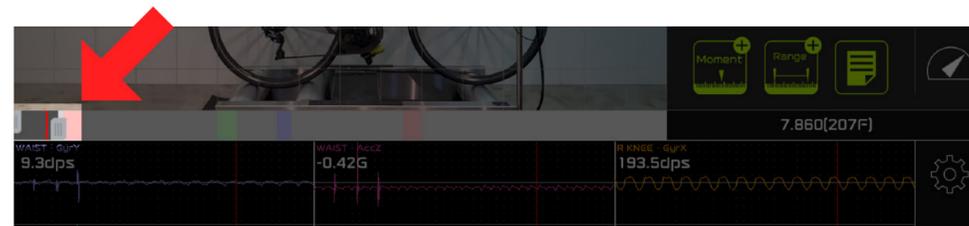
HOW TO SYNCHRONIZE VIDEO AND GRAPH DATA



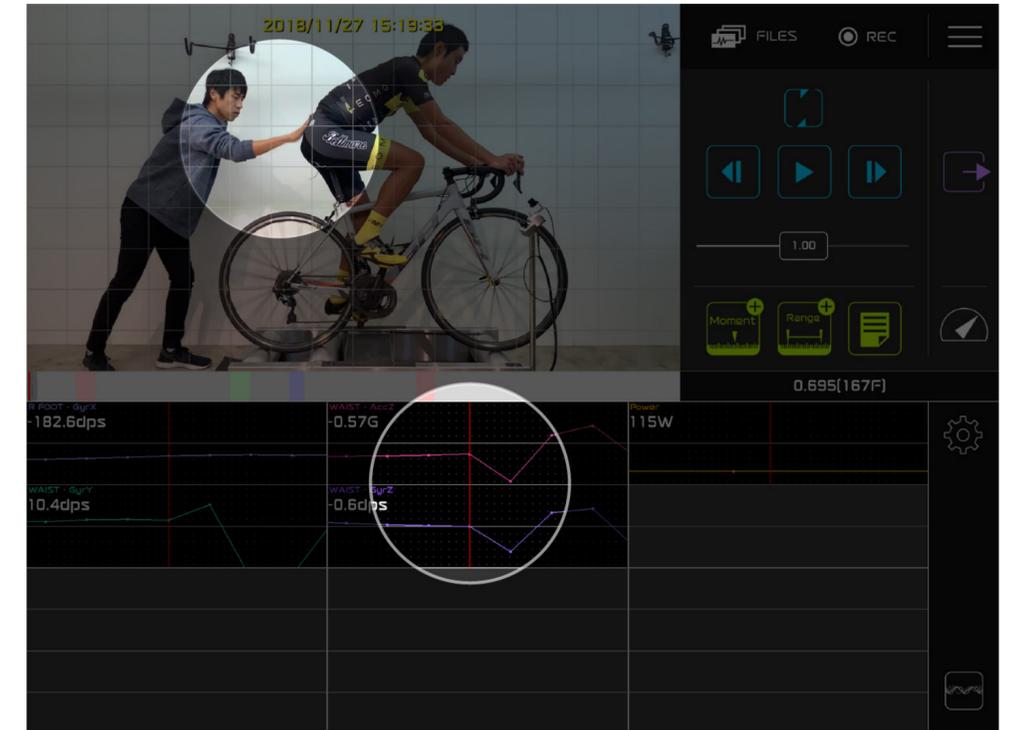
4. Tap the "Sync" button, it will start blinking which means you can align the video data to any part of the graph.



5. Using two fingers, drag the graph to the "current-time indicator" (the red line) to align the video.



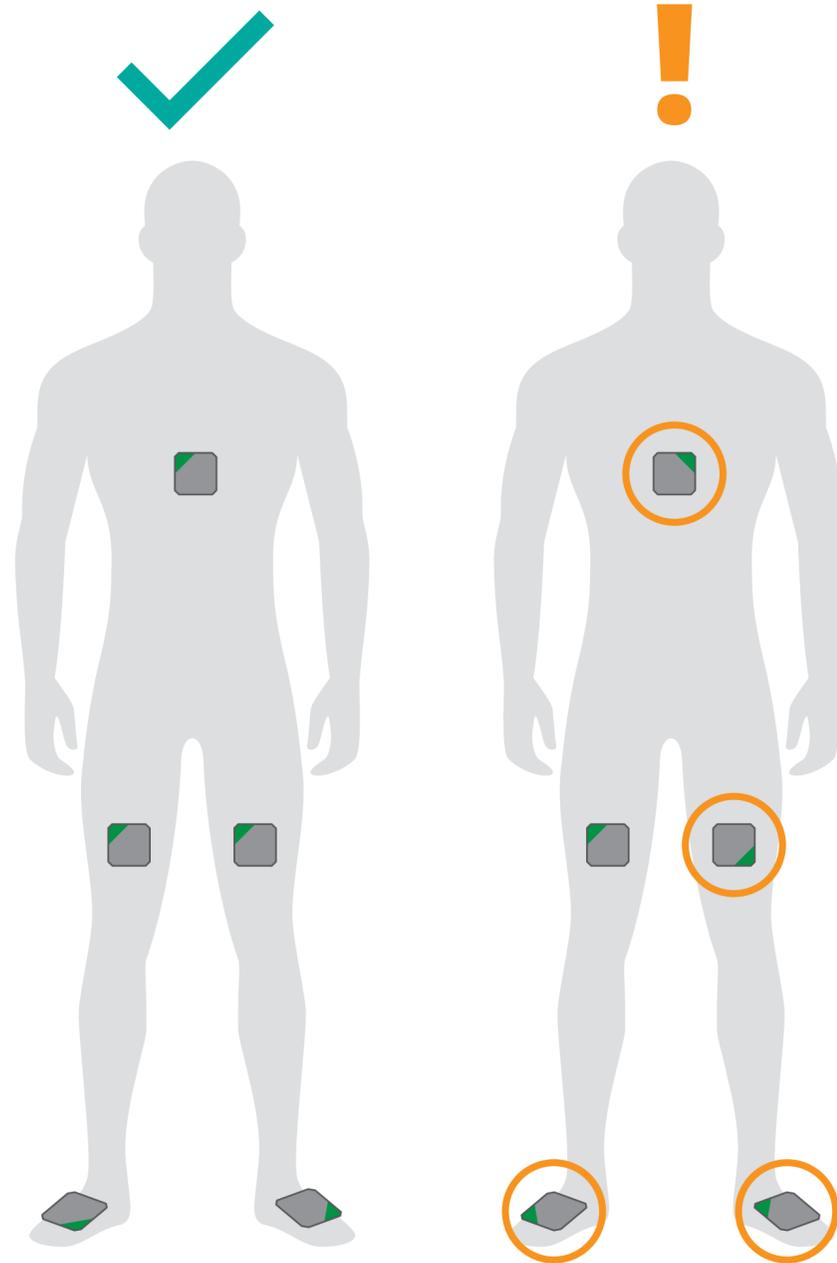
Or use the timeline range to drag the graph.



6. When the video looks like it is aligned/synced with the graph data, tap the "sync" button again to terminate this action.

The video and graph data are synchronized.

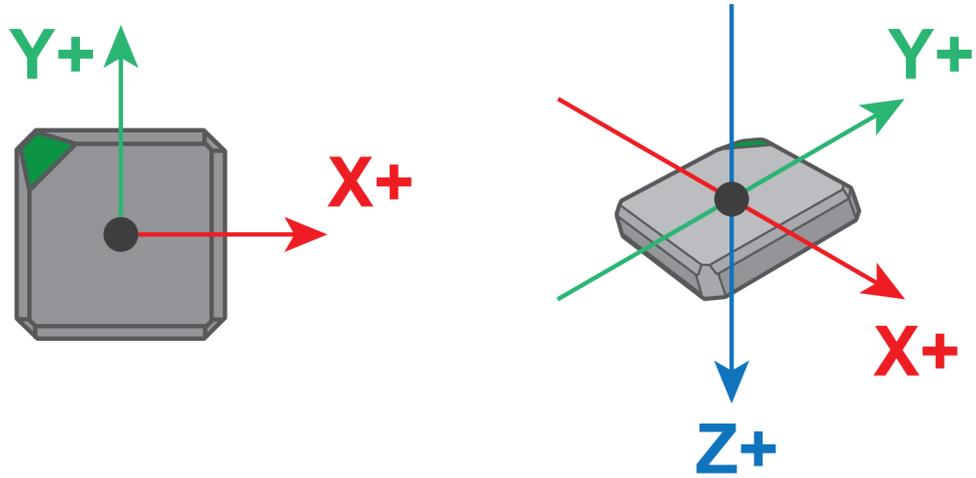
PROPER SENSOR PLACEMENT



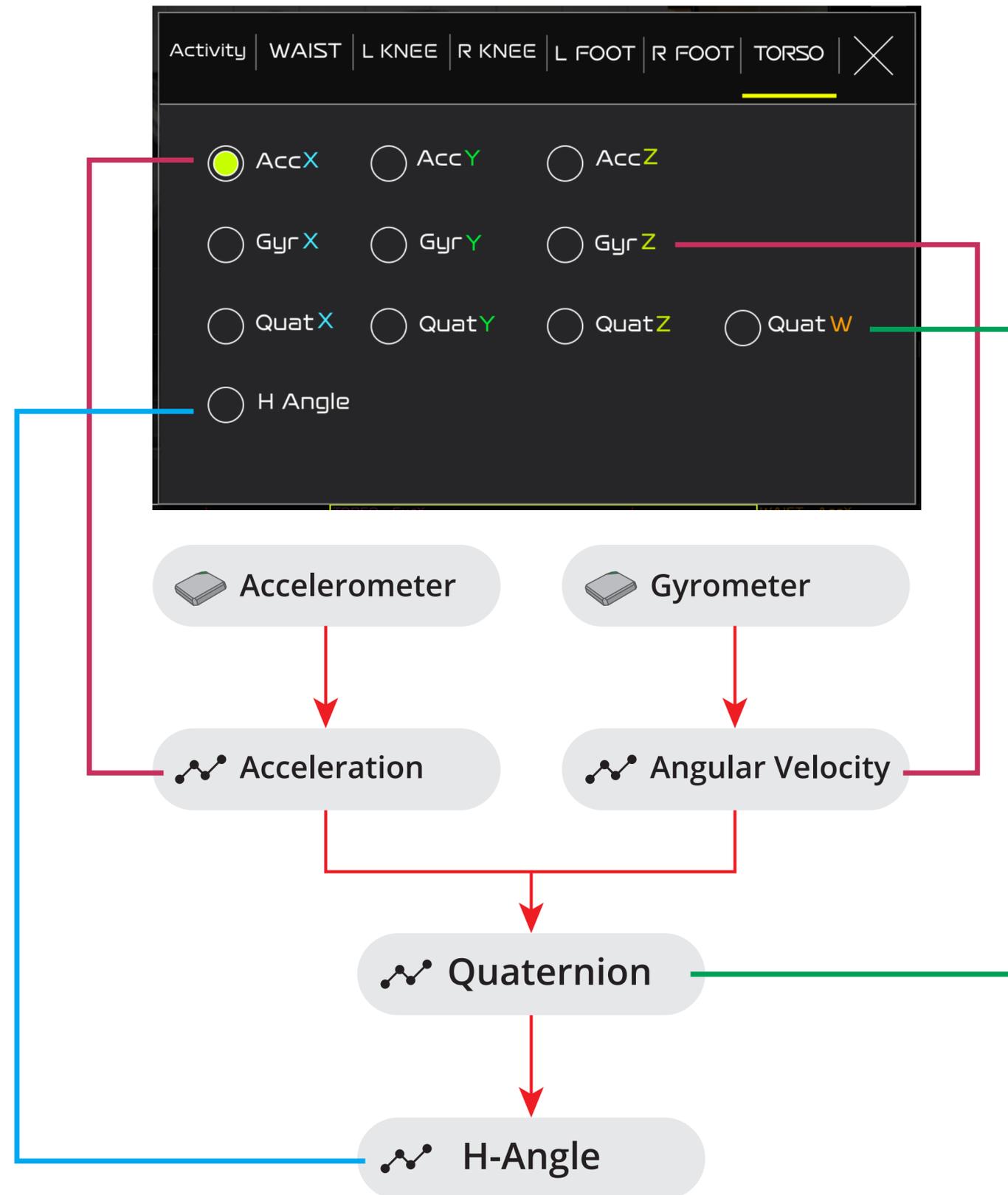
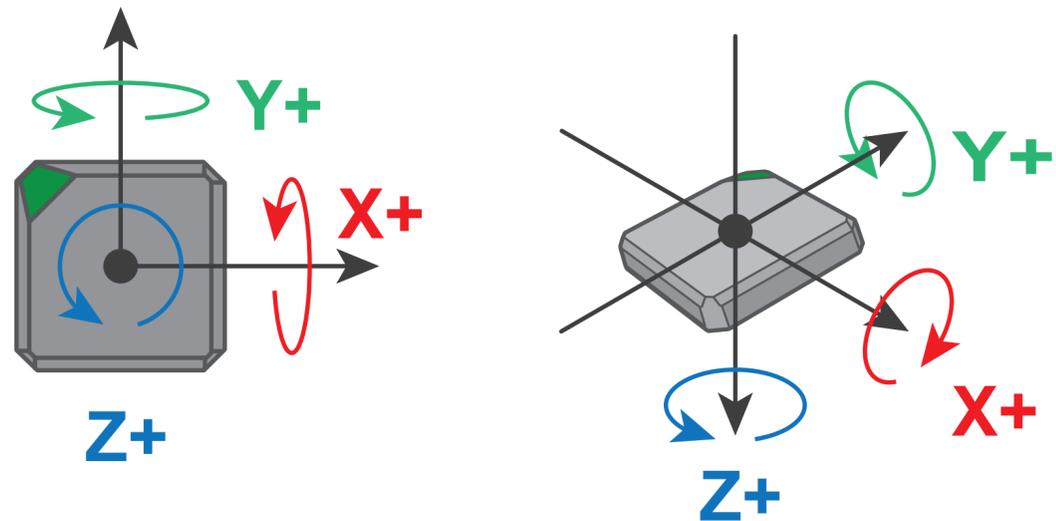
When putting on the sensors on your body, please ensure that all sensors placed according to this image.

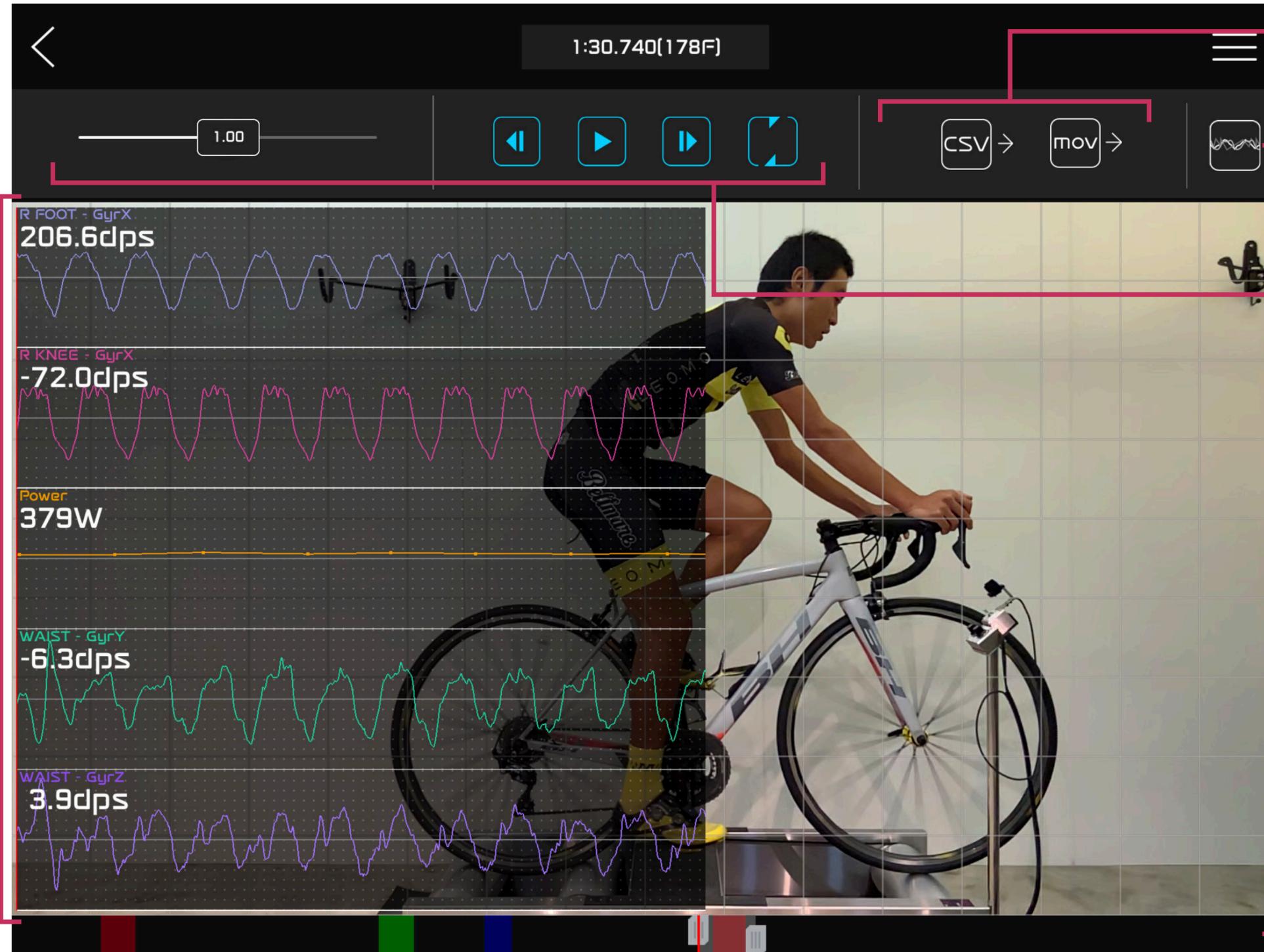
It can affect axis orientation the data that the LVS app receives.

AXES OF ACCELEROMETER



AXES OF GYROMETER





GRAPHS

Graphs can be moved and resized.

EXPORT OPTIONS

Export video in different formats

GRAPH TOGGLE

Switch from displaying graphs combined with other graphs or separately

VIDEO CONTROLS

Play, step backward/forward, Repeat, playback speed.

TIMELINE

Video timeline

MORE INFORMATION AT:

[HTTPS://LEOMO.ZENDESK.COM](https://leomo.zendesk.com)

E-MAIL SUPPORT REQUESTS TO:

[SUPPORT@LEOMO.IO](mailto:support@leomo.io)