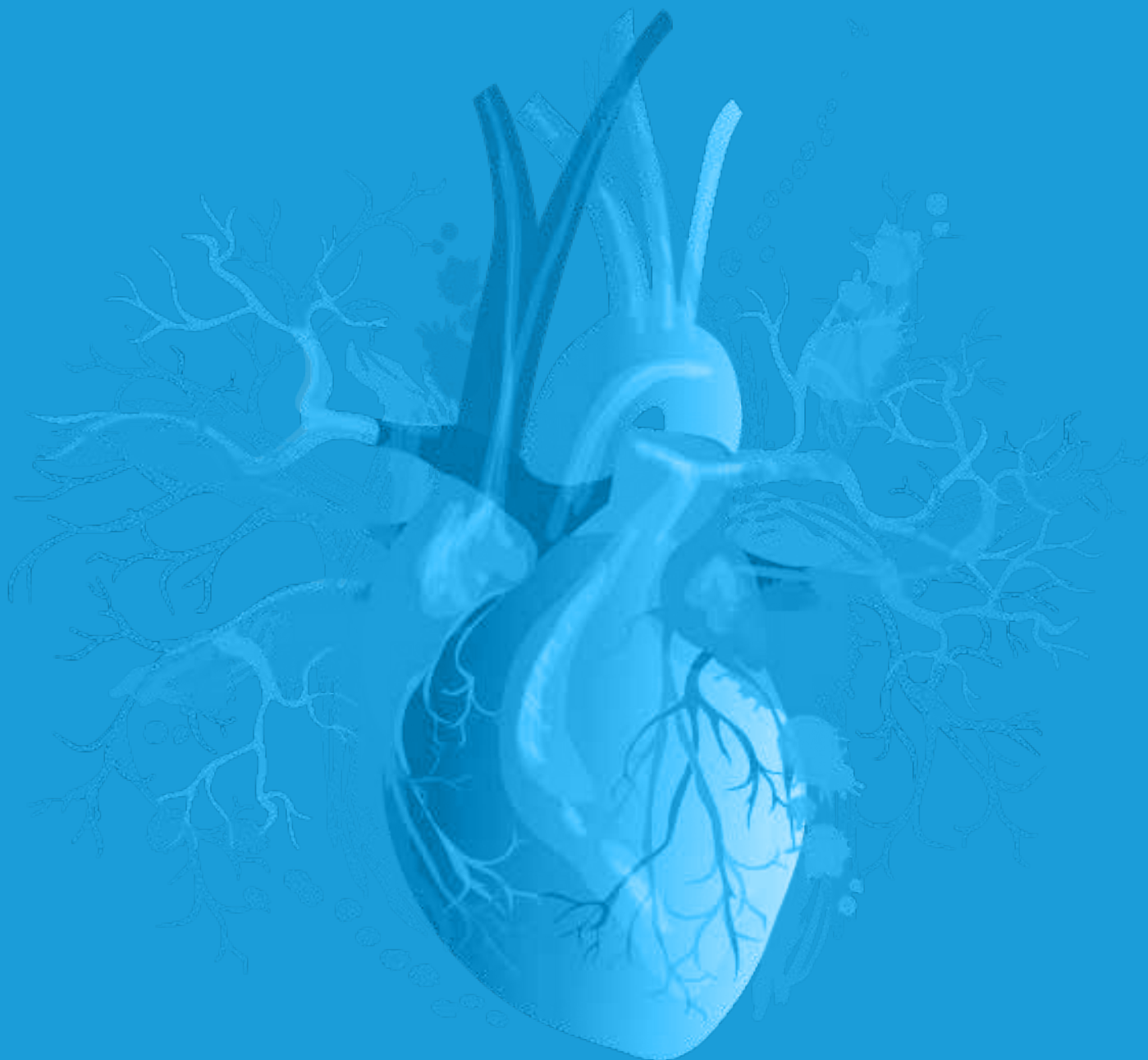


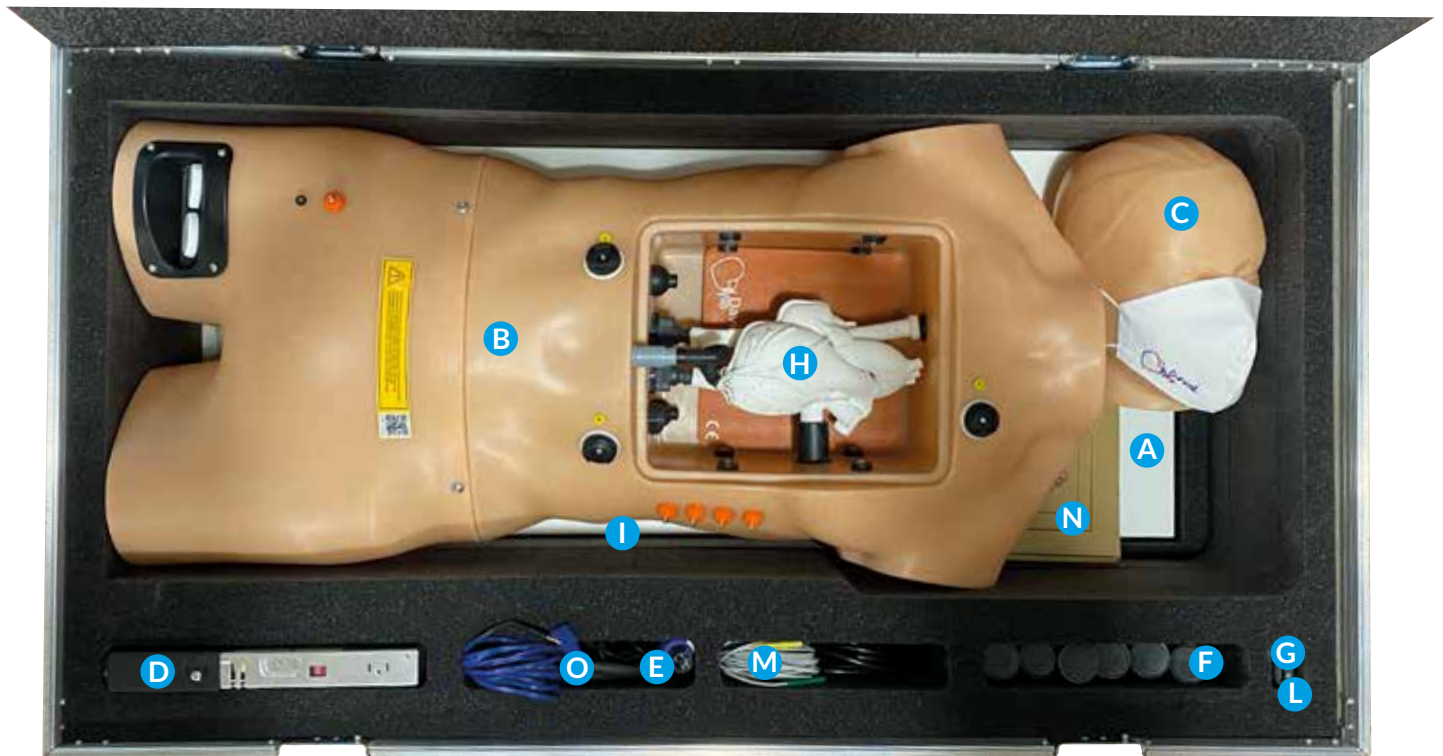
USER MANUAL

Ep-David IC signals



PACKING GUIDE

Wooden packaging



LIST OF COMPONENTS:

- A** Ep-David table (#1)
- B** Ep-David (#1)
- C** Ep-David head (#1)
- D** Power Supply (#1)
- E** Power Supply Cables (#2):
Cable Ep-David-Power Supply (E1) and Cable Power Supply- AC outlet (E2)
- F** Table legs (#6)
- G** Syringe (#1)
- H** 3D heart model (#1)
- I** External pump (to use to empty the Ep-David) (#1)
- L** Atrium septum inserts (#10: #5 normal and #5 hypertrophic)
- M** Carto patches cables (#6) and ground cable (#2)
- N** Tablet
- O** Black ground cable

Pelicase packaging



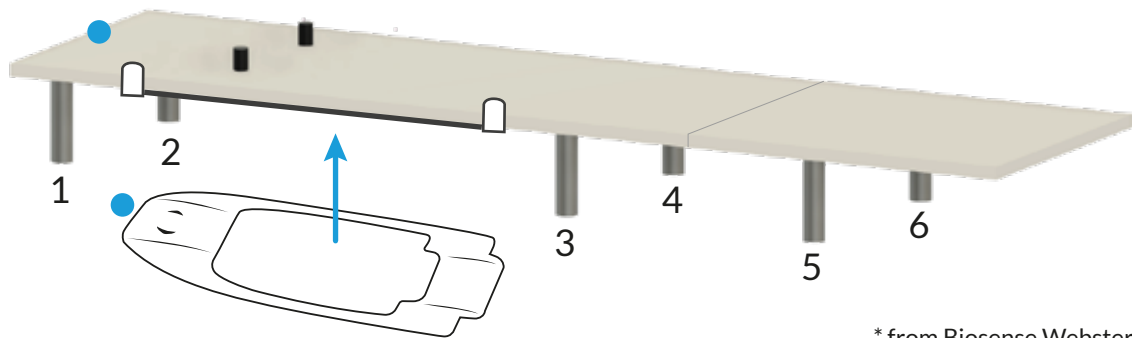
LIST OF COMPONENTS:

- A** Ep-David table (#1)
- B** Ep-David (#1)
- C** Ep-David head (#1)
- D** Power Supply (#1)
- E** Power Supply Cables (#2):
Cable Ep-David-Power Supply (E1) and
Cable Power Supply- AC outlet (E2)
- F** Table legs (#6)
- G** Syringe (#1)
- H** 3D heart model (#1)
- I** External pump
(used to empty the Ep-David) (#1)
- J** Various accessories
(Atrium septum inserts #10:
#5 normal and #5 hypertrophic, salt,
electric patch cables #6 and ground cable #2)
- K** Tablet
- L** Tablet charger
- M** Leg + heart n.2
- N** Ribs
- O** Grounding pod

Ep-David setup

SETUP

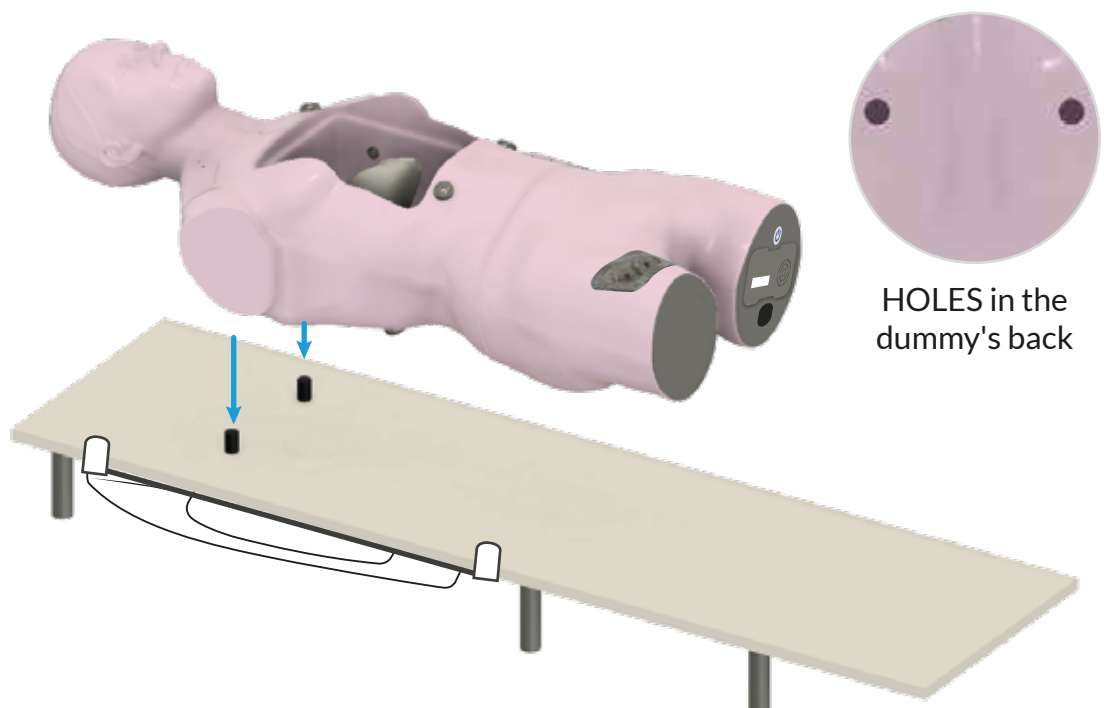
1. Open the EP David table and connect the **table legs** #1 #2 #3 #4 #5 #6. Then, place the location holder* and the **location pad*** under the table.



2. Slide the **head** in position, using the connection on the neck.



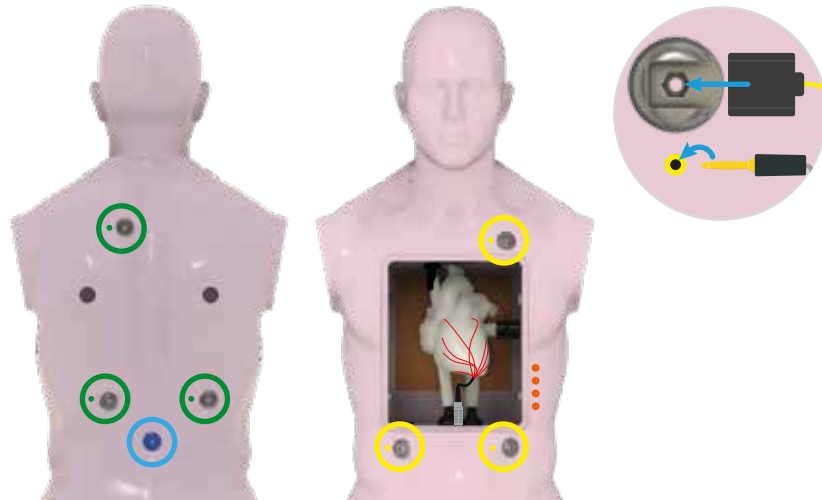
3. Place the **dummy on the table** by centering the holes on David's back with the fixing system on the table.



4. Connect all the **6 patches** (3 yellow, 3 green) to the mapping system.
Connect the **Indifferent electrode** (blue circle) to the RF Generator.

In the updated version patches cables are detachable.

On the left of body you can find **4 orange pins**, that delivers V1, V2, V3 and V4.
Connect the corresponding ECG clamps according to the traces.



5. Connect the **RL electrode of the ECG** to the **orange connector** located on the leg of the simulator.

Use the **black cable with one banana plug and one crocodile clip** to connect the David simulator to the **grounding pod**. Insert the banana plug into the grounding socket on the simulator. Attach the crocodile clip to one of the grounding points on the grounding pod.

Connect the remaining ECG limb electrodes (RA, LA, LL) to the grounding pod as well (see image 5.a). This step is essential to ensure a clean and stable signal on the ECG monitor.



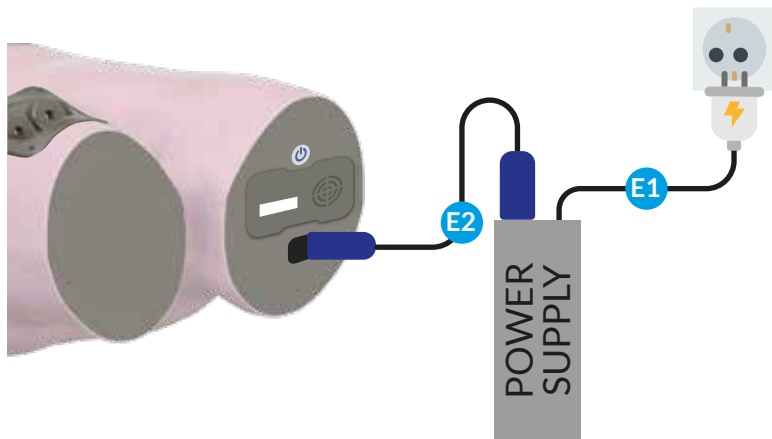
5.a image

6. Fill the EP David with:
- ~8 liters of saline solution or
 - ~8 liters of water plus ~70 gr of salt.



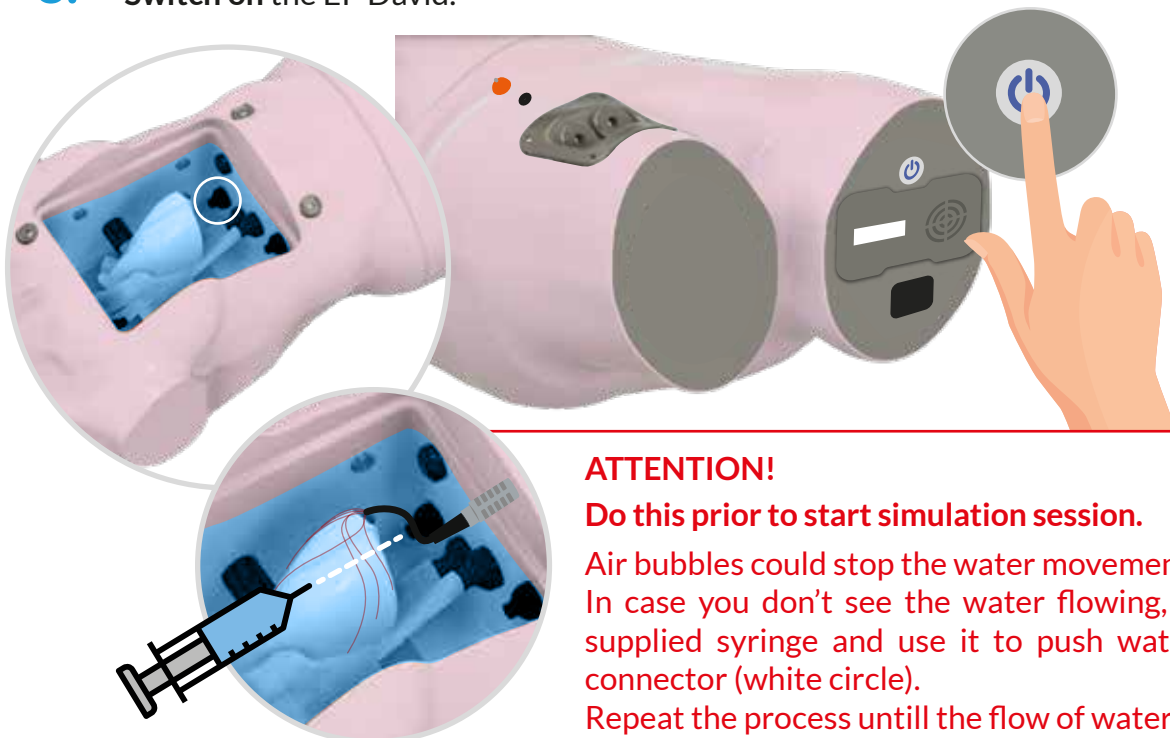
It's important to **fully submerge** the electrodes.

7. Connect the cable E1 to the AC outlet and the cable E2 to the EP David.



Warning:
Please check
the battery voltage
before connecting the power supply

8. Switch on the EP David.



ATTENTION!

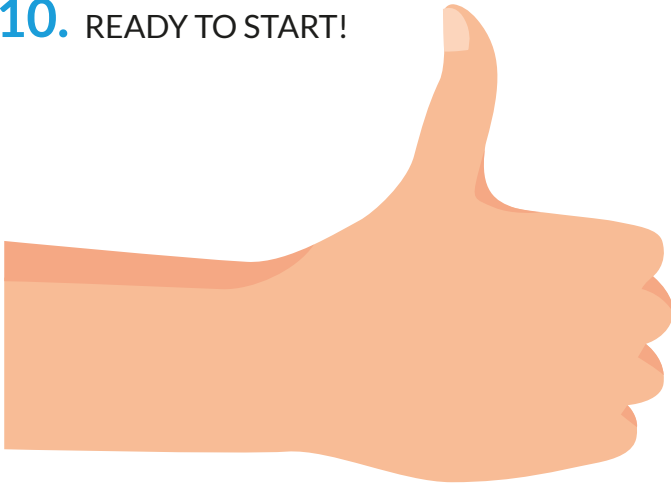
Do this prior to start simulation session.

Air bubbles could stop the water movement.
In case you don't see the water flowing, take the supplied syringe and use it to push water in the connector (white circle).
Repeat the process until the flow of water is visible.

9. Use the **2 accesses on the right leg** to insert catheters (left one for IVC and right one for retrograde/Aorta access) or the white membrane.



10. READY TO START!

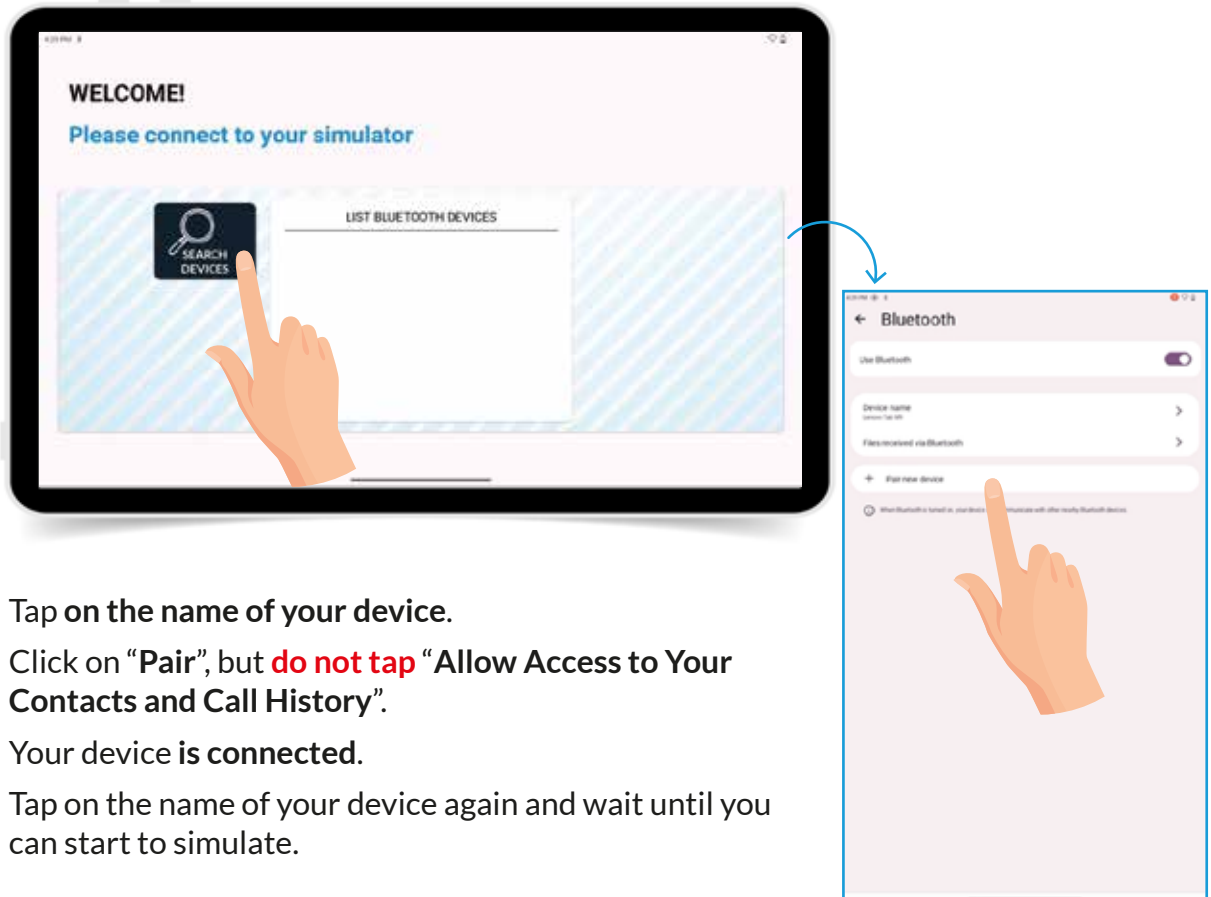


Tablet guide

TABLET GUIDE

Turn on the screen.

1. Tap on “**SEARCH DEVICES**”.
The Bluetooth screen will open automatically. Tap on “**PAIR NEW DEVICE**”.



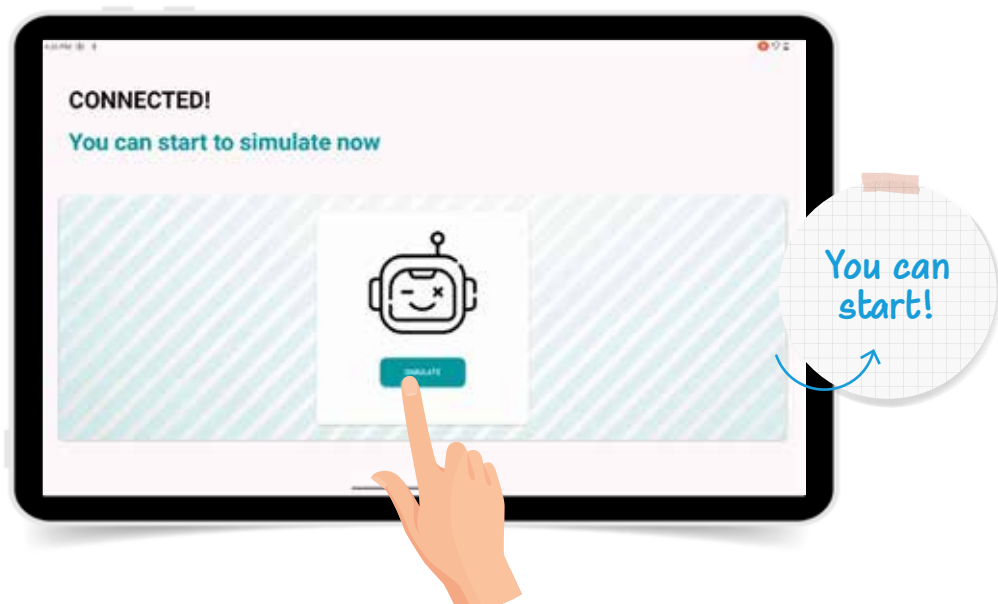
Tap on the name of your device.

Click on “Pair”, but **do not tap** “Allow Access to Your Contacts and Call History”.

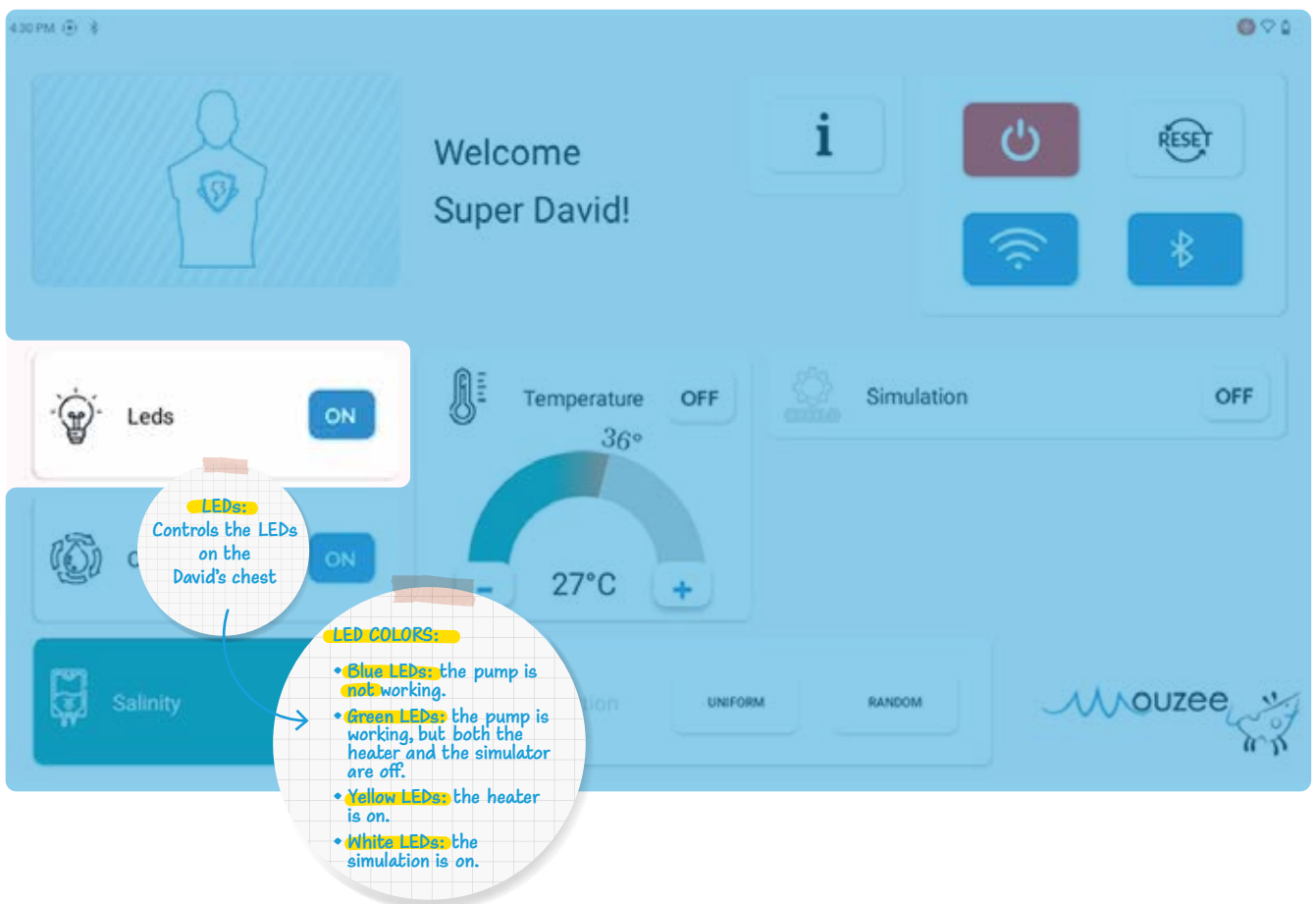
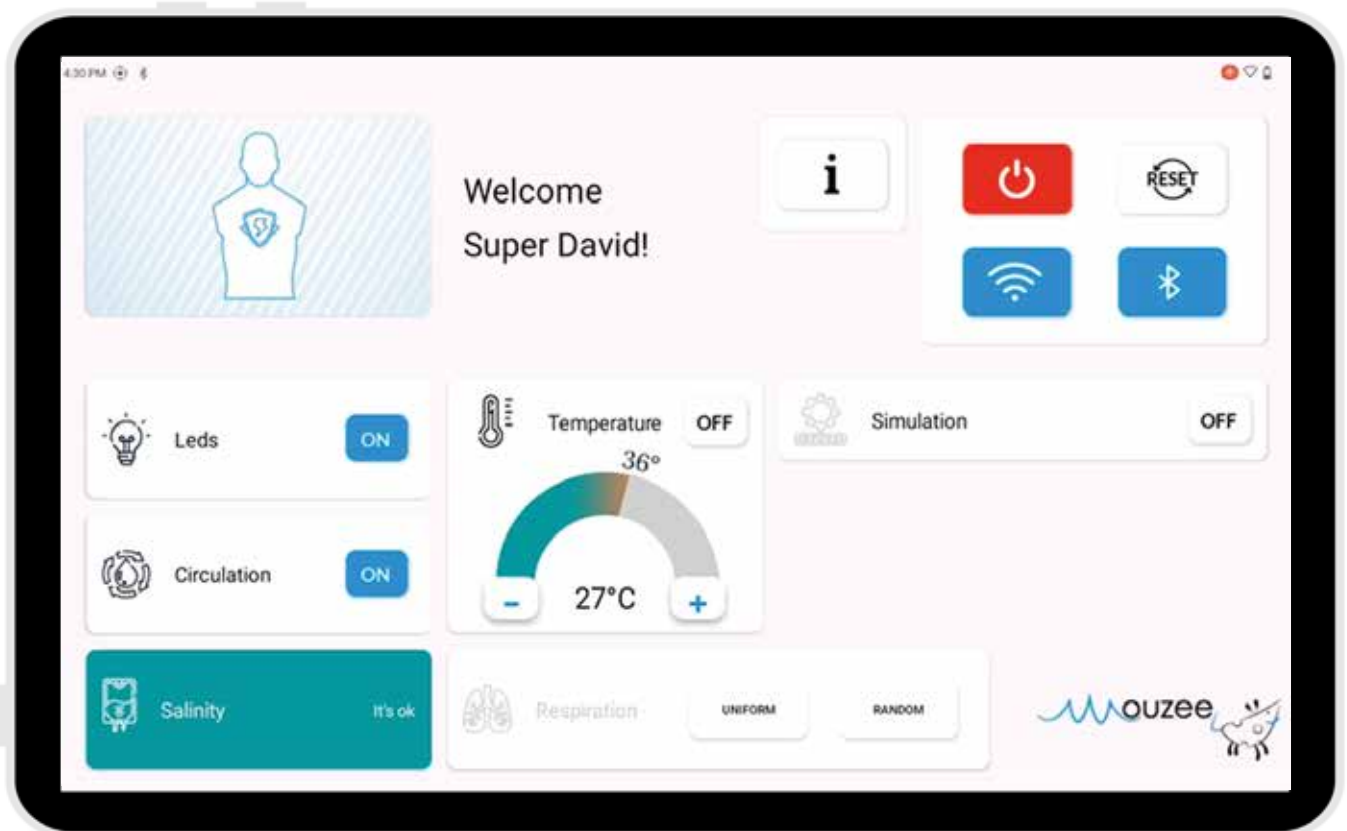
Your device is **connected**.

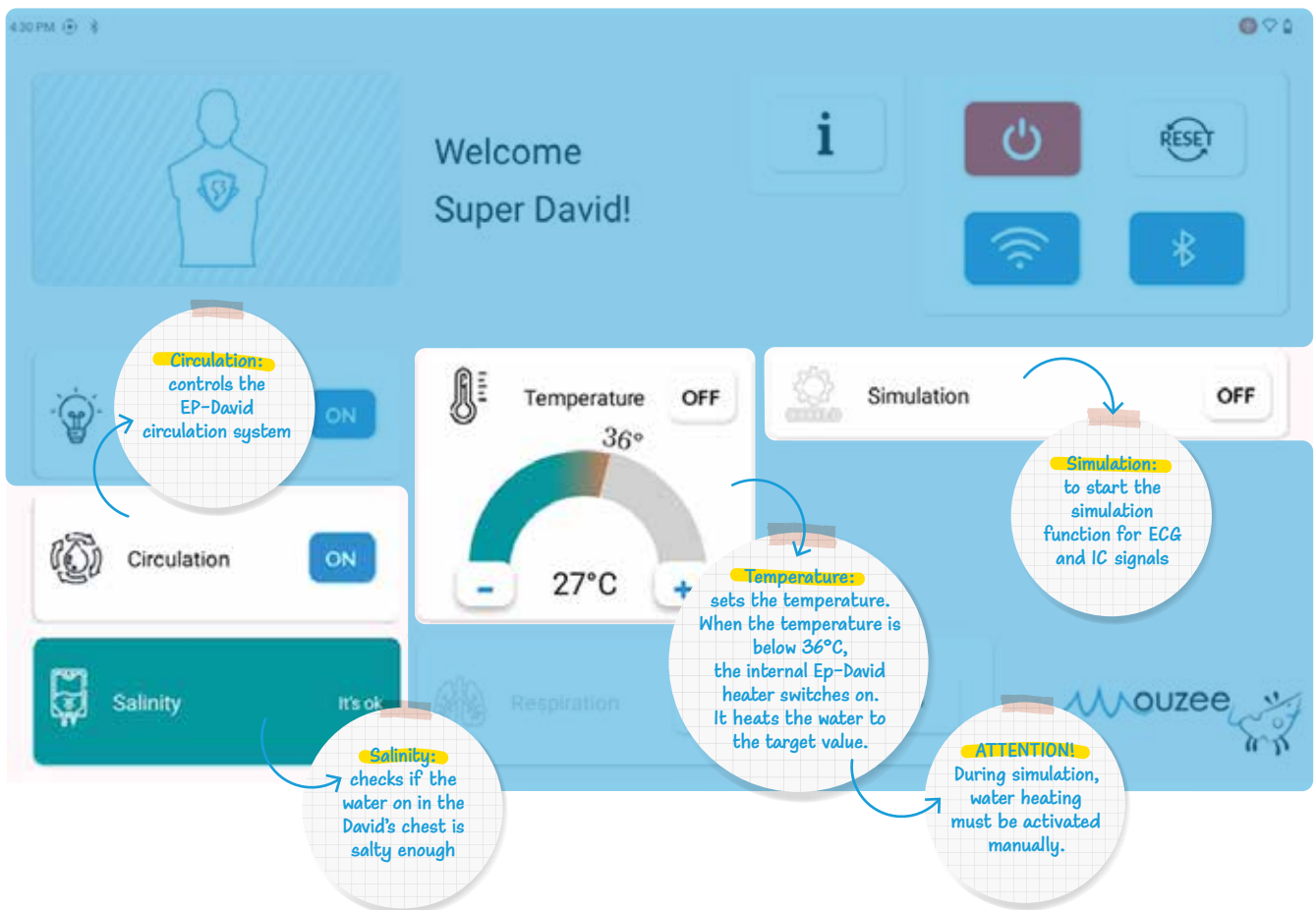
Tap on the name of your device again and wait until you can start to simulate.

2. Tap on “**SIMULATE**”.



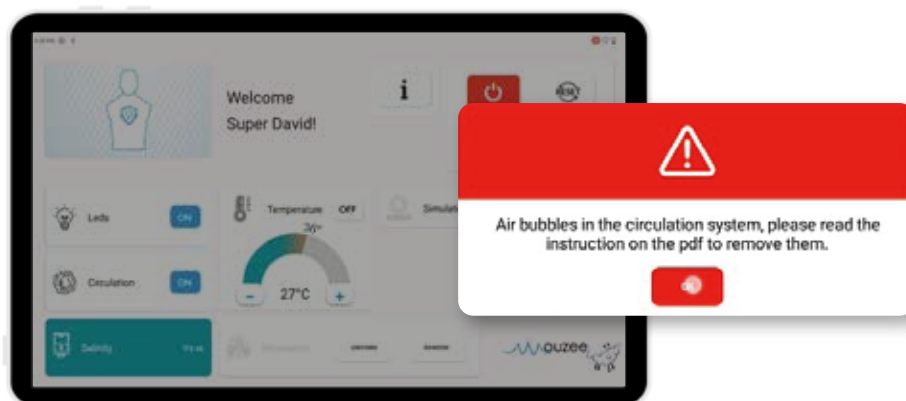
DISPLAY BUTTONS



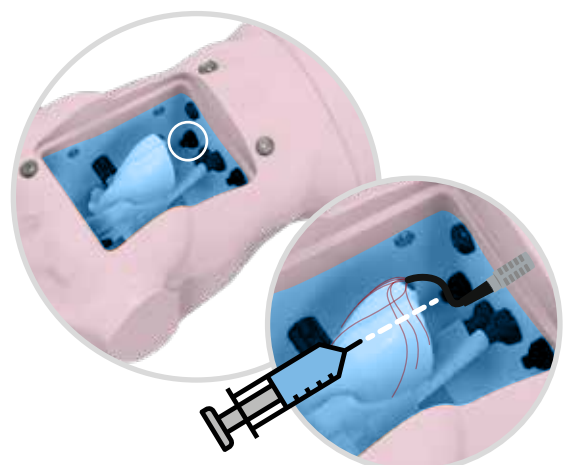


BEFORE STARTING THE SIMULATION

Check that the pump is working properly. If not, the system automatically switches off the circulation and this message appears on the display:

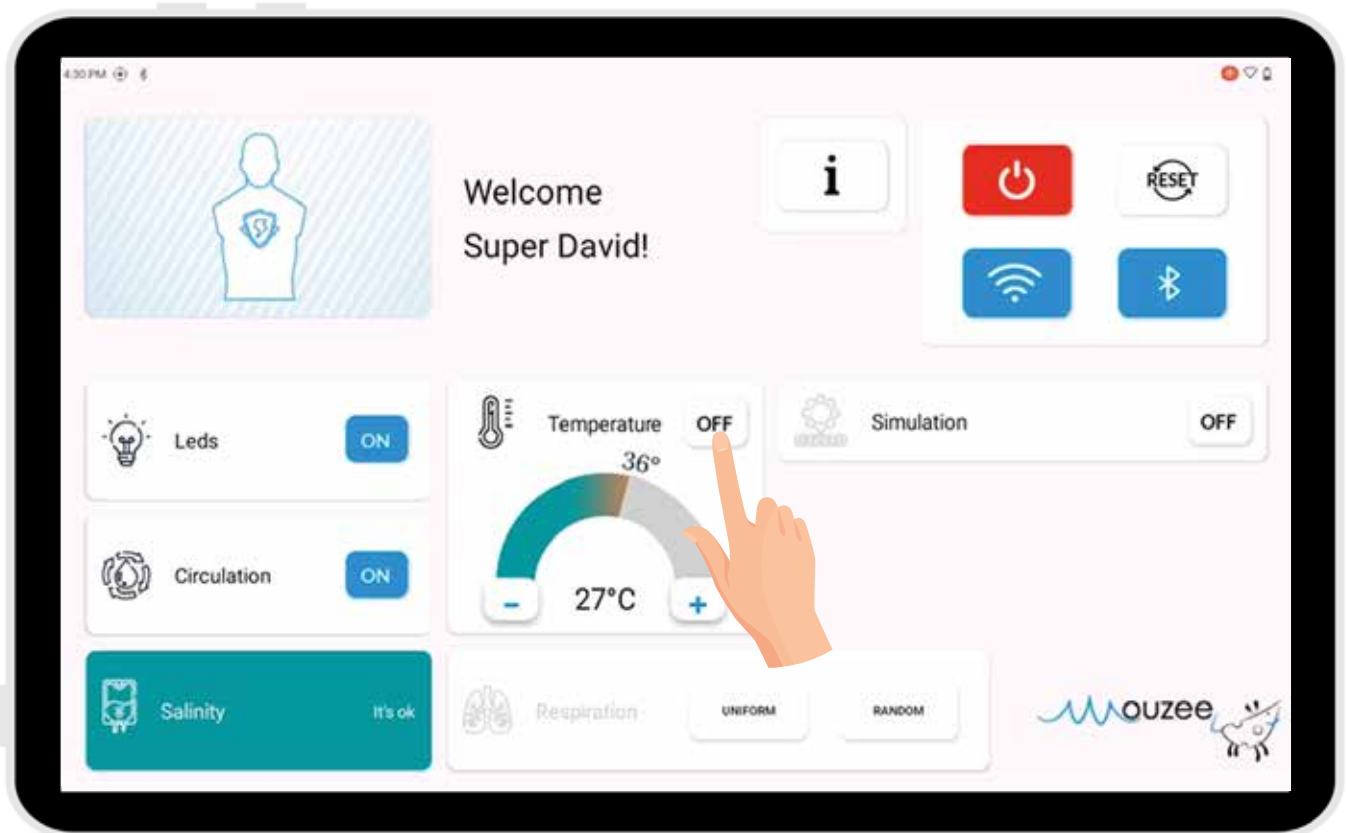


In case you have this problem, use the supplied syringe to push water into the connector. Repeat the process until the water flow is visible.



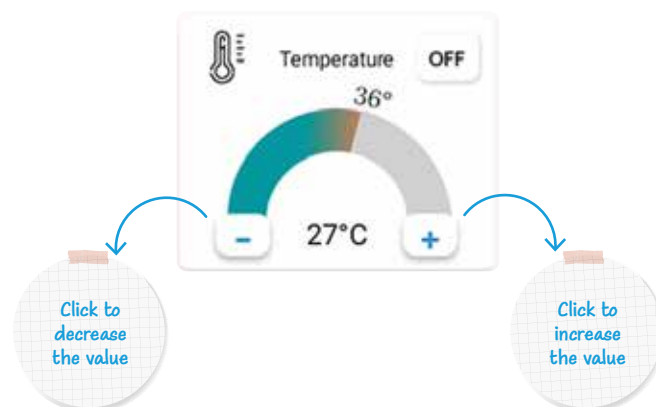
TEMPERATURE

Click the “**OFF**” button near **Temperature** to turn on the heater and reach the desired temperature.



Heating time may vary depending on the initial water temperature.
Yellow LEDs indicate heating is in progress.

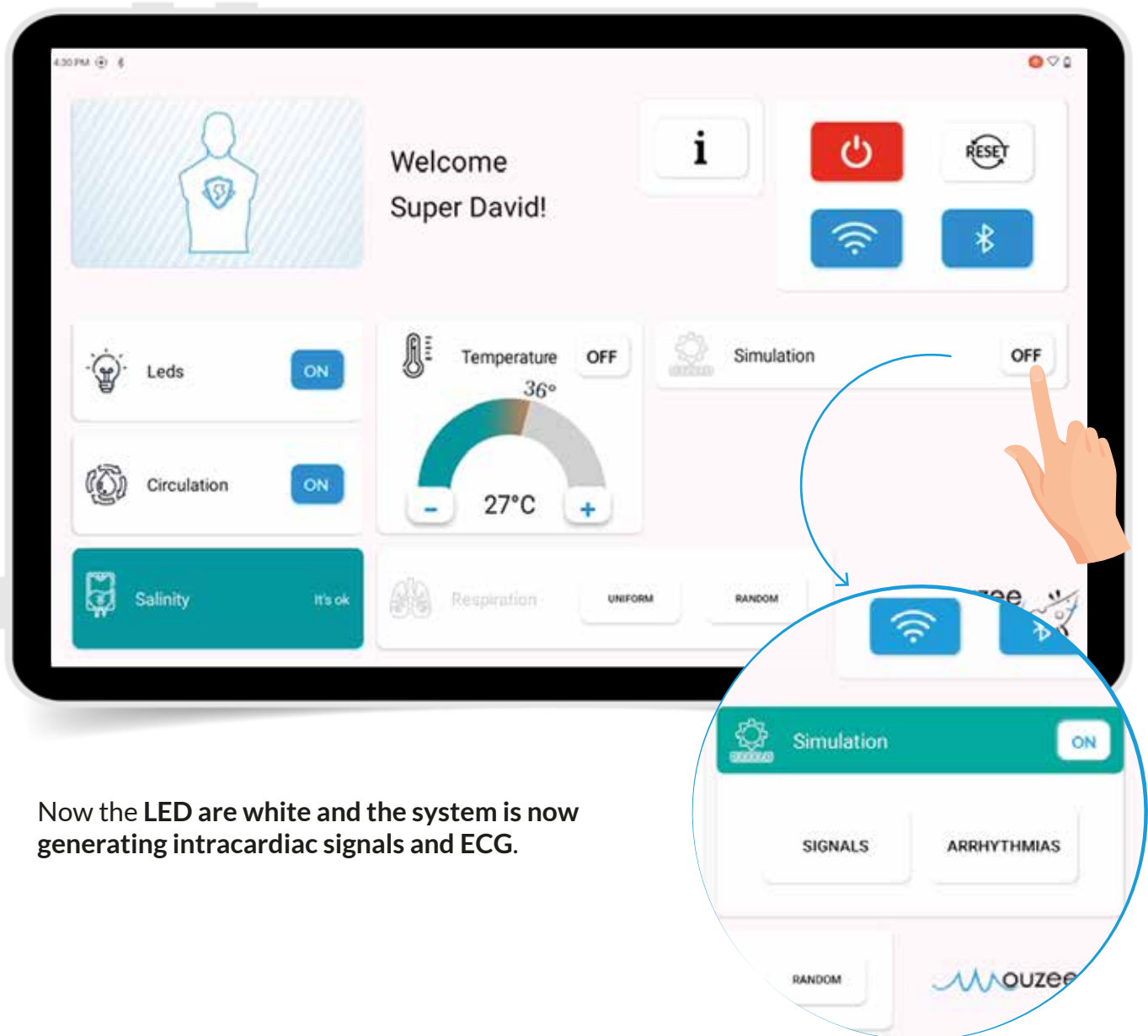
To adjust the temperature:



Once the desired temperature is reached, you can start the simulation.

SIMULATION

Click the “**OFF**” button near Simulation to turn it on.

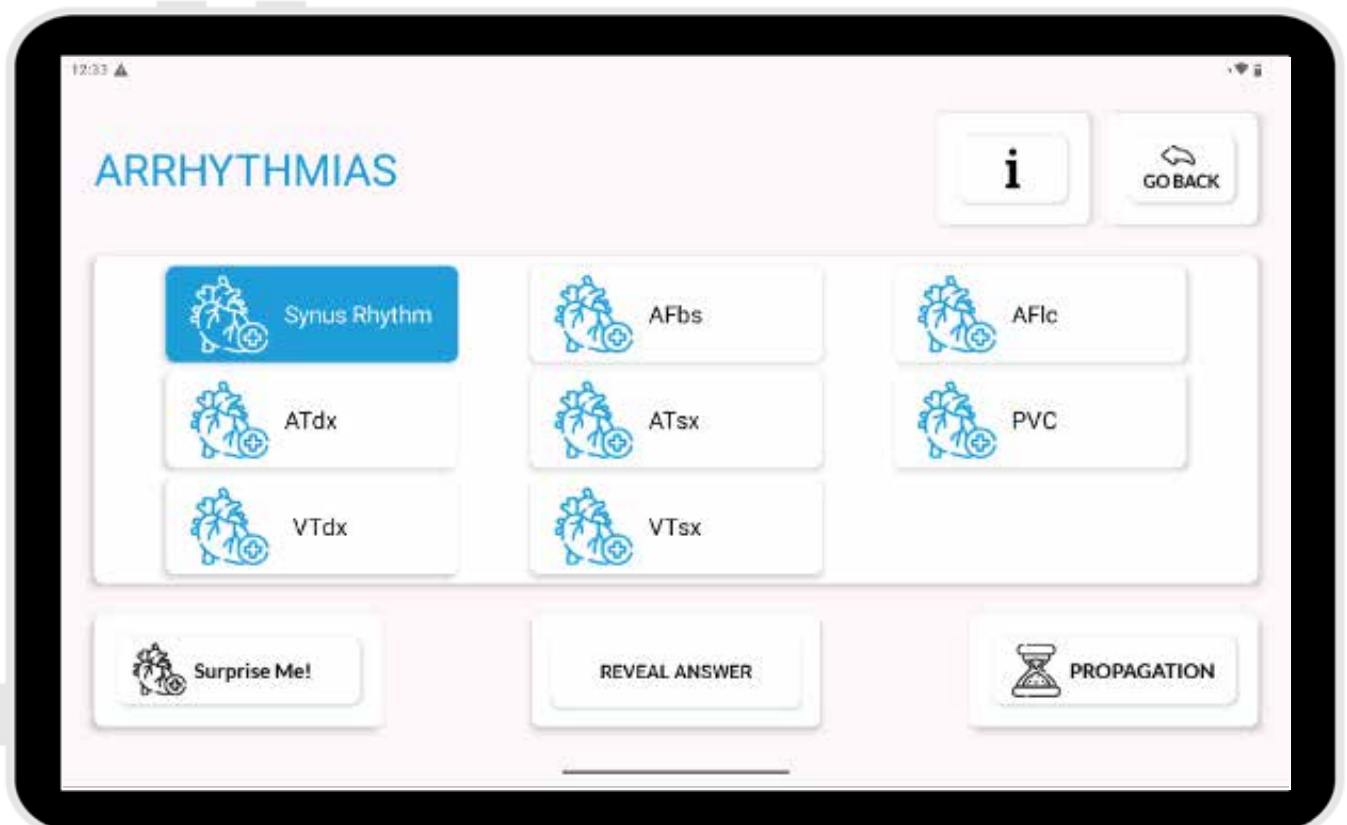
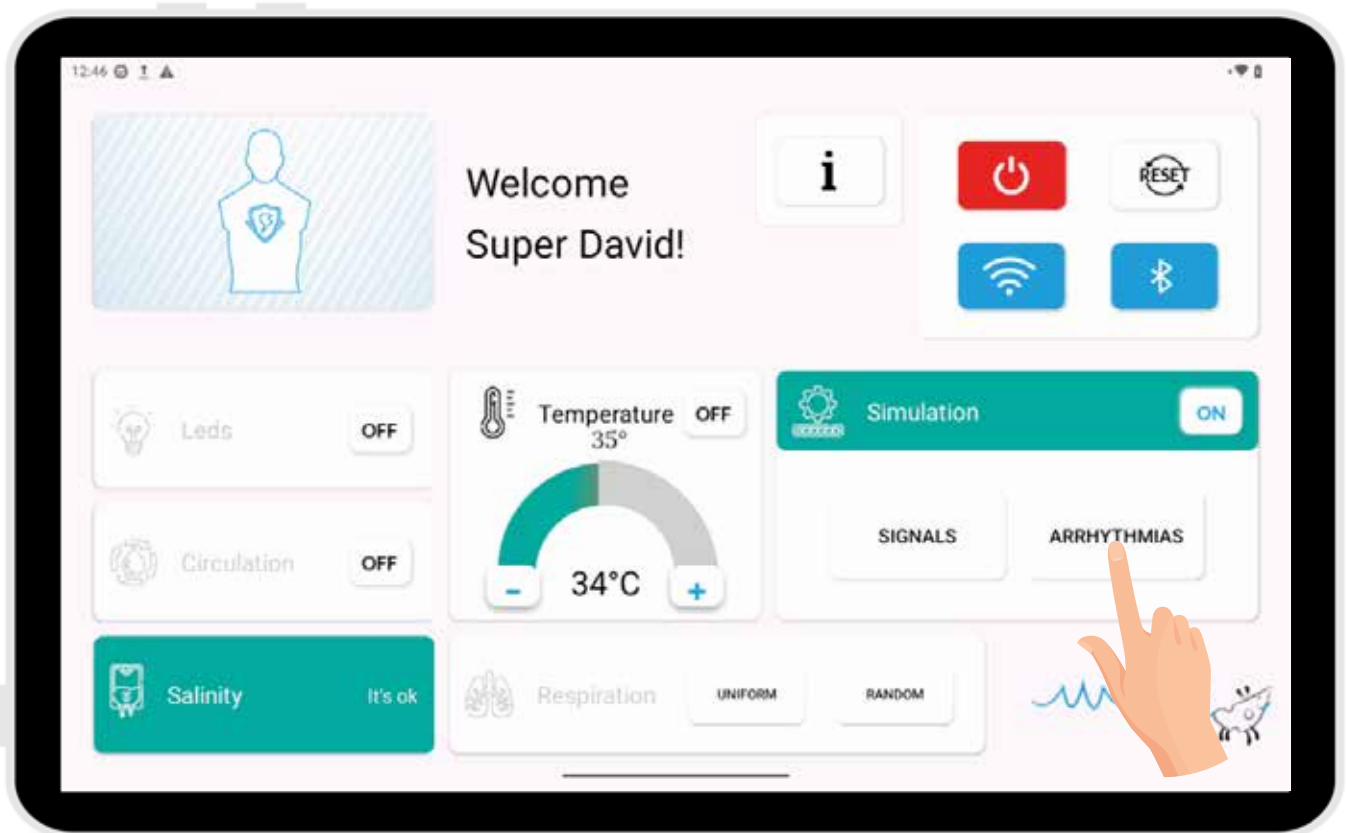


Now the LED are white and the system is now generating intracardiac signals and ECG.

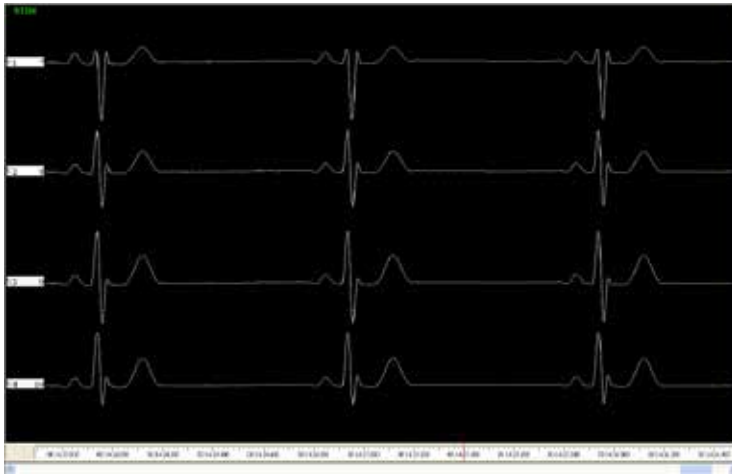
ATTENTION: during simulation, the system must stop heating the water.

ARRHYTHMIAS

Click the “**ARRHYTHMIAS**” button to access pre-loaded cardiac rhythms:



Sinus Rhythm



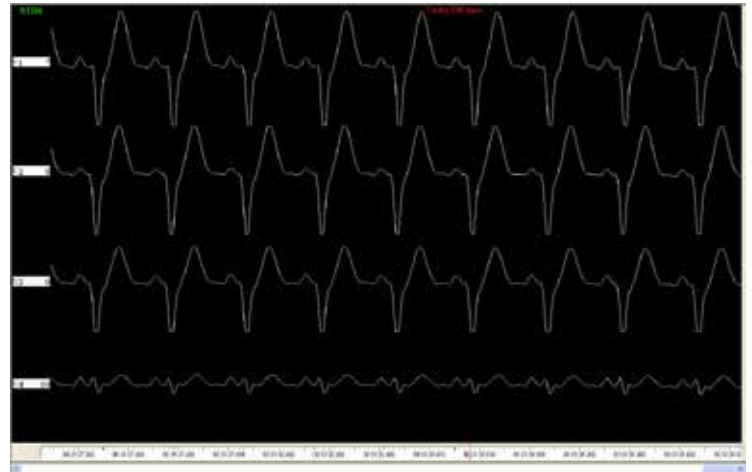
Focal Ectopic Right Atrial Tachycardia: ATdx



Focal Ectopic Left Atrial Tachycardia: ATsx



Focal Ectopic Right Ventricular Tachycardia: VTdx



Focal Ectopic Right Ventricular Tachycardia: VTsx



ATRIAL FIBRILLATION: AFbs



Flutter: AFic



Premature ventricular contraction: PVC



12:33

ARRHYTHMIAS

i **GO BACK**

 Sinus Rhythm	 AFbs	 AFic
 ATdx	 ATsx	 PVC
 VTdx	 VTsx	

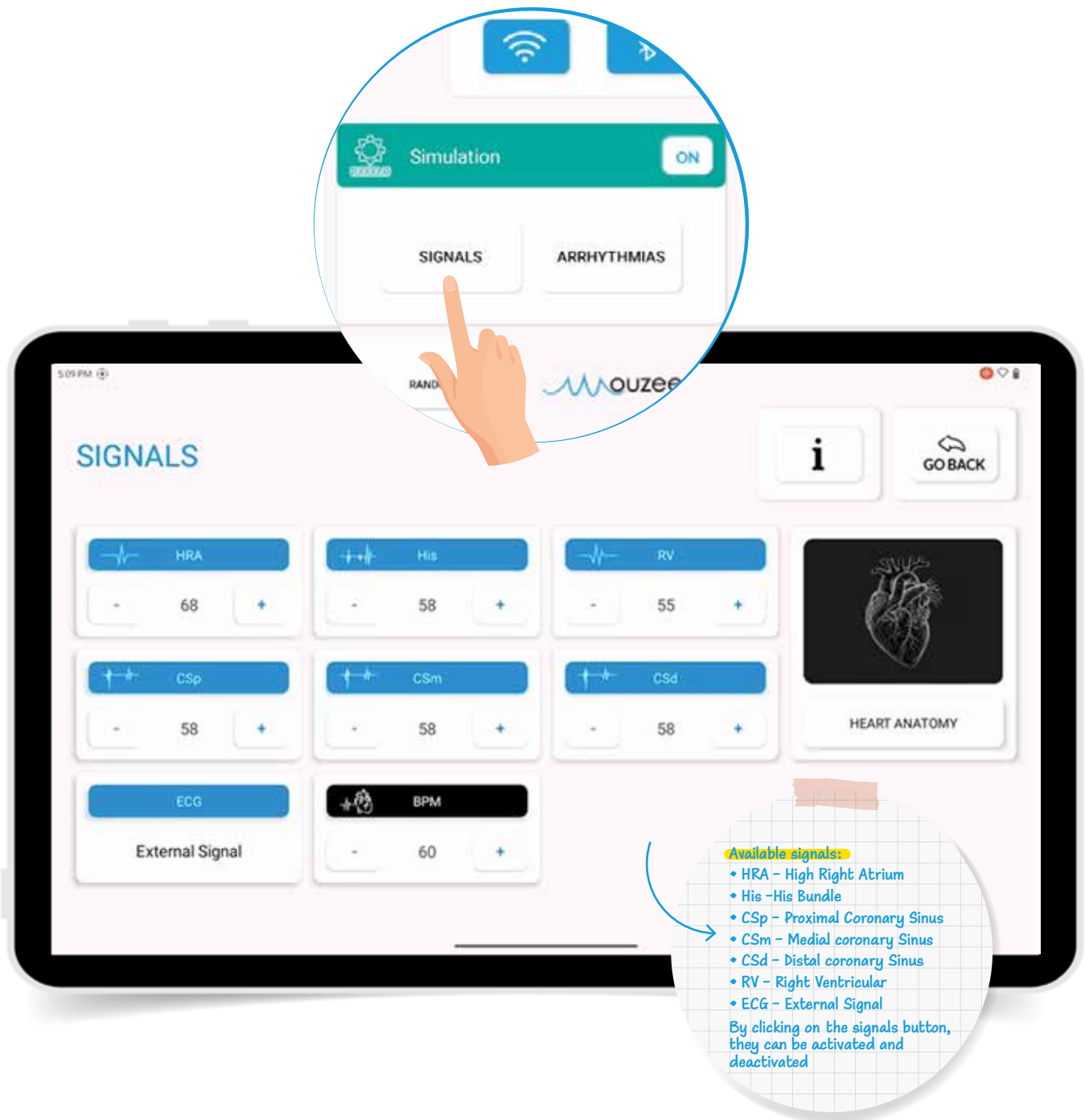
 **Surprise Me!** **REVEAL ANSWER**  **PROPAGATION**

SURPRISE ME!
The system automatically select a cardiac rhythm without declaring it.

If you want to know the answer of "Surprise me!", click on **"REVEAL ANSWER"**.

SIGNALS

Clicking the “**SIGNALS**” button opens the page for setting cardiac chamber signal features

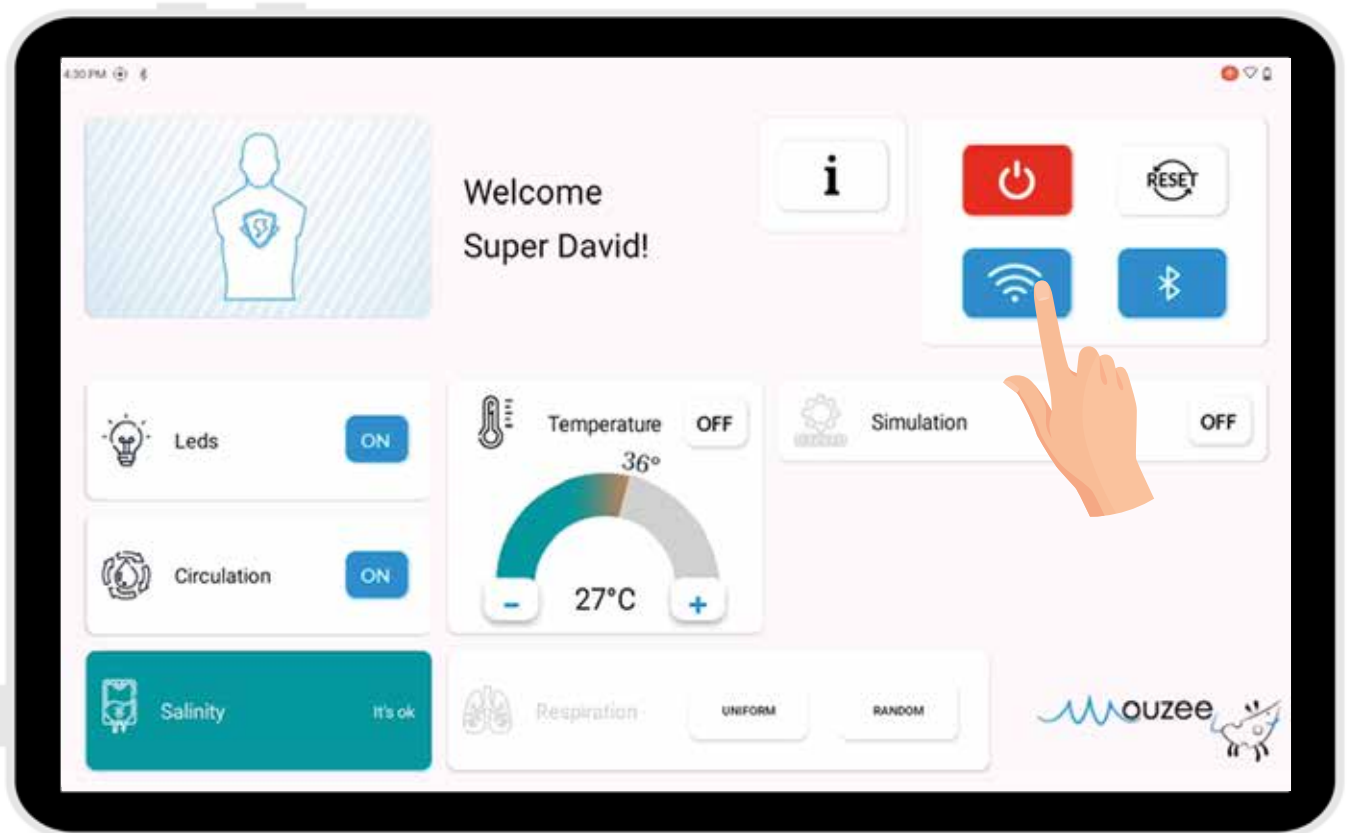


The **AMP** parameter offers the possibility to **calibrate the signal** according to various factors: **water salinity, temperature, catheter status**.

By changing the AMP value using the “+” and “-” **buttons**, the amplitude and dispersion of the signal can be increased or decreased.

WI-FI CONNECTION

Tap the **Wi-Fi** icon on the main screen.



Select your preferred network and enter the password.

Green LEDs light up for 2 seconds if the **connection is successful**.

Red LEDs light up for 2 seconds if the **connection fails**. Retry in this case.

ATTENTION: the Ep-David can't be connected to networks that require a double authentication to access the internet.

To avoid any problem, please use a known hotspot and activate the "maximize compatibility" option in the hotspot configuration of the phone.

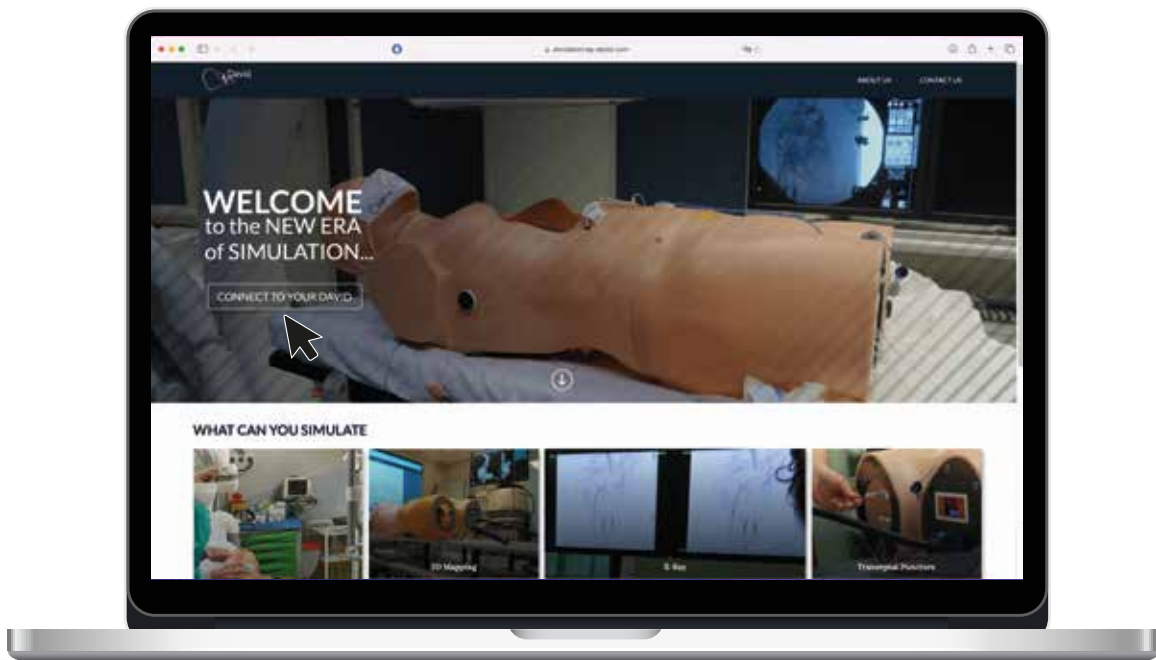
Control dashboard

WEB PAGE AND REMOTE CONTROL

Once the system is connected to the Wi-Fi, go to the following web page:

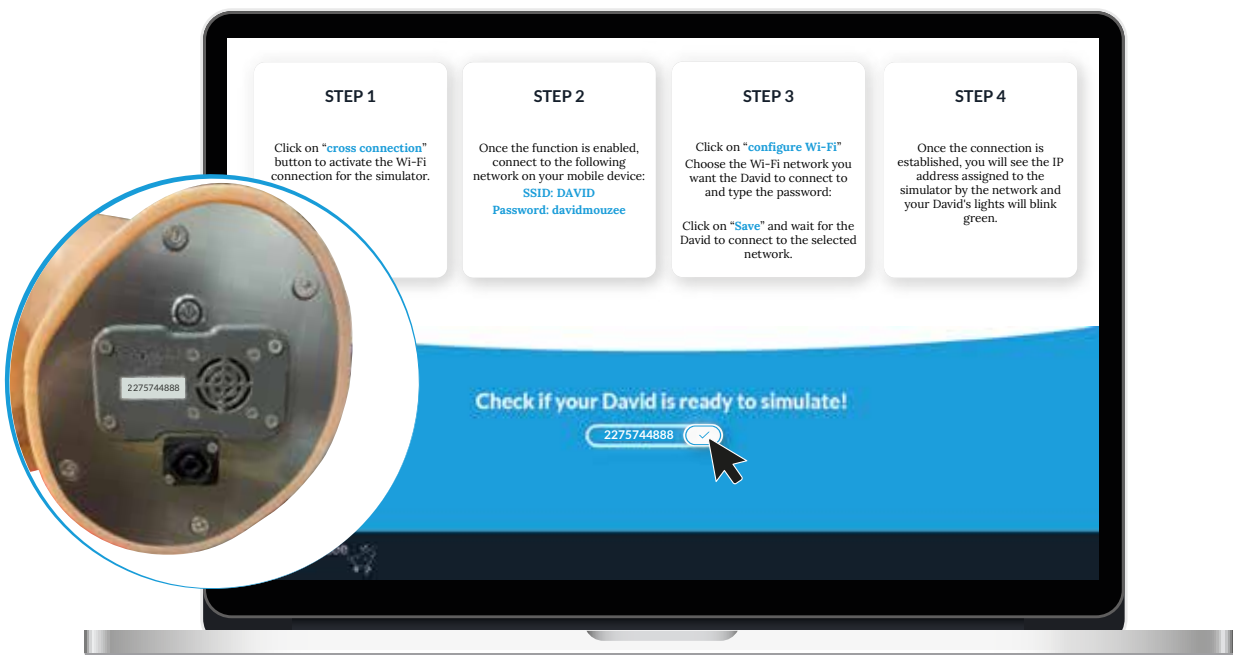
<https://simulation.ep-david.com/>

1. Click on the button “**CONNECT TO YOUR DAVID**”

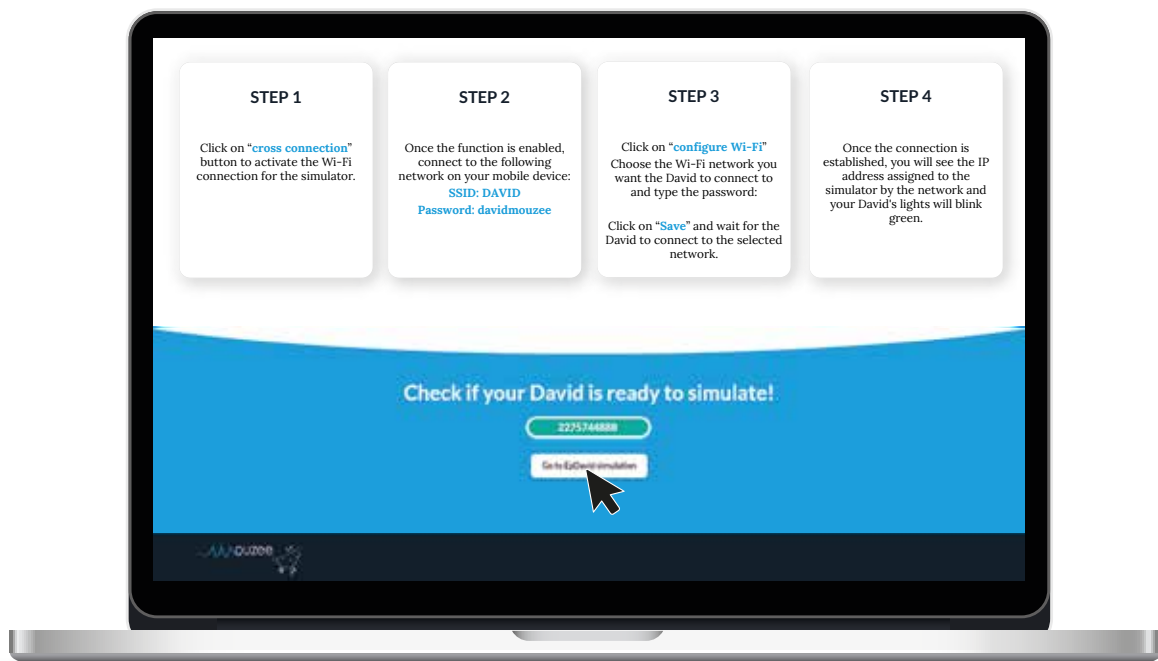


2. Scroll down to end of the page and put the number you can find on the sticker on the Ep-David right leg.

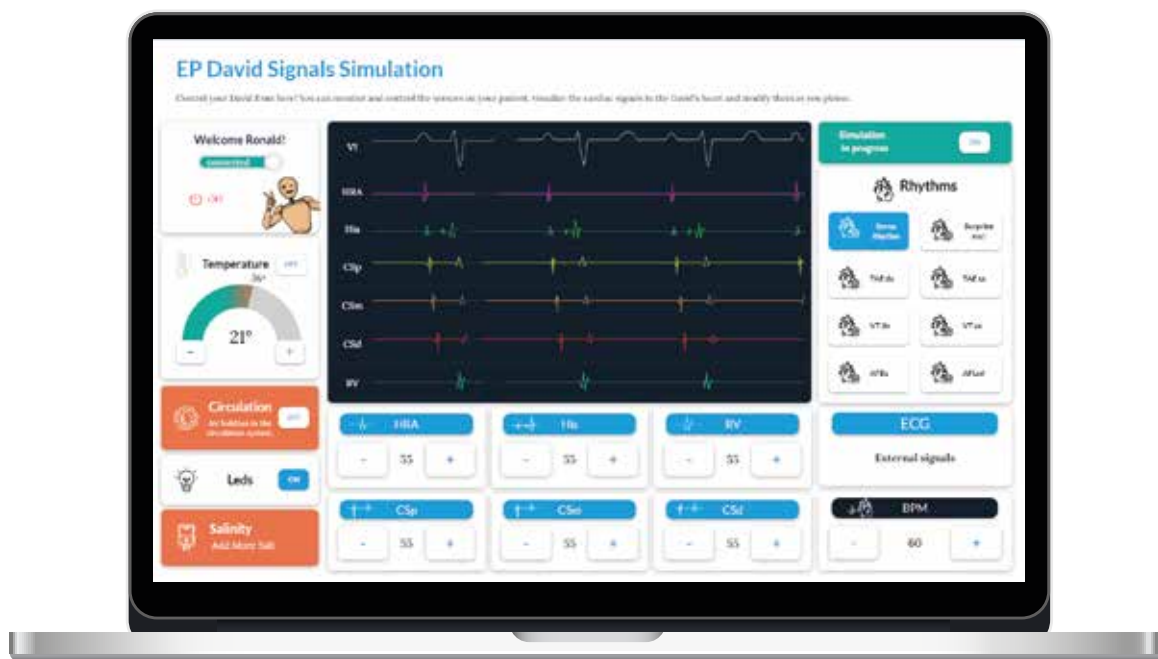
Once you have put the number click on the check to verify the system is connected.



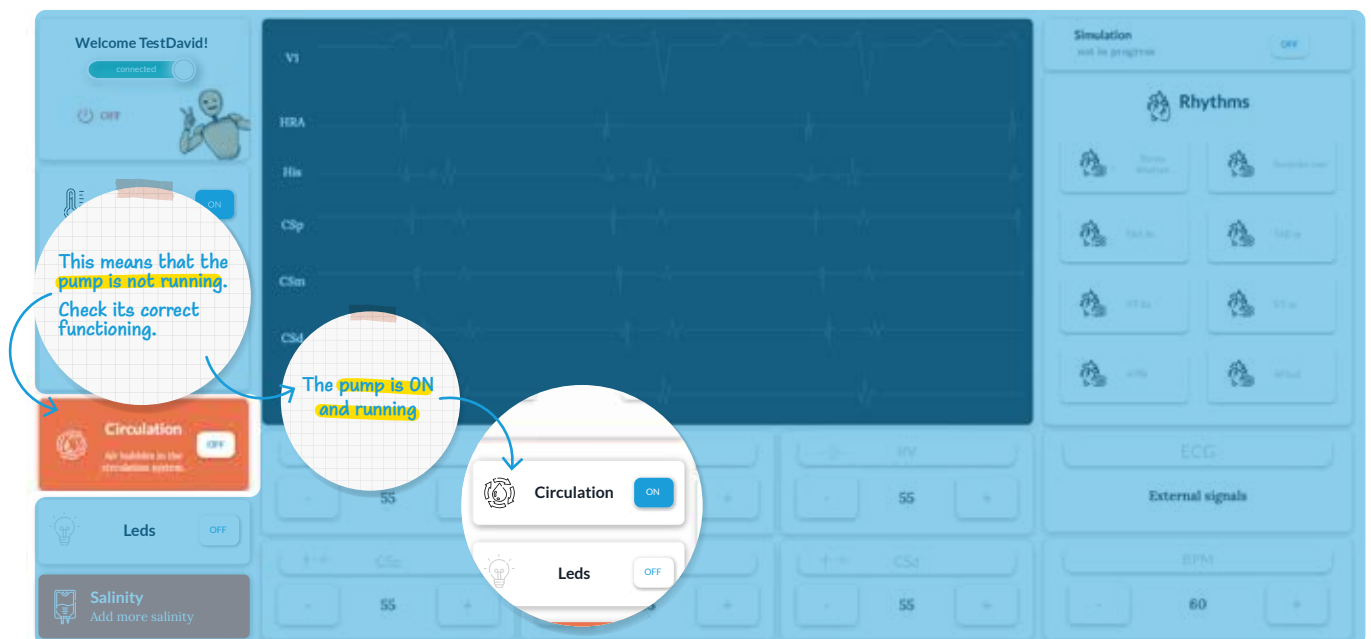
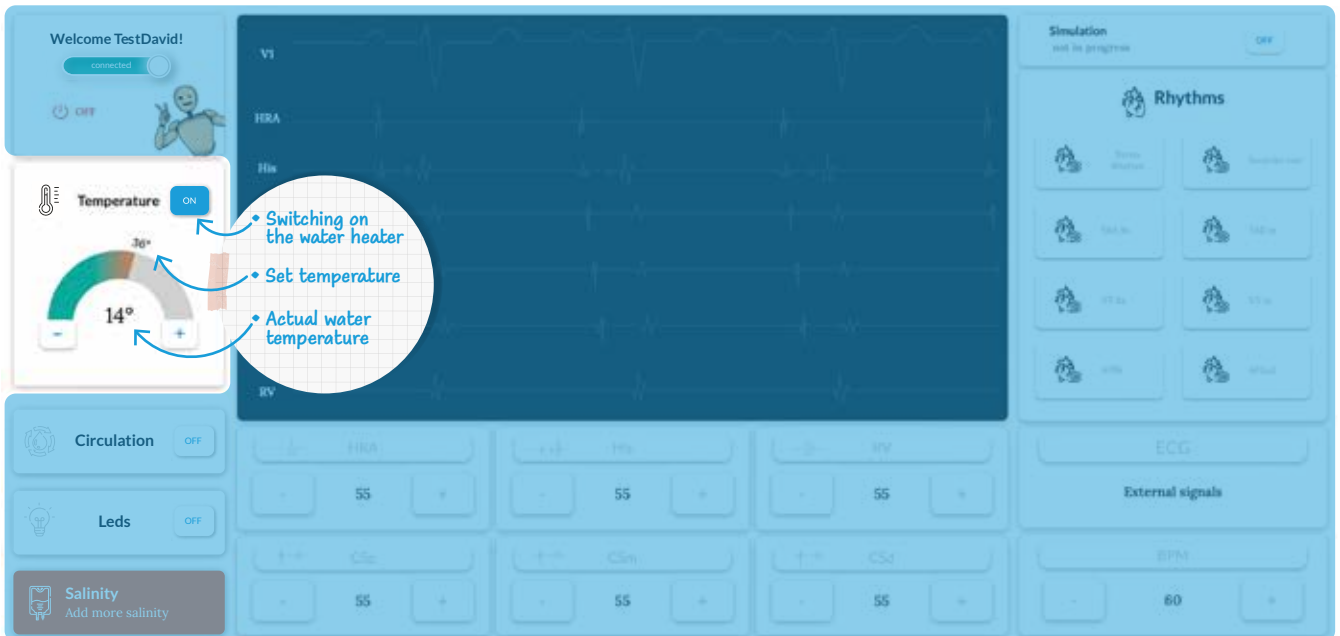
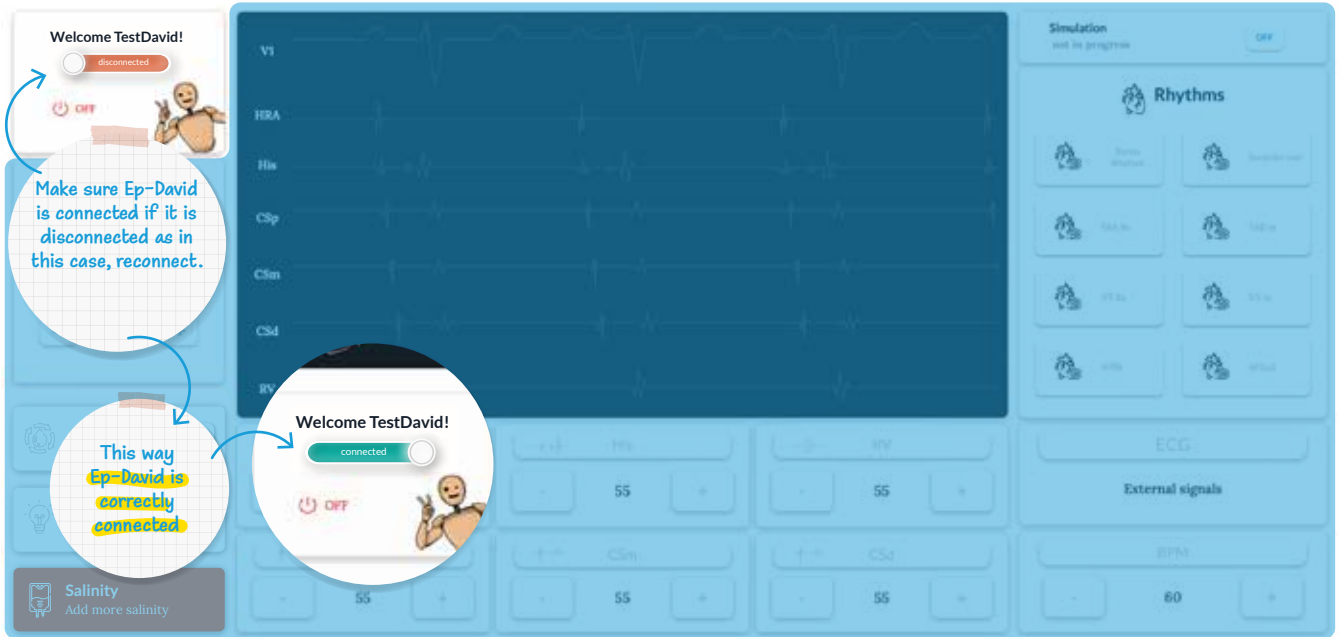
3. Click on “[GO to EpDavid simulation](#)” to access the Ep-David control dashboard.

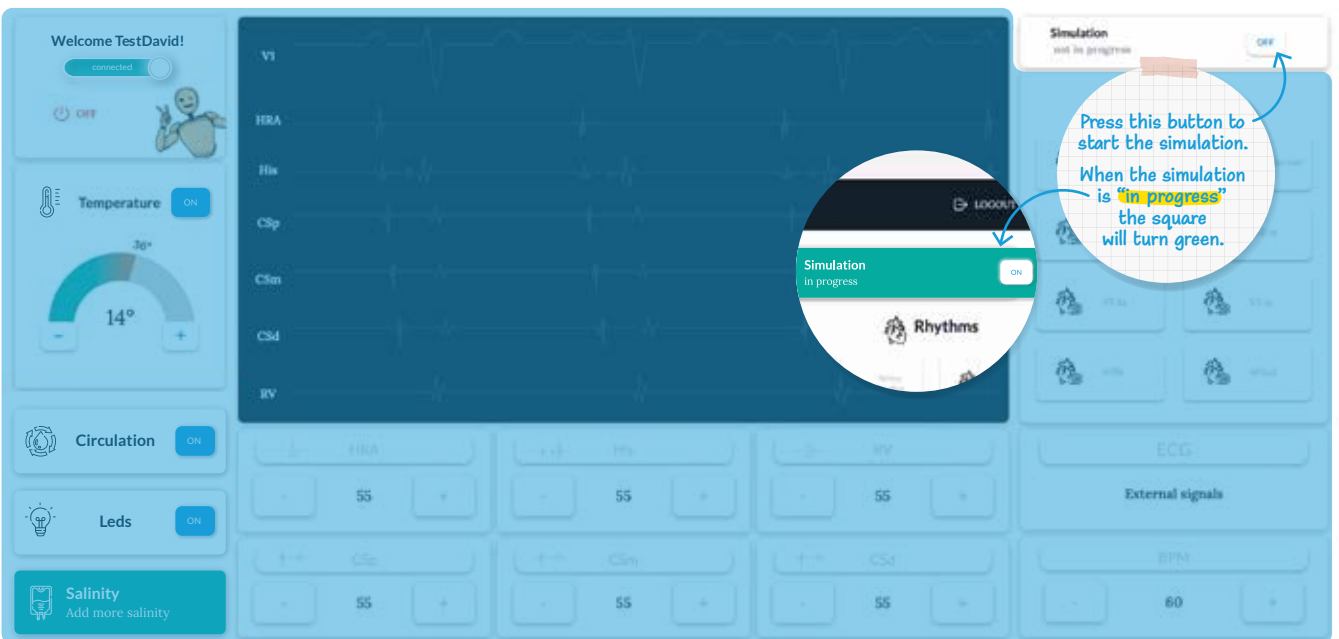
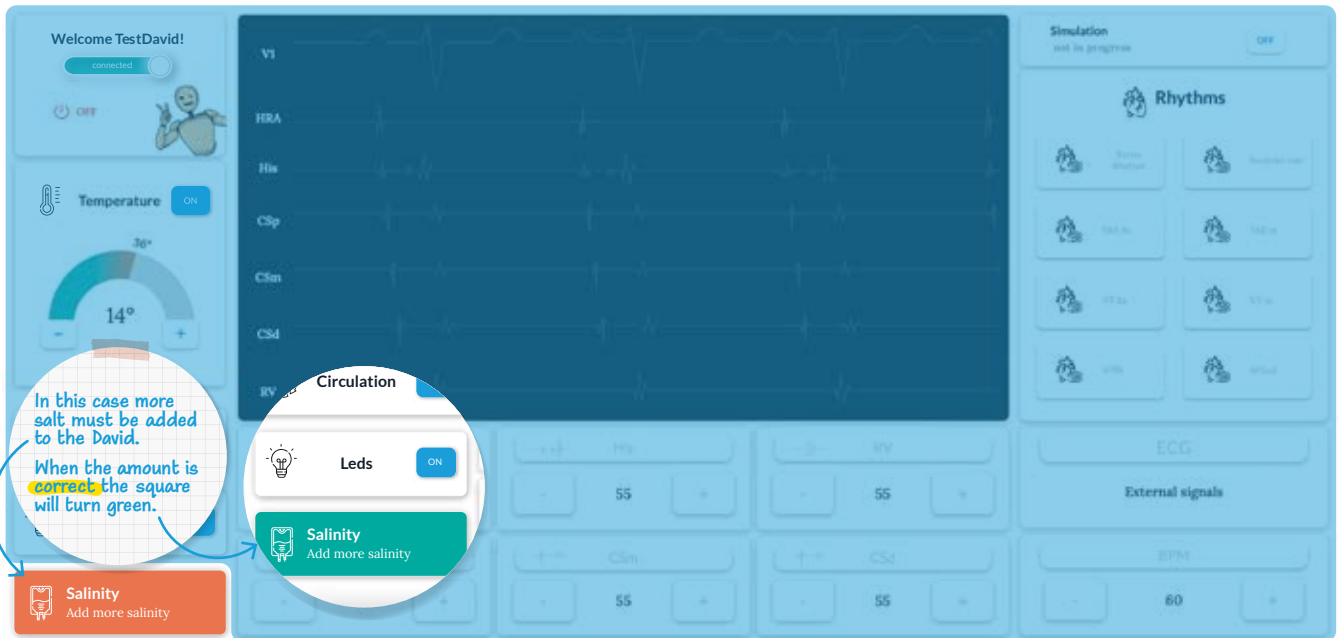
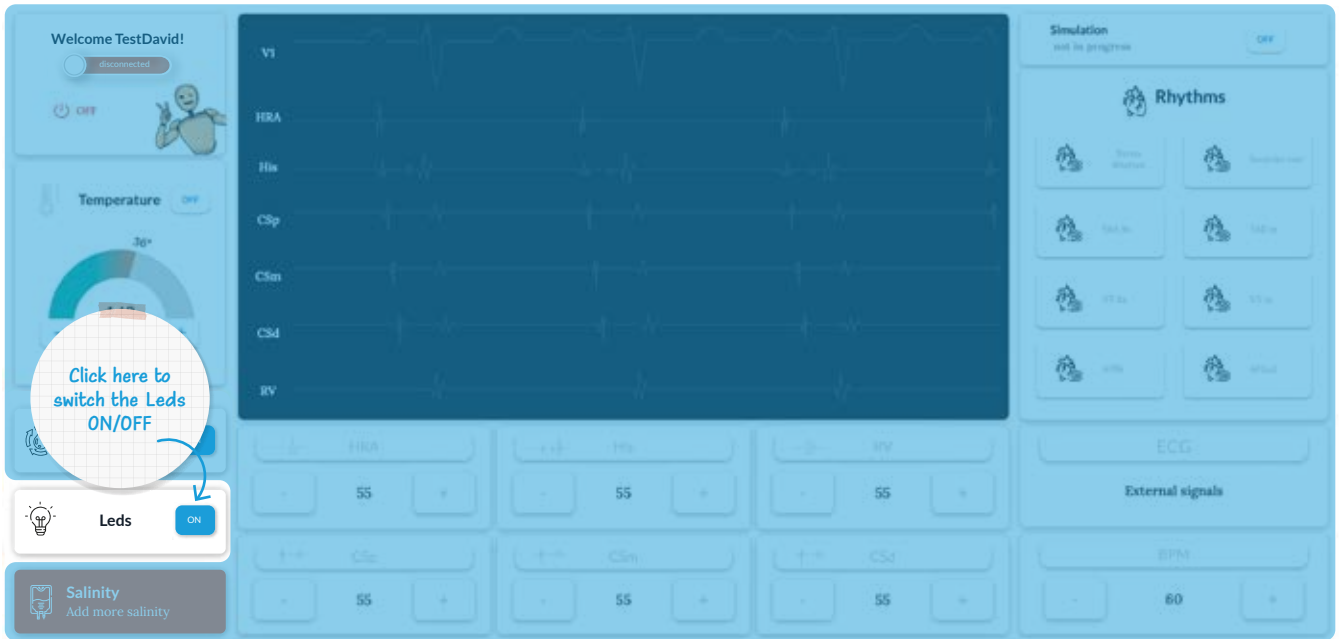


4. This is the Ep-David control dashboard.



Turn to the next page for an explanation of the Ep-David control dashboard.





Welcome TestDavid!

connected

OFF



Temperature

ON

36°

14°

-

+

Circulation

ON

Leds

ON

Salinity

Add more salinity

V1

IIa

IIIa

CSp

CSm

CSd

RV

55

55

55

55

55

55

Simulation

in progress

ON

Rhythms

Sinus Rhythm

Surprise me!

TAE dx

TAE sx

VT dx

VT sx

AFBs

AFLcd

Click one of these buttons to choose heart rhythms

Welcome TestDavid!

connected

OFF



Temperature

ON

36°

14°

-

+

Circulation

ON

Leds

ON

Salinity

Add more salinity

V1

IIa

IIIa

CSp

CSm

CSd

RV

55

55

55

55

55

55

Simulation

in progress

ON

Rhythms

Sinus Rhythm

Surprise me!

TAE dx

TAE sx

VT dx

VT sx

AFBs

AFLcd

Click this button to switch the ECG ON/OFF

ECG

External signals

BPM

60

Welcome TestDavid!

connected

OFF



Temperature

ON

36°

14°

-

+

Circulation

ON

Leds

ON

Salinity

Add more salinity

V1

IIa

IIIa

CSp

CSm

CSd

RV

55

55

55

55

55

55

Simulation

in progress

ON

Rhythms

Sinus Rhythm

Surprise me!

TAE dx

TAE sx

VT dx

VT sx

AFBs

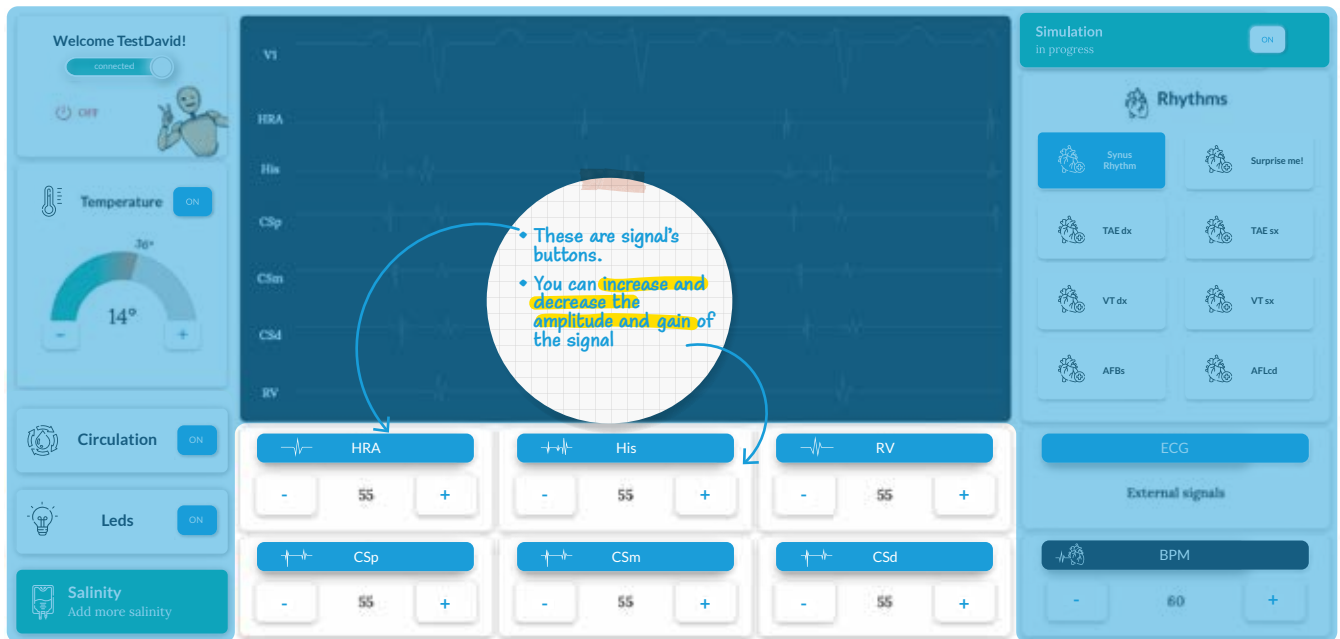
AFLcd

Click this button to increase the BPM

Click this button to decrease the BPM

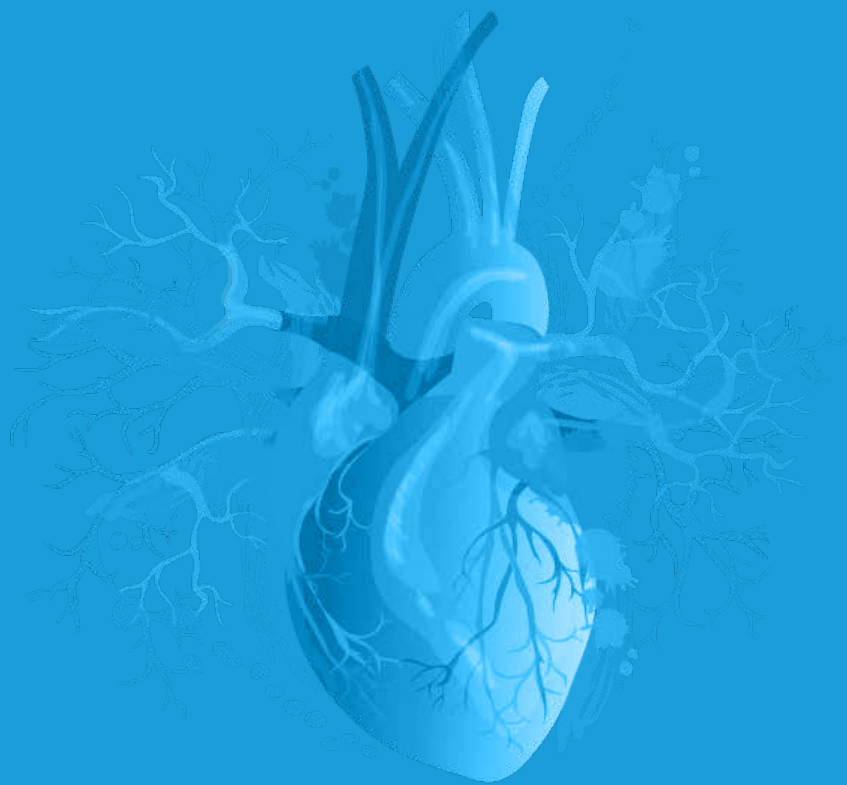
BPM

60



Suggested setup for water at 36° and salinity of 0.9%:

- Hra - 77
- His - 76
- RV - 58
- CsP - 67
- Csm - 67
- Csd - 67



Thank you for choosing us

