

EDUCATIONAL MEDICAL SIMULATION DEVICE

SimClever 
Ingenious medical simulation

Education Laryngoscope

User Manual

Educational Digital Laryngoscope — A Smart Simulation System for Intubation Skills in Medical Training



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1. General Overview

1.1 About the Product

SimClever Education Laryngoscope is a smart educational laryngoscope designed for teaching intubation skills in a simulation environment during medical training. By providing a real-time video stream, the device lets instructors and students watch the intubation procedure live, record it, and review it afterwards.



CRITICAL WARNING

This device is **designed to be used solely for simulation training on intubation manikins**. It **must not be used**.

1.2 Key Features

- ✓ Real-time video streaming via a built-in camera at the blade tip
- ✓ Wireless live image viewing through the control module
- ✓ Video recording in MP4 format and session-based file management
- ✓ Easy one-button control (power on/off, start recording/stop, mode switching)
- ✓ Wireless connection over Wi-Fi (AP and STA modes)
- ✓ Quick Wi-Fi configuration by scanning a QR code
- ✓ Recording management and Wi-Fi settings via a web interface
- ✓ Real-time battery level monitoring
- ✓ Up to 4–6 hours of continuous operation with a portable Li-ion battery
- ✓ Type-C charging input

2. Safety Warnings

Safety Symbols

The table below summarizes the meanings of the safety symbols used on the product label and in this manual.

Symbol	Meaning	Description
CE	CE Conformity Marking	Complies with European Union safety and health requirements.
	Read the User Manual	Read the entire manual before using the device.
	General Warning	Pay attention to situations that could cause injury or damage to the device.
	Do Not Dispose with Household Waste	Hand it in at a separate collection point as electronic waste.

	Manufacturer	RISE – SimClever Education, Rize / TÜRKİYE.
	Operating Temperature	Use the device within the 21–50 °C range.
	Keep Dry	Do not immerse the device in water and protect it from moisture.
	Indoor Use Only	Do not use outdoors or in rainy conditions.
	Lithium-ion Battery	The device contains a rechargeable Li-ion battery. Do not puncture, crush, or incinerate it.
	USB Type-C Charging Input	Use only a 5 V / 1 A approved power supply.
	Not for Clinical Use	For simulation training use only; cannot be used on real patients.
	Wireless Connection (Wi-Fi)	The device operates over 2.4 / 5 GHz Wi-Fi.

Critical Warnings



CRITICAL WARNING

- **This device is a simulation device.** It is not designed for use on real patients.
- **It is not a medical diagnostic or treatment tool.** It does not provide direct consultation for any medical condition and does not replace professional medical care.
- Do not use it in medical applications other than simulation training.
- Real patient care must be carried out using appropriate medical devices and procedures.

Electrical and Mechanical Safety



WARNING

- Do not exceed the specified maximum charging current and voltage.
- Make sure the device does not overheat during charging.
- Do not leave the device in excessively hot or cold environments. The optimum operating temperature is between 21–50 °C.

3. Box Contents

#	Part	Qty
1	SimClever Laryngoscope Handle	1
2	SimClever Laryngoscope Blade	5
3	User Manual	1



The standard package contents: one SimClever Laryngoscope handle and five interchangeable blades in different sizes (for neonatal, pediatric, and adult use).

4. Device Overview

The main components of the device are listed in the table below.

#	Component	Description
1	Camera	The built-in video camera located at the blade tip.
2	LED lighting	The white LED next to the camera (blade tip).
3	Control button	The physical button for power on/off and multi-function control.
4	Status LEDs	The red and blue LEDs that indicate the device status.
5	Type-C charging input	The charging port on the lower part of the body.



Top view of the device body: the control button, the status LED (solid purple – ready state), and the USB Type-C charging input.

5. Technical Specifications

5.1 General

Specification	Value
Video recording format	MP4
Video stream rate	~15 FPS
Wireless connection	Wi-Fi 2.4 GHz / 5 GHz
Effective communication range	10 meters (in an unobstructed environment)
Charging input	USB Type-C

5.2 Battery and Charging

Specification	Value
Battery type	3.7 V Li-ion
Continuous operating time	Up to 10 hours on a full charge
Full charge time	Approximately 4 hours
Input voltage	5 V
Charging current	1 A (maximum 3.4 A)

6. Instructions for Use

6.1 Power On / Off

 **Turning the Device On:** Press and hold the control button for **1 second**. The blue LED lights up. Within about 20–30 seconds, the red and blue LEDs light up together (*purple appearance*), indicating that the device is ready.

 **Turning the Device Off:** Press and hold the control button for **5 seconds**. The LEDs turn off. The system starts a 30-second safe shutdown process.

INFO

Startup check: When the laryngoscope is active, the **purple light** produced by the red and blue LEDs lighting up together indicates that the device is ready for use. Before using the device, **wait until this light appears**. The laryngoscope powers on in about **30 seconds**.

If the light is still not purple after 30 seconds, the device has not started up properly. In this case, **turn the device off and on again**.

6.2 Button Controls

The following controls are performed by pressing the button repeatedly within 1 second.

Number of Presses	Function
2× press	Starts video recording.
3× press	Stops the active video recording.
5× press	Switches to QR code scanning mode (Wi-Fi configuration).
7× press	Switches to AP mode (direct connection).
20× press	Recovery Mode – Used when the device is unresponsive.

WARNING

Recovery Mode (20× press) erases all data on the device. Use it only as a last resort when the device is unresponsive.

6.3 LED Status Indicators

LED Status	Meaning
 Purple (Solid)	The device is on and ready for use.
 Red-Purple (Slow Blinking)	Video recording is active.
 3 Fast Blinks	Low battery warning.
 LEDs Off	The device is off.

6.4 Connection Modes

The device supports two different Wi-Fi modes:



AP Mode (Direct): The laryngoscope sets up its own network.

- **SSID:** RTCLARYxxxxx | **Password:** simclever12345



STA Mode (Shared Network): The device connects to an existing Wi-Fi network.

- **Default SSID:** simclever | **Password:** simclever54321

INFO

By default, **AP Mode** comes set up. To switch to STA mode or change settings, first connect to the device. In the mobile app or the control module app, tap the **[Settings]** button. The button opens a browser and directs you to the laryngoscope's settings page. From this page you can switch between AP/STA modes and, using the tabs at the top, also access the video streaming and recording management pages.

6.5 Mobile App Usage

SimClever — Connect mobile app lets you connect wirelessly to the laryngoscope, watch the live video stream, and make session-based recordings. The steps below show the flow from opening the app to capturing a recording.



! DOWNLOAD THE APP

SimClever — Connect app to your mobile device.

The QR code automatically directs you to the store appropriate for your operating system:

- **Android** devices: *Google Play Store*
- **iOS** devices: *App Store*

★ TIP

Before you begin, make sure your mobile device is connected to the **same Wi-Fi network** as the laryngoscope:

- **In AP mode:** connect directly to the RTCLARYxxxxx network.
- **In STA mode:** connect both devices to a shared network.

Step 1 — Opening the App

SimClever — Connect mobile app, the welcome screen appears. The screen offers two application options: **[Laryngoscope]** and **[Stethoscope]**. To work with the laryngoscope, tap the **[Laryngoscope]** card at the bottom left. From the gear (⚙️) icon in the top right corner you can access the general app settings.

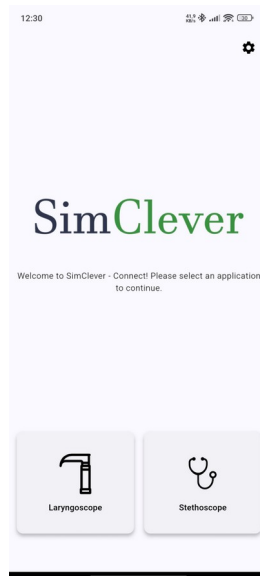


Figure 1: SimClever — Connect welcome screen.

Step 2 — Searching for a Device

[Laryngoscope] is selected, the "No Device Connected" screen appears because no device is connected yet. This screen reminds you that your mobile device must be connected to the same local network as the laryngoscope. Tap the blue [Search Device] button in the middle of the screen, or the magnifier (🔍) icon in the top right, to start device discovery.

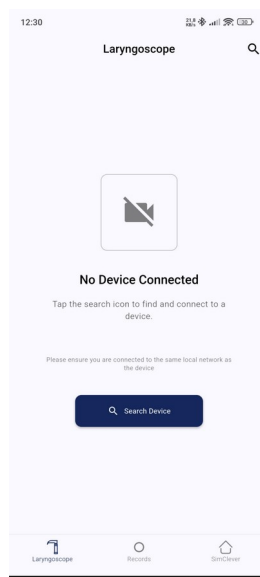


Figure 2: "No Device Connected" screen.

⚡ WARNING

After the scan is complete, if **no device is found**, be sure to **try the scan again**. You can restart the search by tapping the refresh (🔄) icon in the top right or the [Search Device] button again. In this case, also make sure the laryngoscope is ready with its **solid purple LED** and that your mobile device is connected to the **same Wi-Fi network**.

Step 3 — Connecting to the Device

When the search is started, the available laryngoscope devices on the network are listed. Each row shows the device name (e.g. RTCLARY20110) and IP address (e.g. 192 . 168 . 137 . 237). You can repeat the search with the refresh (🔄) icon in the top right. Tap the blue connect (🔗) button in the row of the device you want to connect to. When the connection succeeds, the live view screen opens automatically.

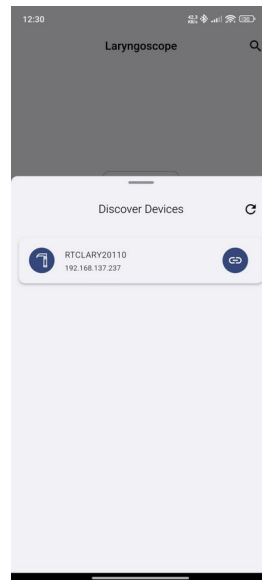


Figure 3: "Discover Devices" window.

Step 4 — Live View and Recording

After connecting to the device, the live video stream from the laryngoscope camera is displayed on the main screen. The laryngoscope's current battery level (%) is shown in the top right corner of the image; you can enlarge the image with the full-screen (⌕) icon in the bottom right corner. The card below the video frame shows the connected device's name (RTCLARY20110) and the active session info (*Active Session: session58*); with the gear (⚙️) icon on the right you can access the device settings (Wi-Fi, mode switching, etc.).

Tap the green round button at the bottom of the screen to start video recording; the button turns red during recording. You can stop the recording by tapping the same button again. From the bottom menu, use the **[Records]** tab to view past recordings, and the **[SimClever]** tab to return to the app's main menu.

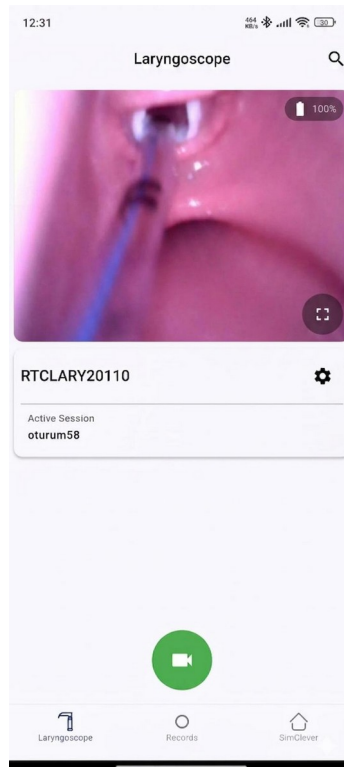


Figure 4: Live view and recording screen.

INFO

On the network provided by the device, your mobile device's internet access may be limited. If device discovery fails, check your Wi-Fi connection and that the laryngoscope is ready with its **solid purple LED**.

7. Charging and Battery

- Connect the device to a **5 V / 1 A** power supply using a Type-C cable.
- During charging, the red and green LEDs blink intermittently.
- The full charge time is approximately **4 hours**.
- The battery level can be viewed as a percentage in the web interface.

⚡ WARNING

Use only a **5 V / 1 A** approved power supply. High-current or incompatible adapters can shorten battery life or create a safety risk.

8. Maintenance and Cleaning

Area	Instruction
Camera	Wipe the lens only with an eyeglass cleaning cloth . Do not use chemicals.
Body	Wipe with a lightly dampened cloth. Do not use alcohol, acetone, or thinner.
Liquid Contact	Do not immerse the device in water or place it in a sterilizer.

9. Troubleshooting

Problem	Solution
The device does not turn on	Charge it for at least 30 minutes.
No image appears	Check the Wi-Fi connection and that the LEDs are lit purple.
Wi-Fi does not appear	Turn the device off and on, then wait 30 seconds.
Recording does not start	Make sure you press the button twice quickly.
The device froze	Start recovery mode by pressing the button 20 times (data will be erased).

10. Technical Support

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SimClever — Connect Mobile App

To control your device, download the **SimClever — Connect** app to your mobile device. By scanning the QR code you can reach *Google Play Store* or *App Store* directly.