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## MANUAL : Vibroscope® - BVA7

### WELCOME

Thanks to this camera, locate and communicate easily with victims in confined spaces

Thank your for choosing our Vibroscope BVA7. Please read this manual carefully before using the product.  
Refer to the user manual for proper usage of this device !

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# 1. PRECAUTIONS OF USE

Make sure to read the user manual in advance to ensure safe and proper use of this product.

- The figures in the user manual may be different from the actual product, and some of the contents may be partially changed to improve performance without notifying the user.
- This wireless device may cause communication interference during operation, so use with wires depending on the wireless communication situation.
- Before connecting with mobile devices other than the tablet provided with the product, check whether the corresponding device is compatible with the product.
- Do not arbitrarily disassemble or modify the product. There is risk of electric shock or damages. - Do not disassemble battery or place in fire.
- Do not expose directly to flammable or corrosive materials.
- Do not place camera in liquids other than water.
- Do not use in environments with risk of explosion.
- Do not clean camera with ammonia-base cleaning agents.
- Avoid long-term exposure to high temperatures.
- Use a soft cloth when cleaning the camera lens cover.
- After using the camera and its components in saltwater, soak them in freshwater for about 30 minutes and then dry them before storage.
- If the camera's waterproof slide cover is opened and used in a dusty environment, fine dust may accumulate on the speaker and microphone, causing a decrease in volume output. If this happens, do not attempt to remove foreign substances using sharp or pointed objects, as it may damage the speaker and microphone module. Please contact the supplier or manufacturer in such cases.
- In case of rain, if you have opened the camera's waterproof slide cover for usage, make sure to store it with the cover open after drying it. Avoid exposing the camera, with the cover open, to saltwater, acidic, or alkaline liquids.
- To ensure waterproof performance, each component (camera, underwater device, cable reel) is equipped with waterproof O-rings on their connectors. When assembling these components, it may feel a bit tight, but this is normal.

## 2. APPLICATIONS

The BVA7 is a video search device used for rescue at various sites such as searching for people buried at collapse accidents, underwater searches for accidents on water, and for manhole rescues and duct searches, and it can film surrounding areas at 360 degrees. Videos and photos can be taken at a wide angle of 360 degrees using the two fisheye lens.

The BVA7 can be operated wirelessly by installing an application and connecting to a tablet PC or smart device instead of using a dedicated monitor, and depending on the situation, it can also be operated with wired communication.



## 3. COMPOSITION

### GROUND KIT :

- Case (dimensions: 850 x 440 x 158 mm)  
(weight: 10kg)
- BVA7 Camera + Charger
- Shockproof Tablet + Charger
- Telescopic Pole + Handle
- Wired Headset for Audio
- Tablet Stand



### UNDERWATER KIT :

- Case (dimensions: 687 x 528 x 276 mm)  
(weight: 26,5 kg)
- Underwater device
- BVA7 Camera + Charger
- Shockproof Tablet + Charger
- 50m Table reel



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**CAMERA HEAD :**

- Camera size: length 300mm, diameter 48mm (margin of error  $\pm 5\%$ ) • Camera weight: 860g (margin of error  $\pm 5\%$ )
- Camera body material: anodizing aluminum
- Camera lens cover material: heat-treated tempered glass
- Camera light: max 100 lumens x 6
- Use and charge time: use for minimum 2.5 hours to maximum 7 hours, and 2 hour charging time. (margin of error  $\pm 5\%$ ) • Black box storage: (52 hours/64GB recording possible) saving possible
- Temperature range for use:  $-10^{\circ}\text{C} \sim 40^{\circ}\text{C}$
- Waterproof performance: When microphone & speaker waterproof is opened, IPX8 (max depth 3M)
- When closed IPX8 (max depth 100M). Certification authority test report submission conditions
- Certification: must be a product that received CE certification.

**TELESCOPIC POLE :**

- Length: when minimized 500mm / when expanded 1350mm (not including camera head)
- Material: aluminum

**TABLET PC (exclusively for Android) :**

- Display: 8" or bigger
- Resolution: 2560 x 1600 (WQXGA) or larger
- Storage device: basic 64GB



**UNDWATER WEIGHT SYSTEM :**

- Weight: 6.3kg (additional weight blocks can be added)
- Light: 230-lumen LED x 36
- Waterproof performance: IP68 (max depth 100M) certification authority test report submission conditions.

**STORAGE CASES (2 TYPES) :**

- Composed of a land case that can store all components such as the BVA7 camera and tablet PC, etc., and underwater case that can store underwater search device and cable reel.



## 4. COMPONENT CHECK

### CAMERA HEAD

The camera body, which includes a built-in battery and Wi-Fi module, is made of anodized aluminum for durability. The camera lens's protective glass is enhanced with heat-treated covering to improve its durability.

- The lens protective glass and guard are designed to be replaceable if damaged. (If replacement is necessary, please contact the manufacturer for assistance.)
- It is possible to achieve a maximum waterproof depth of 100 meters simply by operating the slide cover, without the need for additional components.
- In dusty environments, if the camera's waterproof slide cover is opened and used, dust and foreign materials may accumulate on the speaker and microphone, causing a decrease in volume output. In such cases, please contact the supplier or manufacturer.
- In case of rain, if you have opened the camera's waterproof slide cover for usage, make sure to store it with the cover open after drying it. Avoid exposing the camera, with the cover open, to saltwater, acidic, or alkaline liquids.
- Waterproof O-rings are attached to the connectors to ensure waterproof performance. When assembling, it may feel a bit tight, but this is normal.



### TELESCOPIC POLE

- It is possible to combine the camera head with a 3-stage aluminum pole. The folding pole has a length of approximately 500mm when collapsed and extends up to 1350mm when fully extended.
- When connecting or disconnecting the camera, always check for any moisture around the connectors. If moisture is present, be sure to remove it before proceeding.
- Waterproof O-rings are attached to the connectors to ensure waterproof performance. When combining the camera head with the pole, it may feel a bit tight, but this is normal.



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## UNDERWATER SEARCH DEVICE

When combining or disconnecting the camera, always check around the connectors for any moisture. If moisture is present, be sure to remove it before proceeding.

Please handle the equipment with care, as serious damage may occur if it collides with the ground.

Waterproof O-rings are attached to the connectors to ensure waterproof performance. When combining the camera head with the cable reel, it may feel a bit tight, but this is normal.



## CABLE REEL

- It is an approximately 50-meter cable reel that can be combined with the camera directly or with underwater devices for exploring confined spaces such as underwater areas, pipelines, and manholes. When in use, please ensure that the antenna is extended, and when storing, fold it back.
- When combining or disconnecting the camera, always check around the connectors for any moisture. If moisture is present, be sure to remove it before proceeding.
- Waterproof O-rings are attached to the connectors to ensure waterproof performance. When combining the camera head with the underwater device, it may feel a bit tight, but this is normal.
- Do not deploy or retract the cable reel while it is connected to a power source or a wired cable.





## 4. STATUS LAMP

### CAMERA HEAD

COLOR	STATUS
Blue flickers three times	Power on When memory card formatting
Red blinking	Low battery (under 10%)
Red	When internal memory card status is defective
Red->Blue	Before connecting to a tablet PC or smart device, the red LED lights up. After the connection is established, the blue LED lights up.
Blue blinking	Video and photo transmission



### CABLE REEL

COLOR	STATUS
Blue flickers three times	Power on
Red blinking	Low battery (under 10%)
Green	When the camera is not connected, the green LED lights up.
Red->Green->Blue	Before connecting to a tablet PC or smart device, the red LED lights up. After the connection is established, the blue LED lights up..



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## 5. MEMORY CARD

### INTERNAL MEMORY CARD

Videos and photos taken using the BVA7 are stored in the camera and the saved data can be managed using the Gallery menu from an admin-authenticated tablet or smart device.

- Frequent repetition of saving and deleting data can shorten the life of memory cards.
- In the event that there is a problem with the internal memory card, a red light will turn on in the status lamp.
- Admin authentication is allowed for one tablet or smart device for one BVA7 camera.

### DELETING INTERNAL MEMORY CARD DATA

When the camera head and smart device is connected either wired or wirelessly through the application, data saved in the camera can be deleted or moved to a mobile device.

- Always save back-up copies before deleting or moving data.

We will not be responsible for data deleted that were not backed up.

## 6. BATTERY

### CHARGING BATTERY

When using the product for the first time after purchase or after in storage for a long time, charge the battery sufficiently before use.

- Always use an authentic CE-certified charger. Charging battery with an unapproved charger may cause the battery to explode or malfunction of product.
- Erroneous connection of charger may lead to malfunction of product. Warranty service will not be applied for damages caused by erroneous use.

1. Plug the camera head charger plug in the outlet first and then connect the camera and charger.
2. Once charging is complete, the status lamp of the charger will turn green. Afterwards, separate charger and camera and unplug the charger from the outlet.

### CHARGING THE CABLE REEL

1. First, plug the cable reel's dedicated charger into an electrical outlet, then connect it to the cable reel.
  2. When the charging is complete, the status indicator on the charger will light up in green. After that, detach the charger from the cable reel, and unplug the charger's plug from the electrical outlet.
- Do not deploy or retract the cable reel while it is connected to a power source or a wired cable.

### INFORMATION ON CHARGING BATTERY

- When battery is low, the battery icon on the upper part of the screen will appear as empty.
- When there is no battery left, product will not turn on even if connected to charger. Charge battery for at least a few minutes before turning on power.
- Product and charger may heat up while charging. This is normal and does not affect product life or functions.
- If product does not charge properly, please contact the manufacturer or place of purchase. When the battery is left without charging for a long period of time, the battery may become completely discharged and cause malfunctions.

## 7. POWER ON/OFF

- Select components and connect with the BVA7 camera head depending on the operation method. Once components are separated after use, camera power will turn off.
- Power will turn on when connecting the SAR 360 camera head with the foldable pole, underwater device, and eyebolt cover, and power will turn off when separated.
- When not using the eyebolt connector, please detach it and store it in the case.
- Be cautious not to apply excessive force when coupling the eyebolt connector, as it may damage the screw thread.
- Waterproof O-rings are attached to the connectors to ensure waterproof performance.
- When combining the camera head with each component, it may feel a bit tight, but this is normal.

## 8. HOW TO USE THE PRODUCT

### THE BVA7 APPLICATION

#### Installing App in Tablet (or Mobile Device)

To connect product and tablet, the SAR360 app must be installed in the tablet first. Download the SAR360 app from Google Playstore.

App installation and operation may not be possible for iOS mobile devices.

- Support or detailed functions may differ depending on the tablet or mobile device.
- App can be used properly only after giving permission for using photos, microphone, speaker, and location information during initial execution following app installation.

#### Entering User Authentication in Tablet (or Mobile Device)

Wireless operation is possible by connecting the tablet and WiFi after turning on camera power. At this time, user authentication and admin authentication is possible, and based on simultaneous operation, it is limited to one for admin-authenticated device and four for user-authenticated devices.

Before executing app, turn on camera power and set the WiFi connection with the table or mobile device.

- The BVA7 camera's Wi-Fi is not capable of connecting to the internet, and a message stating that the connection is not possible will always be displayed. This is a normal status.

Before executing app, turn on camera power and set the WiFi connection with the table or mobile device.

- When initially connecting to Wi-Fi, you need to input a password for user authentication.
- The temporary user authentication code is "00000000," and you can change the temporary password in the options.
- If you forget the changed password, please contact the manufacturer or the supplier. • The BVA7 camera can be connected to a maximum of five tablets or smart devices simultaneously.

## PRECAUTIONS WHEN CONNECTING TO WIFI

- Use within the usage distance (5m) between the tablet or mobile device connected to the product.
- Usage distance may change depending on the user environment.
- In the event that there are obstacles (people, walls, corners, sub-partitions, etc.) between the tablet or mobile device connected to the product, the send/receive signals may weaken.
- WiFi signals may weaken in environments with many WiFi devices in the proximity, which can cause the screen to become choppy.
- Transmission time may take longer depending on the WiFi connection status and size of the file being transmitted.

## MAIN SCREEN COMPOSITION

Select and tap desired functions such as LIVE, MAP VIEW, GALLERY, etc. in the initial screen of the application to execute.



## LIVE SCREEN EXECUTION

This mode allows you to watch real-time videos through the SAR 360 lens from a tablet or smart device. It is composed of the Admin Mode that allows use of all camera functions and the User Mode that restricts direct control of the camera.

When the connected camera is selected, an input window will appear for entering the user authentication number.

In the event that the app and LIVE screen mode are executed while not connected to WiFi.

*User authentication number will be automatically completed after being entered one time.*

*User authentication number is located on the Quality Warranty at the end of the product manual.*

*Camera control (light, microphone, photo, video) is not possible with user-authenticated devices.*

## LIVE SCREEN [ADMIN AUTHENTICATION MODE] : FULL FUNCTIONALITY AVAILABLE.

This is the real-time screen mode of the BVA7. Camera lighting, screen shots, saved videos, etc. can be controlled.

For devices that completed admin authentication, multiple devices cannot be used simultaneously. If there is an admin-authenticated device already connected to the camera, posterior devices shall be recognized as user authentication mode and the app will be activated.

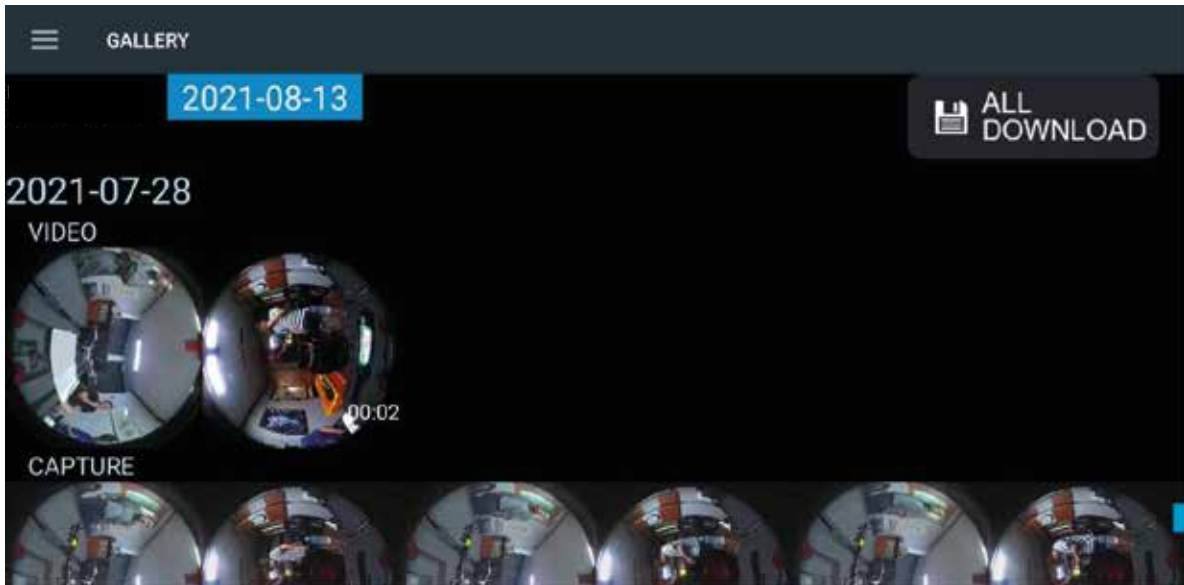
- The temporary administrator authentication code is "11111111," and it can be changed in the options.
- SAR 360 camera can connect to up to five tablets or mobile devices wirelessly at the same time.

**Map View mode** must be executed while the tablet or mobile device is connected to the internet during initial execution after installing the app to download Google Map and operate normally.

- Google Map will be automatically downloaded, and in accordance to Google policies, Map View mode must be executed while connected to the internet at least once every two weeks for normal operation.


**GALLERY**

Videos and captured photos taken with the BVA7 can be checked.



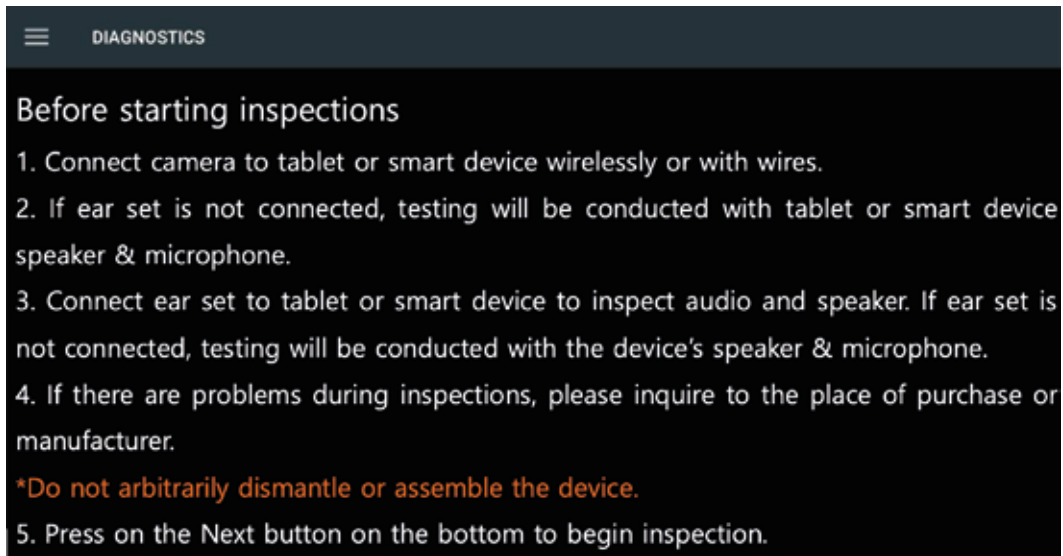
The BVA7 camera saves videos and photos in the internal memory of the camera. Saved data can be saved and moved to tablets or mobile devices, and it can also be selected for deletion.



Tap on the Information icon  located on the lower-right hand of the play screen for saved videos or photos to check information such as date, time, capacity, resolution, video length, location (coordinates).

## DIAGNOSTIC

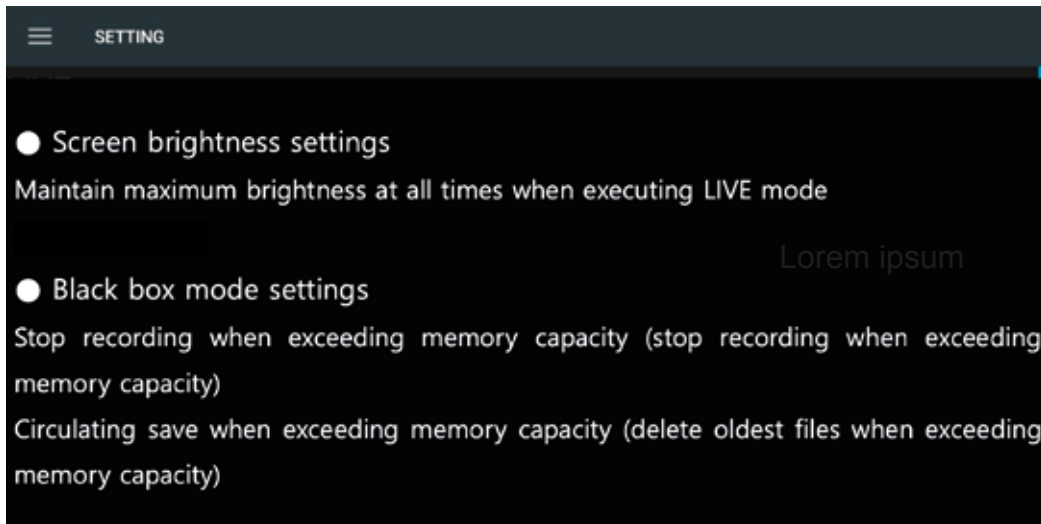
The BVA7 camera head function inspection and diagnosis is possible.



This mode is for inspecting taps for controlling the screen, camera lighting, speaker, and microphone. Inspections can be conducted easily by controlling according to the voice prompts after connecting with the camera.

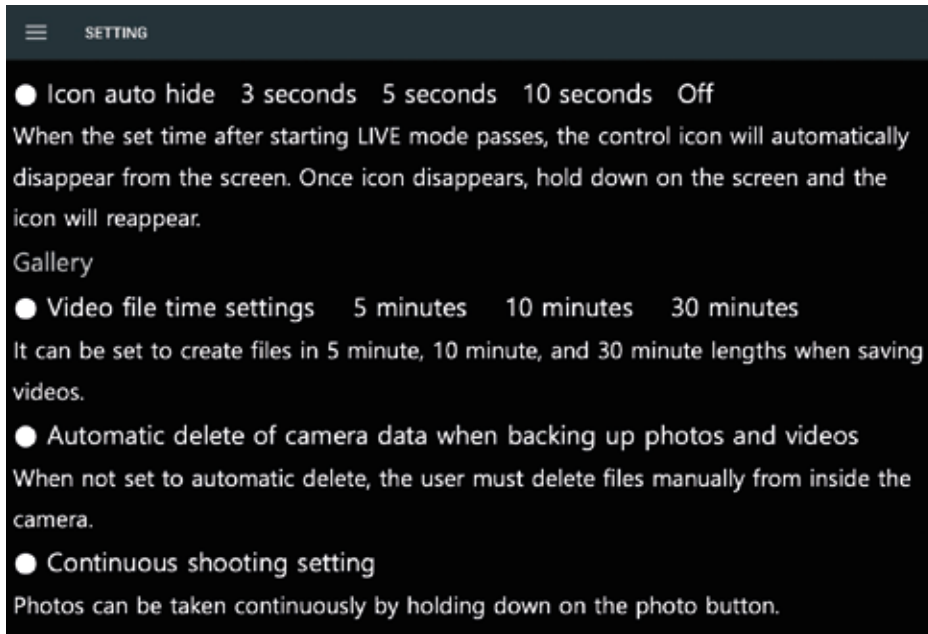
## SETTING

Details can be set for running the BVA7 LIVE screen. In the case of user-authenticated devices, only some settings can be changed, while all settings can be changed with admin authentication.



**Screen brightness settings** - Screen brightness can be adjusted manually. It can be set to maintain maximum screen brightness when executing LIVE screen.

**Video black box function settings** – It can be set to automatically start saving videos without additional operations when executing LIVE mode.



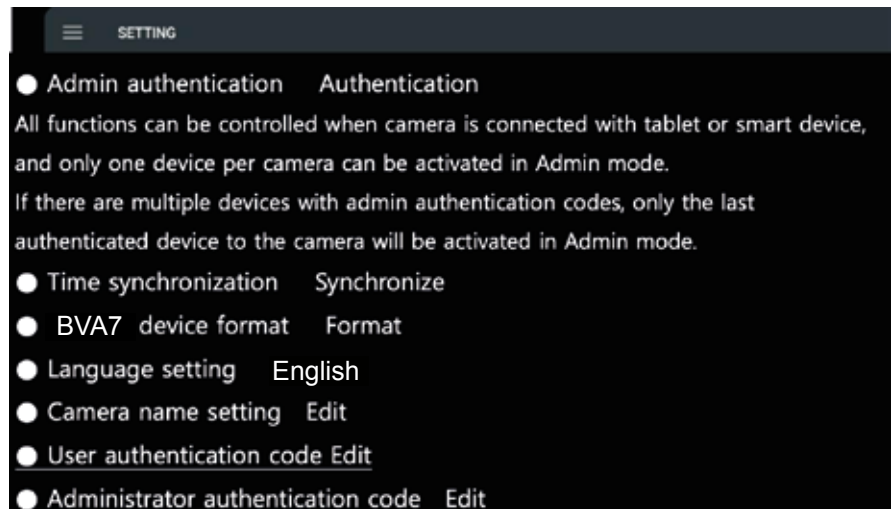
**Icon auto hide** - Function for hiding various icons indicated on the screen in LIVE screen, and it can be set according to user preferences such as 3 seconds, 5 seconds, 10 seconds, or Off.

**Video save time settings** - Videos saved during continuous save can be selected from 5 minutes, 10 minutes or 30 minutes.

**Data backup settings** - This function is for automatically deleting data saved in camera when backing up the videos and photos saved in the internal memory of the camera to a table or smart device.

**Continuous shooting setting** - This function is to execute continuous shooting by tapping and holding the photo icon.

- **Admin authentication** - Admin authentication can be attempted from a tablet or mobile device being used. When admin is authenticated, only one device per camera be connected, and when admin authentication is attempted from a different device while there is a currently connected admin-authenticated device to the camera, the said device can use the LIVE screen in user authentication mode.
- **Time synchronization** - Time of the tablet or mobile device and time of camera can be synchronized.
- **Camera internal memory format** - This function formats data saved in the memory card installed in the camera.
- **Language settings** - Changes language used in the application.
- **Camera name setting** - Edit name of camera. Up to 25 characters including letters and numbers can be entered. "BVA\_" in front of the camera name is a fixed name that cannot be changed.
- **User authentication code** – Edit user authentication code. It can include English letters and numbers, with a minimum of 8 characters and a maximum of 19 characters. The temporary authentication code is 00000000.





## 10. WARRANTY

The **VIBRASCOPE®BVA7** is covered by a total warranty of **one year (1)**.  
(Not including transport and customs costs, where applicable).

In the event of any malfunction, check the batteries before anything else.

If the problem continues, please contact:

**SCORPE TECHNOLOGIES**  
**After Sales Service**  
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