DRAMIŃSKI
TECHNOLOGY

iLens

wireless goggles

for animal ultrasound examination

USER GUIDE

Rev. iLens_1.3_20260430

DRAMIŃSKI S.A.
Wiktora Steffena 21,
11-036 Ząbruk
Poland

Phone: +48 89 675 26 00
E-mail: sales@draminski.com
www.draminski.com

facebook.com/
com.draminski

instagram.com/
draminski_ultrasound_scanners/

linkedin.com/
company/draminski-sa/

Dramiński S.A. has implemented and maintains comprehensive quality management system in accordance with the **EN ISO 9001** requirements. The system is periodically audited by TUV Rheinland LGA Products GmbH notified body, Tillystrasse 2, 90431, Nurnberg, Germany which participates in the conformity assessment process.

Declaration of conformity can be obtained from our Sales Department:
Phone: +48 89 675 26 00
E-mail: sales@draminski.com

We wish you and the users of the product a lot of success in taking care of your patients.
We are sure that with our product you will be able to provide good care for your patients.

DRAMIŃSKI S.A. will be glad to receive your feedback regarding the device and this manual.
Please call the number: +48 89 675 26 00
or send an e-mail to: sales@draminski.com

Prepared by DRAMIŃSKI S.A.

Contents:

1. About this manual

Individual chapters of the manual describe user's safety, construction and accessories, as well as preparation for work, functions and operation of the Draminski iLens wireless goggles.

1.1. Symbols used in this user manual

Due to the need of emphasizing important content in this manual, the following ways of highlighting are used:

Warning! - when it is necessary to draw special attention due to safety of the user of the device.

Attention! - when it is necessary to draw attention due to protection of the device against damage or due to its proper operation.

Bold text - to draw attention to more important parts in the manual or to make them more distinct or visible.

Descriptions of the schemes and figures - to make recognition of some details easier.

Symbols used in the user manual do not fully inform about the safety instructions and that is why it is important to read the instructions (Chapter 2) and follow them!

1.2. Revision history

Version	Changes
1.0_20240408	First version of iLens User Manual
1.1_20240821	Update of : - Charging status LED indicator signals, - Power LED indicator signals
1.2_20241022	Chapters added: - Pairing iLens with the Draminski ultrasound scanner - iLens goggles update
1.3_20250310	- Updating content, graphics and stylistic corrections - Pairing iLens goggles with airScan pro

2. Basic information about the iLens wireless AR goggles

iLens are wireless, transparent goggles used to display images from Draminski ultrasound scanners.
The use of AR technology displays guarantees greater user safety when working with animals. Thanks to the shaded visor, you will get good contrast and a clear image, even in strong lighting conditions. The built-in battery

provides energy for over 10 hours of continuous operation. iLens wireless goggles define a new standard in animal ultrasound examination.

iLens goggles were designed for veterinary doctors and technicians performing ultrasound examinations of farm animals. In combination with a compatible Draminski ultrasound scanner, they will be used primarily in examining the reproductive system of cattle and horses, confirming and monitoring pregnancy, determining the age and sex of the fetus, as well as examining the lungs in calves, the udder and teats, and the abdominal organs.

Attention!
Rainbow, haze and ghost image effects are natural to AR display technology.

3. User's safety

Warning! - The user's safety depends on observing the below mentioned instructions!

1. DRAMIŃSKI iLens should be used for diagnostic purpose and by the trained staff only.
2. Goggles should be disinfected in reasonable situations in which they could have a contact with infectious substances.
3. It is recommended the users of iLens check the condition of the displays, visors, battery module and head band regularly. Do not use the goggles if any of these elements are damaged or gets very hot.
4. If any mechanical damage or excessive heating of the components is noticed, the device should be sent to an authorized DRAMIŃSKI service centre.
5. It is forbidden to disassembly the device, repair and adjust it by the user except for the procedures stated in this manual.
6. It is forbidden to modify the device by the user.
7. Despite the AR technology used, the display module may limit the field of view above the line of sight. Be especially careful when moving around and when working in a bending or squatting position.
8. The device is suitable for indoor use.
9. It is recommended to connect supplied cables and accessories only.
10. Exposing this device to strong solar radiation should be avoided. Regarding working, storage and transport conditions, it is advised to follow the instructions on the labels of the device and its parts.
11. In order to avoid electric shock the device’s charger should be connected to a grounded outlet.
12. In the places where explosive and anaesthetic gases are used the use of the goggles is prohibited for safety reasons.
13. DRAMIŃSKI iLens is an electric device which can be a source of electromagnetic radiation. Other electric devices can interfere with its work, which is why it is recommended to limit the number of other electric devices working nearby.

14. DRAMIŃSKI iLens uses WiFi connection. Other devices can interfere with its network, which is why it is recommended to limit the number of other wireless devices working nearby.
15. When its service life expires in order to avoid risk to the environment, the device and the accessories should be disposed of by specially trained units according to the applicable regulations or sent back to the manufacturer.

3.1. Augmented Reality (AR) specific warnings

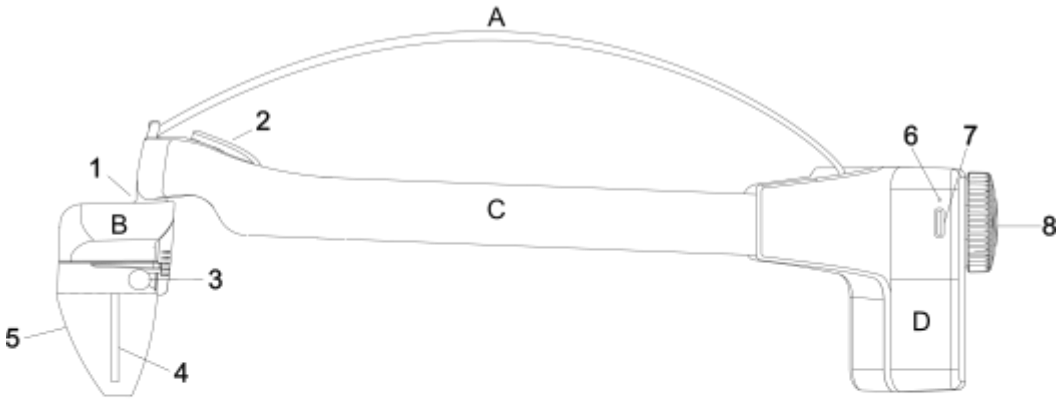
1. Prolonged use of the iLens may cause eyestrain, discomfort or motion sickness. Make sure the device is properly adjusted to your head by following instructions in this User Manual. Start with short sessions and gradually increase usage to get used to the AR experience. If you experience punctual discomfort, take regular breaks. If any symptoms of discomfort persist, discontinue use and consult a doctor.
2. Some individuals may experience photosensitive epileptic seizures when exposed to flashing lights or patterns. If you have a history of epilepsy or seizures, consult a doctor before using the iLens.
3. Stay vigilant of your environment when using the iLens. The augmented reality content projected can potentially divert your attention. Ensure usage occurs solely in safe, controlled settings devoid of risky activities.
4. To ensure electronic safety, the device should be used in an environment with temperature between 0°C and 35°C and a maximum altitude of 2000m above the sea level.
5. Your iLens may generate heat during use. It complies with the user-accessible surface temperature limits defined by the International Standards for Safety (IEC 62368-1). Avoid unnecessary prolonged contact with the device to prevent discomfort and if your iLens goggles get uncomfortably warm, remove it and take a break. If the device surface is heating above bearable temperatures (>58°C), contact DRAMINSKI service and support team.
6. Your iLens is made of commonly used materials in wearable devices. However, some materials may cause allergic reactions in certain individuals. To reduce risk of skin irritation and marks, regularly clean your device, do not use against injured skin and do not overtighten the headband. If you experience severe or persisting symptoms of any discomfort, discontinue use and consult a doctor.
7. iLens and its detachable visor are not intended to provide eye protection against chemicals, UV light, debris and high impacts.
8. The AR displays contained in iLens are made of glass, which is susceptible to break upon impact or accidental drops. To reduce the chances of glass damage, it's advisable to maintain the protective visor attached whenever possible and store the device within its protective case when not in use. To reduce the risk of personal injury, avoid touching and wearing the goggles with broken, chipped or cracked glass. In such instances, it is strongly advised to stop using the device and send it back to DRAMINSKI service centre for AR display replacement.
9. The iLens utilizes RF technology for wireless communication. To guarantee a safe user exposure to RF power, this equipment has been designed, manufactured and tested to meet the Federal Communications Commission (FCC) and the European directives, the exposure to RF energy. Wear the device on your head as intended and described in this User Manual to ensure SAR limits set on the mentioned guidelines are not exceeded, and avoid placing the device in contact with other body parts.

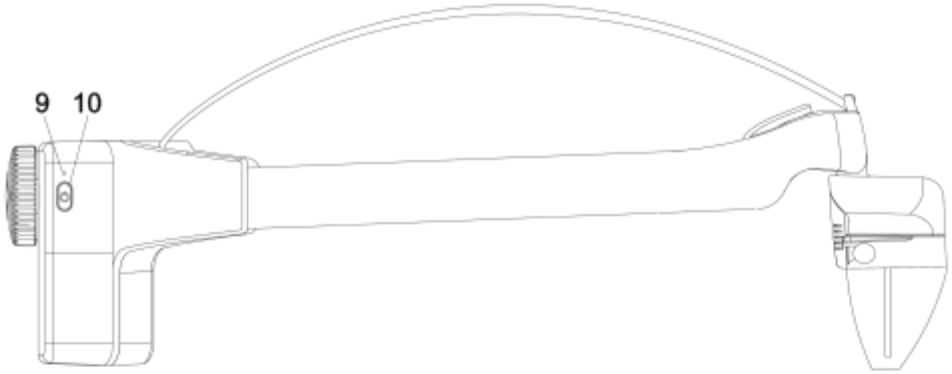
4. The list of DRAMIŃSKI iLens elements and accessories

#	Name and description	Quantity
1	DRAMINSKI iLens goggles with built-in battery	1
2	Transparent visor	1
3	Shaded visor	1
4	Head strap	1
5	Forehead padding	1
6	USB-C cable	1
7	USB-C to USB-A adapter	1
8	Charger	1
9	Transport case	1
10	Power bank (10Ah)	Optional*

5. Construction of Draminski iLens

Draminski iLens is a standalone, wireless, transparent displaying unit allowing for visualization of an ultrasound image in the direct sight of the user.





A. Head strap
B. Display module
C. Headband
D. Battery module

1. Hinge
2. Forehead padding
3. Visor latch
4. AR display
5. Protective visor
6. Charging status LED
7. USB-C socket
8. Headband adjustment screw
9. Power button LED
10. Power button

6. Getting ready to work

After you receive the iLens for the first time, make sure all the components of the set are intact.

6.1. Charging

In order to charge the built-in battery, connect the charger to the mains and the USB cable to the charger and to the iLens USB socket.
Remember, for safety reasons, it is advisable to use only the original components included in the set.

Charging status LED indicator signals:

Signal	Description
OFF	Not charging, USB cable not connected
ON, shining bright	Charging
OFF	Fully charged

Power LED indicator signals:

Action	Signal	Description
-	OFF	iLens is OFF
-	Cyclic: shining for 1s and OFF for 6s.	iLens is ON or in standby mode
Plugged USB cable Device is OFF	OFF	iLens is OFF and USB cable is connected
Pressing the power button	No flash Flash	Battery deeply discharged iLens turning ON

Charging time should be up to 5 hours.

Working time depends on ultrasound scanner with which iLens is connected.
iScan mini – 12h.

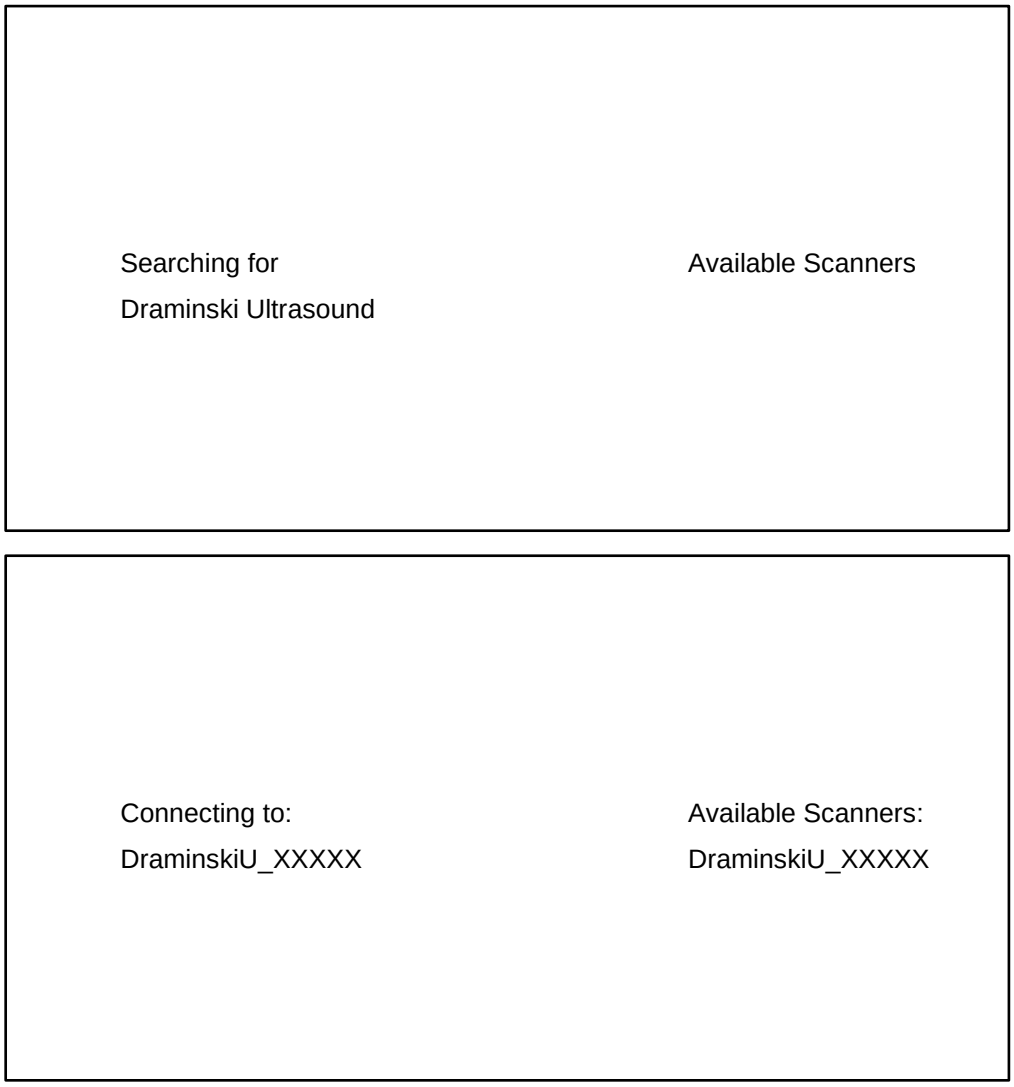
Attention!
iLens cannot be used while being charged directly or indirectly (for example: iLens -> power bank -> mains) from a mains-connected charger!

6.2. Turning on and shutting down

In order to turn on the iLens, press long (>3 s.) the power button. Five seconds after you press power button the LED will blink 4 times, indicating the device is starting.

After booting up, which can take about 60 seconds, you will see a pairing window, the appearance of which depends on the application dedicated to the specific model of the ultrasound scanner.

Appearance of the pairing window for iScan mini and iScan 3 ultrasound scanners.



If you purchased the ultrasound scanner and iLens together they will already be paired.

iLens recognises the network of ultrasound scanner automatically and connects to it.

To shut down the iLens, press and hold the power button until you see “Shutting down”.

6.3. Standby mode

The Stand-by mode saves energy and helps with getting ready for work almost instantly.

To turn on the Standby mode, press Power button shortly. The display will go OFF.

To turn the Standby mode OFF, press Power button shorty again.

You can use standby mode when moving around the buildings.

Attention! Remember not to put iLens into the case in the Standby mode!

6.4. Pairing

It may have to be necessary to pair the iLens with your ultrasound unit in several cases:

- If you acquired the iLens and you already had the ultrasound scanner before,
- if you received the iLens after service maintenance,
- if you want to use them with other ultrasound unit than before.

6.4.1. iScan mini

In order to pair the iLens with your Draminski iScan mini ultrasound scanner:

1. Turn on the iScan mini, turn on the Access Point (make sure no other Draminski ultrasound scanner is turned on or with AP mode activated).
2. When you hear three quick beeps, and with the AP mark turning green, it means the iScan mini is in broadcasting mode.
3. Turn on the iLens.
4. When the iLens boots up and the networks screen is displayed, you should be able to see the network with name DraminskiU_*serial number.*
5. On the iScan mini, press “ESC” + “<” simultaneously. The scanner will beep slow twice which means it will go into the pairing mode allowing the iLens for getting connected.
6. After the iLens is connected, you will see the iScan mini main window <chapter 7>.

6.4.2. iScan 3

The ultrasound scanner network window differs depending on the installed iScan 3 software version (information available in the Help -> About).

In order to pair the iLens with your Draminski iScan 3 ultrasound scanner with **software before 2025-01-24**:

1. Turn on the iScan 3, turn on the Access Point: 

-> System -> Networks -> AP -> ON.
2. When the symbol  in the right bottom corner of the screen appears, it means the iScan 3 is ready for connection.
3. Turn on the iLens.
4. When the iLens boots up and the networks screen is displayed, you should be able to see the network with name DraminskiU_*serial number.*
5. On the iScan 3, turn on the Pair mode: 

-> System -> Mobile App -> Pair mode.
6. Wait until the image is displayed on the iLens goggles.

In order to pair the iLens with your Draminski iScan 3 ultrasound scanner with **software from 2025-01-24**:

1. Turn on the iScan 3, turn on the Access Point: OK MENU -> System -> Network.
2. Use the left arrow, to turn on the Access Point (AP). A QR code and your ultrasound scanner's network name (SSID) will appear.
3. Turn on the iLens.
4. When the iLens boots up and the networks screen is displayed, you should be able to see the network with the SSID name of your ultrasound scanner: DraminskiU_*serial number.*
5. On the iScan 3, turn on the Pair mode: press the "P" button on the keyboard.
6. Wait until the image is displayed on the iLens goggles.

6.4.3. airScan pro

The iLens goggles automatically connect to any airScan pro nearby.

In order to pair the iLens with your airScan pro ultrasound scanner:

1. Connect the battery to the ultrasound scanner.
2. Make sure it is charged by briefly pressing the Power/Freeze button. Four LEDs indicate a fully charged battery.
3. Press and hold the power button until the power LED lights up.
4. Turn on the goggles and wait for the app to load. The iLens scans networks nearby. Once the airScan pro is detected, the goggles will connect to it automatically. Depending on the number of available networks, this can take up to several minutes.
5. The appearance of the ultrasound probe image on the screen indicates readiness for operation.

6.5. Visor change

In order to detach the visor, place one finger on the display module and pull the visor with the second finger next to the visor's latch. Do the same on the other side.

In order to attach the visor, push it under the latches on both sides of the display module.

Warning!

Be careful not to pull or push the display! Although it is made with the toughened glass, it may get broken if too much pressure is applied.

Attention!

Keep the visor installed at all times to protect the display!

6.6. Adjusting the iLens on your head

In order to adjust the iLens on your head:

1. Loosen the headband by turning the headband screw counterclockwise.
2. Put the iLens on your head.
3. Holding the iLens with one hand, unfasten the Velcro of the head strap with your other hand and adjust it so the display unit is in front of your eyes. Fasten the Velcro.
4. Tighten the headband by twisting the headband screw clockwise.
5. Grab the display module and adjust the viewing angle gently.

6.7. iLens goggles update

Use this option in order to send update file to the connected mobile device.

We recommend that you update your iLens every time you update your ultrasound scanner to ensure that you always have the latest software available on your device.

6.7.1. iScan mini

1. Turn on the iScan mini.
2. Update your iScan mini ultrasound scanner via USB or WiFi.
3. Turn on and pair the iLens goggles with the iScan mini ultrasound scanner (see point <6.4.1.>).
4. On the iScan mini ultrasound scanner, run the Update: 

-> Settings -> Update software -> Update iLens.

6.7.2. iScan 3

1. Turn on the iScan 3.
2. Update your iScan 3 ultrasound scanner by USB or Internet.
3. Turn on and pair the iLens goggles with the iScan 3 ultrasound scanner (see point <6.4.2.>).
4. On the iScan 3 ultrasound scanner, run the Update: 

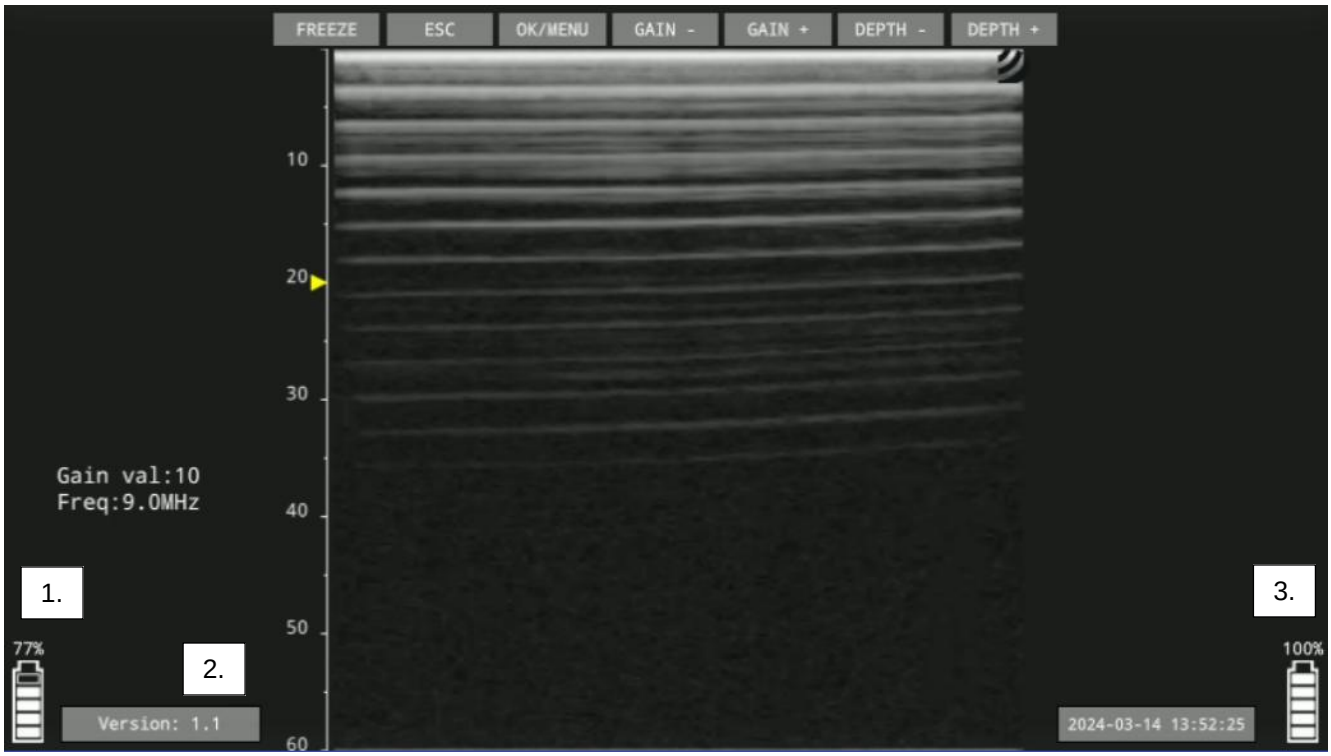
-> System -> Mobile App -> Update iLens.

7. Main window

The appearance of the main window depends on the goggle software dedicated to a specific ultrasound scanner model.

Common features for iScan mini and iScan 3 software:

1. iLens battery indicator.
2. Software version.
3. Ultrasound scanner battery indicator.



8. Cleaning and disinfection

8.1. Recommended materials

1. Eyeglass cleaning solution – for cleaning the AR display
2. 70% isopropyl alcohol – for cleaning and disinfection of plastic parts (except the visor)
3. Mild solution of soap in distilled water – for cleaning the visor.
4. Dry microfibre cloth

Attention! Remember to follow the cleaning solutions providers' safety datasheet!

8.2. Cleaning and disinfection

Attention! Remember about using the personal protective equipment.

Before each use it is recommended to clean the iLens thoroughly. Follow the steps ad below:

1. Turn off the iLens
2. Detach the head strap, forehead padding and the visor. Remember not to leave the iLens without the visor for long time to prevent display damage!
3. Use a clean, dry microfiber cloth to remove loose dust and debris from the iLens' surface and openings.
4. Gently wipe down all external surfaces of the iLens with 70% isopropyl alcohol dampen cloth. Wipe all the plastic surfaces of the iLens and all the detachable parts (**except the visor**). Be careful not to let any excess liquid enter the openings in the device.

5. Gently wipe down the both sides of the glass display with a lint-free cloth priorly sprayed with the eyeglasses cleaning solution.
6. Gently wipe the visor surfaces with a lint-free cloth priorly sprayed with the distilled water & soap mix. Do not use alcohol-based solutions, as they can damage the visor's surface or anti-fog coating.
7. Allow the device and visor to air dry for at least 3 minutes.
8. After all moisture has evaporated, reattach the head strap and forehead padding. Attach the visor back on the iLens by clipping it on one side and the other.
9. Store the devices in the transporting cases.

The carrying case should be cleaned externally with water and detergent. The foam insert should be vacuumed regularly and cleaned with water and a mild detergent. A disinfectant solution, e.g. Virkon S, may be used for disinfection. Before using the carrying case, make sure that the foam insert is completely dry.

9. Storage and transport

Attention! Before storing the components in the transporting case, clean them following the instructions steps in <8.2.>.
Attention! Before storing the iLens in the transporting case, turn it OFF.

When not in use, the iLens and all the components should be stored in the provided transporting cases to minimize improper manipulation and/or contamination. Each item should be inserted inside its dedicated slot. The transporting cases should be kept in a cool and dry place, away from direct heat, excessive humidity, and magnetism. Remember to meet the storage and transport humidity and temperature limits.

Storage and transport relative humidity range:	**35-85% without condensation**
Storage and transport temperature range:	**0º – 35º C (32º – 195º F)**

10. Regulatory information

Regulatory compliance marks can be found marked on the visible plastic surface of your device.

Manufacturer address:
ARVICOM S.a.r.l.
20 Rue du Commerce
3895 Foetz, Luxembourg

Simplified EU Declaration of Conformity

Hereby, DRAMINSKI declares that iLens product is compliant with the EU Radio Equipment Directive 2014/53/EU.

EMC Compliance

iLens have demonstrated electromagnetic compatibility (EMC) compliance. It is important that you use compliant peripheral devices and shielded cables between system components to reduce the possibility of causing interference to radios, televisions and other electronic devices.

RF Emission & Exposure

The iLens goggles have been designed and tested to comply with the Radio Equipment Directive (RED) and the Federal Communications Commission (FCC) requirements regarding RF emissions and exposure.

Mode and Frequency bands	Max Power (dBm) EIRP
WLAN 2412-2472 GHz	12.87
WLAN 5180-5210 GHz	11.17
WLAN 5290-5320 GHz	12.10
WLAN 5610-5700 GHz	7.13
WLAN 5725-5850 GHz	7.10
Bluetooth 2402-2480 GHz	2.68
Bluetooth LT 2402-2480 GHz	0.91

Operation of this device in the band 5150-5250 MHz is restricted to indoor use only in the following countries: BE, BG, CZ, DK, DE, EE, IE, EL, ES, FR, HR, IT, CY, LV, LT, LU, HU, MT, NL, AT, PL, PT, RO, SI, SK, FI, SE.

The highest value of Specific Absorption Rate (SAR) for all the used frequency bands generated by these product models is: 0.49 W/kg (Head).

To ensure the exposure to RF energy produced by device do not exceed the limits set by the guidelines above, use and position the headset as described in this User Manual of the product.

Waste electrical and electronic equipment (WEEE) directive and battery directive.

This WEEE symbol means that the product, packaging or its accessories should not be disposed of with your household waste. If the product or its accessories need to be disposed, please return the devices to the DRAMINSKI, by contacting the service and support team and following the provided instructions. This dedicated disposal and recycling will help to conserve natural resources and the environment, as well as protect human health.

11. Warranty

The manufacturer hereby grants the buyer a 12-month warranty for a trouble-free operation of the product if it is used in accordance with this User Manual.
The battery for the device has a 6-month warranty.

In case of any failure occurring at no fault of the user, the manufacturer undertakes to repair the product not later than within working 14 working days from the date of receiving the device at the service center (Wiktora Steffena 21, 11-036 Sząbruk, Poland) and to return the device in good working order at the manufacturer's cost. The warranty excludes:

- damage resulting from misuse, neglect, or unauthorized modifications or repairs.
- normal wear and tear, including consumable parts and accessories.
- damage caused by accidents, natural disasters, or environmental factors.

The warranty is processed based on a proof of purchase (invoice). To make a complaint, the user should inform the DRAMINSKI Company or its representative immediately of any suspected fault.

To submit a warranty claim, the following steps must be taken:

1. Notify DRAMIŃSKI S.A. of the device malfunction immediately after it occurs.
2. Send the device to the Service Department (no later than before the warranty expiration date) or deliver it in person together with the proof of purchase, which should include the seller’s and purchaser’s details, the date and place of purchase, the device name, and its serial number.
3. A description of the malfunction must be enclosed with the device sent to the Service Department to ensure efficient diagnosis and repair of the damage:

- Before shipping, the ultrasound device, carrying case, and all included accessories must be cleaned and disinfected (*in accordance with the Cleaning and Disinfection section),
- Please pay particular attention when packaging the device to ensure that it is properly secured, as the manufacturer shall not be held liable for any damage incurred during transport.

The warranty is provided by:
DRAMIŃSKI S.A.
Wiktora Steffena 21
11-036 Sząbruk, Poland
e-mail: serwis@draminski.com
www.draminski.com

DRAMIŃSKI S.A.

Wiktora Steffena 21, 11-036 Sząbruk, Poland

Phone: +48 89 675 26 00

e-mail: sales@draminski.com

www.draminski.com