Next generation Medical Simulator
mikoto Gastrointestinal endoscopy Model R0GT01

User's Manual

R ZERO Inc.

Ver.1.0

(24／12／2024)

Contents

1．Introduction

This product is an educational training simulator for gastric and duodenal insertion practice and observation practice. It reproduces the sensation of human-like insertion and enables practice of the procedure with a completely new sensation, supported by educational content and a proprietary navigation function for the acquisition of procedural know-how.

★ Please be sure to read the following
Do not use the product for any purpose other than its intended use. Please note that we are not responsible for any damage or accident that may occur by using the product in a manner other than that described in the instruction manual.

★ Product Feature
【Easy to use】
・Quick set up
・Build-in touch panel display
【Portable material and size】
・Lightweight (7.6 kg), box type, compact in size
【Easy to maintain】】
・No need to clean-up after use
・Vegetable oil-based lubricant

★ Product Function
【Realistic reproduction of the oral cavity, esophagus, stomach and duodenum of the human body.】
・Materials of different hardness, sliding sensations
・Realistic fold shape and texture
・Equipped with organ models that expand and contract
【LEDs to navigate procedural know-how and visualise skills】
・The instructor's know-how of the procedure is shown in a video before training.
・Navigational function with LED illumination to inform the approach point
・Procedure scoring system
・Video storage function facilitates self-learning

※Specifications of this product are subject to change without notice.

★ Product Safety
The overall safety of this product system is the responsibility of the system assembler. Refer to this manual for actual handling instructions.

2．Safety precautions

To prevent injury to persons and damage to equipment, please follow the following instructions.

⚠ DANGER	Extent of imminent hazard which has the potential to cause death or serious injury to the user in the case of improper handling.
⚠ WARNING	Extent of hazard which has the potential to cause death or serious injury to the user in the case of improper handling.
⚠ CAUTION	Extent of hazard or damage which has the potential to cause injury to the user or damage to physical property (houses and household goods) in the case of improper handling.

🚫 This symbol means "prohibited" (never do this)	❗ This symbol means "compulsory" (be sure to do)

⚠ DANGER	
🚫	Do not apply shock or pressure to this product. Failure to do so may result in malfunction or injury.
🚫	Do not heat the product or place it in a fire. Doing so may cause overheating, fire, or electric shock.
🚫	Do not use the product near fire or heat appliances. Doing so may cause overheating, fire, or electric shock.
🚫	Do not use medical devices such as electrocautery or forceps other than endoscopes. Doing so may cause malfunction.

⚠ WARNING

🚫	Never attempt to disassemble, modify, or repair the product. Disassembly, modification, or repair may cause fire, malfunction, injury, or electric shock. For repair, please contact our regional representative or the distributor from which you purchased or R ZERO Inc. (E-mail:mikoto@rzero.jp)
❗	In case of abnormality or malfunction, stop using the product immediately and unplug it from the power supply. Immediately contact our inquiry desk.
❗	Endoscopes inserted into the unit may contain residual lubricant. Please reprocess the endoscope in accordance with the endoscope manufacturer's reprocessing manual.
🚫	Do not disconnect the power plug during operations (e.g. while changing the difficulty level or moving the abdominal pressure plate or the power lamp is blinking when the unit is shutting down.)
🚫	Do not move the product while energized. Transporting or carrying this product with the power on may cause electric shock, malfunction, or failure. Always turn off the power and disconnect the power plug before moving the product.
❗	If the endoscopic image shows that the organ model has been torn or damaged, stop training and shut down the monitoring system. Then contact your dealer.
🚫	Do not put water or liquids containing water other than our specified lubricant into the organ model or get the unit wet. Doing so may cause malfunction, electric shock or fire.
🚫	Do not inject the lubricant through a working channel of an endoscope. It may cause poor visibility of endoscopic video image.
🚫	Lubricants should only be used on organ models.
❗	Keep lubricant away from ignition sources such as heat, sparks, naked flames, and hot objects. Failure to do so may cause fire.
❗	When unplug a connector of a cable, do not pull the cable but always hold and pull the connector. If not, the connector or the cable may be damaged, resulting in electric shock or fire.
🚫	Do not press metal objects into the contacts. Doing so may cause heat generation, fire, or electric shock.

🚫	Make sure to insert the power plug all the way to the root. If the plug is not pushed in properly, it may cause ignition or electric shock.
❗	Use the accessory products that are bundled with the unit for connection to the unit. Do not use other products as they cannot be used or may cause malfunctions. Also, if the power cord needs to be replaced, contact the dealer from whom you purchased the product.

⚠ CAUTION	
❗	Clean the unit with neutral detergent.
🚫	Store the product away from direct sunlight, high temperature and high humidity. Doing so may cause deformation, discoloration, or malfunction.
❗	When the device is not in use, close and store the lubricant injection points on the top surface of the device and the slide cover at the endoscope insertion point. Lubricant may leak from inside the organ model and contaminate the area around the device.
❗	The Wi-Fi function will only be in a state where the connection is permitted if the unit is the client. The Bluetooth function will also lock access to the part to be configured and the wireless function will be disabled.
❗	When transporting the unit, keep it in the packing box that was used when the unit was delivered or in a case that can mitigate external shocks. Do not drop the unit or subject it to impact. Doing so may result in damage to parts or malfunction.
❗	Use of the equipment in a manner not specified by the manufacturer when using the equipment will impair the protection provided by the equipment and should be used in accordance with the handling instructions in this manual.
❗	As indicated on this label, before use, the respective points should be Lubricate with lubricant.

3．Before use

■Product components（main unit and accessories）

＜Main unit＞	＜ AC adapter＞	＜Operator's camera＞
	＜USB Analog Video Capture＞※	＜Lubricant＞
	Including extension cable	

※ This accessory may not be included in some sales areas. For details, contact the dealer.

※ Although this product is manufactured and inspected with the greatest possible care, there may be minute scratches on the exterior during the manufacturing process . This does not affect the performance or function of the product. Please be aware of this beforehand.

■Name of each part of the main unit

【Front side】 　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　　【Right side】

Slide cover
Endoscope insertion port (oral)
Endoscope insertion port (nasal)

Power button
HDMI port
Power port
USB port

【Top surface】

Slide cover

Oil injection port （Lateral side）

Oil injection port （oesophageal side）

【Inside】

Duodenum

Stomach

Oesophagus

Pharynx

Endoscope insert （nasal・oral）
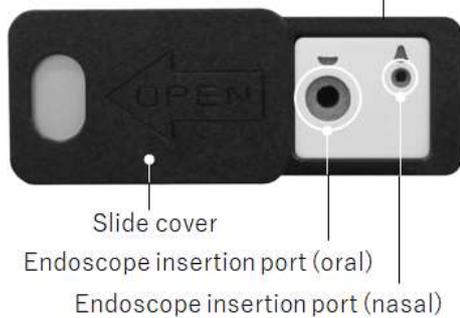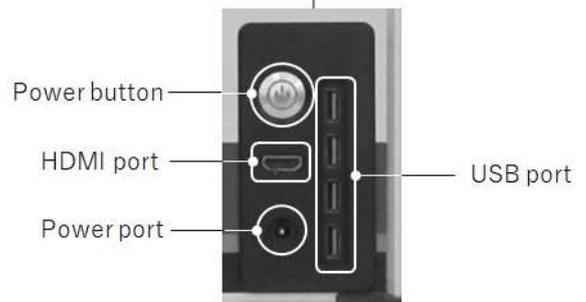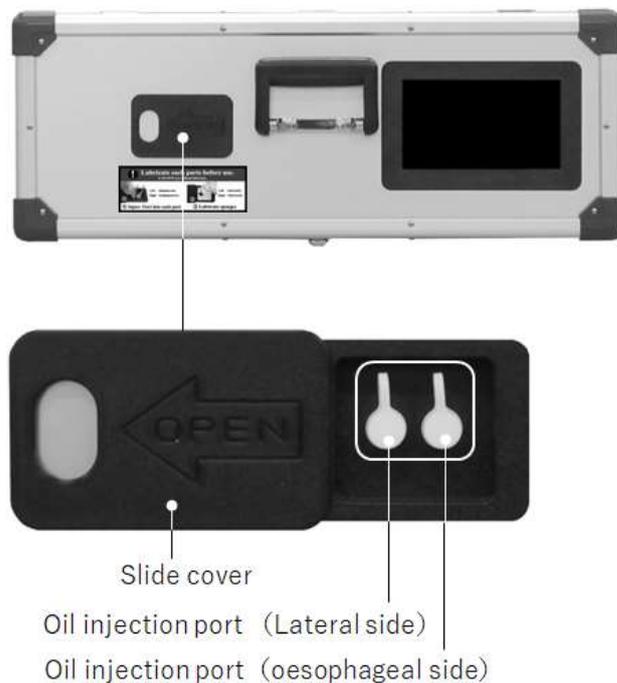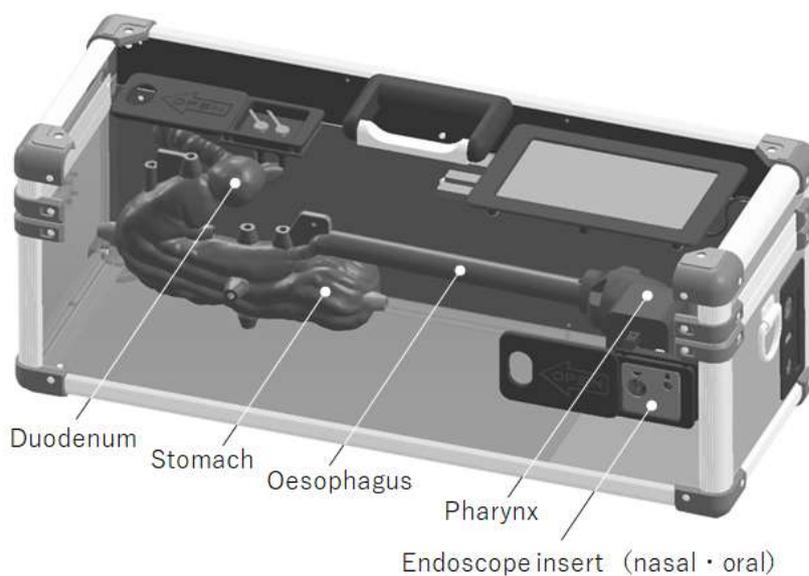
Diagram of organ model installation inside the device.
※Displayed as a cut model with some panel data omitted to facilitate confirmation of organ model

4．Preparation

4－1　Place the upper gastrointestinal endoscopy simulator on a level surface
In some locations, a sheet or similar should be placed underneath to prevent contamination by the lubricant.

4－2　Power supply connection
Plug the AC adapter into the power port of the main unit and the power plug into a wall outlet.

4－3　Connecting peripheral devices
・Plug the operator's camera and USB analog video capture into the USB port on the main unit.
・The connection to the endoscope system and a monitor are as shown in the figure below.
・A keyboard and a mouse can be connected for the operation.

＜Overall connection diagram and connection type＞

4－4　How to use lubricants
・Move the slide cover on the left side and inject lubricant around the sponge hole at the endoscope insertion port (oral or nasal). This should ensure that the lubricant is fully applied around the endoscope during endoscope insertion.
・Move the top slide cover, remove the cap and press the tip of the lubricant bottle directly onto the plastic tube to inject lubricant. Follow the instructions on the label sticker to inject the lubricant.

8
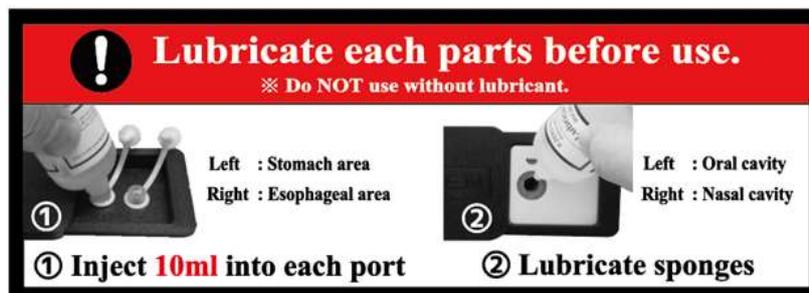
	If too much oil is injected into the sponge, the lubricant may start to leak, so inject a little at a time.
	Any unwanted lubricant that has accumulated inside the organ model should be sucked out with an endoscope.

4 − 5　Endoscope preparation
　This model can simulate deformation caused by air insufflation and air suctioning by endoscope.
　Therefore, the following points should be noted.

	Do not use water for the model. Please use a water bottle of an endoscope system without water.

５．Operation

5 － 1　Startup of the main unit

Press the power button.（The lamp on the button will light up blue.）

After a while, the following screen will appear on the monitor.（Screen during boot up）

The home screen is displayed.

①：Move to training

②：Move to the result ranking

③：Move to the certificate issuing screen

④：Device information.

⑤：The info of the selected language, scoreboard setting, audio output setting, sound setting and name of hospital. This is also the direct links of each function.

⑥：The info of Wi-Fi connection

⑦：Move to setting
⑧：The info of updates
⑨：Power off button

5－2 Start of training

When you select 'Start training', a screen will appear to select the type of endoscope to use and the various training modes; select one of these.

5－2－① Selecting the endoscope scope type

Select whether the endoscope to be used for training is nasal (left-hand side) or oral (right-hand side). Tap on 'DEFAULT' to display the registered scopes, as shown in the diagram below. If the scope is not on this list, select 'DEFAULT'.

*When training with 'DEFAULT' selected, adjust the response of the light sensor by referring to 'Sensor sensitivity' in 5-6-⑤.

Registered scope list (oral)

5 − 2 −② Step by step training

    This mode allows the user to learn the operations and observations required for endoscopic procedures in 13 sequential steps. In this mode, clearing one step allows you to move on to the next step. If you are using the system for the first time, select 'New registration' on the first screen and enter your information.
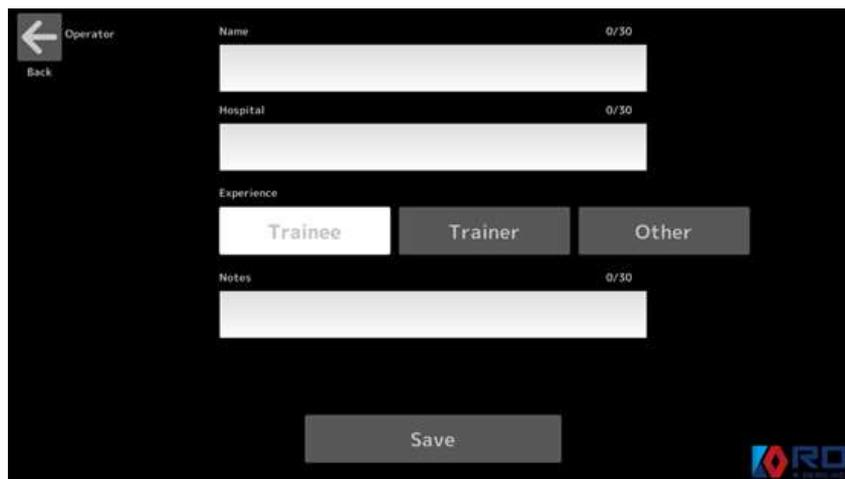
    If you select 'Name', you can key in the following screen.
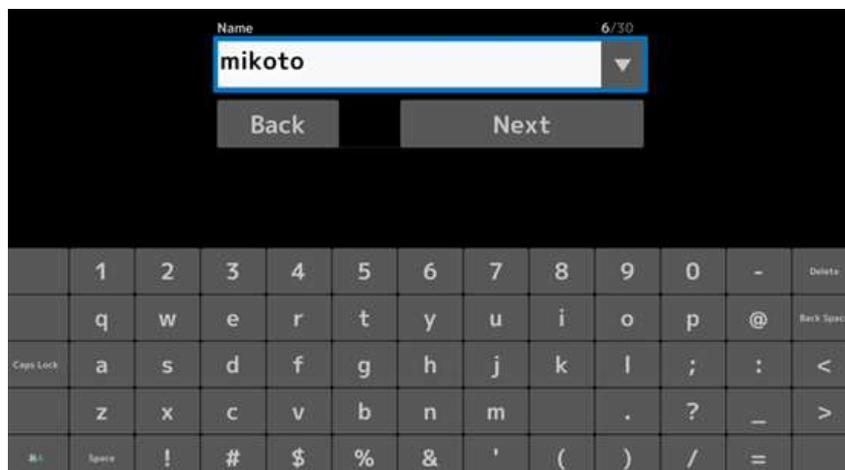
Select 'Next' and then 'Save' to display the step-by-step mode start screen.
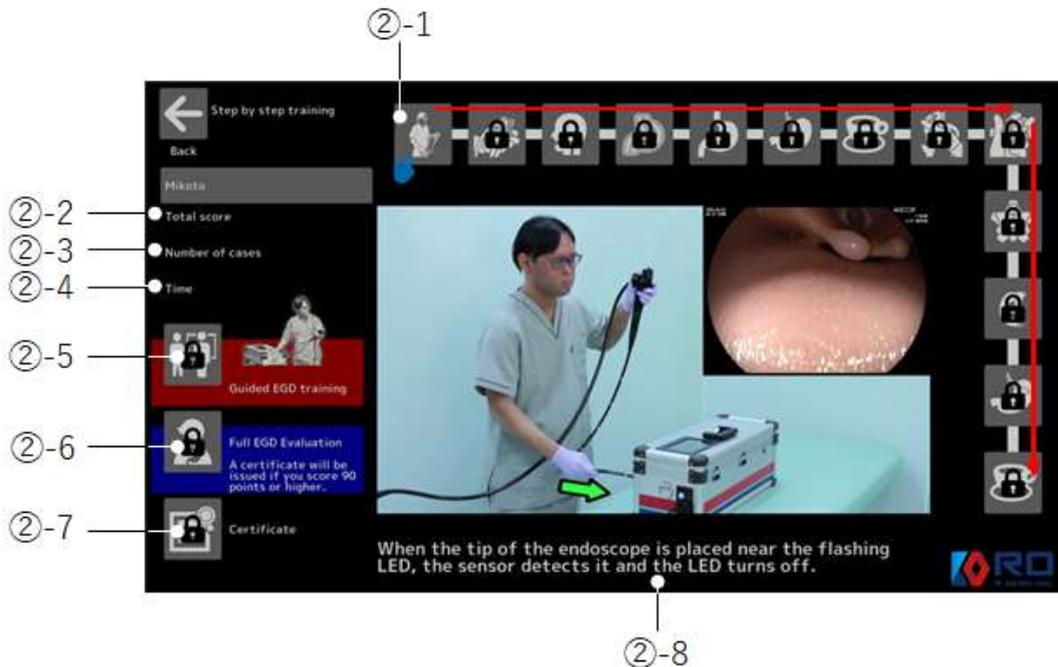
②-1 First step. Start here and train the 13 steps in sequence.

After each step of the training, a tick, as shown on the right, is icon.

②-2 Displays the total score for each step performed.

②-3 Displays the total number of 13 step training sessions performed.

②-4 Displays the total time spent training the 13 steps.

②-5 Once all 13 steps have been completed, the key lock is unlocked and guided EGD training can be performed from this screen.

②-6 Once guided EGD training has been completed on this screen, the key lock is unlocked and training in Full EGD evaluation mode can be carried out from this screen.

②-7 When a score of 90 or more is achieved in the Full EGD evaluation mode, the key lock is unlocked and a QR code is displayed to verify the certificate.

②-8 The instructional content for the selected step of the endoscopic procedure operation is played in the centre of the screen. Text explaining the content is also displayed and read aloud. When training, watch the instructional video displayed in the centre of the screen before starting.

※ It is also possible to select 'guided EGD training' or 'Full EGD evaluation mode' directly from the 'Start training' screen.

In both cases, the highest score will be reflected if the registration name is the same, whether the selection is made from Step-by-step or directly.

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※ 'Demo' function.

Step-by-step has a 'demo' function. It is possible to start training from any step. In addition, you can freely check the video of the instruction of each step and the explanation of the technique.
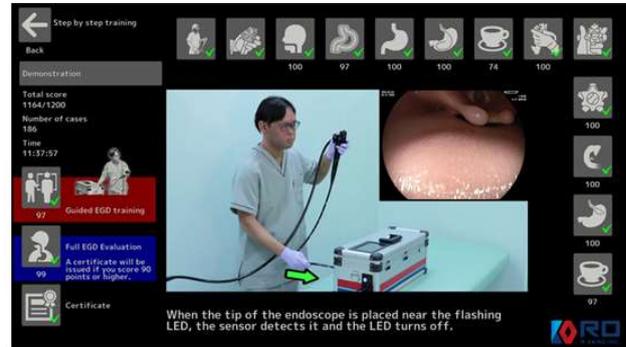
5 − 2 −③ Guided EGD training mode

This mode can be selected either from within Step-by-step or from the Start training screen.

When you enter this mode, you first select one of the three different procedures to start training. A countdown will start and when it reaches '0', insert the endoscope through the insertion opening corresponding to the type of scope used.

Text, sound and an image of the target observation point are displayed on the screen, as well as the operating procedure of the endoscope up to the target observation point and the endoscope image during the procedure. An LED light flashes at the target observation point and navigates you to the point where the endoscope is to be inserted.

When the endoscope approaches the target observation point, the light sensor adjacent to the LED light detects the illumination of the endoscope, the LED light blinking interval shortens and the light goes off. After an audible indication of detection, the LED light of the next observation target starts to blink.

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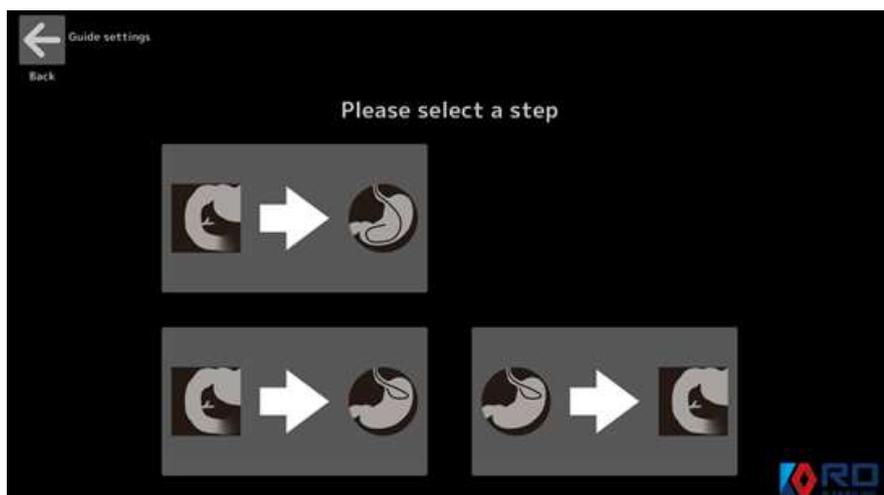
【Guided EGD training start screen】
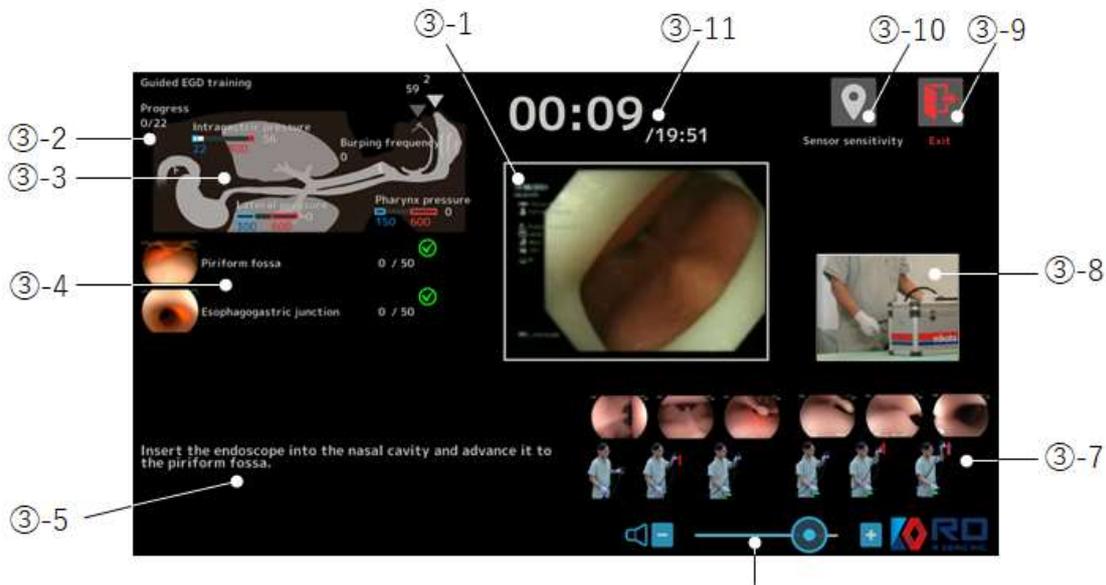
③-1 Endoscopy image

Captures and displays endoscope images.

③-2 Progress checks

Displays the number of cleared target areas out of the 22 target areas set for observation.

③-3 Pressure sensor display

Measures and displays endoscopic pressure to the pharynx and the greater folds and air pressure in the stomach. It also displays the number of burps.

③-4 Indication of the observation target location

Shows a picture of the location where the LED light of the observation target location is displayed. Also shows the detected light intensity of the illumination.

③-5 Explanatory display of endoscopic operations

The training procedure, the endoscope operation and the target area to be reached are displayed in text and navigated by voice.

③-6 Sound volume

③-7 Display of endoscopic technique operations

Displays the procedural operation when approaching the target reach indicated in ③- 4 with the endoscope and the endoscopic image displayed while the operation is being performed.

③-8 Operator's camera image

Displays the video captured by the operator's camera. Please adjust the camera position so that the movement of your hands is displayed.

③-9 Exit icon

You can end the training even in the middle of a training session.

③-10 Sensor sensitivity

Sensor sensitivity can be adjusted even during training.

Refer to 5-7-⑤ 'Sensor sensitivity' to adjust.

③-11 Training time display

Each training session lasts for 20 minutes. The time from the start of training and the remaining time are displayed; if the training is not finished after 20 minutes, the training is forcibly terminated.

5－2－④　Full EGD evaluation mode

In this mode, all observation target areas should be observed with the function that navigates the approach to the observation target area by switching on the LED light in Step-by-step mode or Guided EGD mode disabled.

Select 'Full EGD evaluation mode' to start training after a countdown.

【Full EGD evaluation mode start screen】
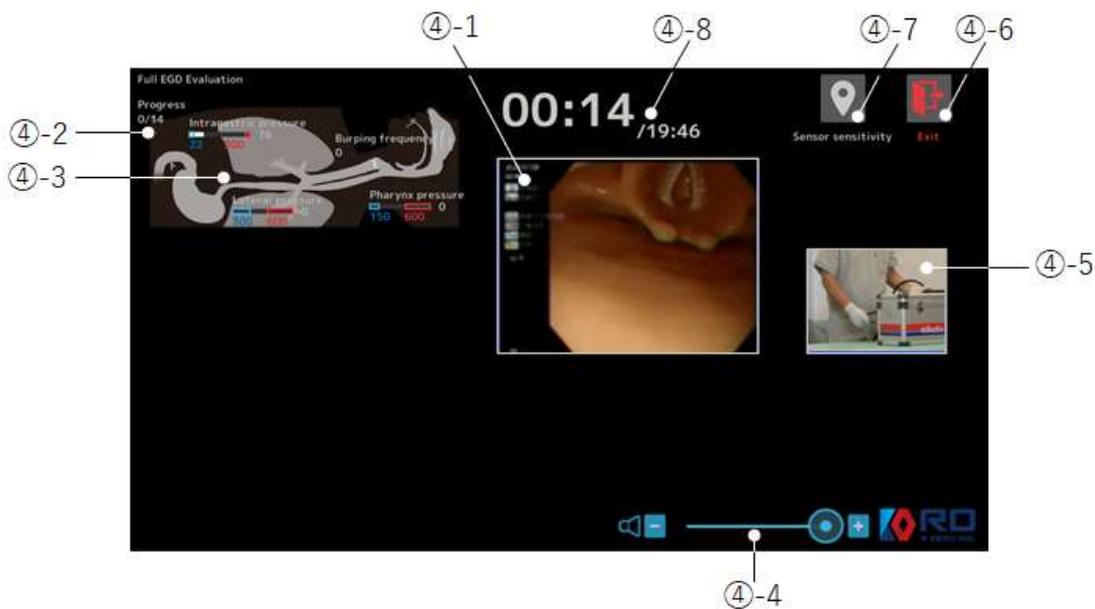
④-1 Endoscopy image

Captures and displays endoscope images.

④-2 Progress checks

Displays the number of cleared target areas out of the 22 target areas set for observation.

④-3 Pressure sensor display

Measures and displays endoscopic pressure to the pharynx and the greater folds and air pressure in the stomach. It also displays the number of burps.

④-4 Sound volume

④-5 Operator's camera image

Displays the video captured by the operator's camera. Please adjust the camera position so that the movement of your hands is displayed.

④-6 Exit icon

You can end the training even in the middle of a training session.

④-7 Sensor sensitivity

Sensor sensitivity can be adjusted even during training. Refer to 5-7-⑤ 'Sensor sensitivity' to adjust.

④-8 Training time display

Each training session lasts for 20 minutes. The time from the start of training and the remaining time are displayed; if the training is not finished after 20 minutes, the training is forcibly terminated.

5 － 2 －⑤　Mini game

Here, there are two modes: speed mode, which measures the time taken to observe 14 observation locations, and random mode, which measures the time taken to observe any location indicated by the announcement and images.

This mode allows you to evaluate how well you have grasped each observation location together with your endoscope operation technique.

【Mini game selection screen】
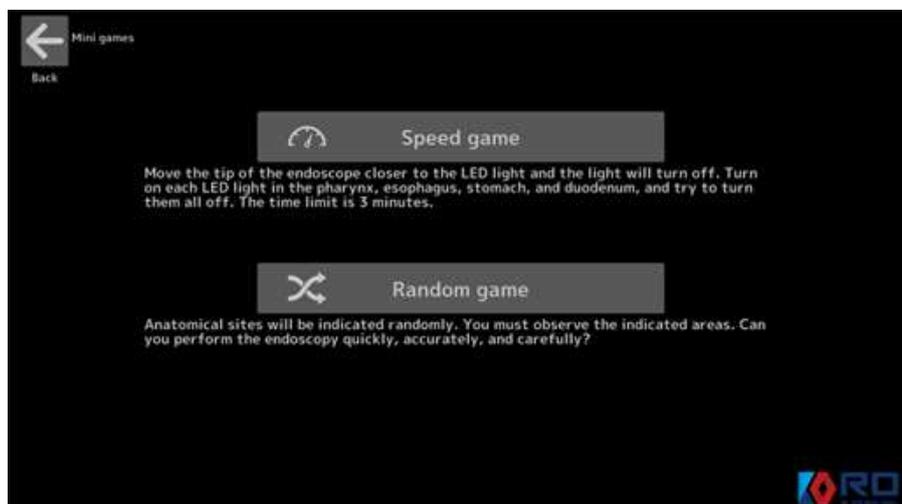
【Mini games Challenge screen】

Speed game　　　　　　　　　　　　　　　　　Random game

⑤-1 Indication of observation points
　The part to be observed by the endoscope is indicated by a blue circle. The blue circle disappears after the observation is completed.

⑤-2 Display of observation points
　The position of the indicated observation point is indicated by a blue circle.

⑤-3 Image display of the observation point
　The indicated observation point is displayed as an image and name.

⑤-4 Clear check
　If the observation location is unknown or the endoscope observation cannot be cleared, this check can be pressed to clear the observation location.

⑤-5 Sensitivity adjustment
　If the light intensity of the scope used is far from the set sensor threshold, it can be changed directly.

5 － 3　Operator registration

When the observation evaluation is completed and the "Next" button is pushed, the following screen will appear.

To register the operator info, please select "Check your score". In the registration page, please input the operator's name and your experience.

*If you select "Training" or "Home", the training video will be stored without these information.
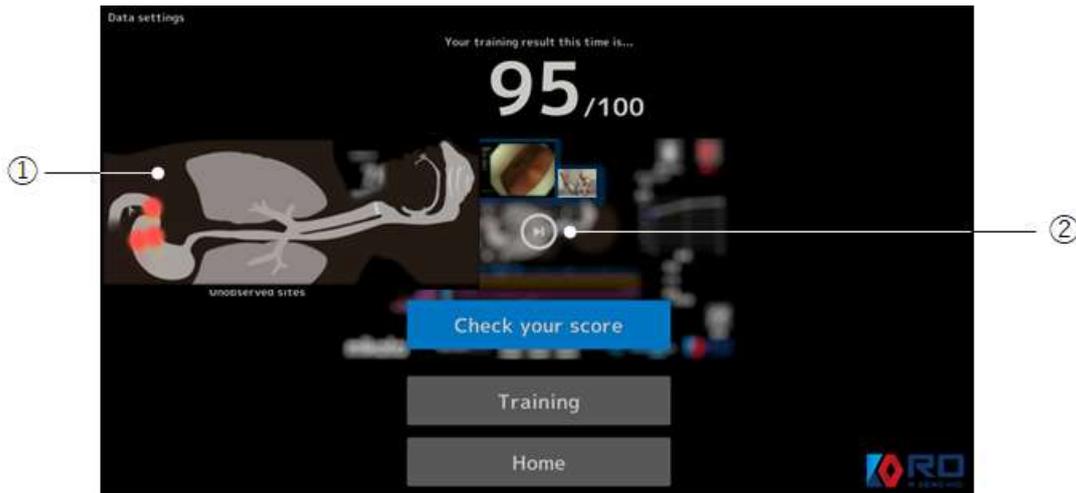
Exit screens for Guided EGD mode and Full EGD evaluation mode

① The areas that have not been observed by the endoscope are circled in red.
② You can move to the replay screen. (You will be transferred to the surgeon's registration screen, as if you had selected 'Check evaluation'.)

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5 － 4　Replay of training video
　　Once the name of the Operator who conducted the training is registered, the content of the training is automatically played back.
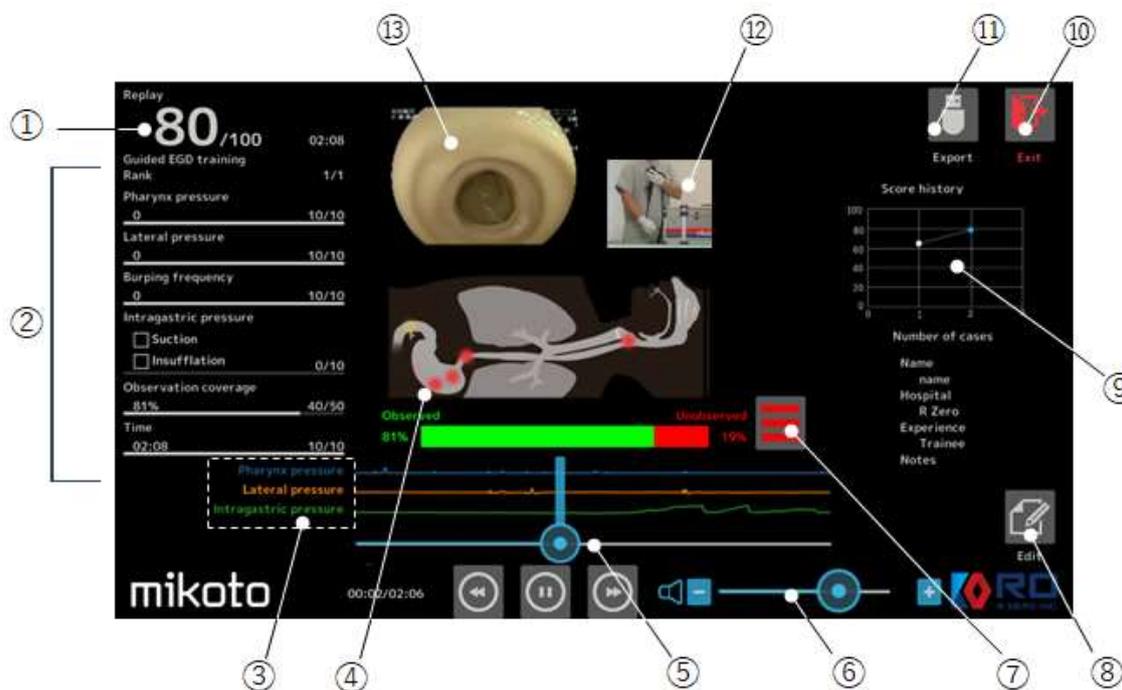
Replay screen of Guided EGD training mode
（* Replay screen in Full EGD evaluation mode also displays the same information.）

①Display of grading results by score or grade.

②Results of scoring and observation of each point
　　You can check the 'rank' of the points in the results of the training, 'pharyngeal pressure', 'large bay pressure', 'number of burps', whether 'suction' or 'insufflation' of intragastric pressure is performed, 'observation rate' and the points at each scoring point in the 'training time'.。

③Waveform graph display at each point.
　　The waveform displays the state of the procedure at each scoring point.

Pharyngeal pressure	Graphical representation of the state of the pressure sensor being pressed when the endoscope passes through the pharyngeal area
Lateral pressure	Graphical representation of the state of the pressure sensor being pushed when the large bay portion is pushed through the endoscope
Intragastric pressure	Graphical representation of the state of the pressure when the endoscope is aspirating or pumping air into the stomach.

④Diagrammatic display of observed and unobserved locations

The diagram displays the areas observed by the endoscope as yellow circles and the areas that have not been observed as red circles.

⑤Replay Slide Bar

The play can be moved to any timing by dragging the slide bar.

⑥Sound volume

⑦Check unobserved areas.

Select here to display a list of unobserved locations. If you select the check box on the left, the number and the name of the site will be in blue, the location of the site will be indicated by a blue circle on the upper side and the image of the site when it is visible through the endoscope will be displayed.
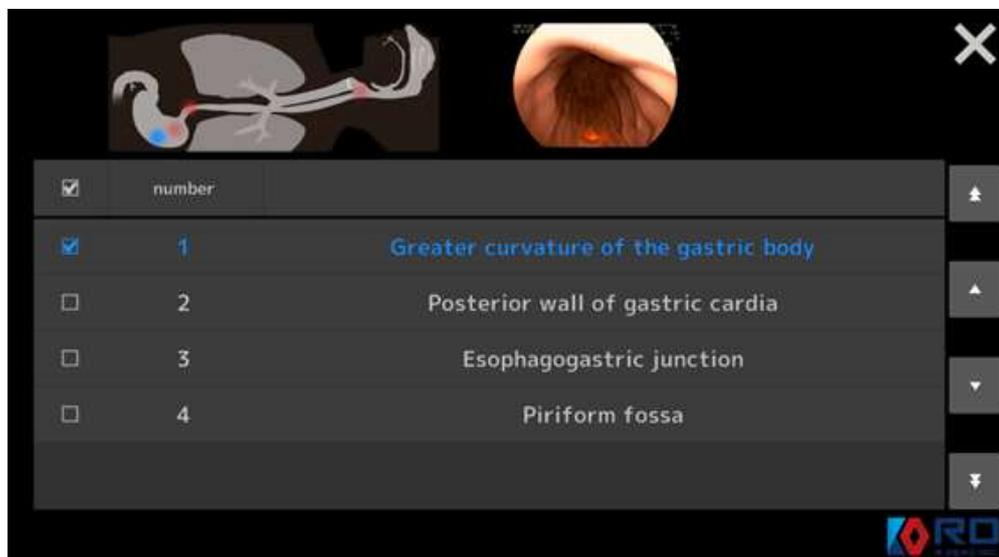
⑧Edit operator's registration data

You can edit the operator's data (name, hospital affiliation, experience, etc.) at the time of registration.

⑨Score history

The score history of the operator is shown.

⑩Exit icon

Exit the replay.

⑪Exporting data to USB memory

When a USB memory device is inserted into the USB hub of the unit and selected, training result data can be exported to the USB memory device.

⑫Operator's camera image

⑬Endoscopy image

Selecting 'Finish' on the Replay screen will take you to a screen that will take you to either Training, Ranking or Home. If you select Ranking, the names and scores of the implementers registered so far will be displayed, with a graphical representation in the top right-hand corner. Selecting another practitioner's list allows you to replay and view their training content.
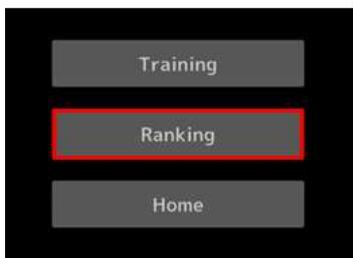
5 - 5   Issue of certificates

Select 'Certificates' on the home screen. Next, the results of implementers who scored 90 or more points in Full EGD evaluation mode are listed, and you can select the list for which you would like to issue a certificate.

A QR code will appear, which you can scan with your smartphone to issue the certificate as PDF data.

CERTIFICATE

We hereby certify the results of training conducted with the medical simulator 'mikoto' with following results.

Equipment used:
mikoto Gastrointestinal endoscopy model (R ZERO INC.)

Demonstration
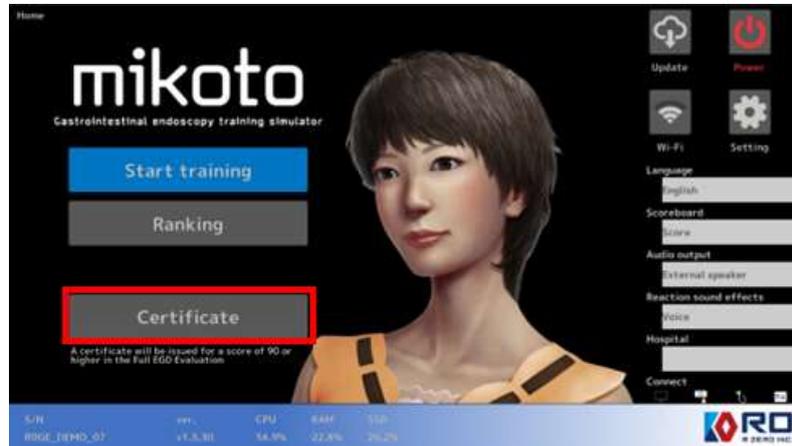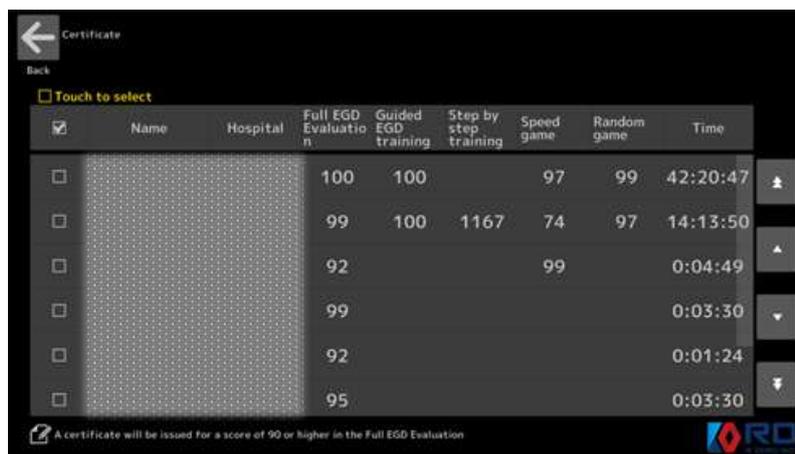
Hospital

Full EGD Evaluation : **99**/100

Guided EGD training : **97**/100

Step by step training : **1164**/1200

Speed game : **74**/100

Random game : **97**/100

Date
Oct/15/2024

Total Practice Time
11:37:57

Certified by
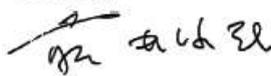
Masashi Fujii MD.,Ph.D.

Certified by

Tomohiko R.Ohya MD.,Ph.D.

Certified by
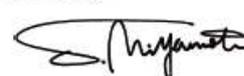
Shuichi Miyamoto MD.,Ph.D.

Examples of certificates issue

5 － 6　Settings

Select "Settings" to view and change various settings.

① Wi-Fi

Displays Wi-Fi connection status. To make new connection, please select "Add new" and register it. Wi-Fi can also be switched off by unchecking the Wi-Fi box in the top left-hand corner.

※When connecting for the first time, please check the contents of the agreement at (7) and only connect after agreeing to it.

② Language
The listed languages are available.

Table columns: checkbox, Number, Language, Language

☑	Number	Language	Language
☐	1	Deutsch	German
☑	2	English	English
☐	3	español	Spanish
☐	4	Français	French
☐	5	हिंदी	Hindi
☐	6	bahasa Indonesia	Indonesian
☐	7	Italiano	Italian
☐	8	日本語	Japanese
☐	9	한국어	Korean
☐	10	Melayu	Malay
☐	11	norsk	Norwegian
☐	12	Português	Portuguese
☐	13	Русский	Russian
☐	14	svenska	Swedish
☐	15	ไทย	Thai
☐	16	Türkçe	Turkish
☐	17	Tiếng Việt	Vietnamese
☐	18	简体中文	Simplified Chinese
☐	19	繁體中文	Traditional Chinese

③ Display option

For home screen appearance, two options which are "Character" and "Device" are available.

For score board, two options are available. If you select "Score", it is displayed numerically. If you select "Grade", it is displayed alphabetically.
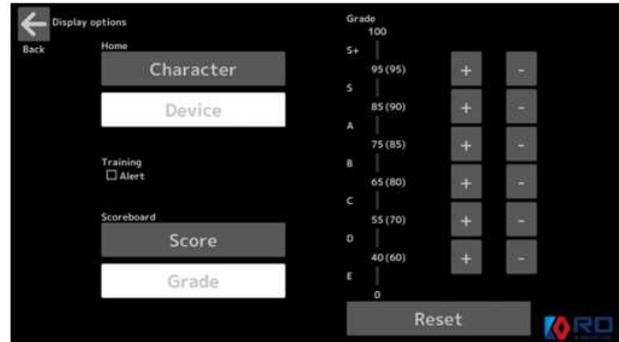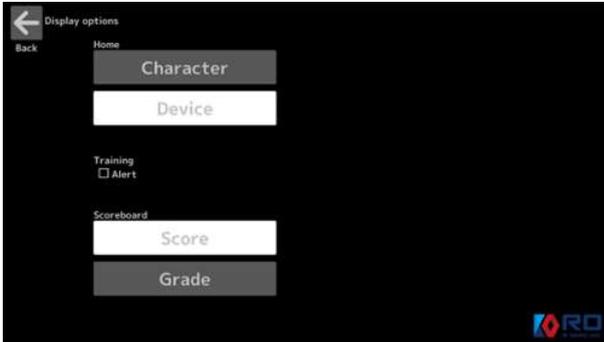
Character Display

Device Display

Score Display

Grade Display

（※The operator's registered names are shown in the line "Name".）

④ Sound Option

Volume	Adjusts the volume played from the speakers. Also adjusts the volume of background music played during training.
Audio output	You can select whether the sound is output to the device itself or to an external speaker.
Sound effect	You can select whether the sound effect is a voice or a beep.
Microphone	The microphone slide bar allows you to adjust the microphone volume attached to the surgeon's camera. Selecting Default returns it to its default value.
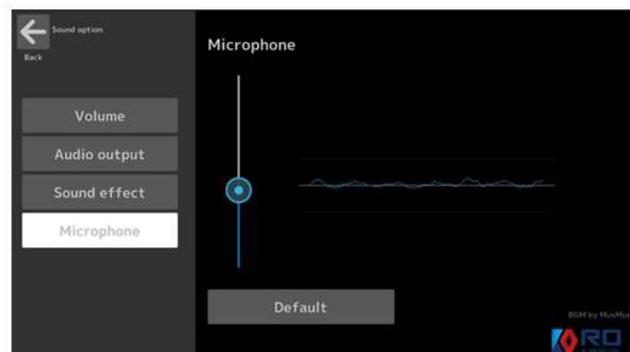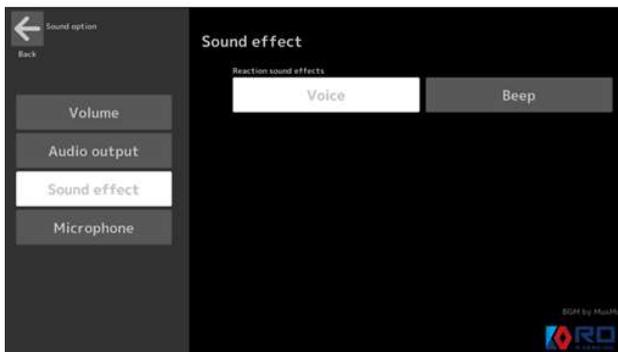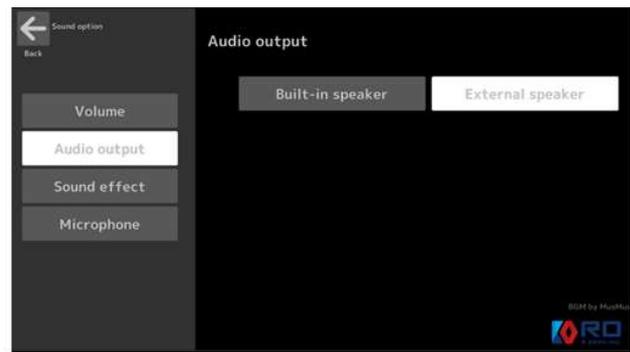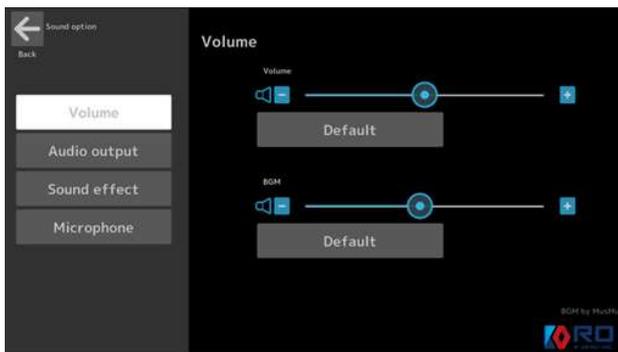
⑤ Sensor sensitivity

The sensitivity of the optical sensor that detects the light intensity of the endoscope used in the organ model and the sensitivity of the pressure sensors in the pharynx and large bay and the air pressure detection sensor in the stomach can be adjusted. The pharyngeal, large bay and intragastric pressures are adjusted by changing the range of the slide bar in this screen. The default value is set as the default value, and the sensitivity increases as the lower limit is lowered.
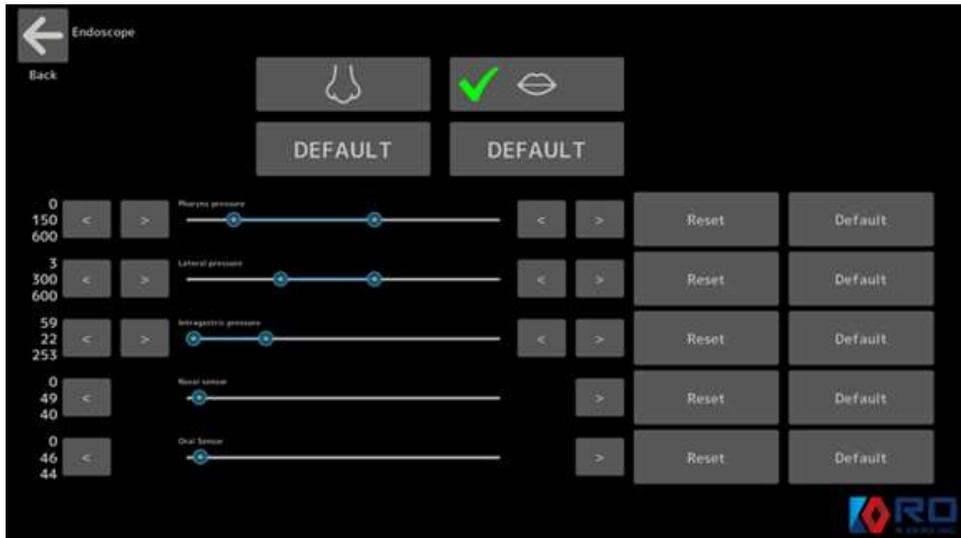
To adjust the sensitivity of the photo sensor installed in the stomach, select 'DEFAULT' and select the scope to be used. When a scope is selected, the selected scope is displayed in the 'DEFAULT' section.
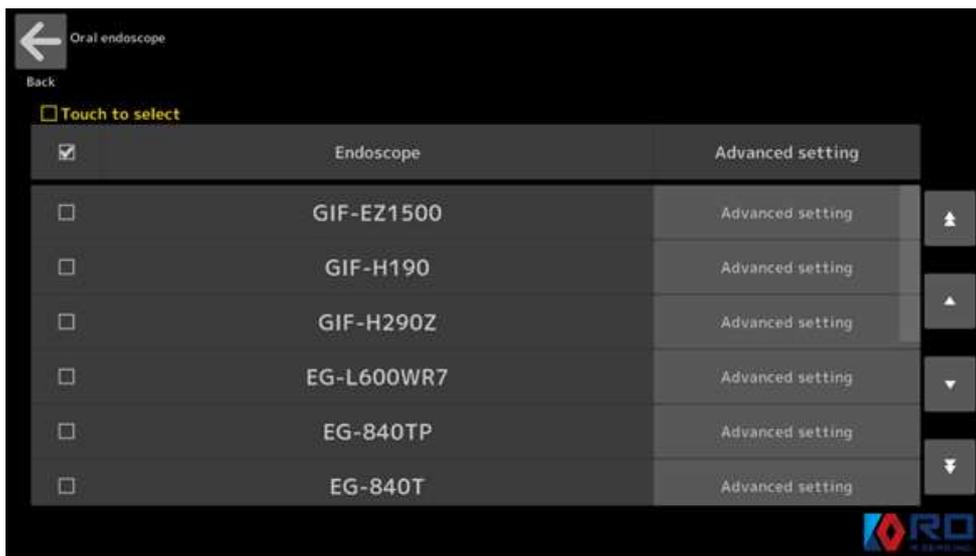
Registered scope list (oral).

If the response of the light sensor is too fast or too slow when observing the target area using the selected endoscopic scope, or when training with a scope that is not registered, select 'DEFAULT' and adjust the light sensor response before use. Select 'Advanced' under 'Sensor sensitivity' and adjust.

⑤-1 Display of the measured light intensity of the endoscope.

The lower number displays the set value and the upper number displays the measured value. Adjust the sensitivity by moving the slide bar. Moving it to the left increases the sensitivity (the endoscope responds more easily when it is further away) and moving it to the right decreases the sensitivity (the endoscope is less likely to respond when it is closer).

When the endoscope approaches the target observation point and reaches the point where the LED lamp can be seen, the optical sensor detects the light from the endoscope. The measured value and the name of the observation point will then change to yellow when the set value is exceeded, so adjust the value by moving the slide bar to the value that reacts at a suitable distance while changing the distance to the LED light when the endoscope is brought closer.
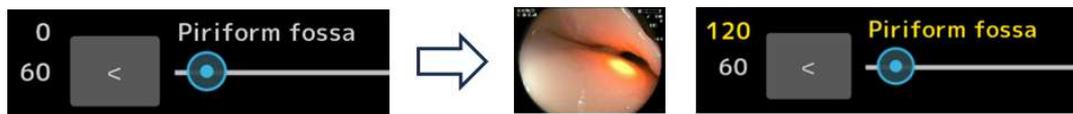
⑤-2 Magnification setting for sensitivity

The sensitivity of all sensors that detect light from the endoscope can be adjusted. Since '1' is the set value state, move the slide bar to the left if you want to increase the sensitivity of the entire sensor, or to the right if you want to decrease the sensitivity.
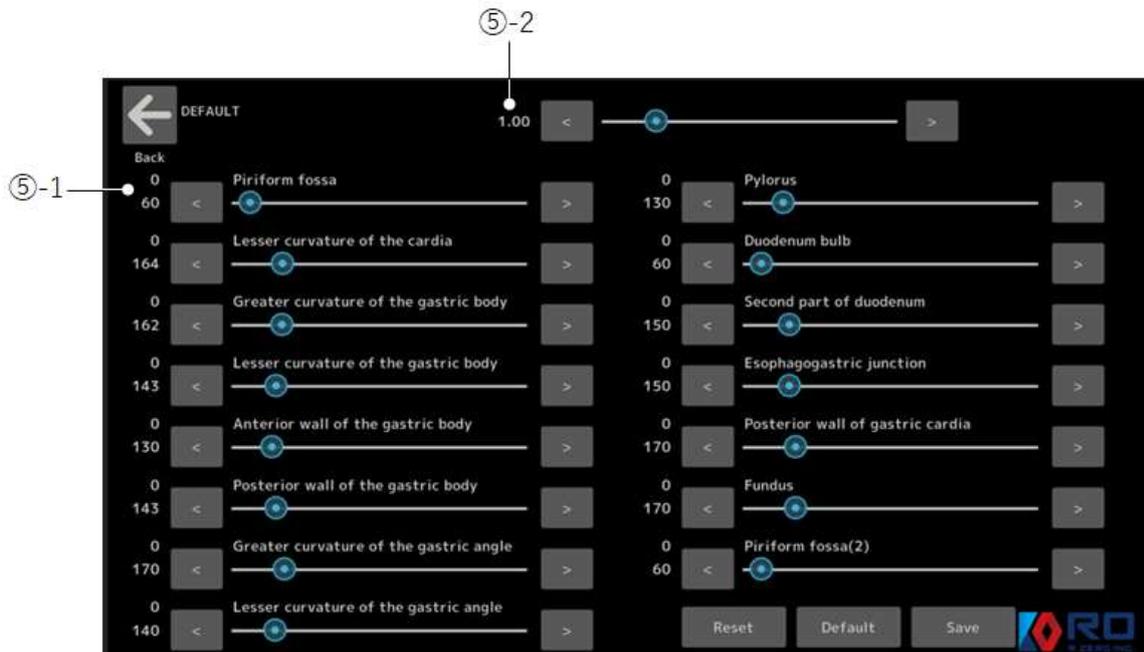
⑥ Register
Your region, country, facility name, and Gastric model replacement day can be registered as a memo.
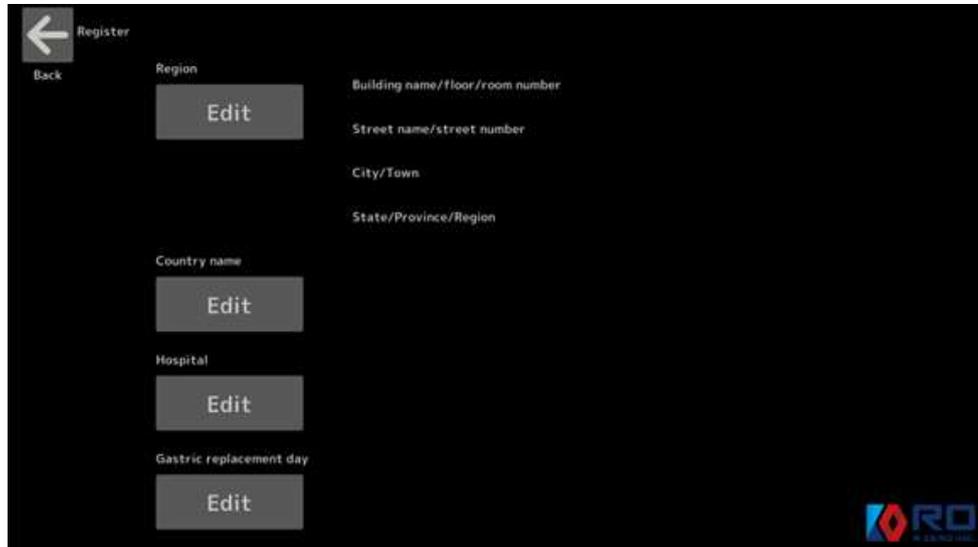
⑦ Consent form
　　Receiving update software and data transfer is handled as the following. If you agree with the terms and conditions, the Wi-Fi function will be available.

Users (hereinafter referred to as "User") of the next-generation medical simulator Mikoto Colonoscopy Model (hereinafter referred to as the "Simulator") hereby consent to the handling of transmitted and received data as defined in (1) below by RZERO Inc. (hereinafter referred to as the "Provider").

1 . Data to be Transmitted and Received
a) Transmitted Data: Data registered and recorded by the User as described in Table 1
b) Received Data: Transmission data described in Table 1 provided by the Provider

2. Data Collection
The Provider may collect data regarding the User as indicated in Table 1 and may transmit this data to servers designated by the Provider. While this data may contain personal information, the User agrees that the collected data will be handled with appropriate measures for privacy and security.

3. Purpose of Data Collection
The User agrees that operational data is collected for purposes such as enhancing the functionality, customization, and analysis of the Simulator.

4. Data Sharing
The User agrees not to share operational data collected by the Provider with third parties, except for academic and research purposes with non-profit organizations. The User also acknowledges that data may be shared in accordance with legal requirements and regulations.

5. Costs Incurred during Transmission and Reception
The User agrees to bear the cost of network preparation, communication fees, and provider usage fees, among other network-related costs, when using the necessary network connection for transmission and reception.

6. System Updates, etc.
For the purpose of updates to the Simulator app, the Provider will provide the received data listed in Table 1 to the User through the User's prepared network. The User understands and agrees that in case of network issues, interruptions, errors, or other malfunctions, data loss may occur, and the User will not seek compensation from the Provider.

7. Withdrawal of Consent

The User has the right to withdraw consent for the transmission of operational data at any time.

However, the User agrees that withdrawing consent may limit the receipt of medical examination data as indicated in Table 1, and the effect of withdrawal does not apply retroactively.

8.Governing Law

This consent form is governed by Japanese law.

（8）準拠法

　　　本同意書は、日本法を準拠法とします。

Table　1　Contents of Transmitted and Received Data

Item	Contents
Transmission data	1. User's registered name 2. Registered name of the organization to which the user belongs 3. Evaluation points 4. Video of use 5. Registered voice and address details 6. Date, time and number of colon exchanges 7. Operating time of actual machine 8. Number of selections 9. Device serial number
Received data	1. update data 2. OS update data

If you agree with the terms and conditions, check "I agree" and select "Next". Wi-Fi setting page appears. Please input SSID and the password.
If the unit is connected to the Wi-Fi, the message "Connection successful" will be displayed.
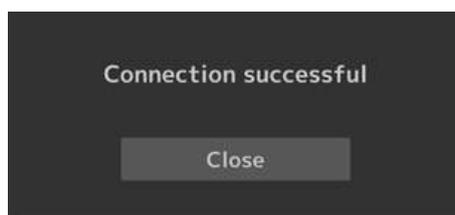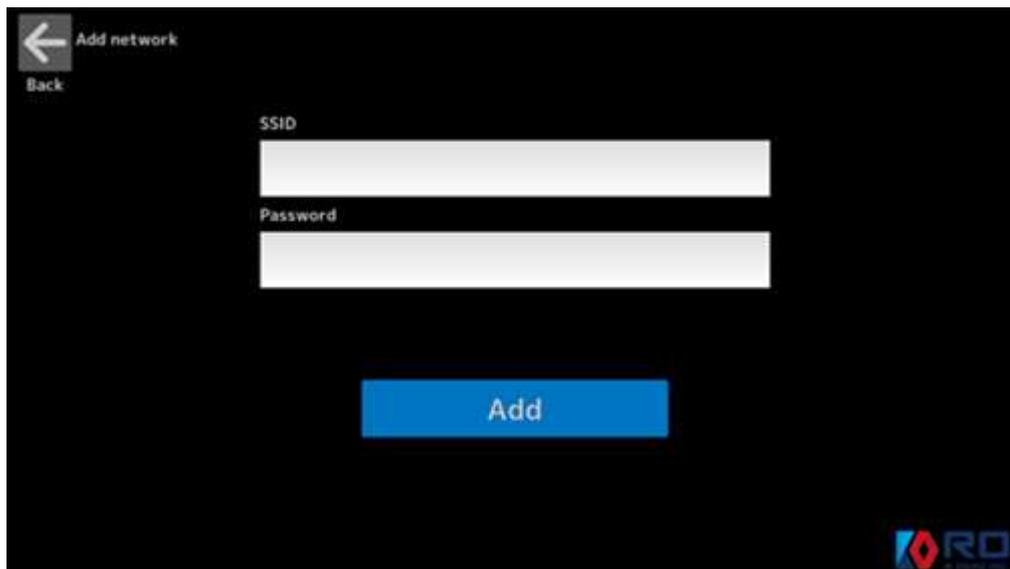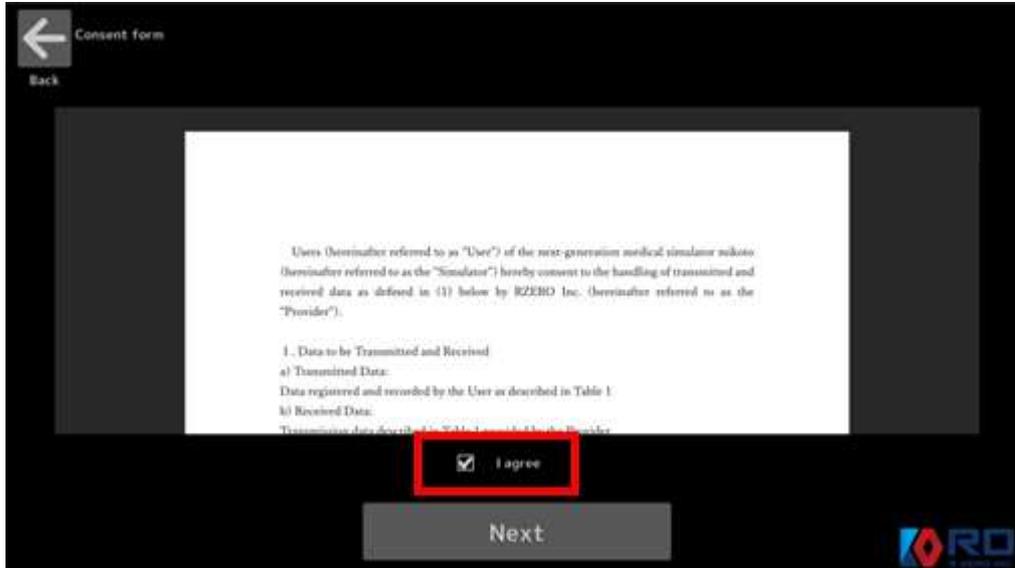
⑧ Data management

Displays a list of training information (mode, score, training time, etc.). Selected data can be exported to USB memory or deleted. When unplugging the USB, please do so after the message "Exported, please unplug the USB."

Please use a USB memory stick formatted in FAT32.

In the Data protection section, you can select 'Protect' and 'Do not protect' (default setting is 'Do not protect'), and in the Cloud section, you can select 'Enable' and 'Disable' (default setting is 'Enable') for data transmission when connected to Wi-Fi.

(The operator's registered names are shown in the line "Name".)

⑨ System log

It records the operating hours of the device, the number of training sessions in each mode and the number of times data is exported.

Item	Item value
Operating time	202:45:09
Step by step training	86
Guided EGD training	341
Full EGD Evaluation	52
Mini games	22
Export	0
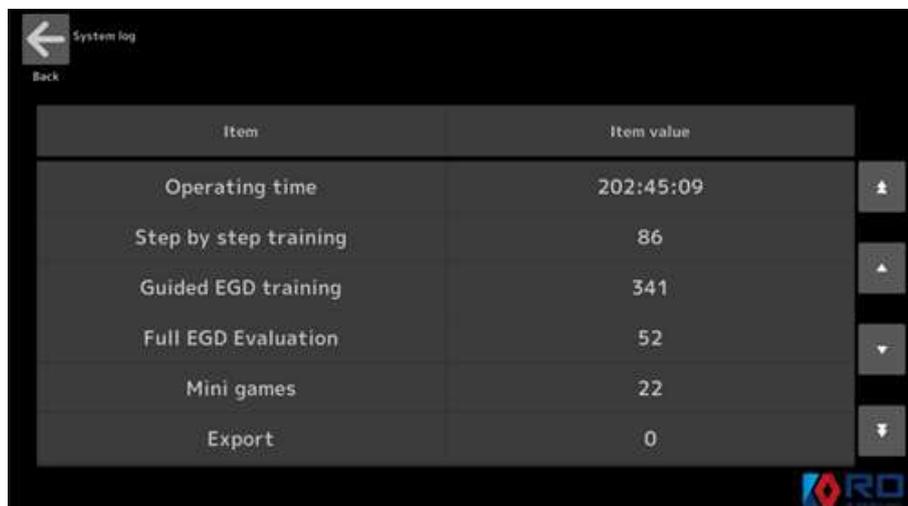
⑩ License

Displays information of the licenses which is used by the unit.
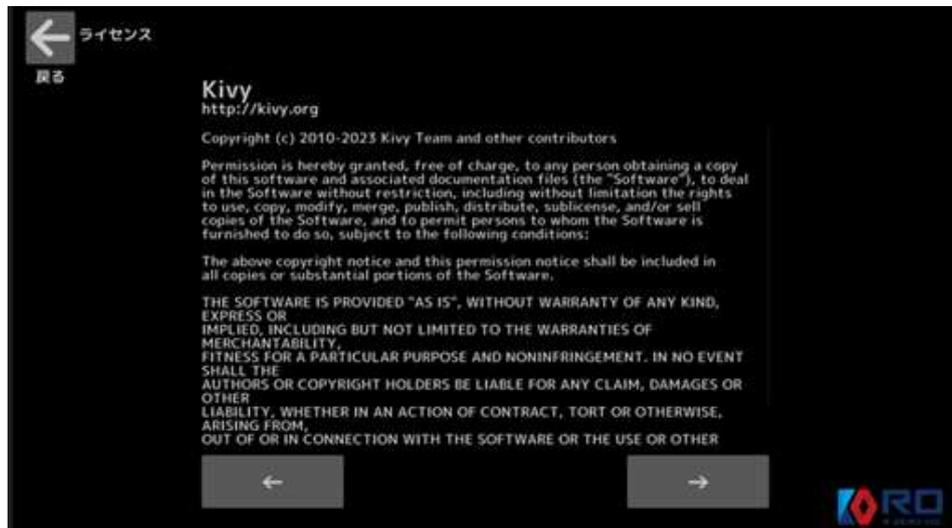
⑪ User's manual

The latest user's manual is available on web site.

5－7　Update

If there is update information while connected to the network, it will be displayed in the update section of the home screen as shown in the diagram. Please update to the latest state and use the device.

After updating, you can select Recovery to restore the original state.
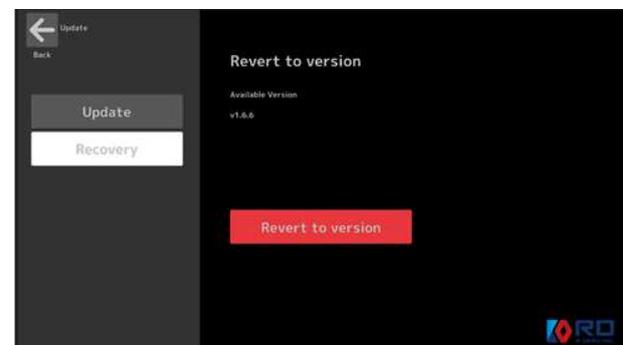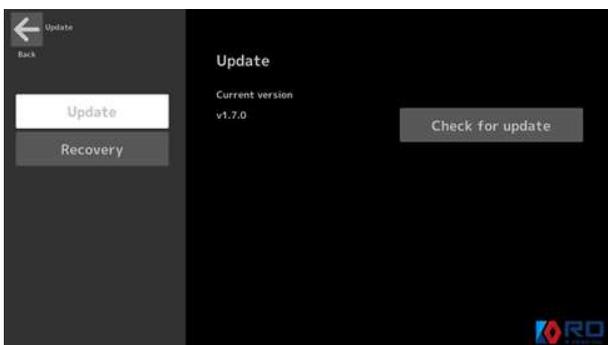
6．Exit operation

6－1　Power off

To shut down the main unit, press and hold the power button on the unit, or select the "Power" button in the home screen. The blue light on the power button on the unit will blink while the system is being shut down. After the blinking ends, unplug the power plug
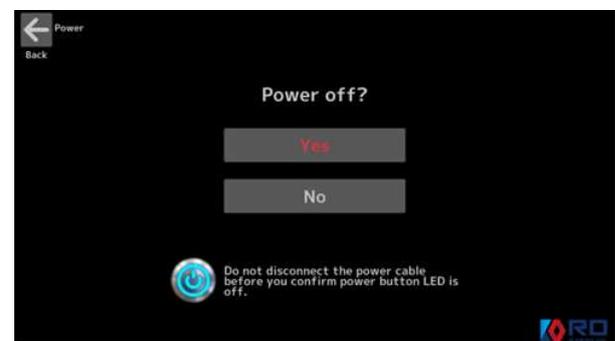
6－2　Slide covers for endoscope insertion and lubrication inlet.

Close the slide cover after use.

7．Specification

■ Composition of lubricant: Refer to the safety data sheet.

■ Lubricant form: Supplied by plastic bottle

■ Usage of lithium battery: No

■ Size and weight

　Main unit：W640×D240×H250 mm（H: Including handle），7.6 kg

■Power：INPUT：DC 12.0V　5.0A　60W

　　　　　　AC Adapter：AC 100V～240V　50～60Hz　1.5A MAX

■ Basic internal PC software：Linax base

■ Wireless LAN：IEEE802.11b, IEEE802.11g, IEEE802.11n, IEEE802.11ac

　　　　　　　（2.4GHz band/5GHz band）

　Frequency of operation：2.4GHz(2412-2472MHz), 5GHz(5180-5700MHz)

　Transmit power：2.4GHz(+14.7dBm(max)), 5GHz(+14.0dBm(max))

■ Environmental conditions：Indoor use, Altitude：Below 2,000m

　　　　　　　　　　Pollution degree of the intended environment　：Pollution degree 2

■ Operating temperature/humidity：10～40℃/ 85%RH or less

■ Storage temperature/humidity：-20～60℃/ 5～95%（There should be no condensation.）

8．Optional parts（consumables）

No	Name	Type	Quantity	Product
1	Lubricant	R0CMT	50ml×2	
2	Sponges for lubricants	R0SPGT	2	

※These parts are consumable. For further information, please contact.

Inquiries

R ZERO Inc.
2-218, kamo-cho, Yonago-shi, Tottori, 683-0823, JAPAN
mikoto@rzero.jp