# VOLTCRAFT ®

App Instruction Manual

## Digital multimeter VC891

Item no. 2576866

## Digital multimeter VC871

Item no. 2576867

# Contents

# Introduction

The software application (shortly "app") enables you to control the digital multimeter using your smartphone/tablet.

This manual explains how to install, operate and use the app.

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Android™ is a registered trademark of Google LLC.

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# General information

## Important information

Give information in an orange frame special attention.

The blue frame provides tips on product use and features.

# Latest operating instructions

Download the latest operating instructions at [www.conrad.com/downloads](www.conrad.com/downloads) or scan the QR code shown. Follow the instructions on the website.

# Requirements

- Smartphone/tablet with Bluetooth® BLE 4.0 or higher
- Internet access to install the app
- Operating system Android™ 6.0 or later; Apple iOS, iPadOS, macOS 11.0 (M1) or later

# Legal notice

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# Mobile application (app)

The description below only uses the term smartphone. In this context, reference is always made to an Android™ smartphone or tablet or an iPhone or iPad.

## Installing the app

- Open the respective app store on your smartphone. If you are using Android™, open "Google Play". If you are using an Apple device, open "App Store" from Apple.

- Search for the **"Voltcraft VC800 Series"** app and install it.

- You can also scan the respective QR code below or tap on the name. You will be redirected to the page of the appropriate store.
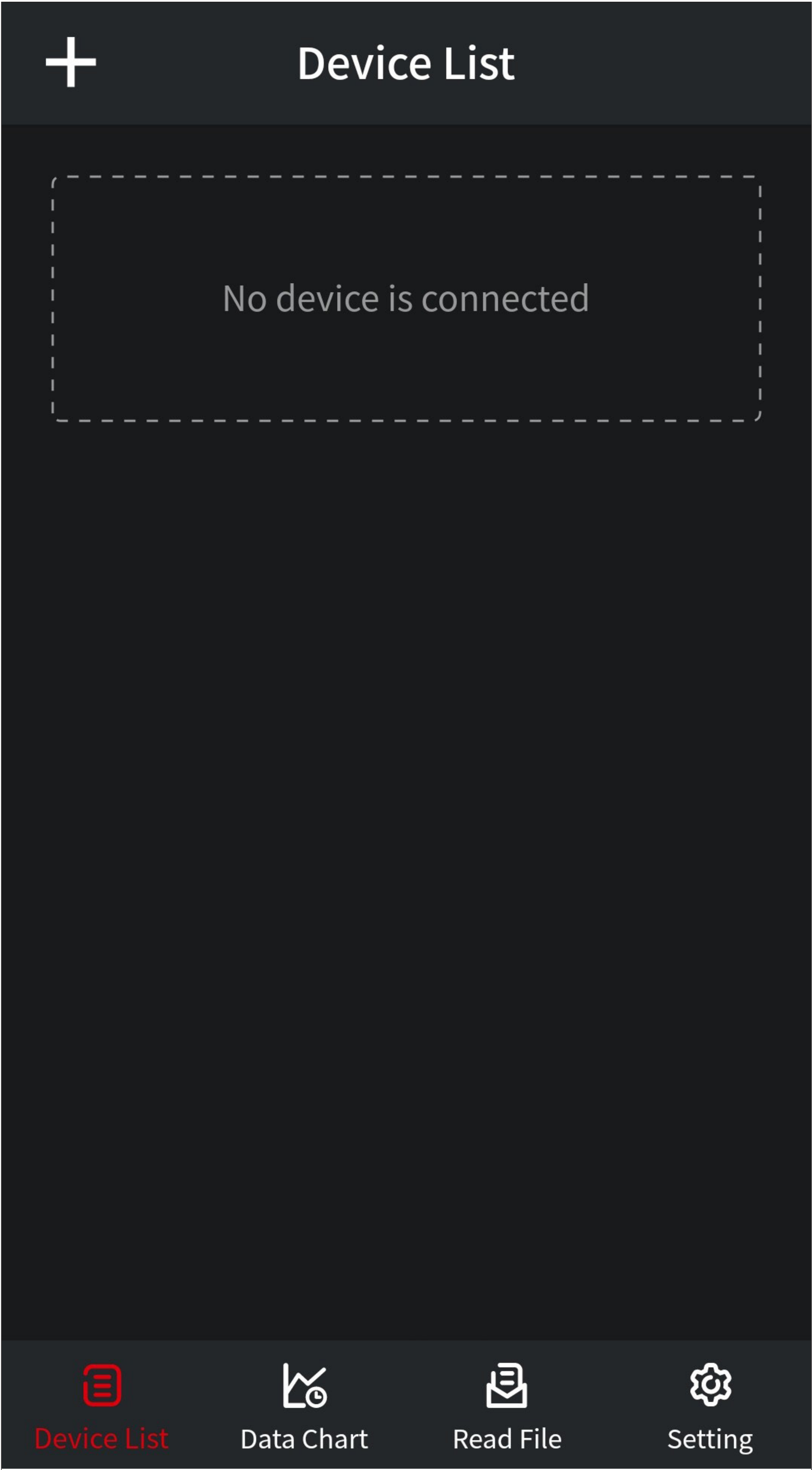
Android™

Apple iOS

Please note the system requirements in this manual and in the description of the app in the respective store.

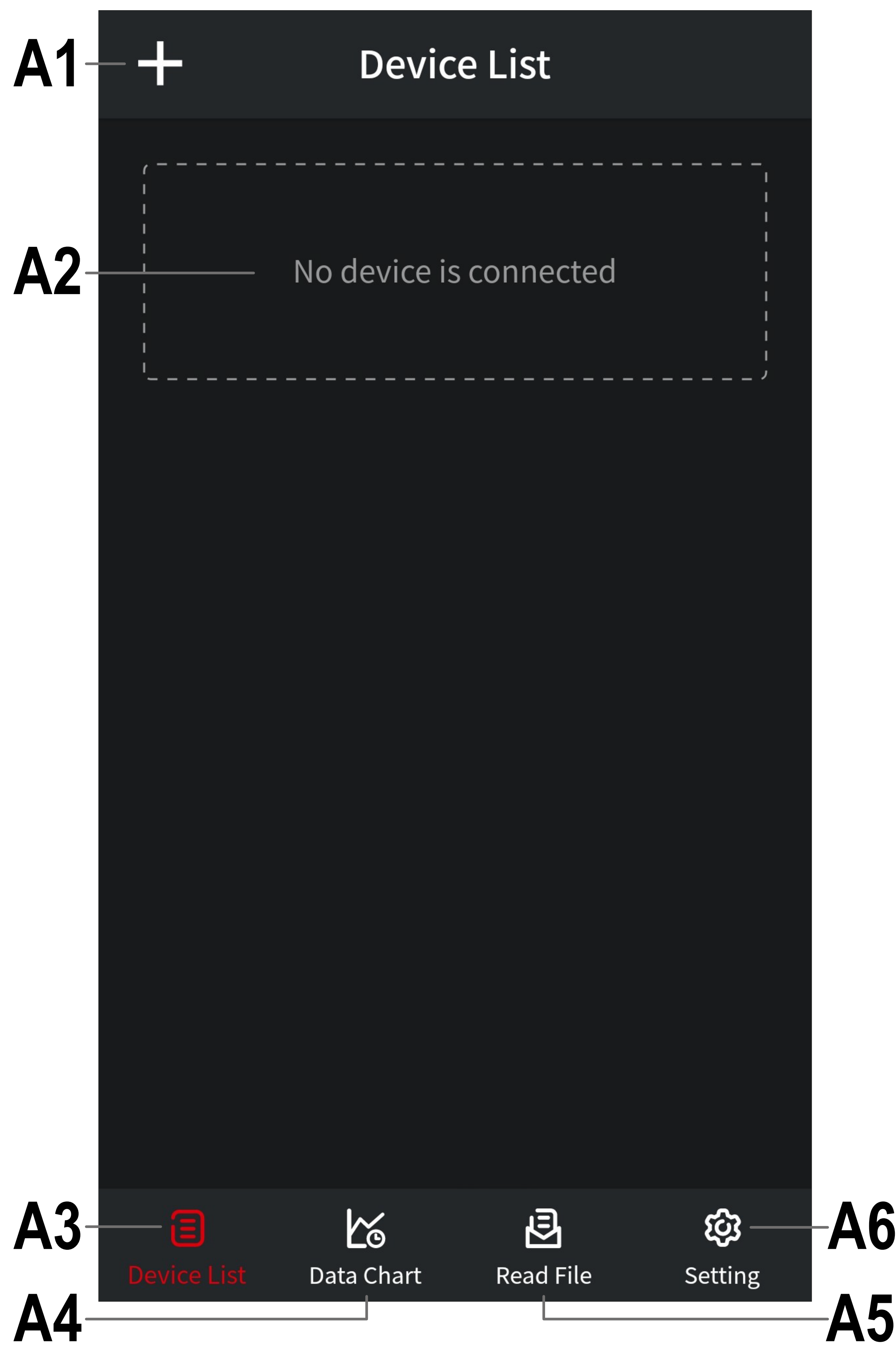Please note that the description below may change for future app versions.

# Launching the app for the first time

- Open the previously installed "**Voltcraft VC800 Series"** app.

- You will see the main page.

# Main page of the app

This section provides a brief overview of the controls on the main page of the app.

A1

+ Device List

A2

No device is connected

A3 — Device List

A4

Data Chart

Read File — A5

Setting — A6

**A1** Opens the menu for adding a new multimeter with Bluetooth®.

**A2** This item shows the first connected multimeter. When multiple devices are connected, they are displayed one below the other.

**A3** Returns to this view after selecting one of the other three items.

**A4** This item is used for online long-term data measurement and for recording and saving the data.

**A5** This item enables you to retrieve a data file saved under **A4**.

**A6** Switches to the settings page with all basic settings.

# Setup and operation

This chapter contains instructions on how to connect the multimeter to the app.

Here you will also find the most important basic settings and controls in the app.

Important!

Before you continue, ensure Bluetooth® is enabled on your smartphone.

## Preparing the multimeter

- Switch on your multimeter. To do this, turn the rotary switch from the "**OFF**" position to any other position, such as "**V**".

- Press and hold the "**< / BLE**" button (below the "**F2**" button) until the multimeter beeps briefly and the Bluetooth® icon appears to the right of the battery symbol.

- That will activate Bluetooth® on your multimeter, and you can proceed with the setup.
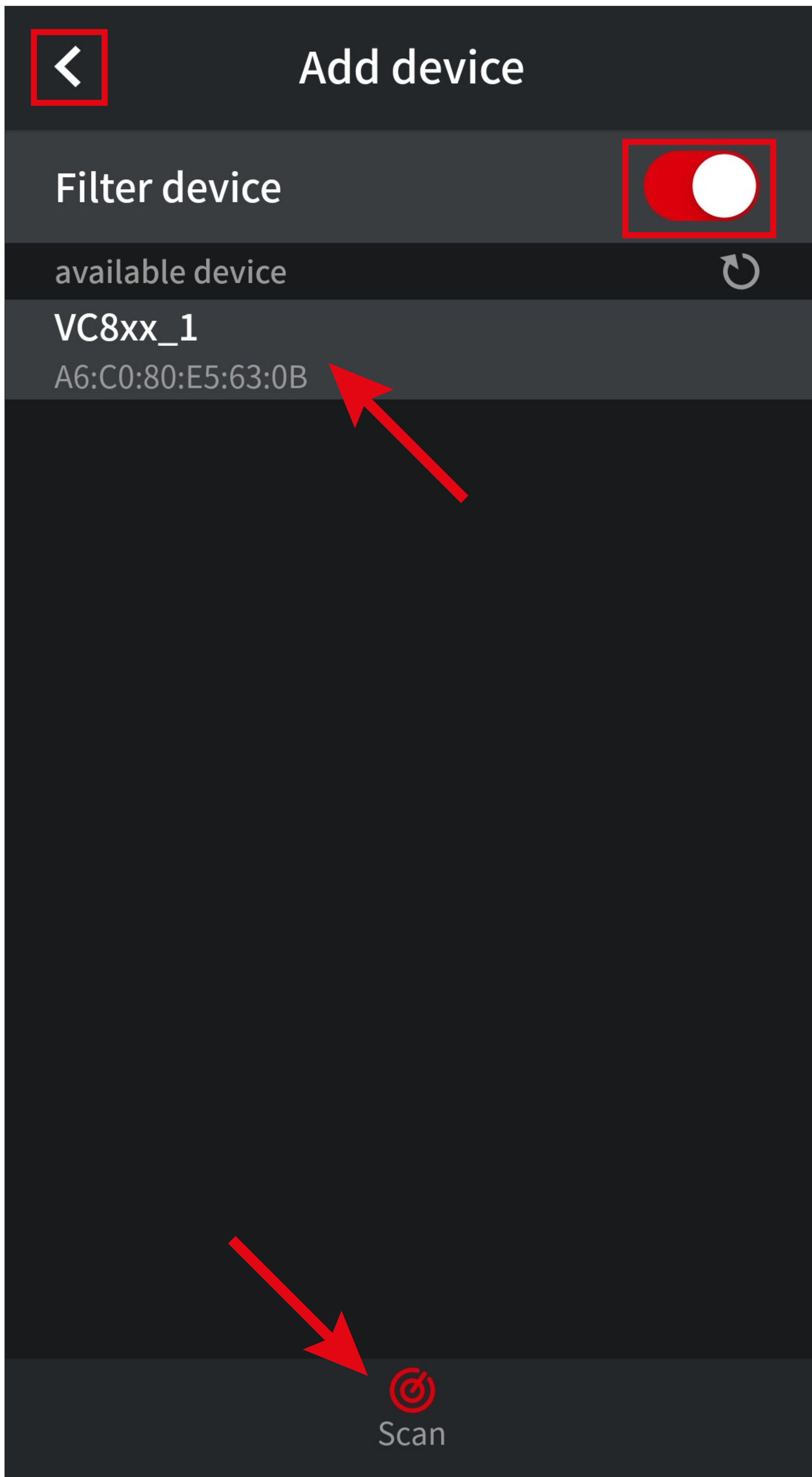
Every time you switch on the multimeter, you must enable Bluetooth® and connect the multimeter to the app.

# Pairing a multimeter

- To add a new multimeter, tap the "**+**" button (red rectangle in the screenshot) in the top left corner of the app's main page.
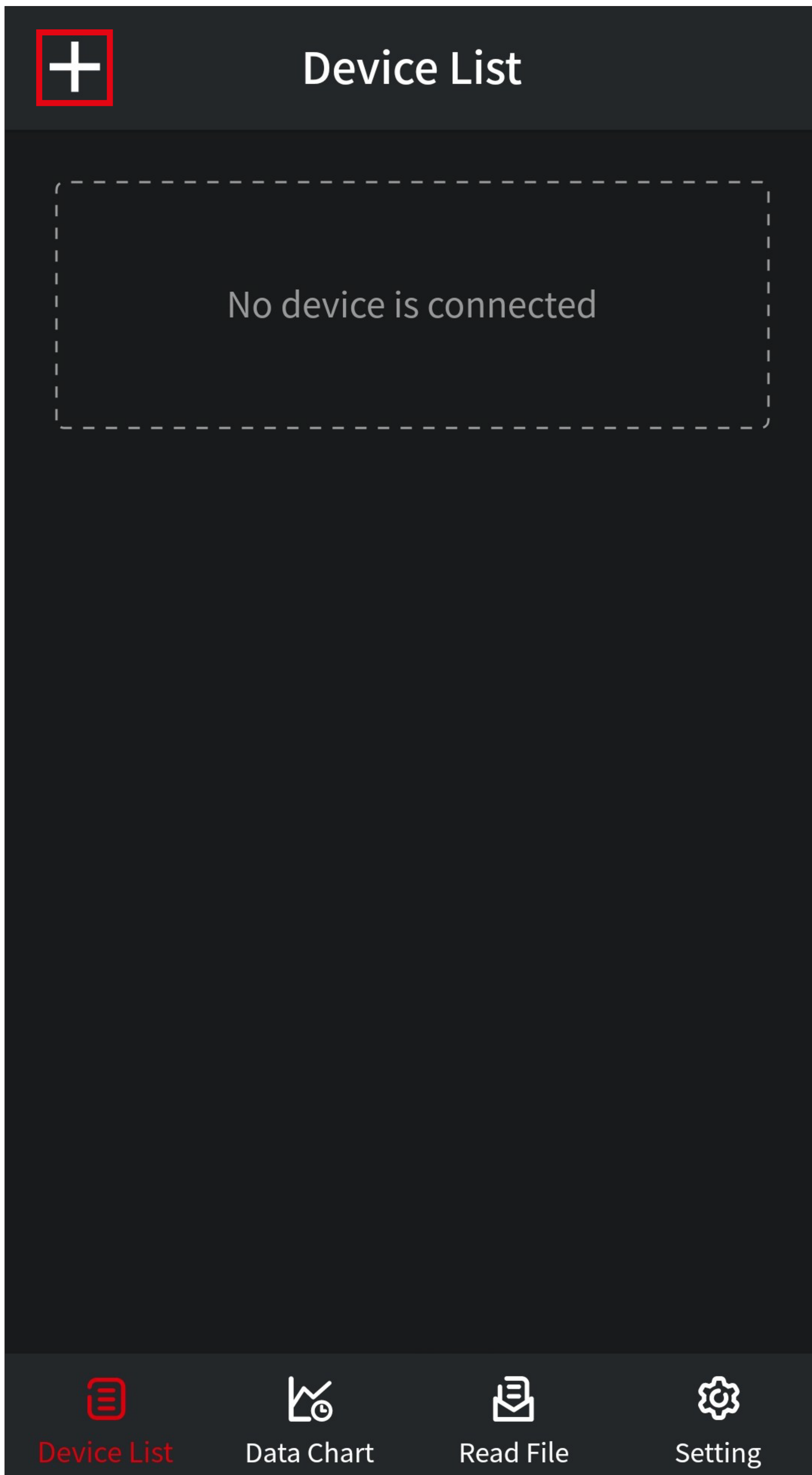
- Search will be initiated automatically, with all available Bluetooth® devices displayed in the list.



- To select the desired multimeter from the list, simply tap on it (upper arrow in the screenshot). The connection will be established automatically, and the app will automatically return to the main page.

- Use the slide switch (right rectangle in the screenshot) to enable or disable the device filter. When enabled, the filter shows only compatible multimeters and hides all other Bluetooth® devices.

- To scan again, tap the button at the bottom (lower arrow in the screenshot).

- Tapping the arrow in the top left corner (left rectangle in the screenshot) cancels the process and takes you back to the main page.

- When the multimeter is connected, the main page should look similar to the screenshot below.
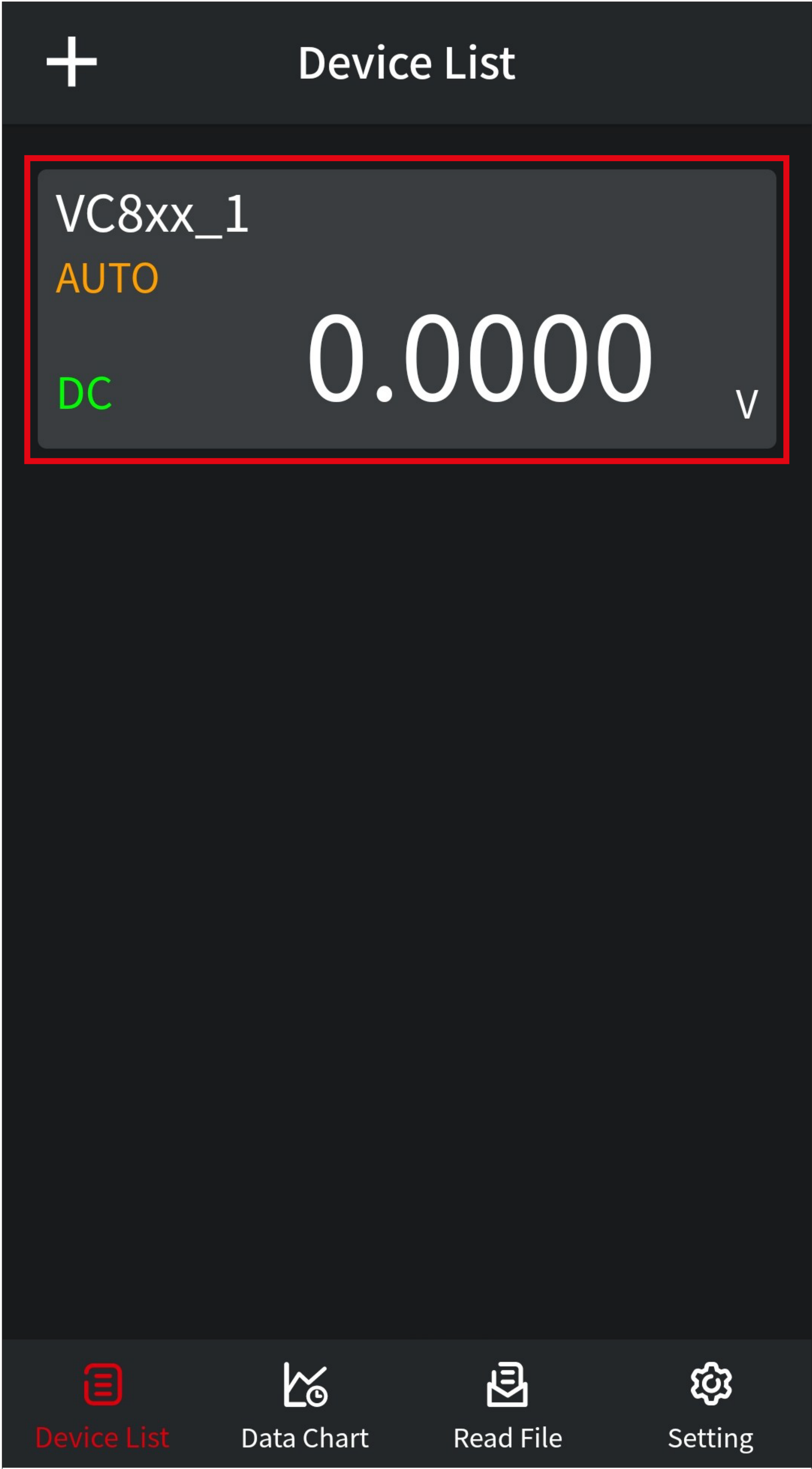- A reading on the multimeter is dubbed on the screen of your device.
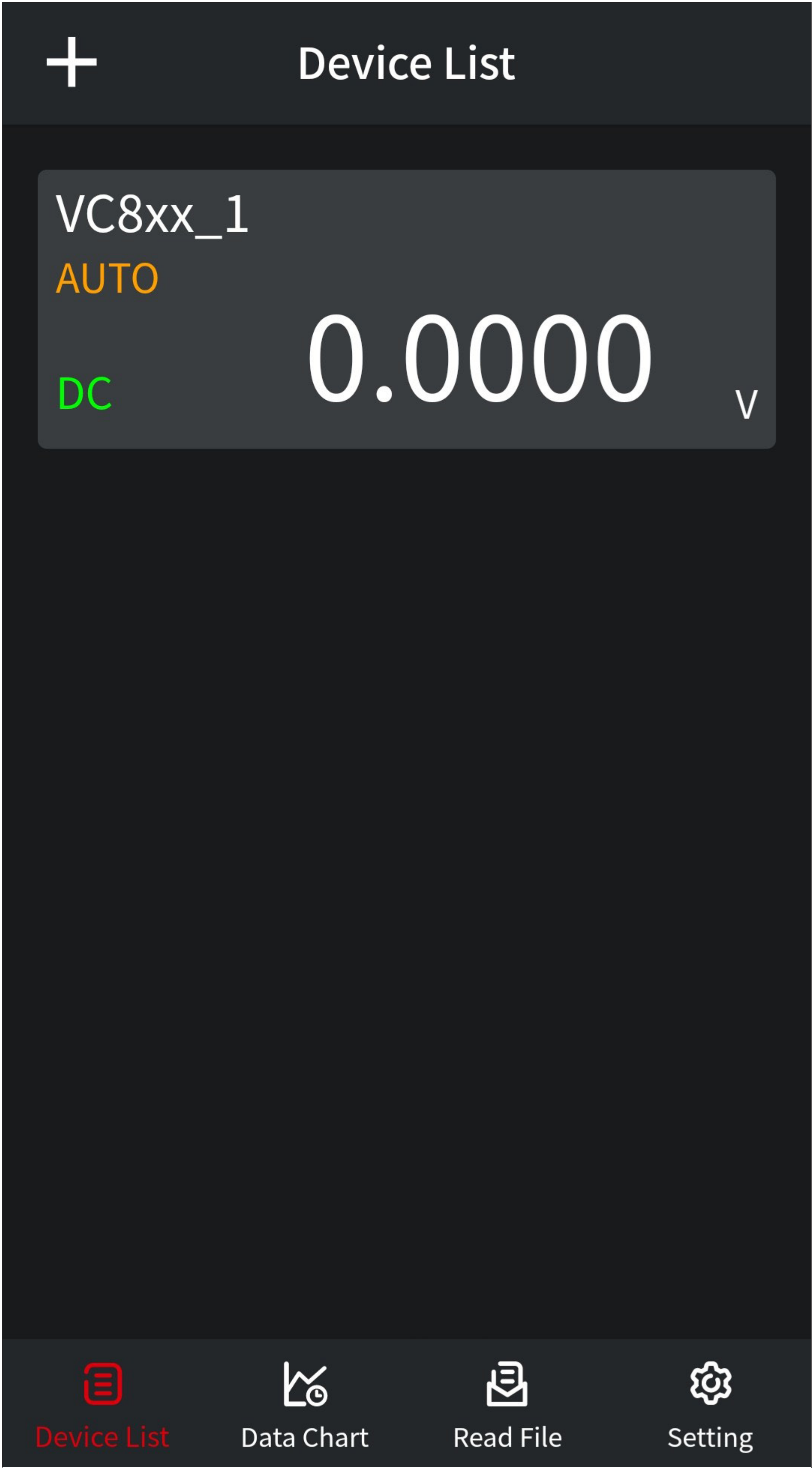
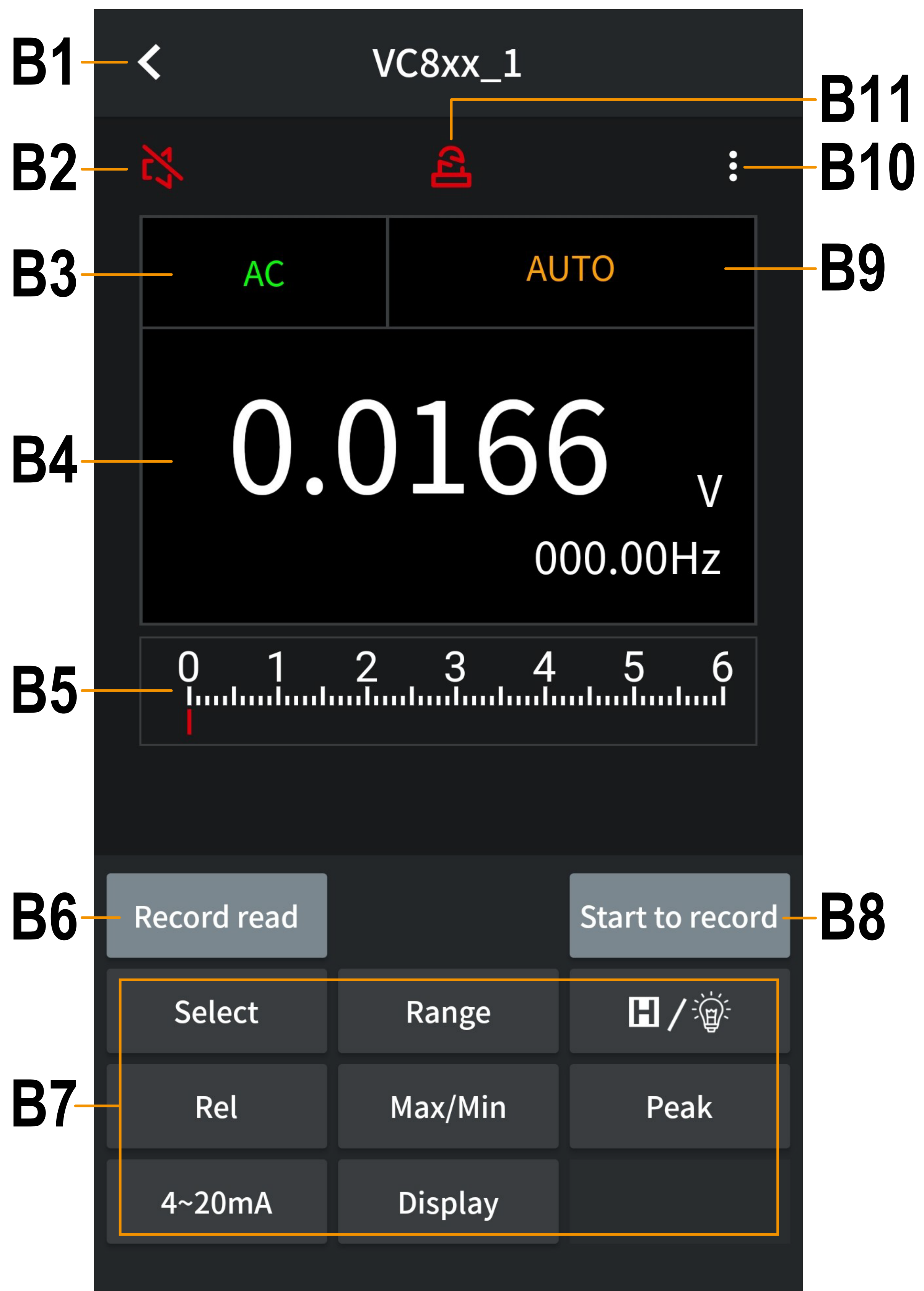- When multiple multimeters are connected, the app display should look similar to the multimeter below.

# Overview of the multimeter controls

- Tapping the desired multimeter on the app's main page takes you to its control page.

# Multimeter control page

Below you will find a brief overview of the multimeter controls, functions and settings in the app.

B1 — ⟨
B11

VC8xx_1

B2 — 🔇
B10 — ⋮

B3 — AC
B9 — AUTO

B4 — 0.0166 V
000.00Hz

B5 — 0 1 2 3 4 5 6

B6 — Record read
B8 — Start to record

B7 —
Select | Range | H / 💡
Rel | Max/Min | Peak
4~20mA | Display

**B1** Returns to the app's main page.

**B2** Enables and disables the voice output.

**B3** Displays the current function:

| Display | Function |
|---------|----------|
| DC | Direct voltage/current |
| AC | Alternating voltage/current |
| RES | Resistance measurement |
| CONT | Continuity testing |
| DIODE | Diode testing |
| CAP | Capacitance measurement |
| HZ | Frequency measurement |
| DUTY | Duty cycle measurement |
| TEMP | Temperature measurement |
| POWER | Power measurement |

**B4** The digital display shows the digital reading and is synchronised with the multimeter.

**B5** The bar graph display shows the analogue reading and is also synchronised with the multimeter.

**B6** This button reads out the data recorded offline by the multimeter and saves it to a file on your smartphone.
For more information, see the chapter "Using the offline recording function".

**B7** These function buttons are identical to the corresponding multimeter buttons/functions.
You can press the buttons briefly or hold them down to perform various functions.

**B8** This button configures and starts the offline recording of the multimeter.
For more information, see the chapter "Using the offline recording function".

**B9** Displays the current measurement mode.

**B10** Opens the multimeter setup.

**B11** Enables and disables the audible warnings.

# Multimeter settings page

Below you will find a brief overview of the basic settings of the connected multimeter.

- To open this page, tap the three dots (**B10**) in the top right corner of the multimeter control page.

**C1** ‹ **More settings**

**C2** Modify device name                    VC8xx_1 ›

**C3** Voice Broadcast

**C4** Threshold Alarm

**C1**   Use the arrow to return to the multimeter control page.

**C2**   From here, you can change the name of the connected multimeter. The name will be retained even if the multimeter is disconnected.
For more information, see the chapter "Changing the name (**C2**)".

**C3**   Use this slide switch to enable or disable the voice output. This item is identical to **B2** on the multimeter control page.

**C4**   This function enables you to activate and set the threshold alarm function.
For more information, see the chapter "Setting the alarm function".

# Changing the name (C2)

- To change the name of the multimeter, tap the **C2** button on the settings page, which also shows the current name of the multimeter.
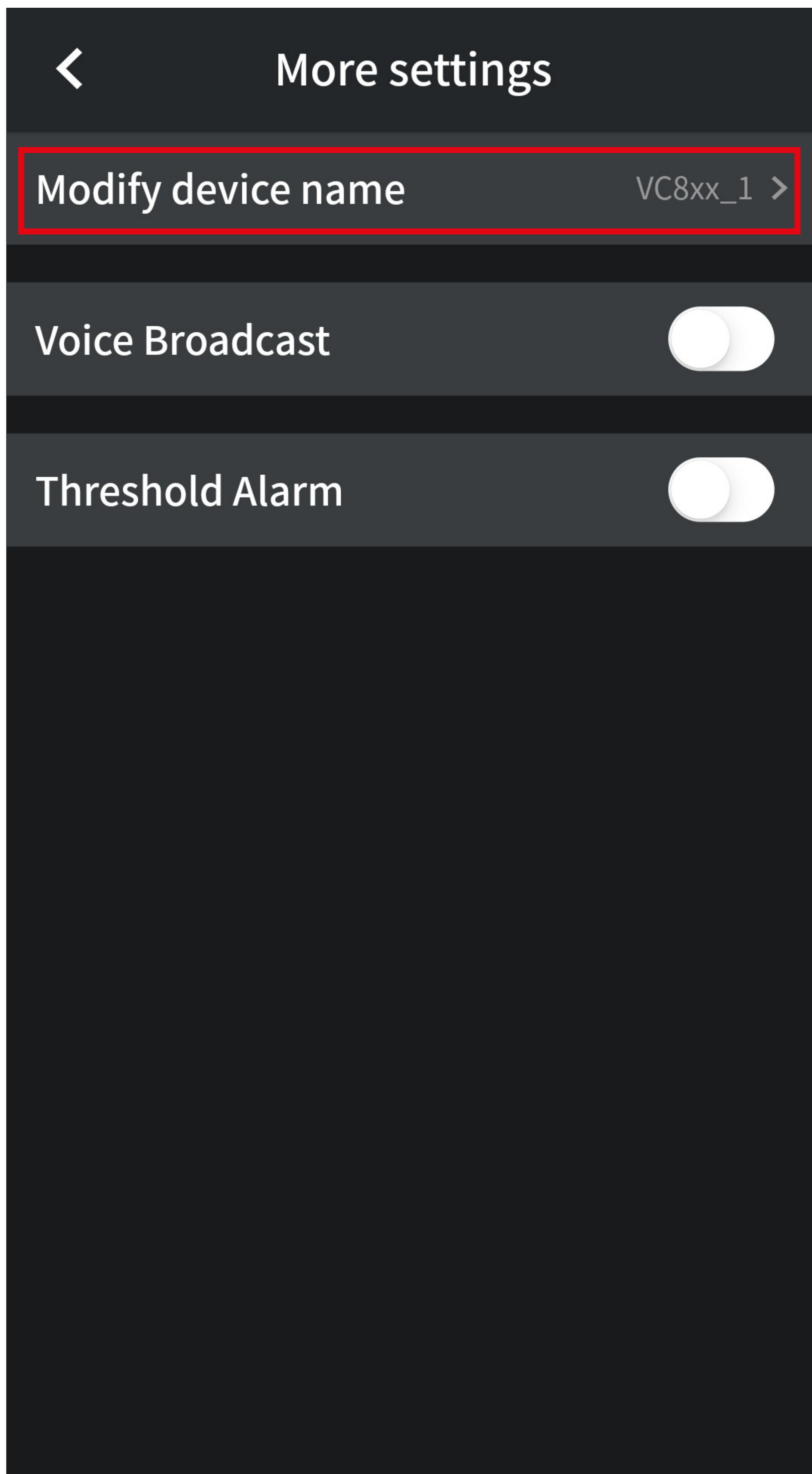
- Then tap on the name again.
- Then enter the desired name. It can contain numbers, letters and underscores.
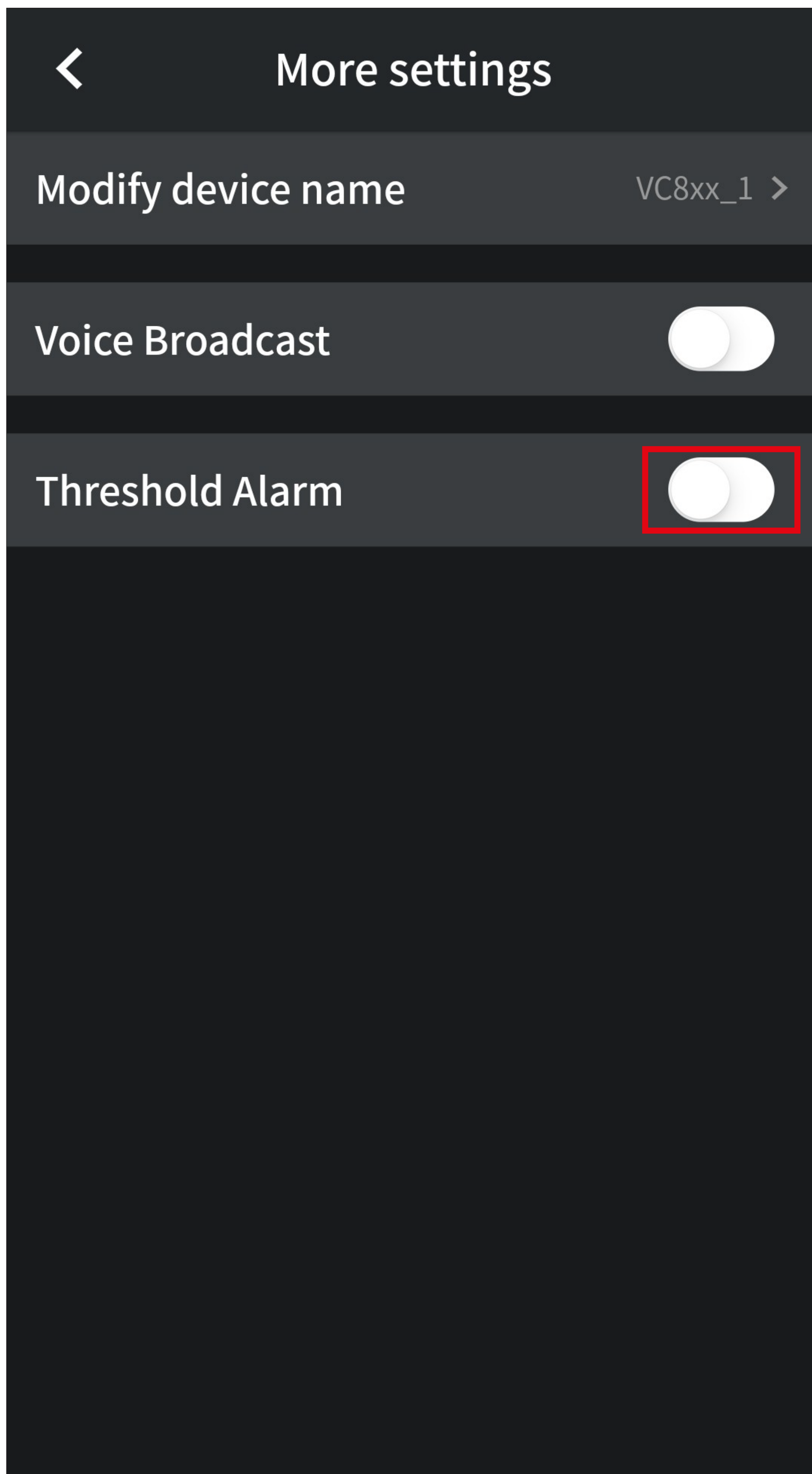- Tap the symbol in the top right corner to save changes.

# Setting the alarm function

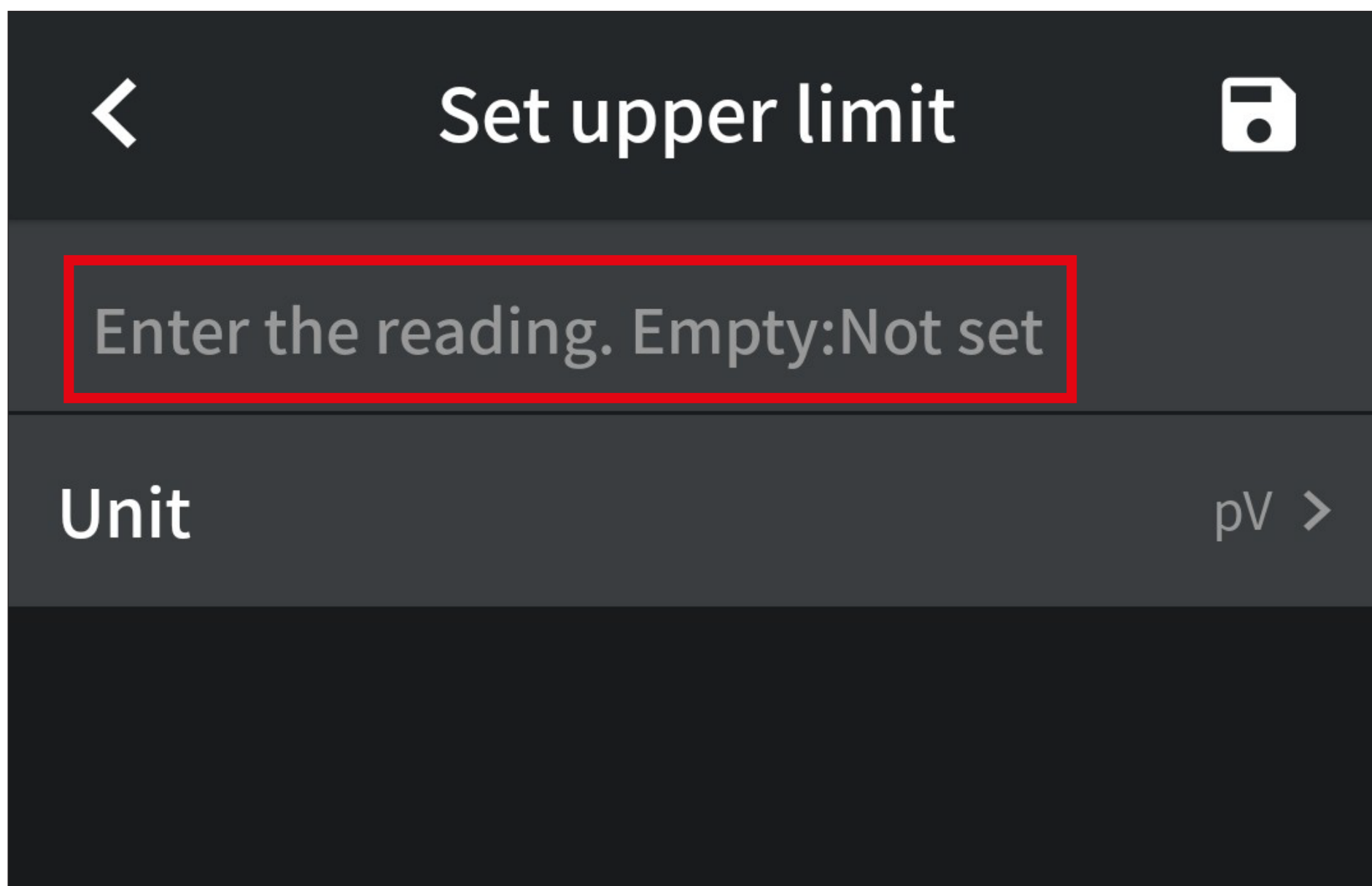- Tapping the bottommost **C4** slide switch on the settings page activates the threshold alarm function (it should turn red).

- You now need to set the lower and upper limit values and choose whether to enable or disable an audible alarm.

- As an example, we have 13.5 V as the upper limit and 10.5 V as the lower limit.
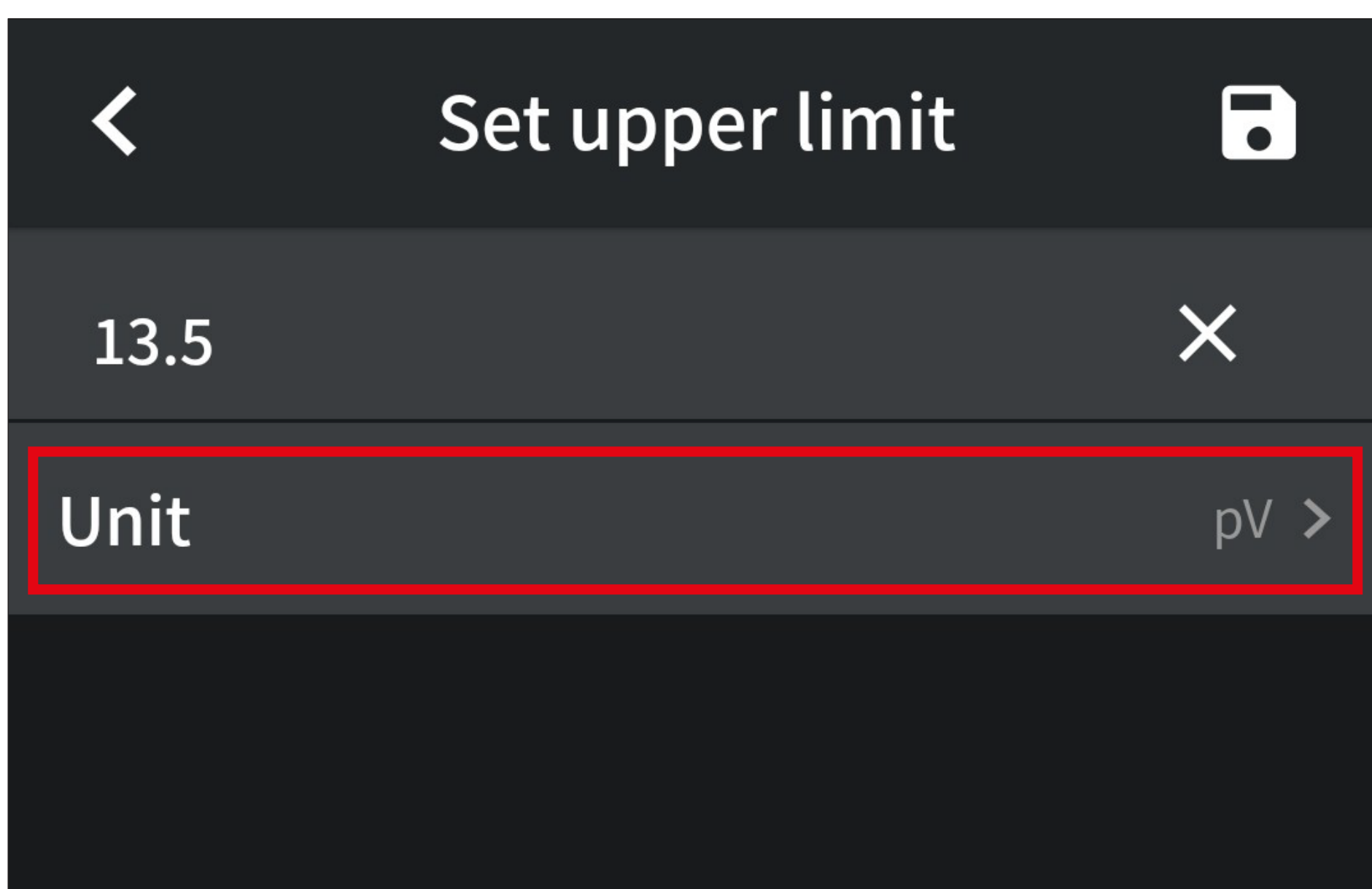
- Tap on "**Upper limit**".
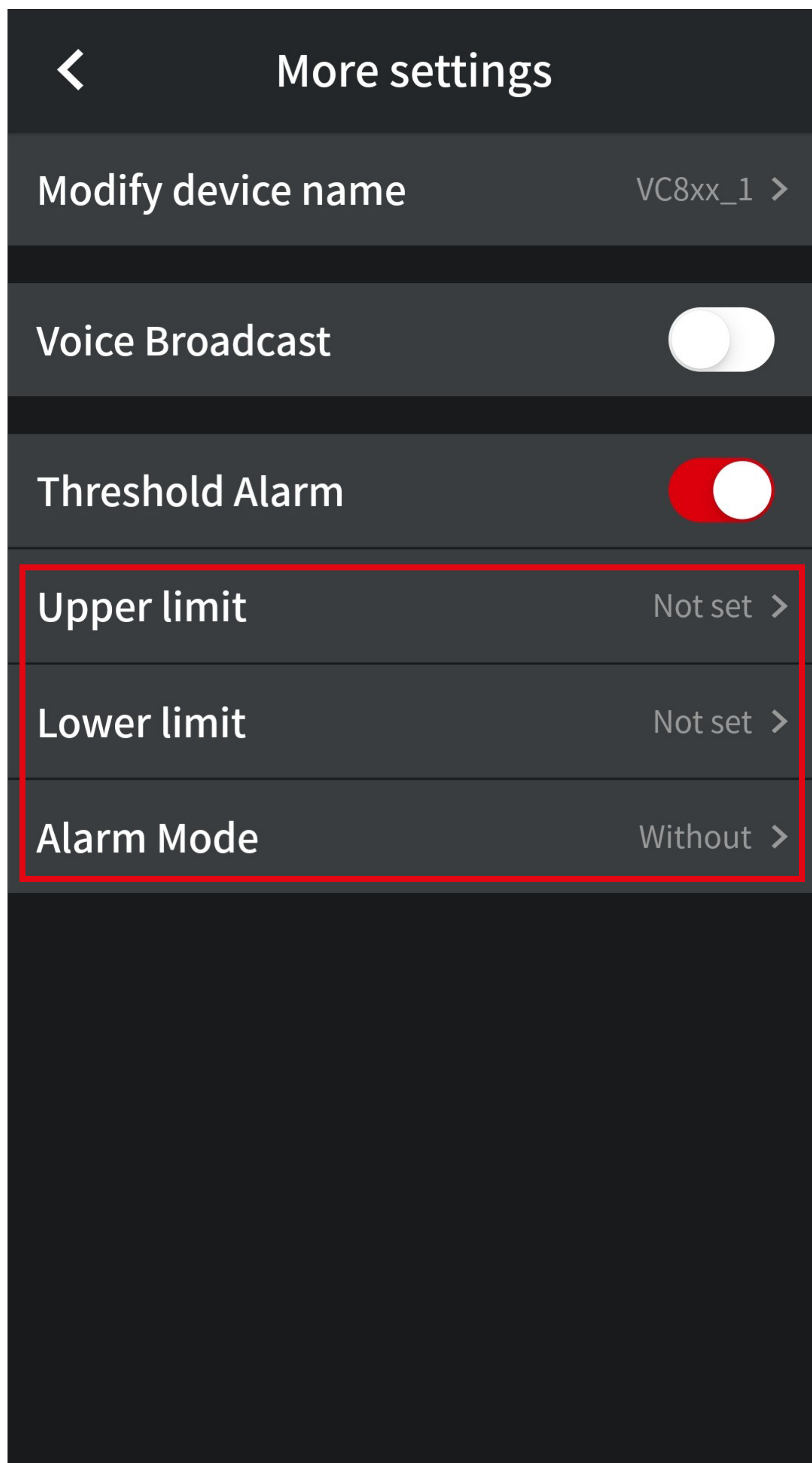
In the app, a dot is used as a decimal separator.

- Tap on the upper input field and enter the value for the upper limit. For example, "**13.5**".



- Now tap on the lower input field "**Unit**".

- Swipe up or down to set the desired unit of measurement. For example, set "**V**".
- Then tap the "**Save**" button to save changes.
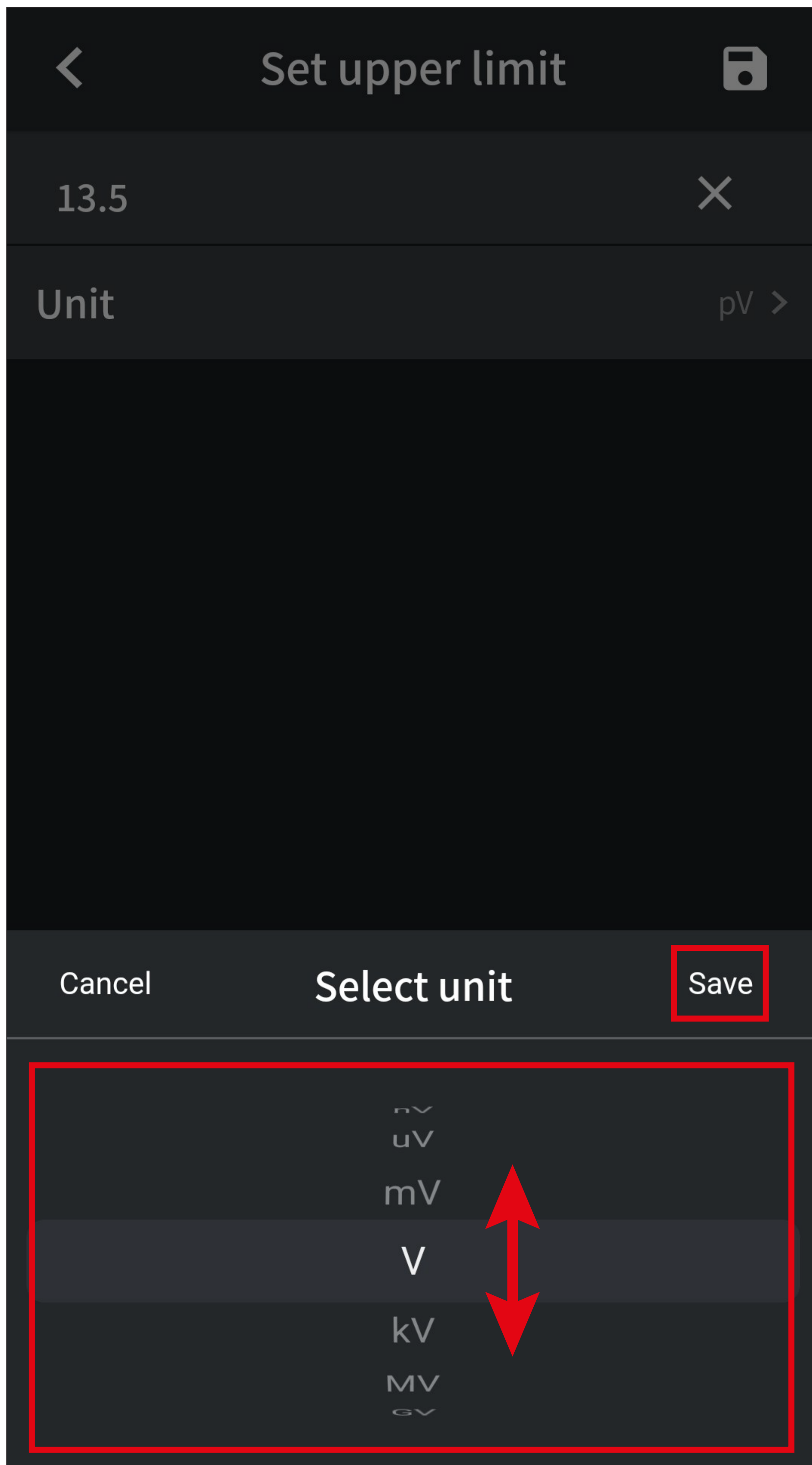
- Now you should see your settings here.
- Tap the button in the top right corner to save changes.



- Use the same procedure to set a lower limit in the "**Lower limit**" item.
- Finally, choose whether an audible alarm should be output or not under "**Alarm Mode**".

> When you are done with the settings and there is still no voltage at the multimeter, an alarm (including audible) has already been triggered.
>
> Besides, you can use either a lower or upper limit only.

- The configuration on the settings page should look similar to the screenshot.
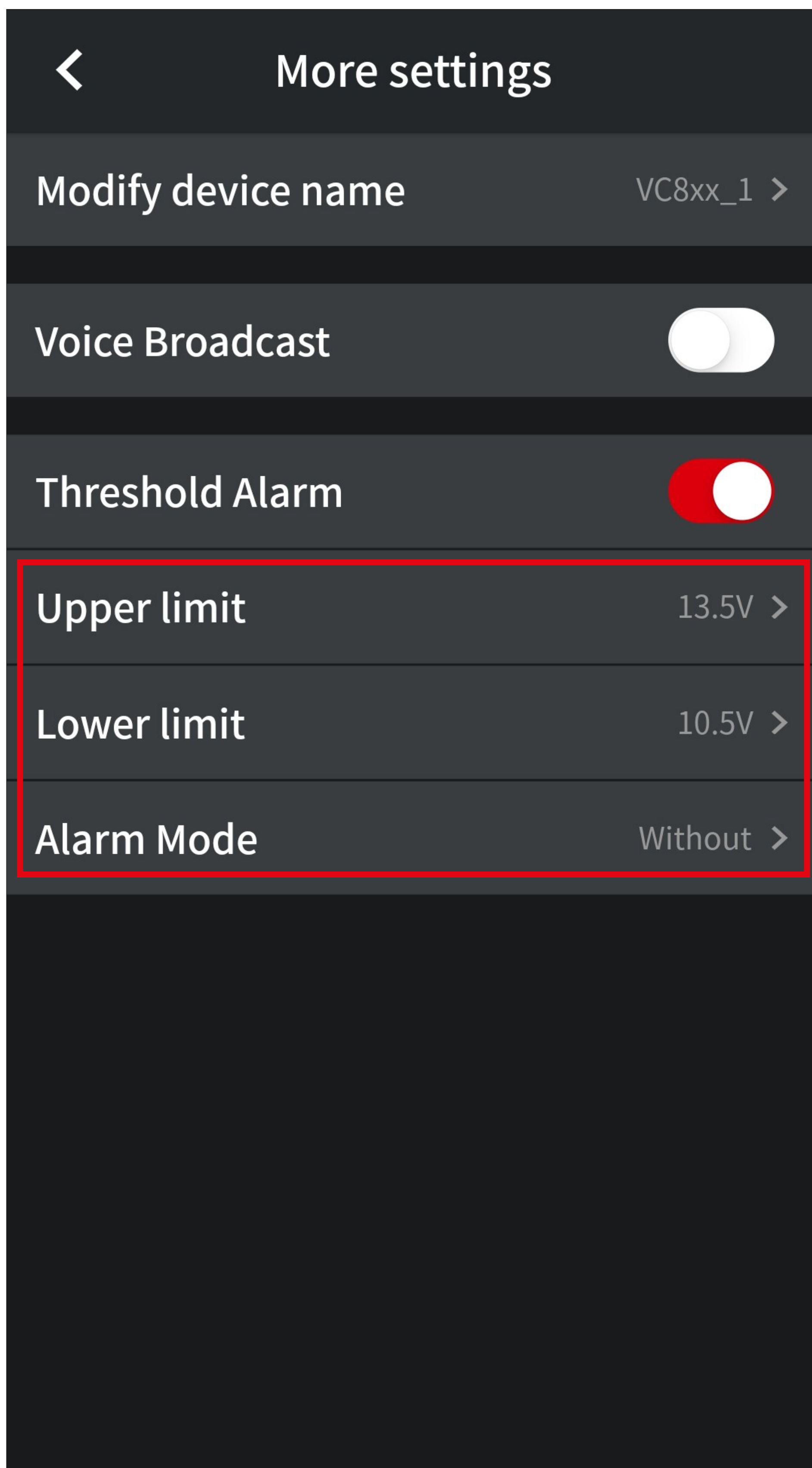


- When an alarm is triggered, the display of the control page flashes red, and your smartphone outputs an audible alarm (if enabled).

# Deleting a multimeter

- To manually delete a multimeter in the app, navigate to the main page of the app.

- From there, swipe the display button of the multimeter to the left and then tap the red rectangle.

- Then tap "**OK**" to confirm.
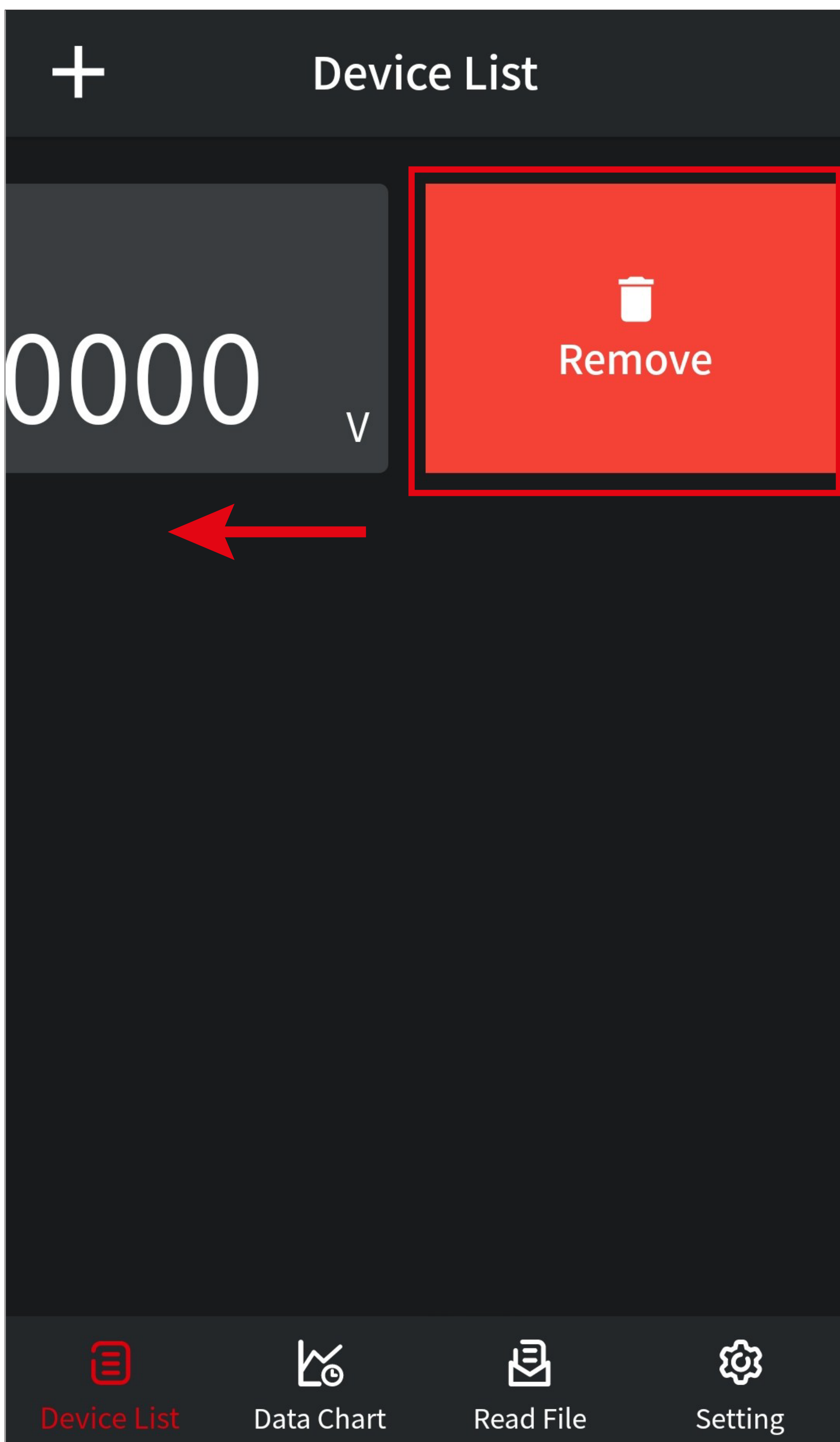
# Advanced functions and settings

This chapter explains how to use the online and offline recording functions of the multimeter and gives a brief overview of the data chart function and the basic settings of the app.
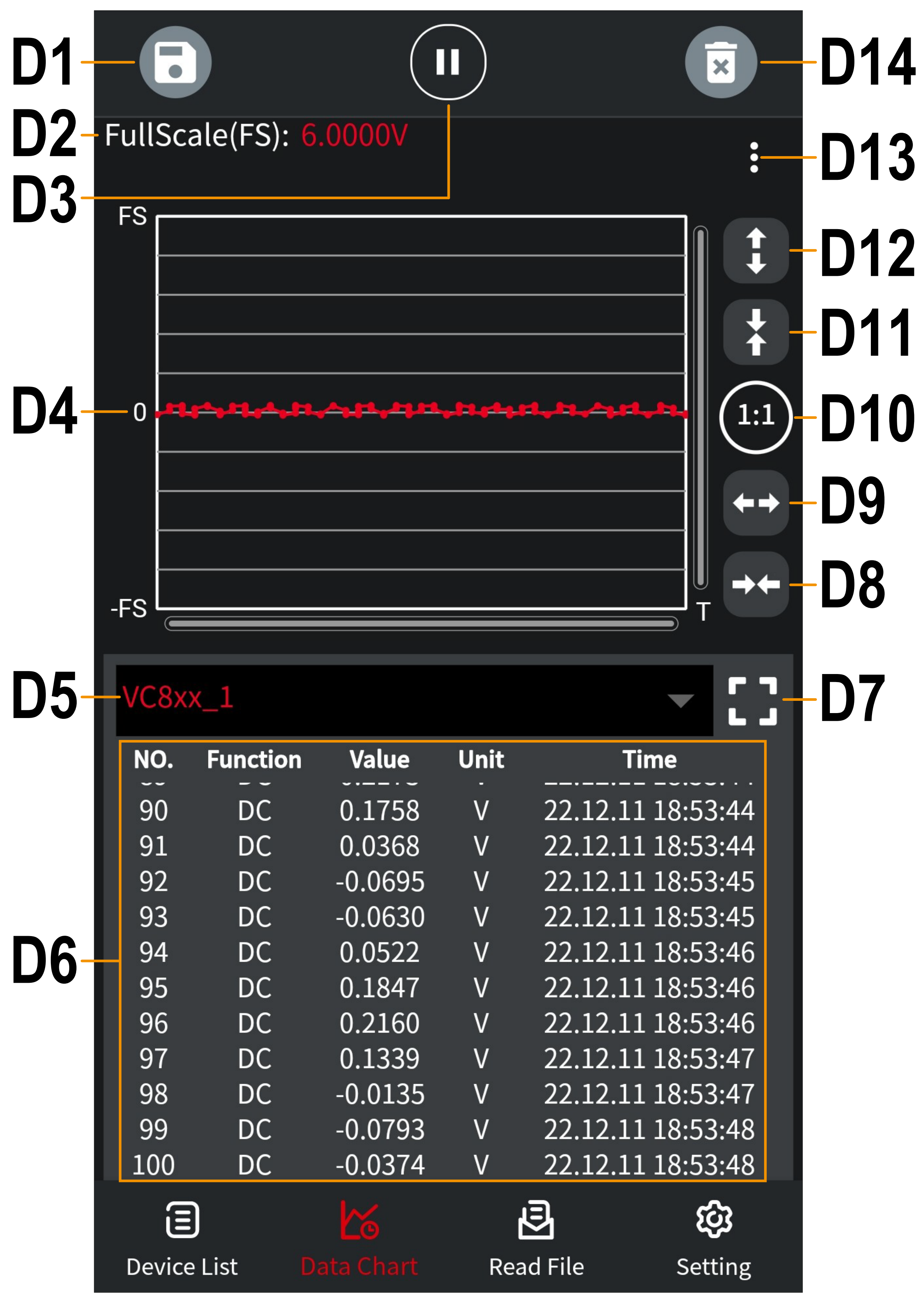
## Data chart and online recording function

- Connect the multimeter via Bluetooth®.

- To open the data chart, tap the **A4** button at the bottom of the app's main page (red rectangle in the screenshot).
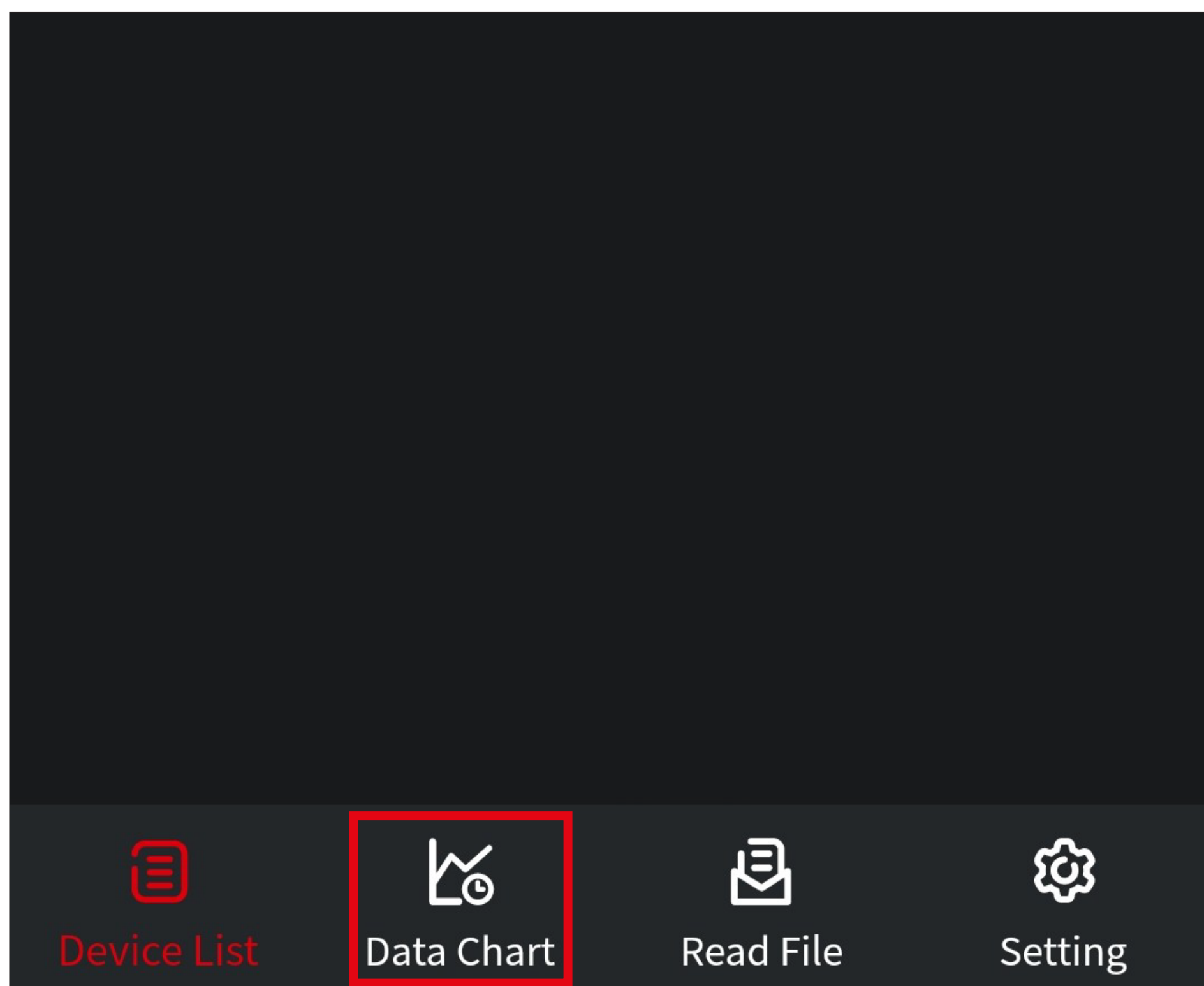
# Data chart overview

Below you will find a brief overview of the controls, functions and settings of the multimeter data chart in the app.

| | | |
|---|---|---|
| D1 | | D14 |
| D2 | FullScale(FS): 6.0000V | D13 |
| D3 | FS | D12 |
| | | D11 |
| D4 | 0 | D10 |
| | | D9 |
| | | D8 |
| | -FS    T | |
| D5 | VC8xx_1 | D7 |

| NO. | Function | Value | Unit | Time |
|---|---|---|---|---|
| 90 | DC | 0.1758 | V | 22.12.11 18:53:44 |
| 91 | DC | 0.0368 | V | 22.12.11 18:53:44 |
| 92 | DC | -0.0695 | V | 22.12.11 18:53:45 |
| 93 | DC | -0.0630 | V | 22.12.11 18:53:45 |
| 94 | DC | 0.0522 | V | 22.12.11 18:53:46 |
| 95 | DC | 0.1847 | V | 22.12.11 18:53:46 |
| 96 | DC | 0.2160 | V | 22.12.11 18:53:46 |
| 97 | DC | 0.1339 | V | 22.12.11 18:53:47 |
| 98 | DC | -0.0135 | V | 22.12.11 18:53:47 |
| 99 | DC | -0.0793 | V | 22.12.11 18:53:48 |
| 100 | DC | -0.0374 | V | 22.12.11 18:53:48 |

D6

Device List    Data Chart    Read File    Setting

**D1** Saves the current data to a file.

**D2** Displays the current range of the multimeter.

**D3** Pauses or resumes the current measurement.

**D4** Graphic display.

**D5** This item enables you to select the multimeter whose readings are to be displayed under **D6** (when multiple meters are connected to the app).

**D6** Current measurements or data transmitted from a saved file.
Swipe up or down to display more values.

**D7** Hides the graphic display and fills the whole display with measurements (**D6**).

**D8** Scales the graphic display (**D4**). Scales down vertically.

**D9** Scales the graphic display (**D4**). Scales up vertically.

**D10** Scales the graphic display (**D4**). Resets the scaling to default.

**D11** Scales the graphic display (**D4**). Scales down horizontally.

**D12** Scales the graphic display (**D4**). Scales up horizontally.

**D13** This item enables you to select the multimeter whose measuring line is to be shown in the graphic display (**D4**) (when multiple meters are connected to the app).

**D14** Deletes the current data. Measurement data transmission starts from 1.
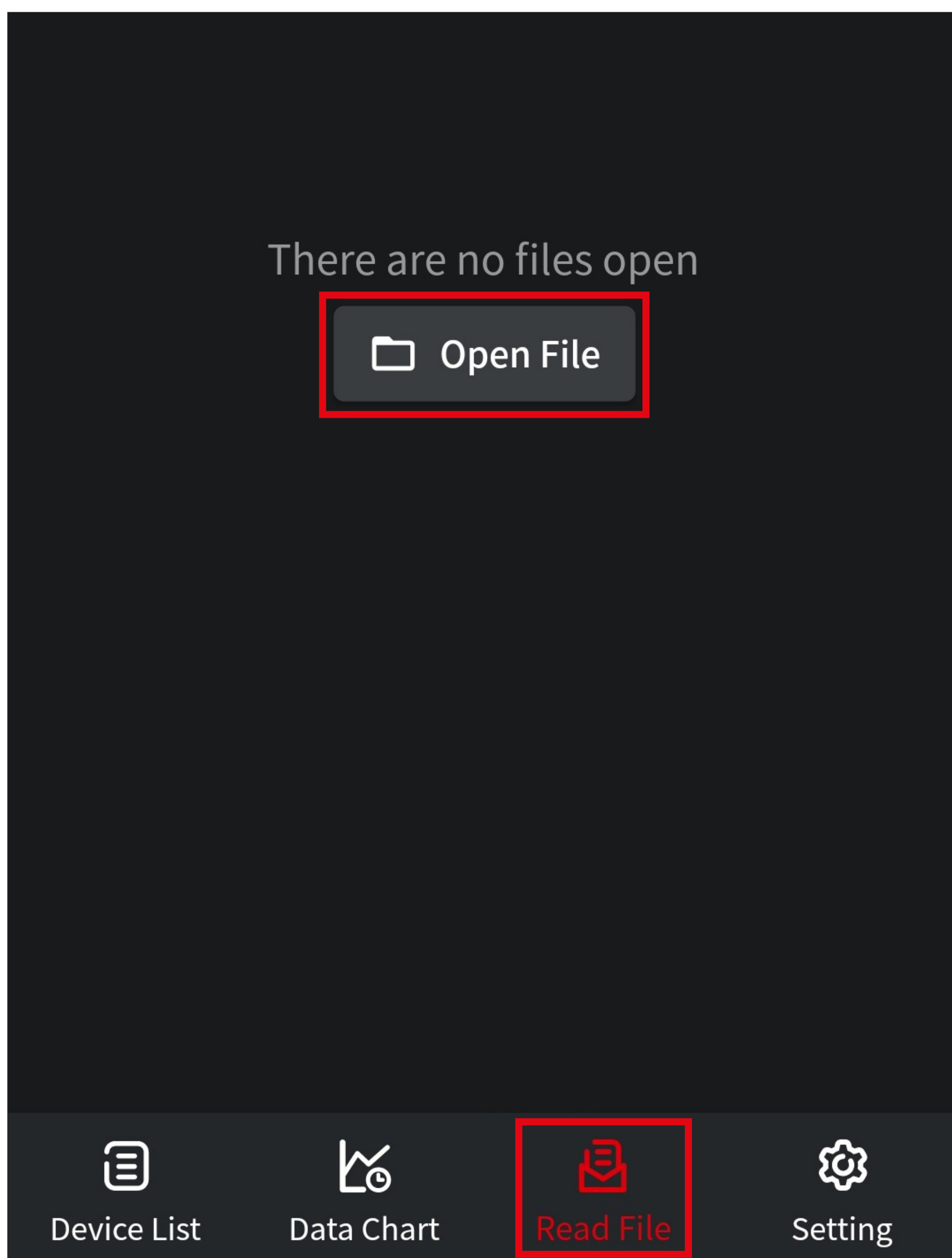
# Saving the measurement data

- Tapping the **D1** button in the top left corner of the data chart page (see the previous screenshot) saves the currently transmitted readings to a file on your smartphone.

# Retrieving saved measurement data from a file

> No meter must be connected via Bluetooth® to open saved measurement data in the data chart.

- To open saved measurement data in the data chart, tap on "**Read File**" (**A6**) at the bottom (lower red rectangle in the screenshot).

- Then tap on "**Open File**" (upper red rectangle in the screenshot).

- From here, tap on "**Online record files**" (middle red rectangle in the screenshot).

- Then select the desired data file by tapping on it (lower red rectangle in the screenshot).
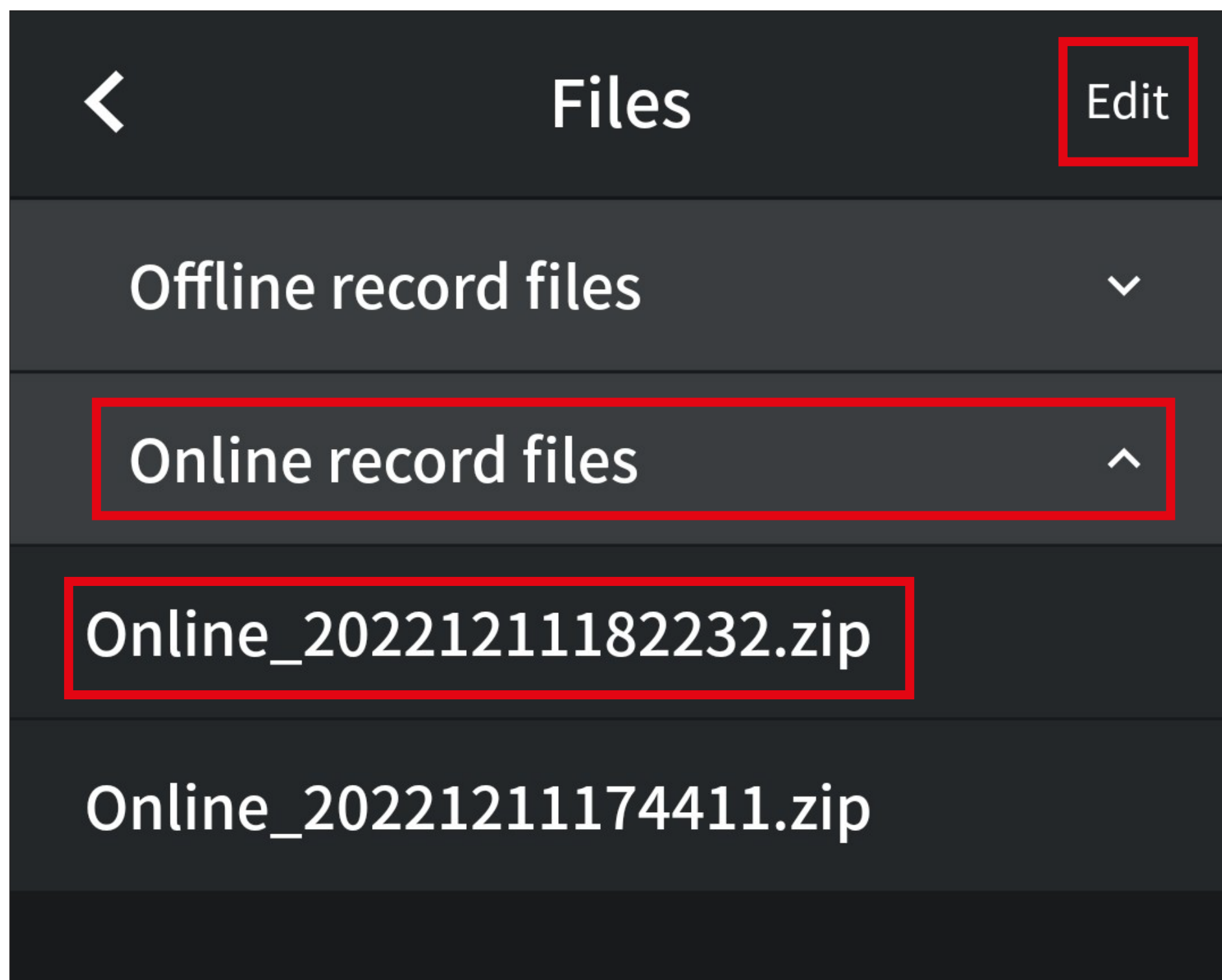


From here, you can retrieve measurement data stored offline in addition to those stored online.

Please refer to the chapter "Using the offline recording function".

- You can also delete or share the data file on this page by tapping the "**Edit**" button in the top right corner (upper red rectangle in the screenshot).

- You can then select the desired files or categories and delete or share them as appropriate.

- Tap on "**Load data**" to retrieve the previously selected file.

- Use the other 4 buttons (in the order shown in the screenshot) to share the selected file, rename the file (by changing the name as desired and tapping on "Save" at the top) and delete the file (by confirming the selection).
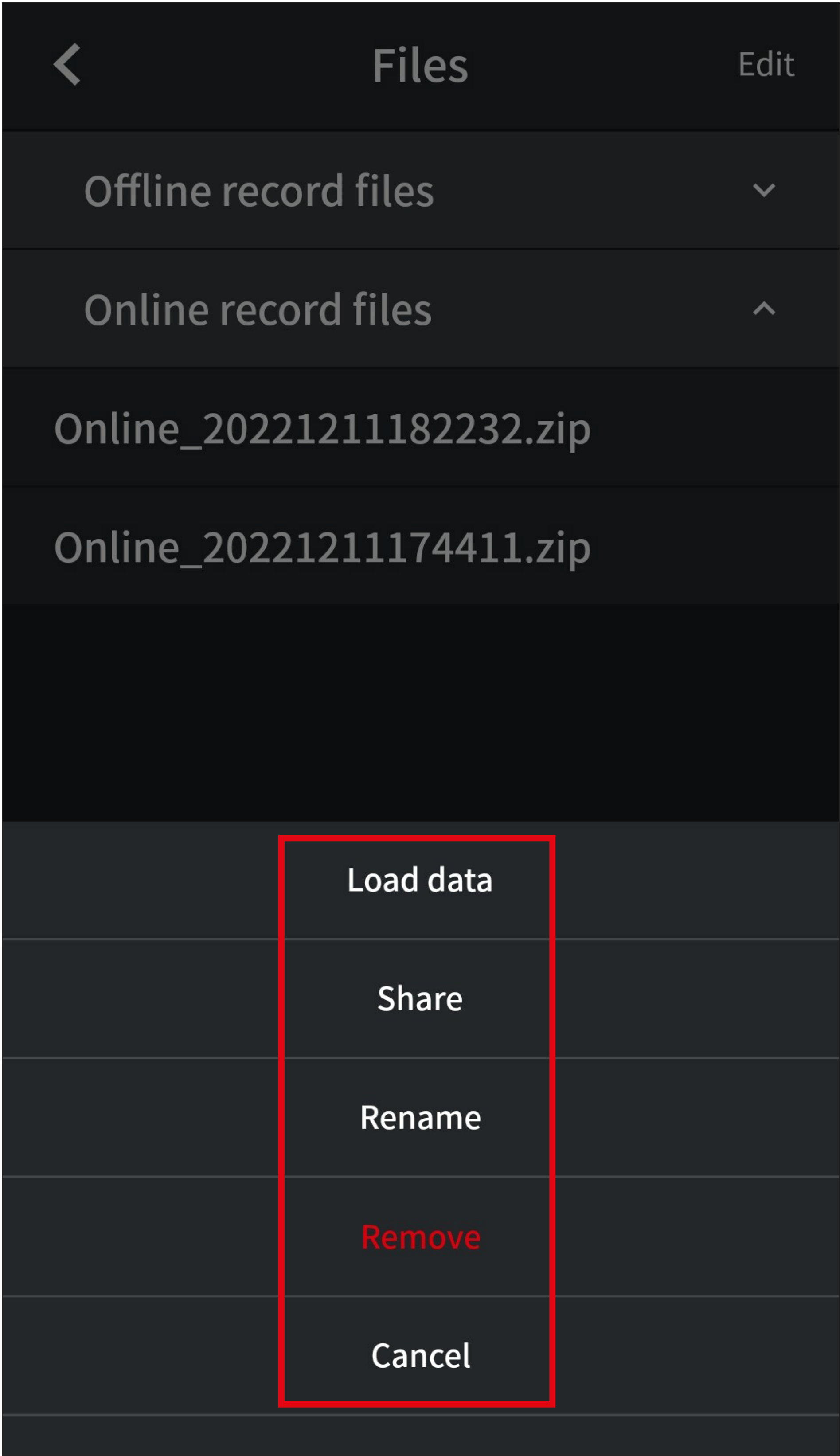
- The data from the previously selected file are now shown in the data chart. The procedure is the same as for the online data chart.

- Tap the folder symbol in the top left corner to select another file.

- To exit this view, use one of the two buttons in the bottom left corner.
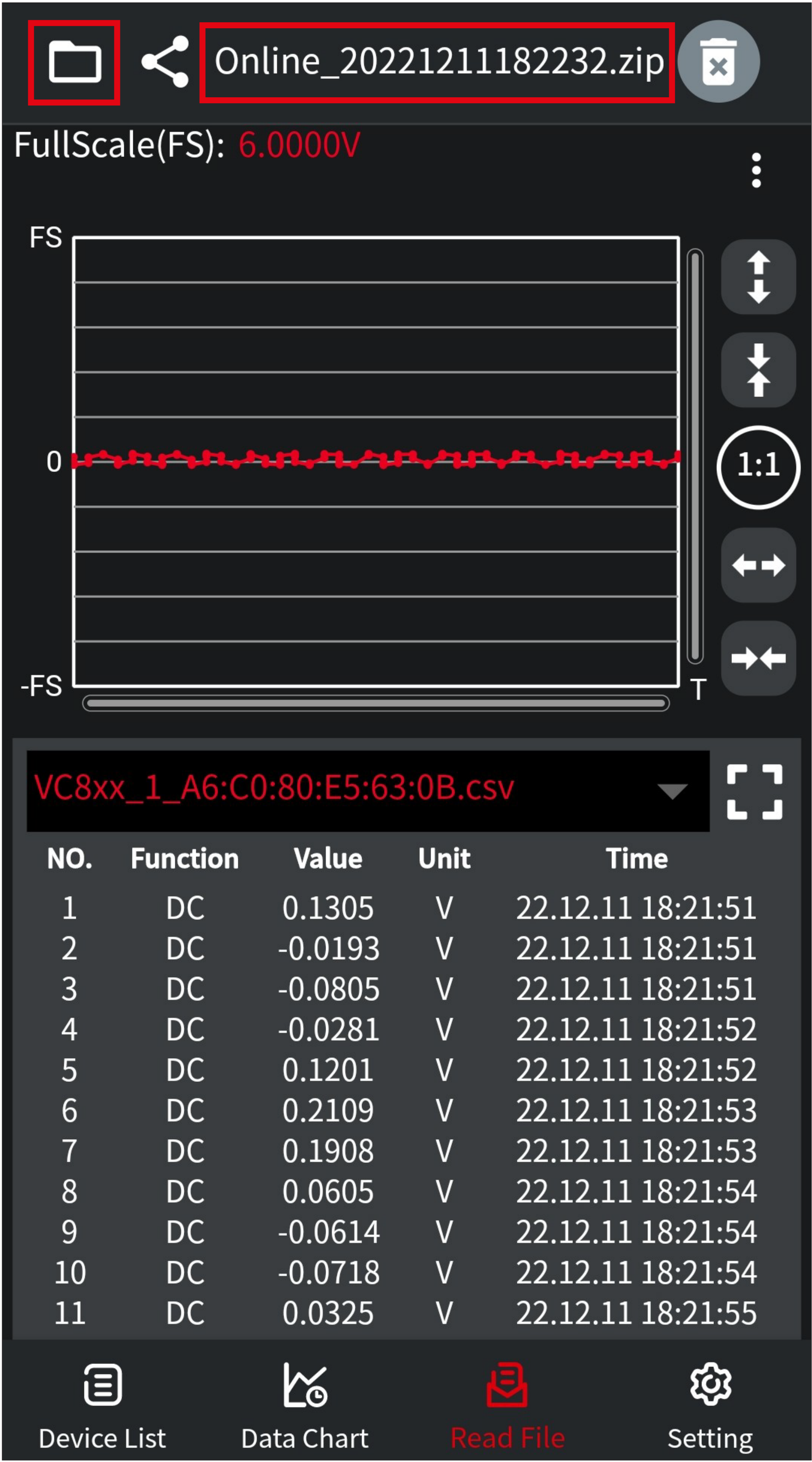
# App settings (A6)

- From the app's main page, tap the rightmost button (**A6**) to open the basic settings of the app.

**E1** Data Chart record interval       <0.5s >

**E2** Data Chart record count       100 >

**E3** Auto save

**E4** Period       0H : 5M : 0s >

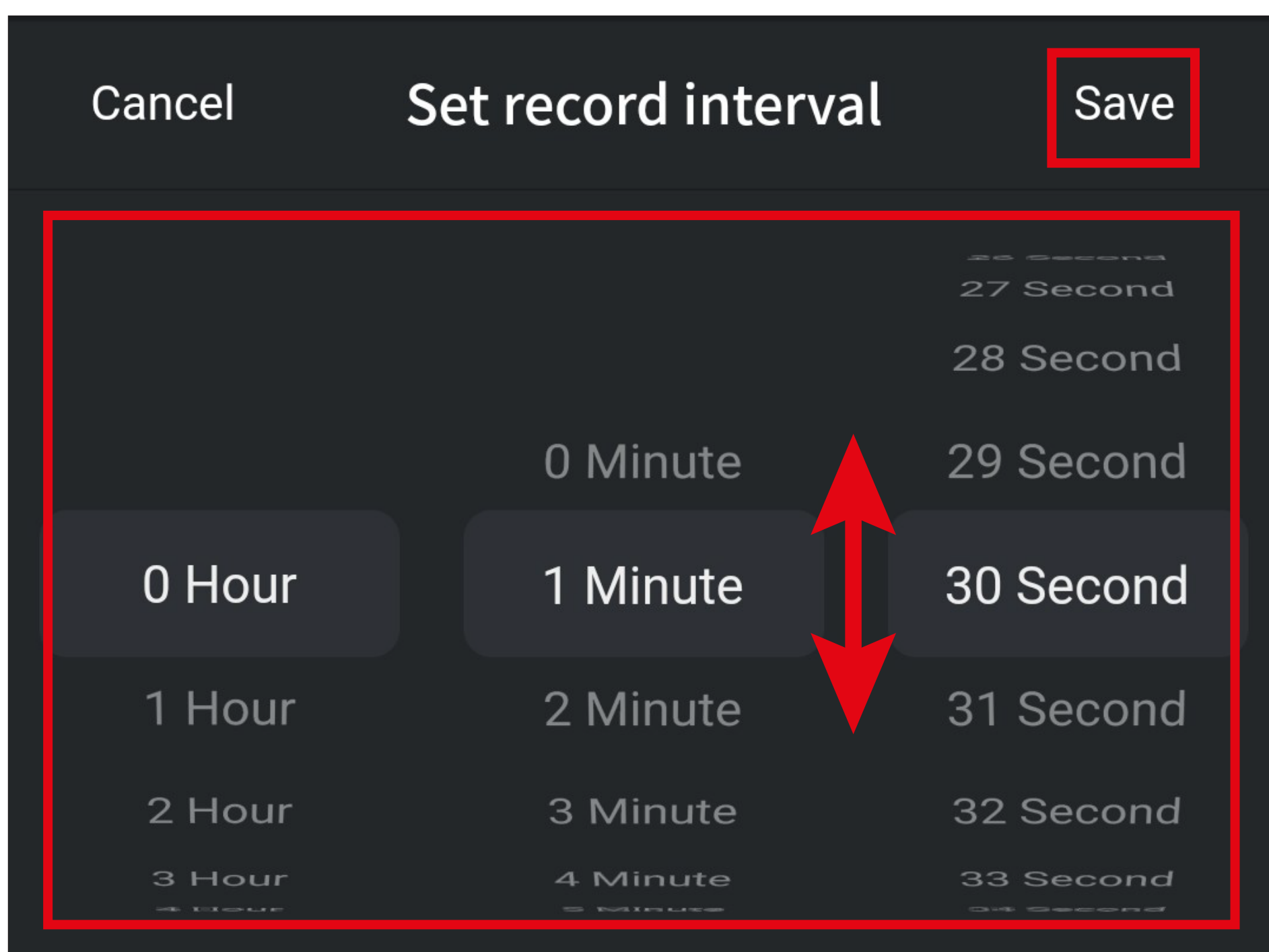**E5** About       >

**E6** Exit       >

Setting

Device List     Data Chart     Read File     Setting

**E1** This item enables you to configure the recording interval for the data chart.
The range can be set between 1S and 1H:59M:59S.
Tap the button and then set the hours, minutes and seconds by swiping up and down. Tap on "**Save**" to save changes.



**E2** This item enables you to set the number of readings. You can select from 100 to 3000 readings. The setup process is the same as for the recording interval.

**E3** This slide switch enables and disables automatic saving. When enabled, the readings transmitted online are automatically saved to a file at a preset interval (see **E4**).

**E4**   This item enables you to configure the time interval for automatic storage (**E3**). You can set the range from 1S to 1H:59M:59S.
The setup process is the same as for the recording interval.

**E5**   This item displays information about the version of the app.

**E6**   Tap this button to close the app.

# Using the offline recording function

Supported multimeters should not necessarily be connected to the app to record measurement data that will subsequently be transmitted to the app.

The app enables you to configure and launch the recording with the multimeter connected via Bluetooth®.

Measurement data are then recorded with the multimeter disconnected from the app and also temporarily stored in the multimeter.

When the multimeter is reconnected to the app, the recording can be stopped and the data transmitted to the app.

If the multimeter batteries are low, make sure you change them first before recording the measurement data offline. Failure to do so may result in the function not working properly.

# Launching the offline measurement

- Connect the multimeter via Bluetooth® and open the control page.

- You can configure and launch the recording of the measurement data by tapping the "**Start to record**" button (**B8**) (red rectangle).
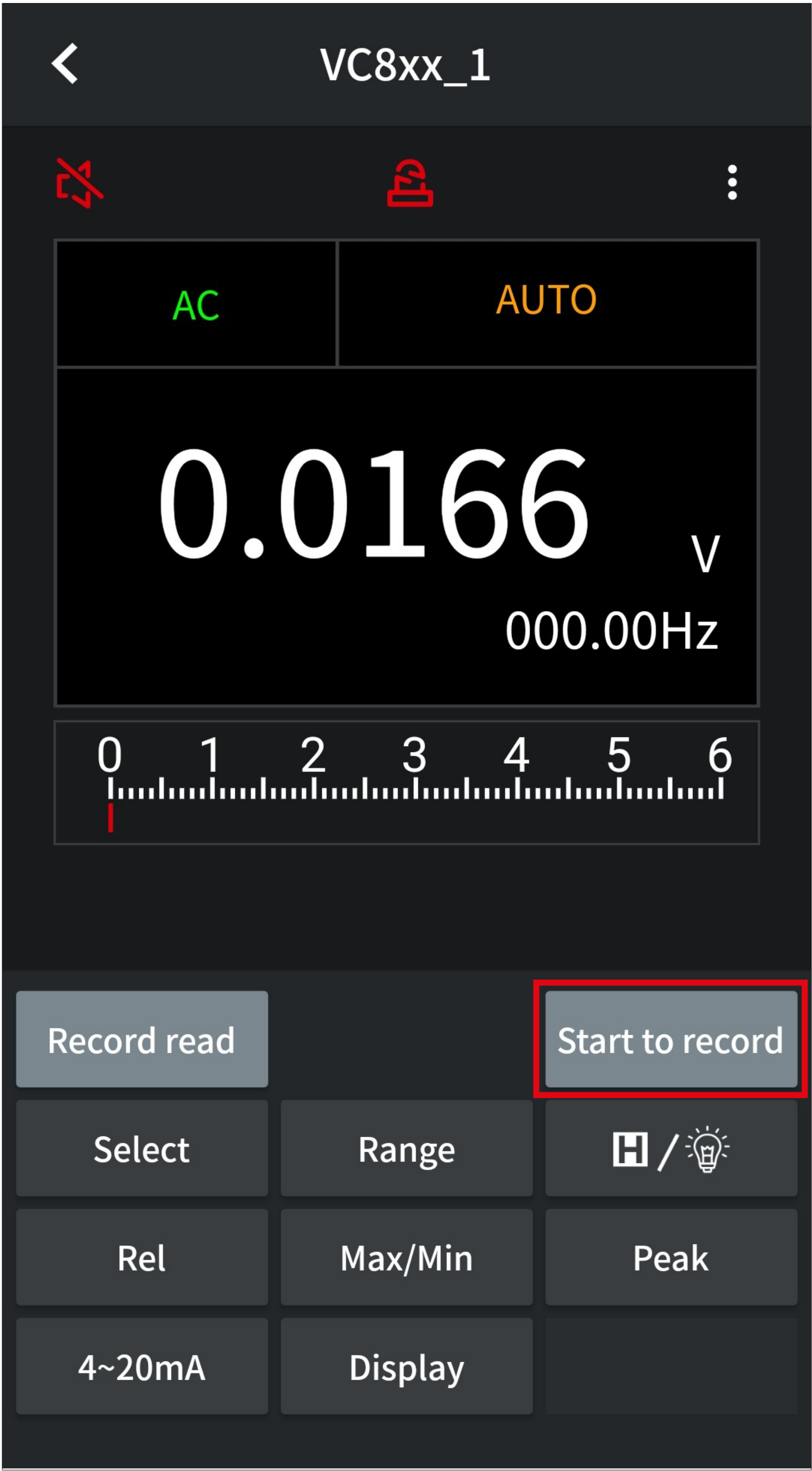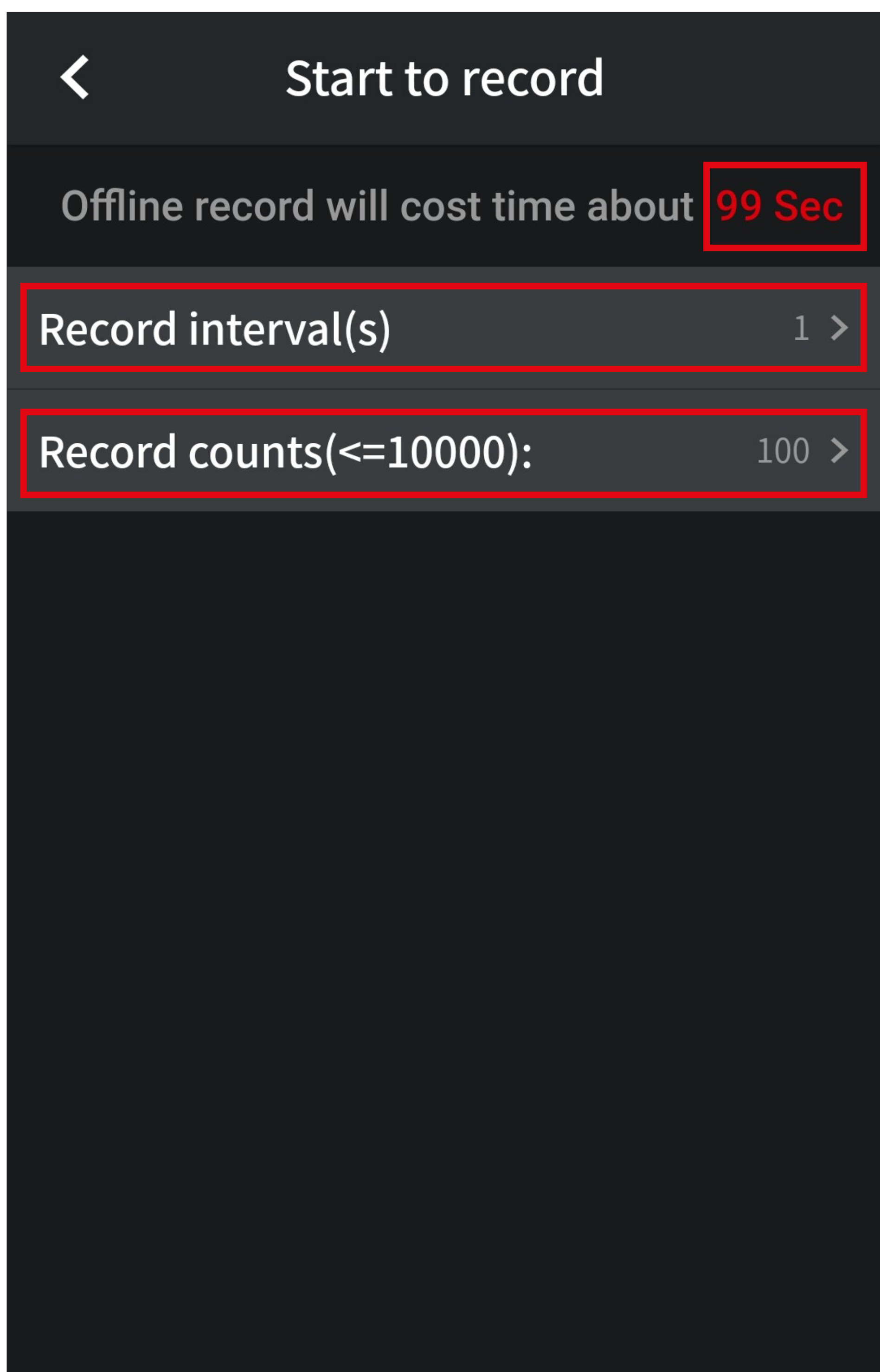
- From here, you can set the interval for the measurement data recording in seconds and the number of readings.

  These two values add up to the maximum duration of the offline measurement. The duration is displayed at the top (see the upper small rectangle in the screenshot).

- You can now set the interval by tapping the "**Record interval(s)**" button.

- Enter the interval in seconds. "1" means that a measurement is recorded every second.
- Tapping the left arrow at the top takes you back to the previous page.
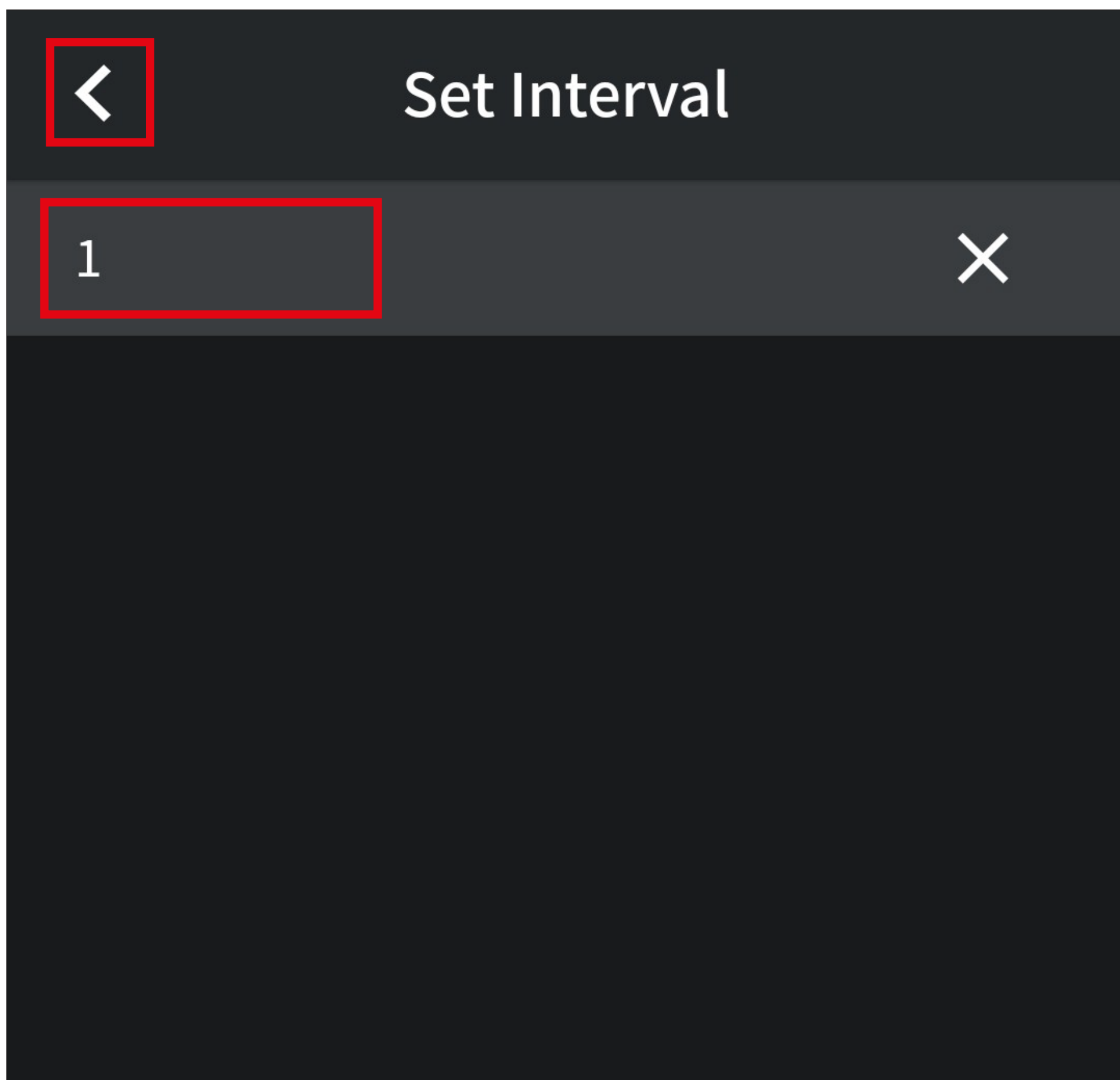


- Then, tap the "**Record counts(<=10000)**" button (see the previous page) to set the number of readings.

  Up to 10000 readings can be recorded.
- The procedure is the same as for setting the interval.

- After configuring all settings, tap the button in the bottom centre to launch the offline measurement.

- The multimeter will be automatically disconnected from the app, and the measurement will start.
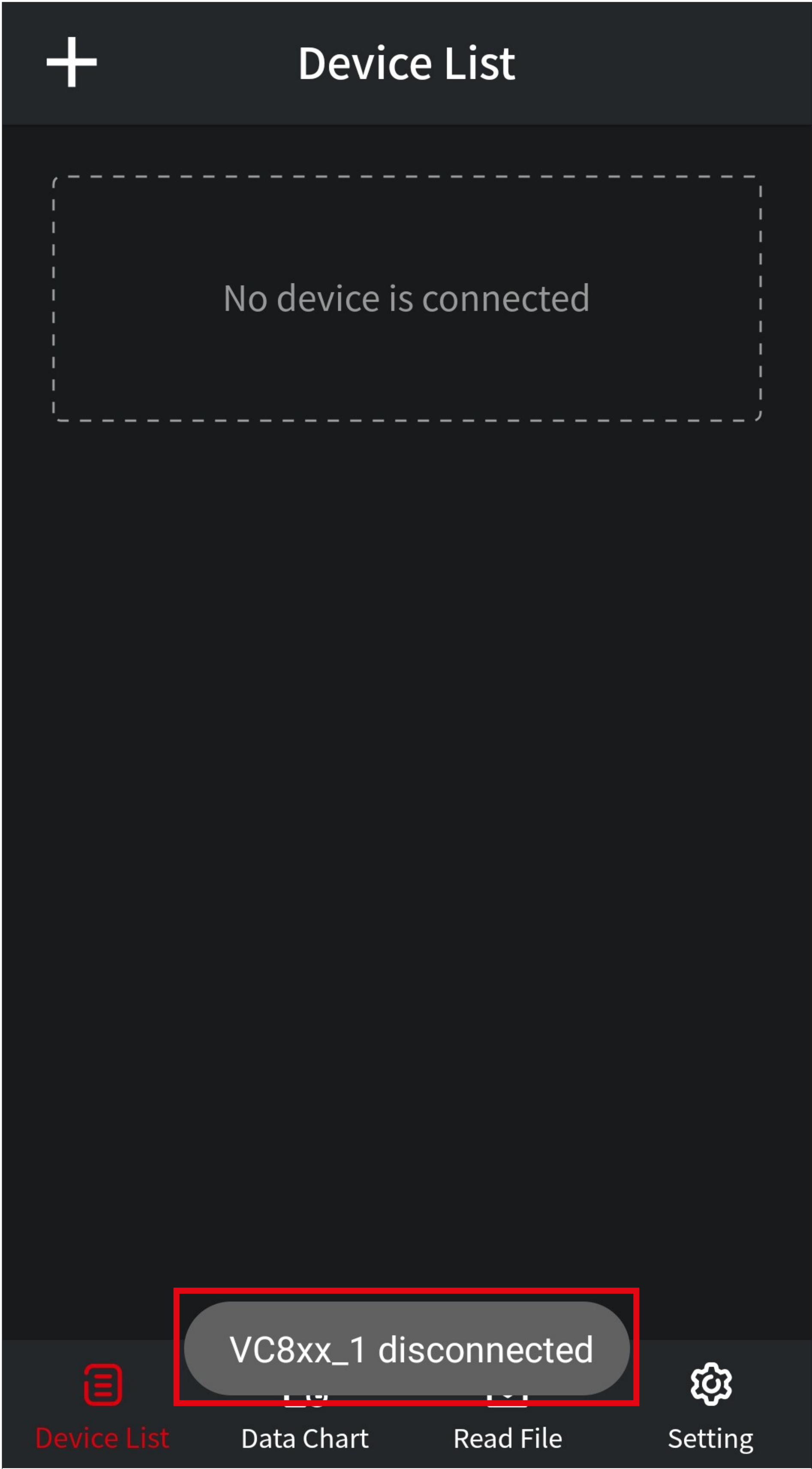
# Aborting the offline measurement

- When attempting to reconnect the multimeter to the app before the preset offline measurement is complete, you first need to abort the process before reconnecting.

- Tap the button at the top if you wish to continue the measurement and not connect to the app.

- Tap the button at the bottom if you wish to connect to the app and thus abort the measurement.
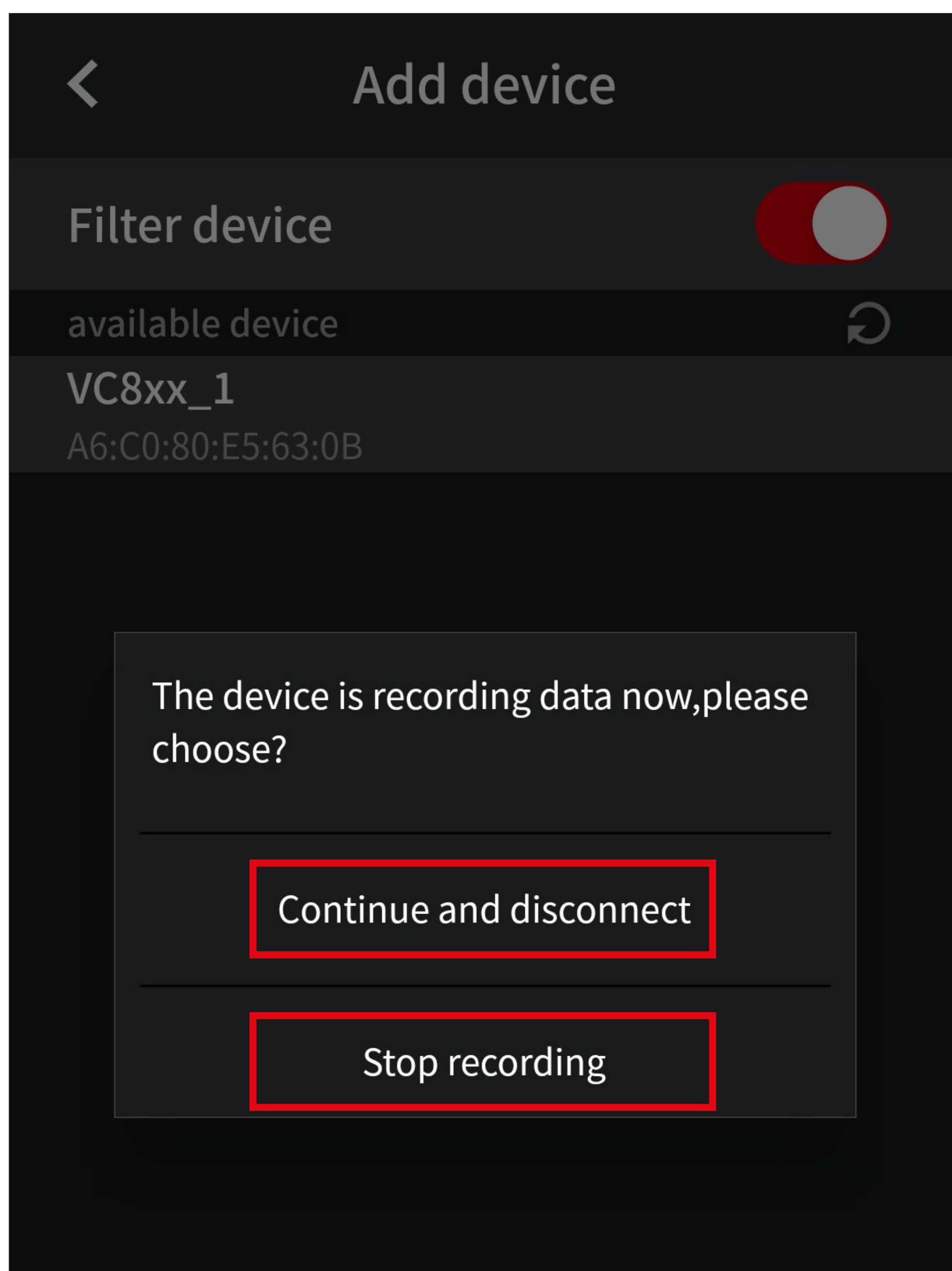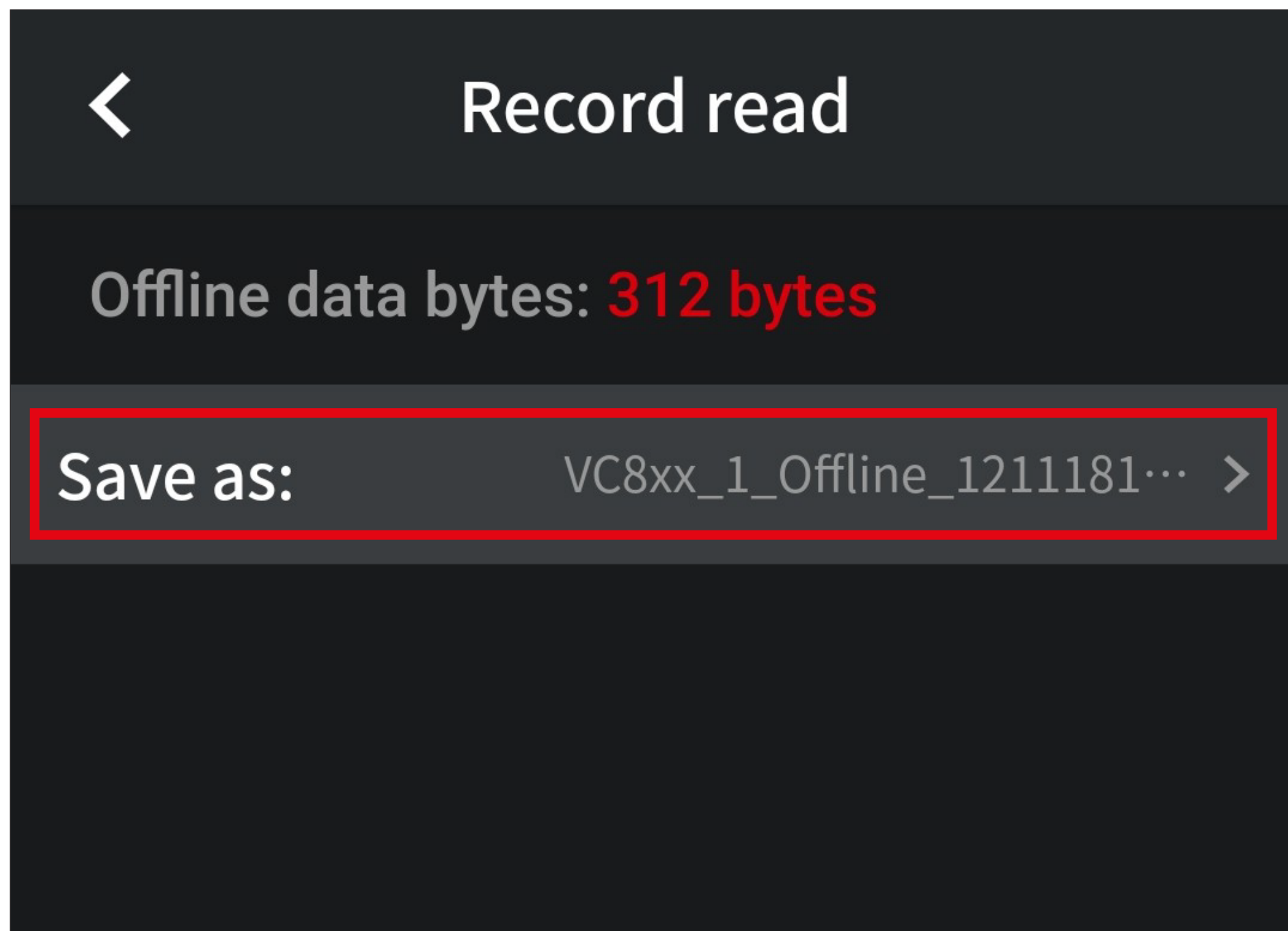
# Reading out and evaluating the measurement data

- Connect the multimeter via Bluetooth® and open the control page.

- You can read out the offline measurement data by tapping the "**Record read**" button (**B6**) (red rectangle in the screenshot).
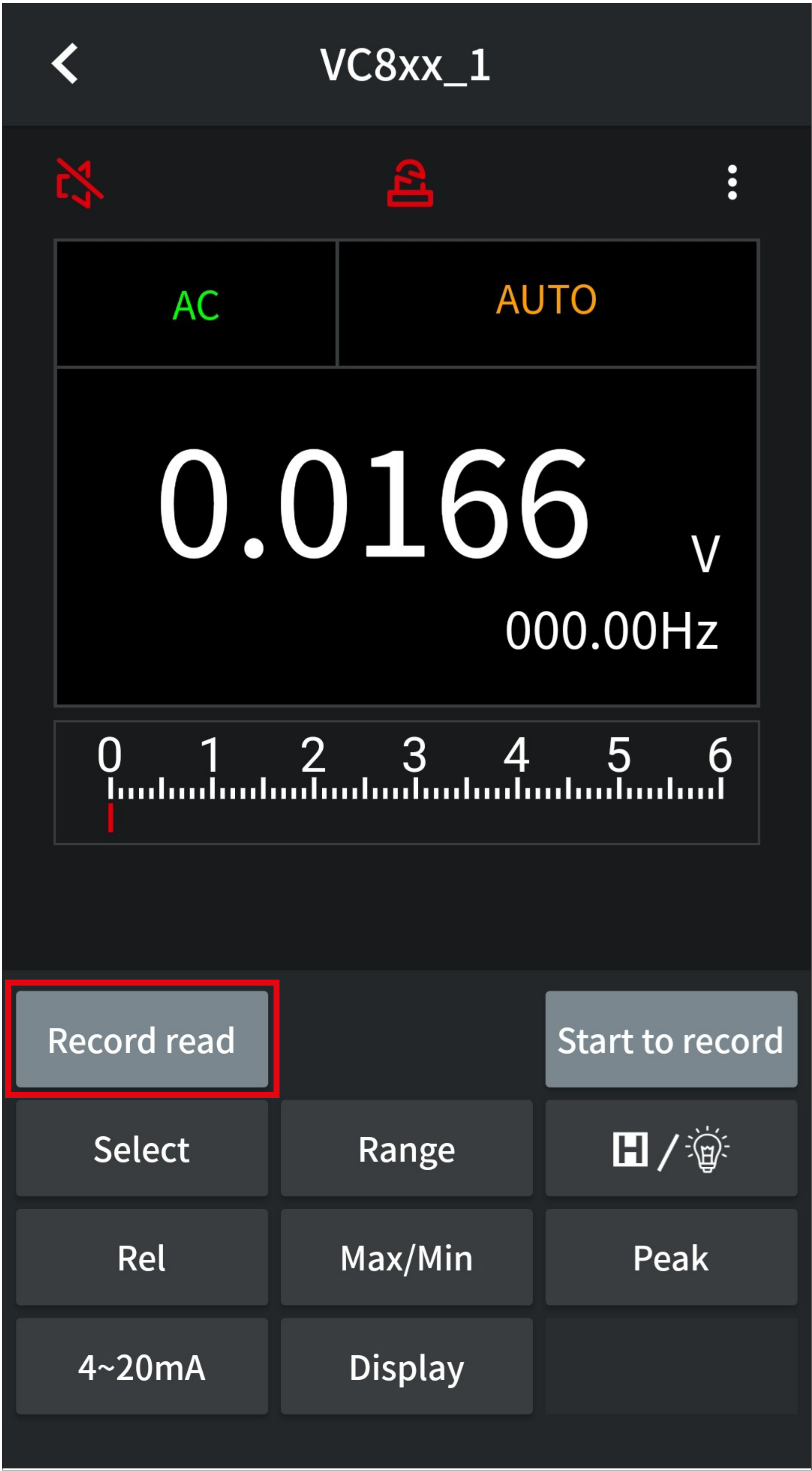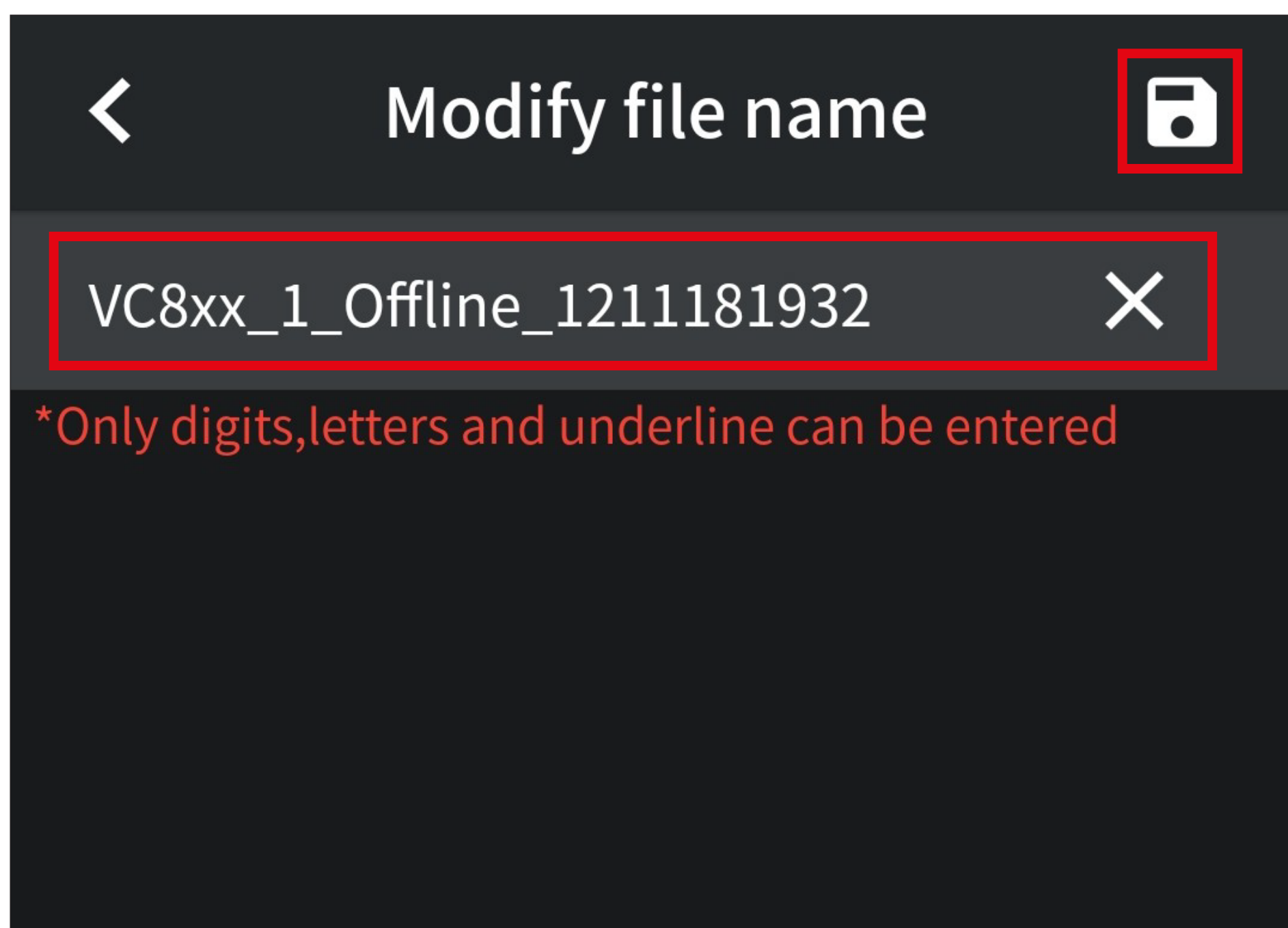
- Tap the button "**Save as:**" to select the file name under which the measurement data are to be saved on your smartphone.
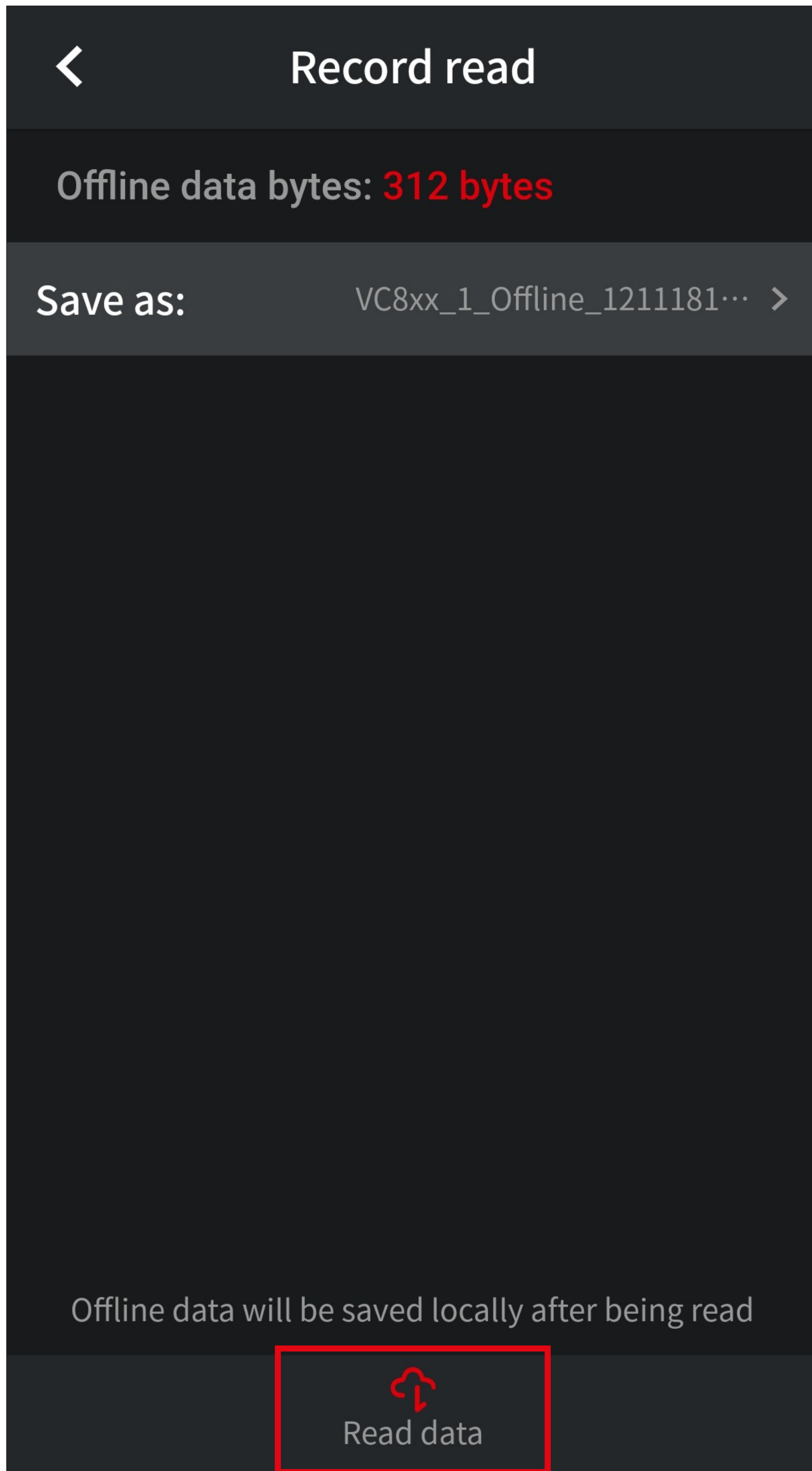


- Change the suggested file names as desired and then tap the save icon in the top right corner to save changes.
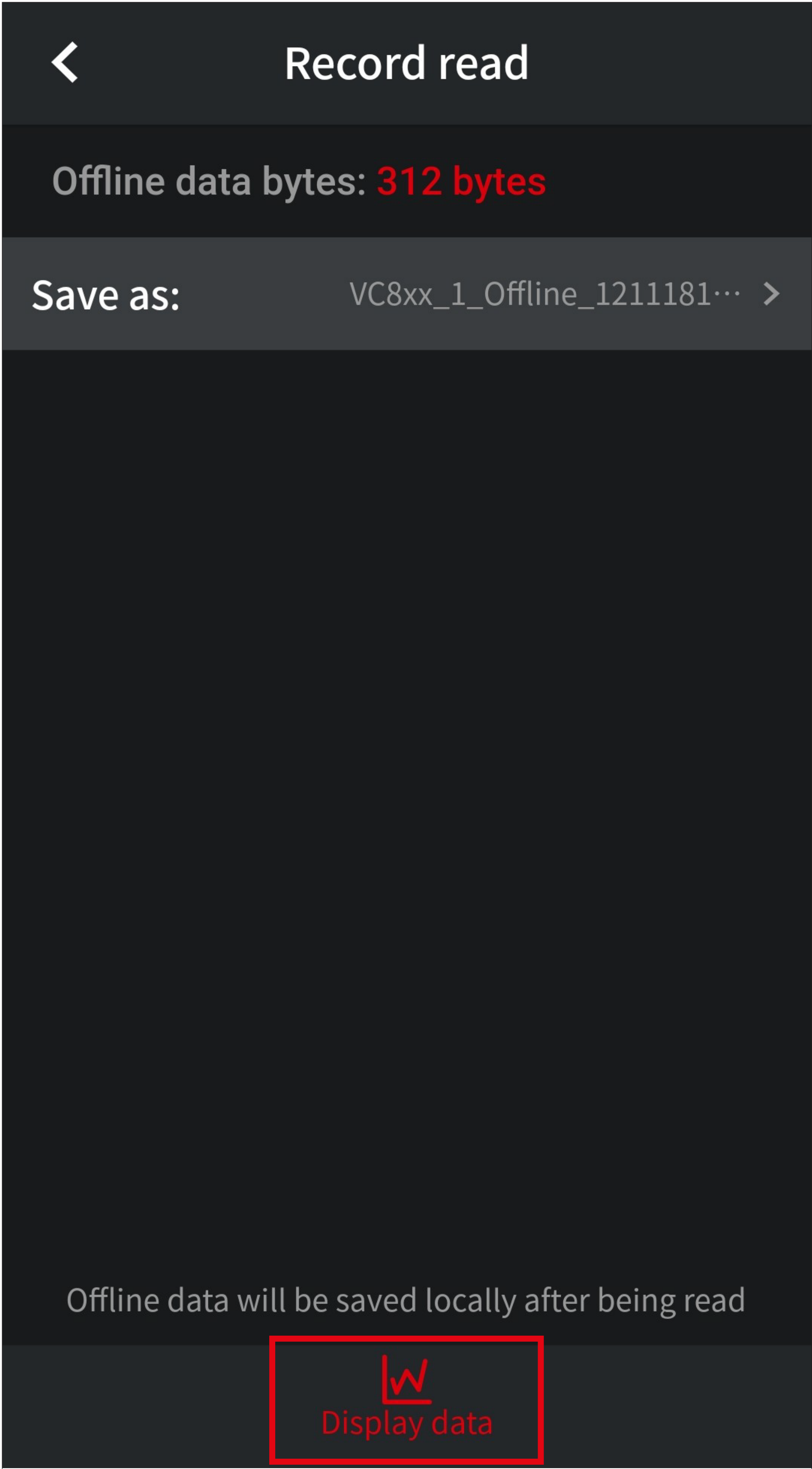
- Tap the "**Read data**" button in the bottom centre to read out the offline measurement data from the multimeter and then save them to a ZIP file on your smartphone.

- Tapping the "**Display data**" button in the bottom centre displays the currently saved measurements in chart mode.



If you wish to view the data later, see the chapter "Retrieving saved measurement data from a file".

- If you had previously tapped the "**Display data**" button, the offline measurements will be displayed in chart mode.

- The procedure is almost identical to the live view. For more information, see the chapter "Data chart overview".



FullScale(FS): 6.0000V

VC8xx_1_Offline_1211181932.zip

VC8xx_1_Offline_1211181932.csv

| NO. | Function | Value | Unit | Time |
|-----|----------|--------|------|------------------|
| 1 | DC | 0.0984 | V | 22.12.11 17:58:43 |
| 2 | DC | 0.0202 | V | 22.12.11 17:58:44 |
| 3 | DC | -0.0293 | V | 22.12.11 17:58:45 |
| 4 | PF | 0.1532 | | 22.12.11 17:58:46 |
| 5 | DC | 0.0000 | V | 22.12.11 17:58:47 |
| 6 | DC | 0.1320 | V | 22.12.11 17:58:48 |
| 7 | DC | -0.0788 | V | 22.12.11 17:58:49 |
| 8 | DC | 0.1734 | V | 22.12.11 17:58:50 |
| 9 | DC | -0.0442 | V | 22.12.11 17:58:51 |
| 10 | DC | 0.1839 | V | 22.12.11 17:58:52 |
| 11 | DC | 0.0972 | V | 22.12.11 17:58:53 |
| 12 | DC | -0.0710 | V | 22.12.11 17:58:54 |
| 13 | DC | 0.1248 | V | 22.12.11 17:58:55 |