

CALIBUR

User Manual

Calibur Pocket boxes

hwdvt ver.: 1.4.1

Mobile app ver.: 3.0

March 4., 2024¹

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¹ Seems too old? The latest version is always available here: <https://calibur.ai/manuals/>

Welcome!

Glad to have you in our community! Let's get into the future of fencing!

Package contents

1 strip bundle

- 2x Calibur pocket boxes
- Double headed charging cable

2 strips bundle

- 4x Calibur pocket boxes
- 2x Double headed charging cable

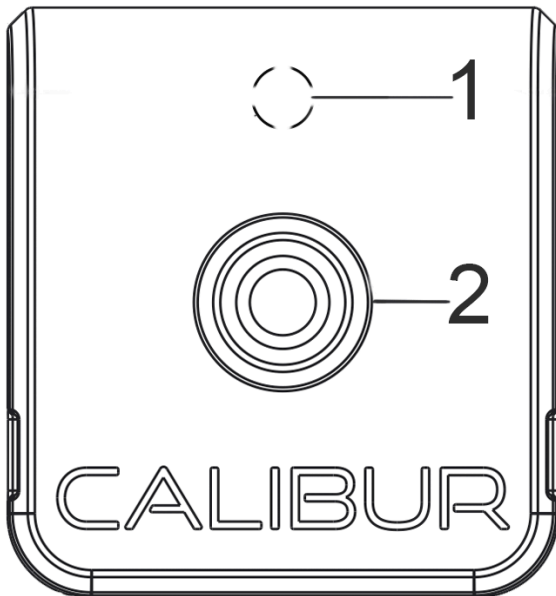
3 strips bundle

- 6x Calibur pocket boxes
- 3x Double headed charging cable

Sabre extension kit

- 4x adapters
- 2x banana-snap cords
- 2x magnetic cable heads
- 2x conductive armbands

Calibur pocket box



1. Status LED

Blue: turned on, no connection.

Green: connected to the app.

Red: charging needed.

White: charging finished.

Off: firmware update mode²

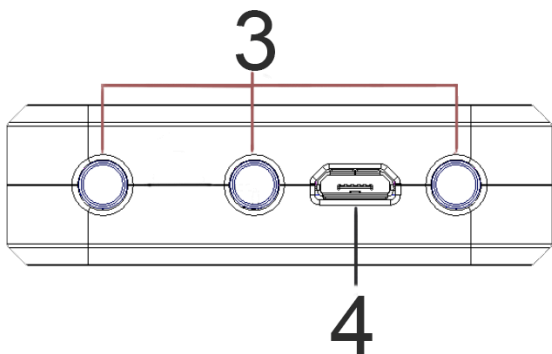
/turned off

Blinking: on and off-target hits

2. Press Button

Press once to turn on

Press twice to turn off



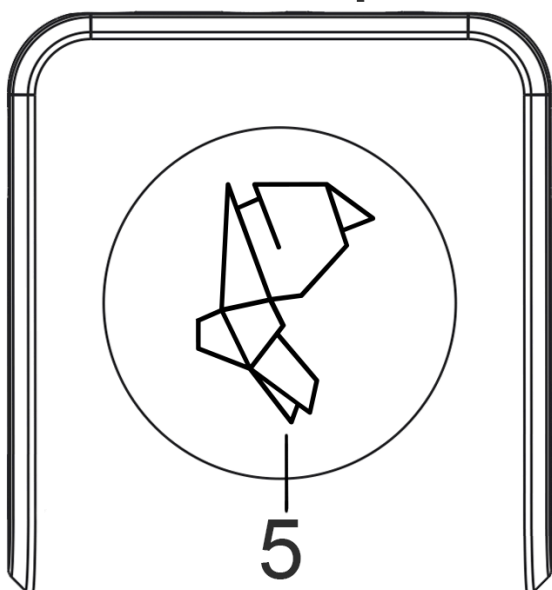
3. Body cord connector

Plug in your body cord before fencing. (Banana sockets are marked from left to right as A, B, C.)

4. Micro USB port

Plug in to charge

Plug in and out to hard reset



5. ID sticker

Look for the icon in the app when connecting

² More details in chapter: *Firmware update on the pocket box*

Calibur mobile app

Installation

Minimum system requirements:

- Android: 8.0 (Oreo)
 - Amazon Fire tablet equivalent: Fire OS 7
- iOS: 10.0

Download the app from the appropriate source:³

	Outside of the People's Republic of China	In the People's Republic of China
Android	Google Play Amazon Appstore	calibur.cn.com
iOS (Apple)	App Store	

As Google Play and Amazon Appstore are banned in the People's Republic of China, Android users in mainland China need to download the Android installation file (APK) from our website and then manually install it. Manual APK download and installation is not necessary on app updates, as the app variant created for mainland China contains a self-update mechanism.

³ Make sure to download the app named just *Calibur*, not the one of the name *Calibur B*. The latter is compatible with an early pocket box prototype only.

Updates

It's critical to keep the app updated for best results and to use the latest features. A notification appears about updates, when your phone is online.

If you use the Android variant for mainland China downloaded from calibur.cn.com, you can start a self-update process from within the app when receiving this notification.

Enable automatic updates in Google Play or App Store if you have downloaded the app from one of them. For more info on automatic app updates via these stores visit: [Google Play](#),⁴ [App Store](#)⁵.

Using Wi-Fi

It is not necessary to be online during bouting. It is recommended to go online on a regular basis for updates⁶ and to upload data for our AI model.⁷

Using a bigger screen

Although the Calibur app is a mobile application, its iOS variant is compatible with Mac laptops with MacOS 11.0 or later and Apple M1 chip or later. If you have such a laptop, you can directly download the app to it and use the laptop's built-in screen or an external monitor connected to the laptop. If you have a PC, you can "hack" an Android OS onto it with the Android-x86 emulator and run the Calibur app inside that; follow [this step-by-step tutorial](#) to do so.

A phone or laptop can also directly be connected to a bigger screen if it supports HDMI. There are several USB/Lightning-HDMI adapters for this purpose as well.⁸ Alternatively, the app can be easily

⁴ <https://support.google.com/googleplay/answer/113412?hl=en4>

⁵ <https://support.apple.com/en-us/HT202180>

⁶ More details in this chapter: *Firmware update on the pocket box*

⁷ The data is anonim and cannot be connected to your identity.

⁸ Apple has its own self-made [adapter](#) for connecting iOS devices to a bigger screen.

mirrored to a desktop machine connected to a display or even a projector.

To mirror the app from a mobile device to PCs or older MacBooks, there are tons of different tools. We recommend using the LetsView app. It requires the mobile device and the computer to join the same Wi-Fi network.

Using different languages

The application is able to work in different languages, it supports English, Chinese, French and German at the moment. (More languages are coming soon.) The language being used depends on the language setting of the mobile device. If the app does not support the language of the device, texts are displayed in English.

Recommendations

A well maintained device will make the experience better:

1. Keep the number of apps on the phone as low as possible.
2. Turn off auto-synchronization and notifications for other apps.
3. When using an older device, do a factory reset first.
4. Close all other apps during fencing.
5. Disconnect other Bluetooth devices (headset, smartwatch...)
6. Keep the device charged. Don't use battery saver mode: it might make it harder to connect to pocket boxes and might cause connection drops.

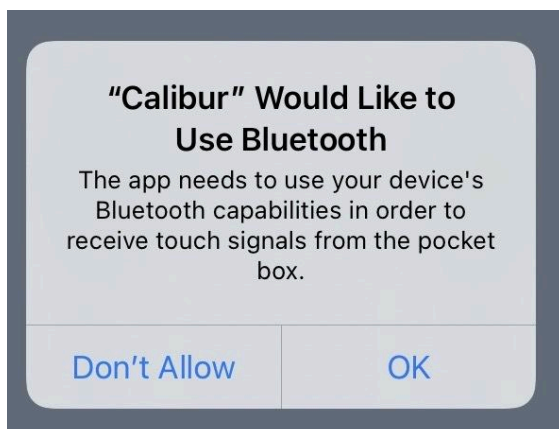
On the first use

1. **Make sure Bluetooth is turned on**
2. **Enable using Bluetooth services for the app** in the popup asking for permissions.

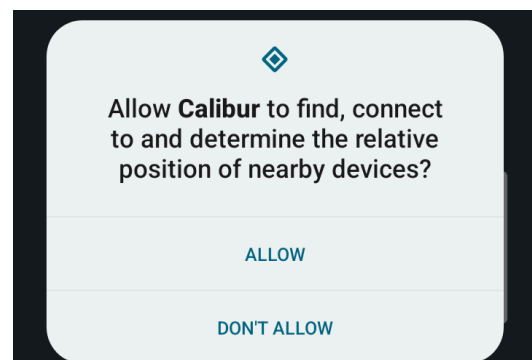
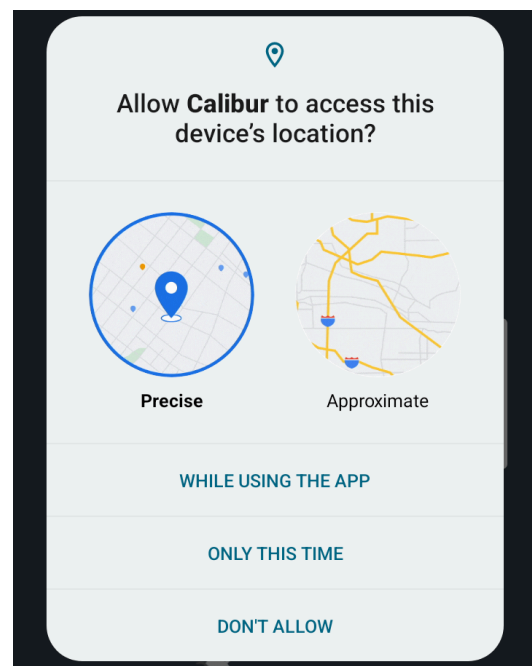
- iOS: use Bluetooth permission
- Android 11 or older: location permission
- Android 12 or later: location **and** nearby devices permissions

Press *OK/Allow*, so the app can connect to the pocket boxes.

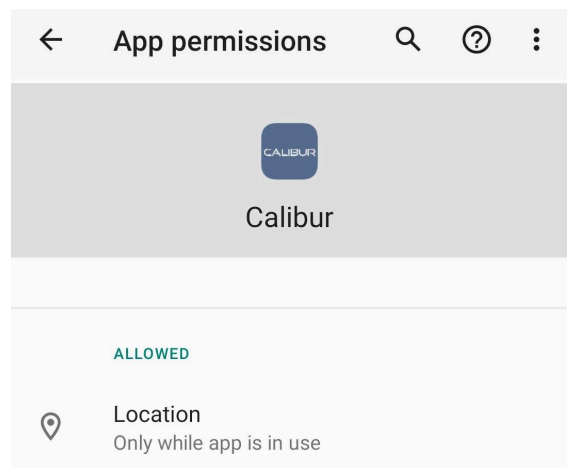
iOS:



Android:



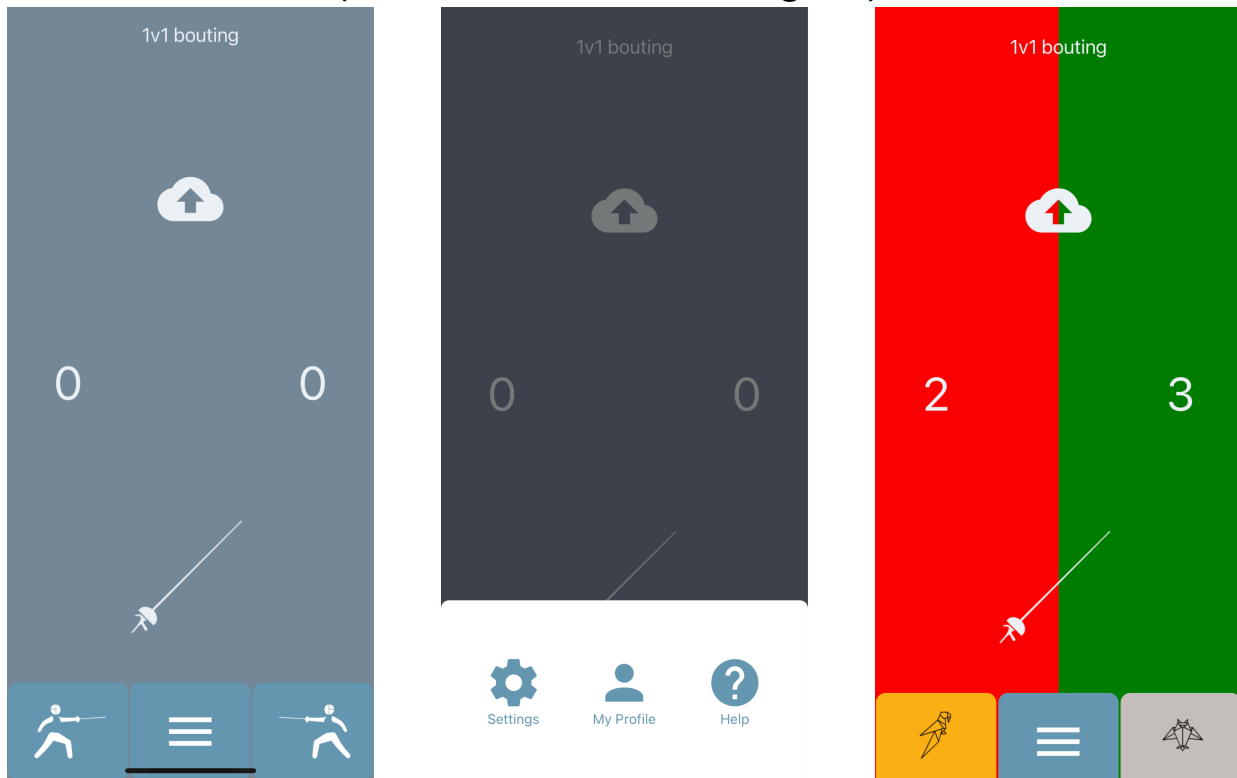
To revoke or grant this permission open the phone's settings⁹



⁹ iOS: support.apple.com/en-us/HT210578,
Android: support.google.com/accounts/answer/6179507

Scoreboard

The main screen (use the ≡ icon to navigate)




Connecting

- Tap to select weapon¹⁰:




- Turn on the pocket box and put it next to the mobile device

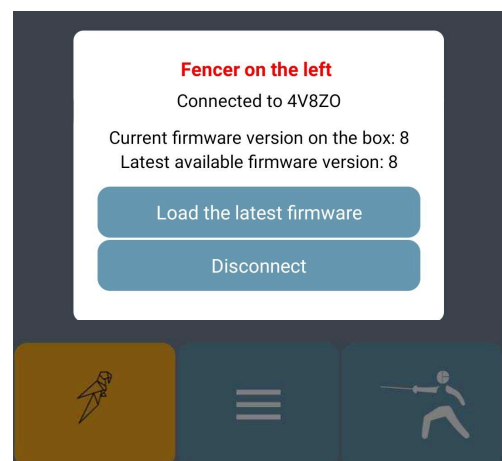
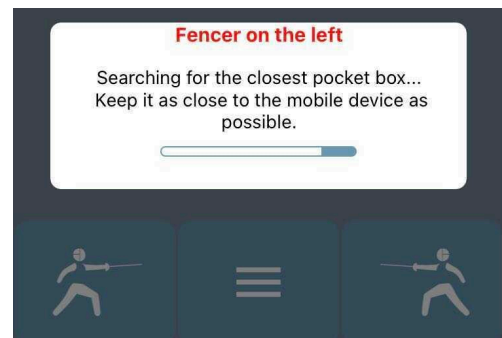
LED: Blue

- Turn on Bluetooth
- Tap the  icon to automatically connect to the closest pocket box

LED: Green

The ID sticker's figure appears in place of the  icon

- Tap the  icon and repeat



¹⁰ Épée, foil or sabre. It always shows the currently selected weapon, and switches to the next one on tapping.

¹¹To use the sabre mode, please read the "Sabre extension kit" chapter first.

- Try on and off-target hits: check the LED on the pocket box
 - Épée and foil:
 - Short-blink = Bellguard hit given
 - Long-blink = On-target hit given
 - White light = Off-target hit given (not on épée)
 - Sabre: long-blink = On-target hit received
 - TIPS: always test in real bout like circumstances, with 2 fencers hitting each other (instead of a lamé laid on the ground e.g.)
 - For good results connect BOTH fencers and wear fencing uniforms
 - Put the box into your pocket
 - Do not touch the tip, guard or blade when hitting
 - Foil: do not keep the tip on the lamé/guard before testing hits, do it as in an actual bout¹²
- Tap the corners of the Scoreboard to increase/decrease the counters, tap a counter to reset to 0

Selecting game mode

- Tap the mode selector button in the top of the Scoreboard (Its text label is the name of the current mode. Default: *1v1 bouting*)
- A popup appears with 3 options, tap one of them:
 - *1v1 bouting*: a simple fencing¹³ bout.
 - *Target practicing (experimental)*: Enable to differently indicate 2 target areas (like a dart board) when target practicing for épée.¹⁴ Put a

¹² Illustration [here](#)

¹³ Check our tutorial video too: https://www.youtube.com/watch?v=CG_5p_pvnOo

¹⁴ You use the app for smart target practicing with foil too, but then you don't need to turn on this switch, because in foil, 2 target areas (on and off-target) are indicated in different ways by default. You just need to put the crocodile clip of the foil body cord to the metal tape instead of a lamé.

piece of metal tape¹⁵ into the middle of your target. Connect one pocket box to your weapon and the other one to the metal tape with a banana plug-crocodile clip cable¹⁶ via the C pin. Hits on the metal tape will be indicated as valid ones (red/green) and the others as invalid ones (white). Épée and foil only.

- *Reaction time game mode (duel)*

Enable to practice executing a fencing action as quickly as possible. Connect both pocket boxes on the Scoreboard, press "Start game" in the popup appearing, wait for the blue light that is displayed at a random time in a few seconds, then hit as soon as you can. The app will measure and display the time elapsed between the blue light and the hit. In its current form, this game mode enables 2 fencers to compete in speed.¹⁷ Épée and foil only.

Settings and customisations

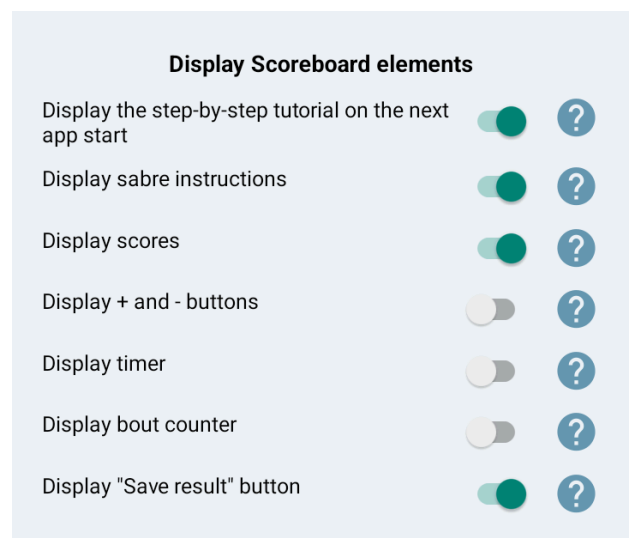
Display Scoreboard elements

Disable unnecessary elements to see the lights on a bigger surface

- *Display the step-by-step tutorial on the next app start*

Enable for text bubbles on Scoreboard

- *Display scores*
- *Display + and minus buttons*
- *Display timer*



¹⁵ Available in DIY stores, e.g. [Conrad](#)

¹⁶ It can be replaced with a foil-sabre body cord: in this case, the plug A of the 3-pronged end of the body wire goes into the banana socket C of the pocket box.

¹⁷ Single mode is coming soon.

- *Display bout counter*

Register hits

- *Indication length*
The duration of light and sound on hits
- *Automatic touch count*
Disable for manual score count only
- *Register only valid hits as valid*
Disable to register all hits
- *Foil: register on-target hits for bellguard*
Disable to not register on-target hits on bellguard¹⁸

Register hits

Indication length: 2 second(s) ?

Automatic touch count ?

Register only valid hits as valid ?

Foil: register on-target hits for bellguard ?

Other

Pocket box scanning length: 3 second(s) ?

Touch labeling: ?

No label v

[Reset settings to default](#)

Other

- *Pocket box scanning length*
Scanning duration for pocket boxes when connecting
- *Touch labeling*
For troubleshooting only
- *Reset settings to default*


¹⁸ The default value is on, because when fencers get really sweaty, the algorithm tends to detect bellguard when hitting the lamé. This will be fixed in a later firmware update.

Bout result tracking¹⁹

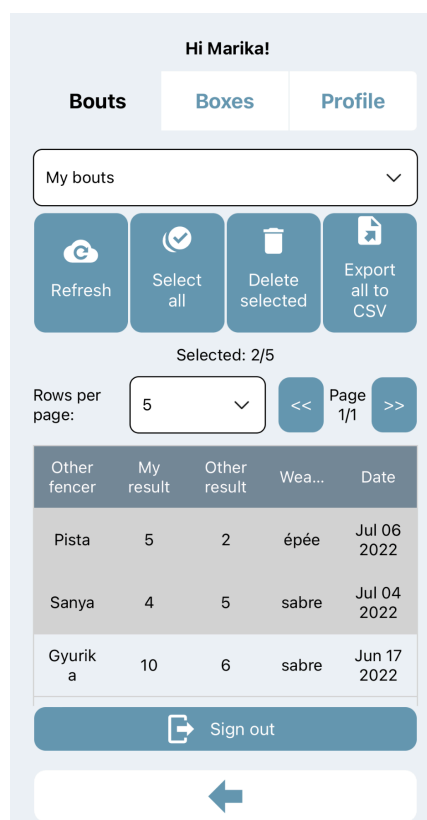
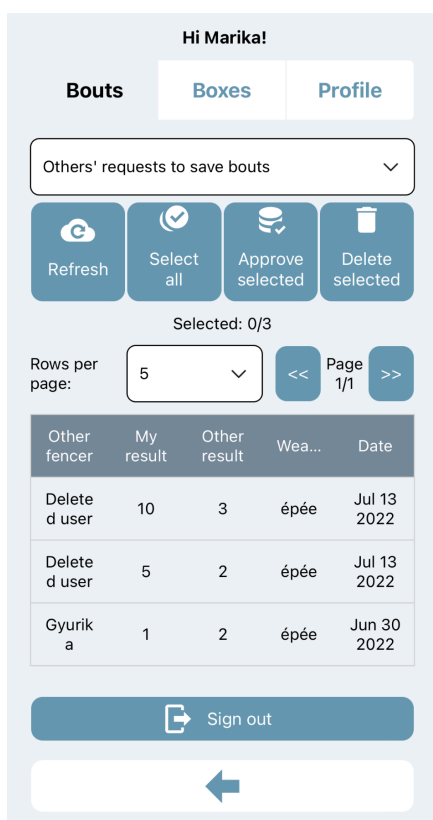
Warning: these features are based on web services that are:

- Banned from the People's Republic of China. Therefore they are not present in the Android app variant which can be downloaded from calibur.cn.com, and if you try to use them in the iOS variant in mainland China, you might receive a *Server unavailable* error.
- Incompatible with the Fire OS, so they are not present in the Android app variant which can be downloaded from Amazon Appstore either.

Save results

- Sign in to your account or create one in the *My Profile* screen
- Press the  icon on the *Scoreboard* and set your opponent's username

Track results



- Go to *My Profile* (sign in if needed)

¹⁹ Video: <https://fb.watch/fWFFa6KeEp/>

- Go to the *Bouts* submenu
- Select an option from the dropdown menu:
 - *Others' requests to save bouts*: bout results that were saved by other users with you as the opponent
 - *My Bouts*: results you saved, or other users saved but you confirmed
- Tap the rows or use the *(De)select all* button to select bouts
 - *Delete selected*
 - *Approve selected* (confirm and move from *Requests* to *My bouts*)
- *Export to CSV*: save all data to a spreadsheet for analysis

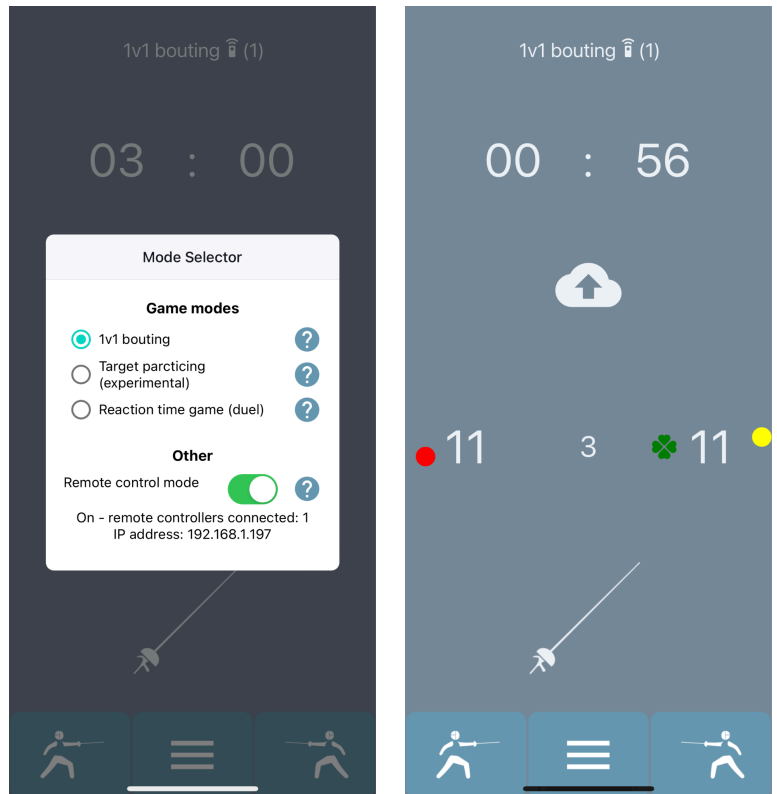
Remote control mode

To let referees control the *Calibur* scoring app from the other side of the piste, another app, *Calibur Remote Controller* is needed too. It's supposed to run on another phone and can wirelessly trigger the following actions in the scoring app:

- Start/stop the timer,
- Change the current value of the timer,
- Set yellow/red cards,
- Change touch counter,
- Change bout counter,
- Set priority manually or randomly.

To use the remote controller:

1. In the *Calibur* app, go to *Settings* and turn on displaying all features you want to control remotely.²⁰
2. Install *Calibur Remote Controller* to another phone.



	Minimum system requirements	Download	
		Outside of the People's Republic of China	In the People's Republic of China
Android	5.0	Google Play Amazon Appstore	calibur.cn.com
iOS	12.4	App Store	

3. Connect both mobile devices to the **same** Wi-Fi network.²¹

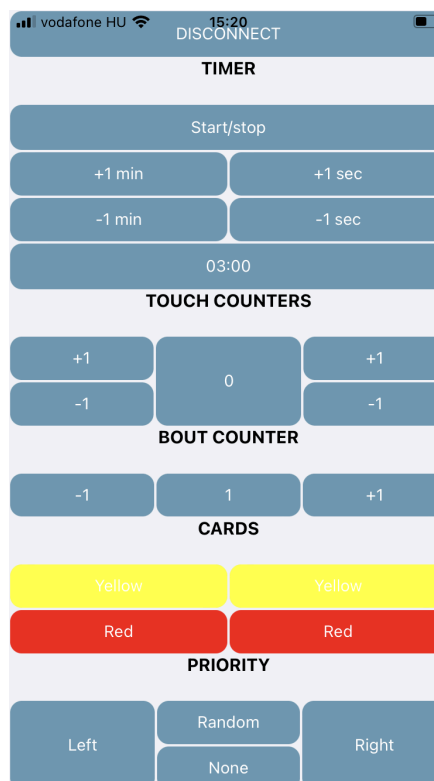
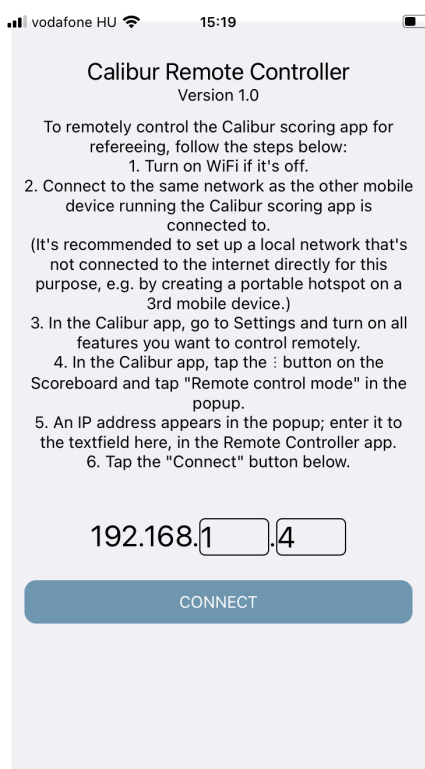
²⁰ Relevant switches: *Display scores*, *Display timer*, *Display bout counter*

²¹ To avoid any latency caused by heavy data traffic, it's worth using a local network only for remote control. The easiest way is setting up a portable hotspot on a third mobile device.

4. On the Scoreboard, tap the mode selector button (at the top of the screen, with a label of *1v1 bouting*, *Target practicing (experimental)* or *Reaction time game (duel)*).

A popup appears. Turn on the *Remote control mode* switch in the bottom.

5. An IP address appears in the popup; enter it to the textfield in the *Remote Controller* app and press *Connect*.



Help

Useful infos,
current software version,
troubleshooting wizard
and this manual.

In case of any technical issue, please follow the steps of the troubleshooting wizard. If the tips there don't help, contact us via the form²² in the end of the wizard.

Firmware update²³

On the pocket box via Bluetooth

- Connect to the internet
- When a firmware update is released this pop-up appears
- Press *Load the latest firmware* in the pocket box menu
- Wait for the download to finish
- Firmware will be updated automatically (1-2 mins)
- Press *Restart*

²² The form is not available in the People's Republic of China. From there, please write an email to support@caliburfencing.com instead.

²³ Video: <https://youtu.be/Vm2S6thhHTw>

Technical help

- User manual
- Troubleshooting wizard

App version info
Version number: 2.12.3
Release date: July 4, 2022

Legal info

- Privacy policy
- Terms of use

Calibur Fencing
Made in Budapest in 2021-2022
© TechCruiser Kft.

Pocket box firmware update available

The program code running on this pocket box is an older version and should be updated. Tap the "Load the latest firmware" button in the popup window.

Got it

Firmware update

State:
DFU_STATE_UPLOADING

Progress: 35%

Fencer on the left

Successful firmware update!
Congratulations! :)
The app needs to be restarted in order to work properly.

Restart

Sabre extension kit

Prerequisites

The sabre extension kit is required for the new sabre mode, which is available from firmware version 12. The kit consists of:

- adapters,
- banana-snap cords,
- magnetic cable heads,
- conductive armbands.

It works only on pocket boxes with a hardware version not older than “DVT 1.4.1”. Check the hardware version in the *Fencer on the left* or *Fencer on the left right* window when connecting your device to the pocket box.

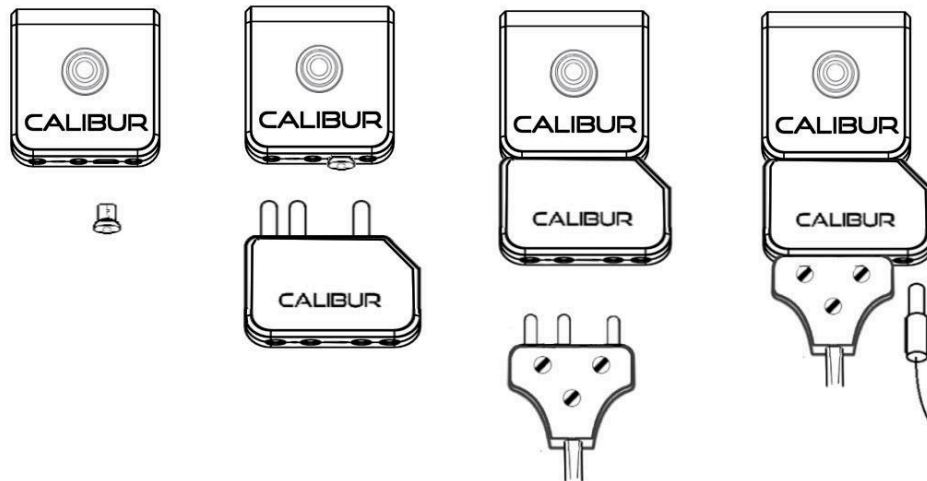
Setting up hardware²⁴

- Armband²⁵, cable & adapter
 - **Put on** the conductive **armband**, preferably to your upper arm where it is tight but not uncomfortable.
 - Wear the armband on either your fencing or unarmed side.
 - **Attach** the **banana-snap cord** to it.
- Pocket boxes, adapter & body cord
 - Plug in the **magnetic cable head** (micro-USB) to your **pocket box**.
 - Plug the **adapter** into the pocket box (there’s only one way it fits).
 - Plug your **body cord** into the adapter, so that one socket remains free.

²⁴ Check our tutorial video as well: https://www.youtube.com/shorts/Y_F5WbmWXwc

²⁵ The armband can be washed by hand.

- Connect the alligator clip of your body cord to your **lamé**. After dressing up, plug in the **banana-snap cable**.



Testing

While dressing up and connecting your body cords to your sabres, the system can occasionally register a hit. This is not an error and will not occur during fencing. This is because various parts of the fencing uniform and the body cord make contact in ways that never occur during bouts.

Fencing

The system should work just as any sabre scoring system during fencing. However, it can occur during fencing that pocket boxes detect hits to bare skin as valid. To avoid this, you can wear a non-conductive glove on your unarmed hand.

Troubleshooting

Please always use the in-app interactive troubleshooting wizard first, which includes all known error sources and guides you step-by-step through the resolution process. (*Help* menu, *Troubleshooting Wizard* button.) If the tips displayed by the wizard do not help, you can ask the Calibur team for more help via the form at the end of the process.

Important: in case of any error, first make sure you are using the latest version of both the mobile app and the firmware!

The form in the end of the *Troubleshooting Wizard* might not work when using it in the People's Republic of China. In this case, send an email to support@caliburfencing.com for support. Please describe the problem in as much detail as possible in the email and provide the following information:

- The identifier of the affected pocket boxes
- Exact model name of mobile device used for scoring (e.g. Lenovo TB-X306F)
- Version of the operating system on the mobile device used for scoring (e.g. Android 11.0)

Important info

Warranty

The warranty is valid for 12 months from the date of purchase. It includes free repair for any defects in materials or assembly. If you encounter a major fault or defective system, you need to stop using the system. Get in touch with us immediately to ensure that you will be eligible for a warranty claim.

Please, get in touch on our Whatsapp, Facebook page or send an email to support@caliburfencing.com for support.

Disclaimer

Calibur products were designed for fencing under normal circumstances. If fencers use the system under non-standard or unsafe fencing conditions (not wearing a glove or proper mask, etc.) we cannot guarantee the reliability of the system. We also cannot take responsibility for damage that results from improper use of the system, or use of the system in a way outside of its intended purpose.

Disposal of Product

In case your Calibur pocket boxes need to be disposed of, please note that waste electronics have to be recycled separately from unsorted municipal waste.

Waste electrical and electronic equipment must not be disposed of as unsorted municipal waste and in particular does not belong in the household waste. Rather, these devices should be collected separately and disposed of via the local collection and return systems.

By separating and recycling your system at the time of disposal you will help to conserve natural resources and ensure that the system is recycled in a manner that protects human health and the environment.

Battery hazard notice

- Batteries may leak or explode if misused
- Do not try to open the pocket box and the inner battery.
- Do not short-circuit the connectors
- Do not dispose of batteries in a fire, they may leak or explode.

Compliance



EMF

This product complies with all applicable standards and regulations regarding exposure to electromagnetic fields.

CE

The Calibur pocket box meets the minimum requirements for safety and electromagnetic compatibility of electronic devices, and conforms with the relevant European Union directives and recommendations

FCC

These Calibur pocket boxes have 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 instruction manual, 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 equipment and receiver.
- Consult the dealer or an experienced radio/TV technician for help.

Pacemaker Notice: This product contains strong magnets and utilizes wireless technology. Consult with a medical professional before using.

Keep out of reach of children.

The 'Calibur' logo is a registered trademark.

Made in Hungary.