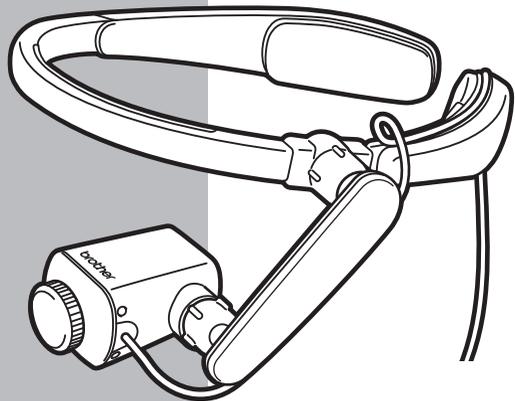


WD-350B

AIRScouter

User's Guide

This guide contains precautions and operation methods for use with this product. Read the whole guide before using your product and keep it for later reference.



Troubleshooting

If you have any problems with this product, to find a solution see [Page 25](#)

1. Introduction

Symbols and conventions used in this document

We use the following symbols and conventions throughout this *User's Guide*:

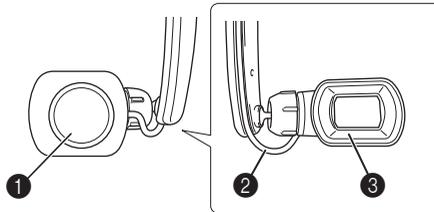
Important	Explains precautions that must be observed when using this product.
Note	Provides supplementary information about using this product.

Contents

1. Introduction	2
Symbols and conventions used in this document	2
Names and functions of key components	4
2. Before using the AiRScouter	8
How to assemble the AiRScouter	8
How to wear the AiRScouter	10
3. Adjusting the display	11
Turn the power on	11
Adjust the position of the Head Display	11
Adjust the focus of the image	13
Rotation of the image	13
4. Adjusting the settings	14
Adjust brightness	14
Lock the buttons of the control box	14
Reduce the size of the image	15
Attach the rear band	16
Switch the head display to be viewed with the right eye	17
Replace the Eyecup	21
5. Maintenance	23
Clean the Lens	23
Clean the Head Band	24
Clean the Control Box	24
6. Troubleshooting	25
Appendix	30
Product specification	30
Requesting repairs	33

Names and functions of key components

Head Display



❶ Focus Adjustment Dial

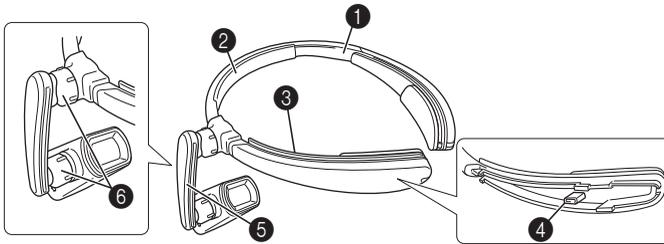
Adjusts the focus of the image on the head display by changing the focal length of the optics (from 30 cm to infinity).

❷ Head Display Cable

Connects the head display to the control box and transmits power and video signals to the head display.

❸ Eyecup

When attached, prevents the head display from touching the user's eye.



① Head Band

Attaches the AiRScouter to the user's head and distributes the weight of the unit.

② Forehead Pad

Cushions the head band and prevents it from slipping down the user's forehead.

③ Cable Channel

Holds the head display cable in place along the head band.

④ Rear Band Attachment Post

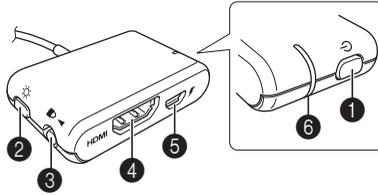
Allows the user to attach the rear band and tighten the head band around the head to prevent slippage.

⑤ Flexible Arm

Allows the user to adjust the position and angle of the head display relative to the eye.

⑥ Joint Dial

Loosens the ball joint to allow for adjustment of the flexible arm, or tightens it to fix the flexible arm's position and angle.



❶ Power button

Press this button to power on the AiRScouter, and press and hold it for two seconds to power off the AiRScouter.

❷ Brightness button

Press this button to select the next brightness level; note that the AiRScouter has five levels of brightness.

Press and hold this button for two seconds to reduce the size of image. To return to the normal size, press and hold it again for two seconds.

❸ Key Lock switch

Slide the switch to the left to disable the power and brightness buttons and prevent unintended changes during operation. The key lock will also disable automatic rotation of the image.

❹ HDMI™ input port

Allows the user to connect the control box to HDMI-compatible devices.

❺ Micro-USB B port

Allows the user to connect the control box to an external power source such as a third-party USB battery.

❻ Display LED (Orange)

Lights up when the AiRScouter is on and an image is being projected on the display.

■ LED Indications

Display LED (Orange)

State	Name	Explanation
 (lit)	Display ON	The AiRScouter is receiving a compatible video signal from an external device.
 (flashing)	No input	The AiRScouter is not receiving a compatible video signal from an external device.
 (off)	Power OFF	The AiRScouter is powered off. To power it on, press the power button.

2. Before using the AiRScouter

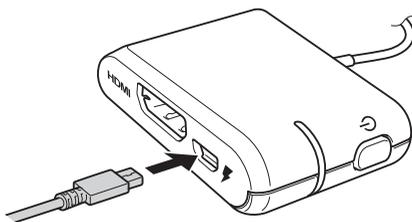
How to assemble the AiRScouter

The AiRScouter is powered by an external source, such as a third party USB battery, that is connected to the micro-USB port on the control box.

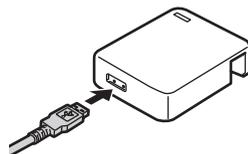
- 1 Before connecting an external battery to the control box, ensure that the external battery has been fully charged. (For more information on charging a third-party USB battery, see the battery's manual.)



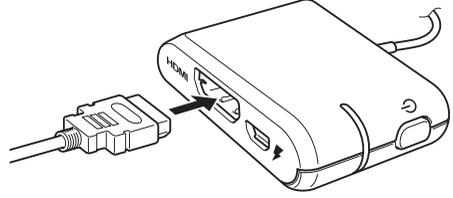
- 2 Connect the Micro-USB B plug of a USB Type-A to Micro-USB B cable to the Micro-USB B port of the control box.



- 3 Connect the USB Type-A plug to the USB Type-A port of the external battery.



4 Connect the video input cable to the control box.



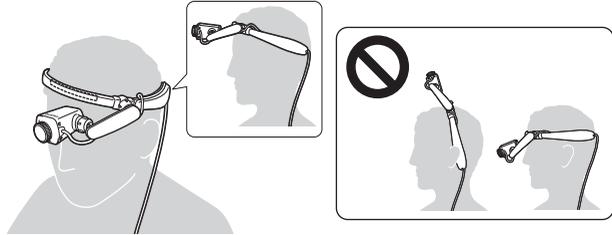
-
- Note** • External third-party batteries, which can be used to power the AiRScouter, may have different capacities. Actual battery life will vary depending on the battery type and operational environment.

Capacity	Battery Life
3,350 mAh	Approx. 5 h
5,200 mAh	Approx. 8 h

- The only supported resolution for input sources is 1280 x 720 (720p). If an input source with a higher or unsupported resolution is connected, the image may not display correctly on the head display screen. If this occurs, check the output resolution of the video source.
 - Degradation of the video signal may occur when longer input cables are used. For maximum quality, it's recommended to use HDMI and USB cables of 2 m length or shorter.
-

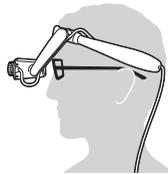
How to wear the AiRScouter

- 1 Place the head band onto the head as shown. The band should be positioned just above the forehead.



Note If the head band feels loose or starts to slip down the forehead, attach the rear band and use it to tighten the fit on your head.

If you wear glasses

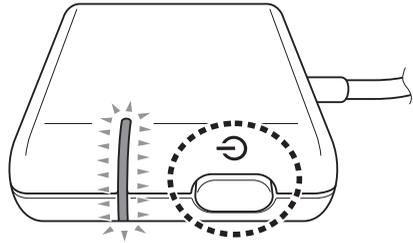


- 2 To secure the head display cable to your clothing, use the cable clip.

3. Adjusting the display

Turn the power on

Press the power button to turn the AiRScouter on. (The LED will turn orange.)



Adjust the position of the Head Display

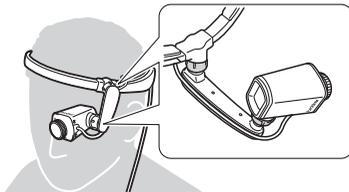
- 1 Loosen the ball joints by turning the dials on either end of the flexible arm counter-clockwise.



- 2 Adjust the position and angle of the head display so that it is easy to view.

- 3 Tighten the ball joints by turning the dials on either end of the flexible arm clockwise to fix the head display in place.

-
- Note**
- If the ball joints become loose after adjusting the position of the head display, turn the dials on either end of the flexible arm clockwise to fix the head display in place.
 - If you cannot see the full image after adjusting the flexible arm, you may have to adjust the position of the head band to bring the display into your field of view.



Adjust the position of the display to fit your application

Depending on your activity, you can position the head display so that the image takes up the whole field of vision, or you can keep it in your peripheral vision to keep both eyes on your work. Follow these tips to ensure that you can see the whole image:

- To keep the image in your field of view at all times, position the head display right in front of your eye and make sure that the lens is facing towards the eye.
- To keep the image in your peripheral vision (so that it is only seen when you move your eyes in that direction), position the head display at the edge of your field of view and make sure that the lens is facing your eye. If the entire image is not visible, change the angle of the head display or switch to Reduce mode.



Adjust the focus of the image

Turn the focus adjustment dial to either side until the image on the head display is in focus. The focal length of the optics can be changed from 30 cm to infinity.



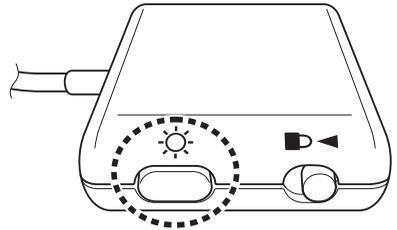
Rotation of the image

The head display automatically adjusts the rotation of the image (for example, when switching the display from left-eyed viewing to right-eyed viewing) to ensure that its orientation is correct. To disable this function (for example, while performing a task that involves frequently changing the orientation of your head), enable the Key Lock function.

4. Adjusting the settings

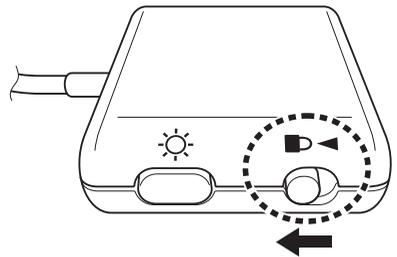
Adjust brightness

Press the brightness button on the side of control box to adjust the brightness of the image on the head display. There are five levels of brightness, and each press will increase the brightness by one level. If the button is pressed while at maximum brightness, the brightness will return to the lowest level.



Lock the buttons of the control box

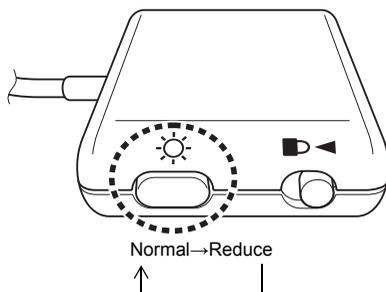
To prevent unintentional operation, activate the key lock function by sliding the key lock switch left.



Note To disable the key lock function, slide the key lock switch to the right.

Reduce the size of the image

To reduce the size of the image to more clearly see the areas around the edges (for example, to ensure that an entire scene is in the frame), press and hold the brightness button.



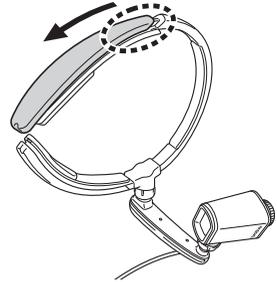
To return the image to its Normal size (filling the screen), press and hold the brightness button again.

Pressing and holding the brightness button will change the zoom mode in the following order: Normal, Reduce, Normal...

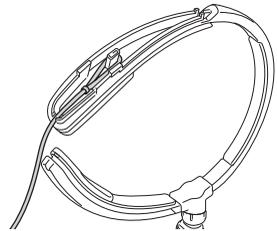
Note Reduce mode uses a fixed percentage to resize the image and is not user-configurable.

Attach the rear band

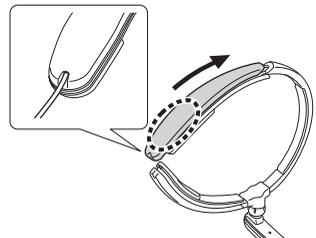
- 1** Press the area highlighted in the image below, and slide the head band cover towards the end of the band to remove it.



- 2** Slide the loop at one end of the rear band over the attachment post as shown in the illustration, and feed the rear band through the opening at the end of the head band.

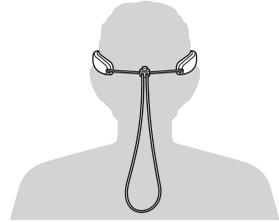


- 3** Replace the head band cover as shown, ensuring that the rear band is fed through the cut-out on the end of the cover. Press the area highlighted in the illustration and slide the cover back into place.



- 4** Repeat steps 1-3 to attach the other end of the rear band to the other end of the head band.

-
- 5 Adjust the rear band's length using the slider.



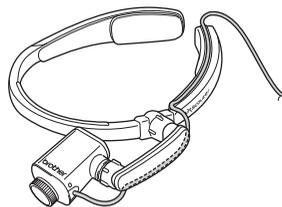
Switch the head display to be viewed with the right eye

While the AiRScouter is supplied with the head display screen on the left side of the head band, the flexible arm may be switched to allow the head display to be positioned over the right eye instead.

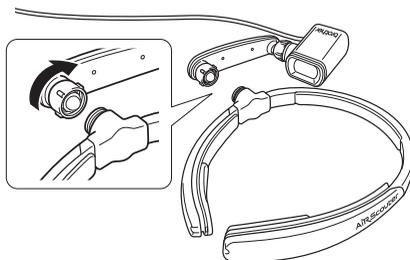
Note The flexible arm for left eye and the flexible arm for right eye are two separate parts that are included in the AiRScouter box. Because of its design, the flexible arm for right eye cannot be used for left-eyed viewing, and vice versa.

-
- 1 Ensure that the AiRScouter is powered off.

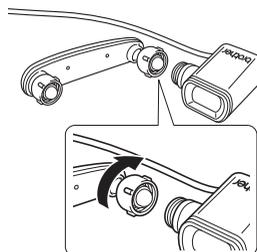
-
- 2** Remove the head display cable from the cable channel on the head band, and from the cable channel on the flexible arm.



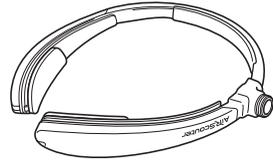
-
- 3** Rotate the dial on the ball joint between the flexible arm and the head band clockwise, until the flexible arm is separated from the head band.



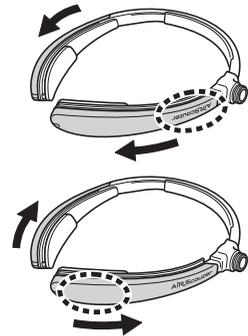
-
- 4** Rotate the dial on the ball joint between the flexible arm and the head display clockwise, until the flexible arm is separated from the head display.



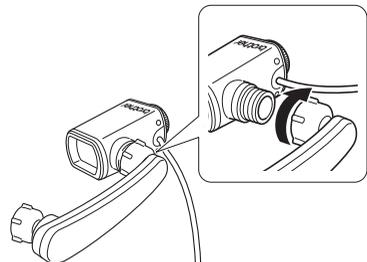
-
- 5** Turn the head band over so that the threads of the ball joint face the other way, and the AiRScouter logos on the head band covers are upside-down.



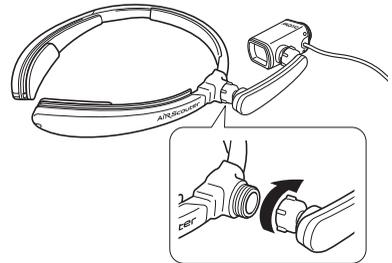
-
- 6** Remove the two head band covers as shown, by pressing the area highlighted in the image below and sliding the cover to the end of the head band. Swap the two covers and replace them as shown, so that the AiRScouter logos are now facing the correct direction.



-
- 7** Attach the flexible arm for right-eyed viewing (the other arm that is included in the box) to the head display, by lining up the narrow end of the flexible arm with the threads on the head display, and rotating the dial on the ball joint clockwise to tighten.

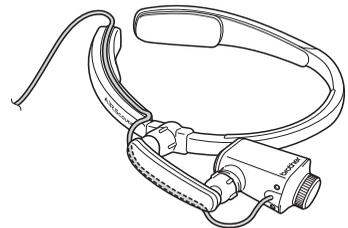


-
- 8** Attach the flexible arm to the head band by lining up the wide end of the flexible arm with the threads on the head band, and rotating the dial on the ball joint clockwise to tighten.



Note To prevent movement of the arm during operation, you can tighten one or both ball joints by rotating their respective dials clockwise.

-
- 9** Run the head display cable through the cable channel on the flexible arm, and then through the cable channel on the top of the head band. Secure the head display cable into the clip on the end of the head band, to prevent it from coming loose during operation.



Note When attaching the head display cable to the flexible arm and head band, ensure that you leave enough slack so that you do not pull the head display cable during adjustment and operation.

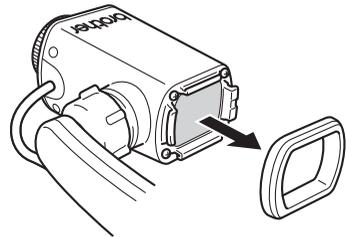
10 Press the power button to turn the AiRScouter on.

Note To return the AiRScouter to left-eyed viewing, follow the same instructions, using the flexible arm for left eye instead of the flexible arm for right eye.

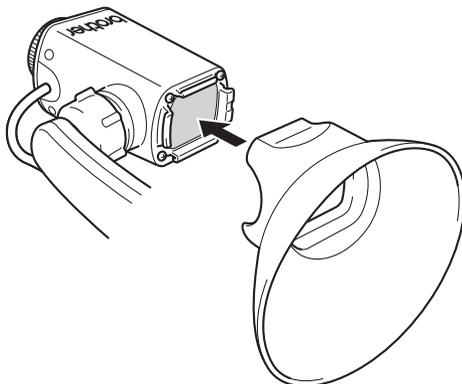
Replace the Eyecup

Depending on your task or environment, you may want to replace the small eyecup attached to the head display with the large eyecup that is included in the box. The large eyecup will isolate your eye and the screen from your working environment.

1 Carefully remove the small eyecup from the head display as shown.



-
- 2** Correctly align the large eyecup, and then gently press the eyecup to attach it to the head display.



-
- Important**
- Be careful to avoid touching the lens while changing the eyecup. You may dirty or damage the lens if you touch it.
 - Be careful to align and attach the eyecup correctly. The eyecup or head display may be damaged if it is incorrectly aligned or forced into place.
-

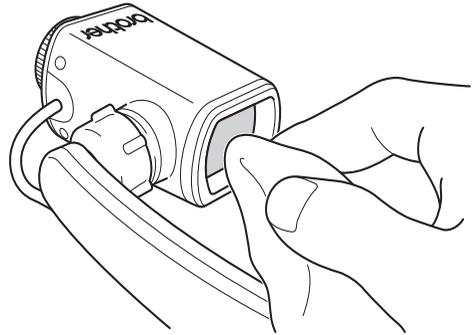
5. Maintenance

Clean the Lens

If the lens becomes smudged or dirty, you may not be able to clearly see the image on the head display. If this occurs, clean the lens as described below.

Important Use a soft cloth for cleaning the lens. Never use ethanol, organic solvents, or organic chemicals. Such substances could cause the lens coating to peel off the anti-reflection film, so that the image will not be seen correctly.

Use a soft cloth to wipe away dirt and dust from the lens.



Clean the Head Band

If the head band pads become dirty, they can be wiped clean with a dry cloth. If this is insufficient to clean the pads, they may be cleaned with ethanol, but take care to prevent any splashing onto the lens.

Clean the Control Box

Dirt and dust can be removed from the control box by wiping it clean with a dry cloth. If this is insufficient, you can use a moistened cloth, but make sure that it is well wrung to minimise the risk of getting water into the control box.

6. Troubleshooting

If a problem occurs while you are using this product, resolve it by using the following methods:

Problem	Check	Action	Page
The screen is blank.	Is the AiRScouter turned off?	Press the power button to turn the AiRScouter on.	11
	Has the external battery discharged?	Disconnect the external battery and connect the AiRScouter to a different external battery or power source.	8
	Is the resolution of the input device set to the input resolution of the AiRScouter?	Check the product specification and set the resolution of the input device to the input resolution of the AiRScouter.	-
	Is the video input cable connected correctly?	Disconnect the HDMI cable from the AiRScouter and from the input device, and then reconnect it.	9

Problem	Check	Action	Page
The image has frozen.	Is the video input cable connected correctly?	Disconnect the HDMI cable from the AiRScouter and from the input device, and then reconnect it.	9
	-	Reset the control box by powering it off and back on again.	-
The edges or corners of the image on the display screen are not visible.	Has the position of the head display unit been correctly adjusted?	Adjust the position and angle of the flexible arm and head display until you can see the complete image.	11
The display screen is blurry.	Is the focal length adjusted correctly?	Turn the focus adjustment dial on the head display right and left to adjust the focal length.	-
The display screen is too dark, or too bright.	Is the brightness set correctly?	Press the brightness button to adjust the brightness.	14

Problem	Check	Action	Page
The display screen is too dark to see.	Is the current environment extremely bright?	Check whether direct sunlight is getting in, and whether anything in the surrounding area is emitting extremely bright light.	-
The image displayed on the screen is too small or does not fill the whole screen.	Is the zoom mode set to Reduce?	Press and hold the brightness button for two seconds.	15
The image displayed appears to have dirt on it.	Is there dirt on the lens of the head display unit?	Clean the lens of the head display unit with a soft cloth.	23
	If you are using a camera as an input device, is there dirt on the lens of the camera?	Clean the lens of the camera.	-

Problem	Check	Action	Page
The fit of the head band feels loose.	Are you using the rear band?	Use the rear band to tighten the head band.	16
	Is the fit still loose when you are using the rear band?	If the head band has been over-stretched, it will not return to its original shape and may have to be replaced. Contact your Brother dealer for more information on purchasing a replacement part.	-
The head band fits poorly on the head when wearing glasses.	Does the head band touch the arms of your glasses?	If possible, use glasses with curved arms (that follow the shape of the ears) so that they do not touch the head band.	10
The movement of the flexible arm is too tight or too loose.	Has the tightness of the ball joint been adjusted?	Turn the dials of the ball joints between the flexible arm and the head band, and between the flexible arm and the head display, to adjust their tightness.	12

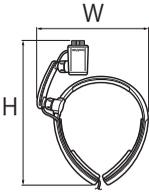
Problem	Check	Action	Page
Nothing happens when buttons are pressed on the control box.	Is the key lock mode on?	Slide the key lock switch to the right.	14

If, after reading the troubleshooting tips, you are unable to resolve your problem, visit the Brother Solutions Center at support.brother.com



Appendix

Product specification

Model Name		WD-350B
Form Factor		Monocular (single eye)
Dimensions	Head Display Unit	 264 mm (H) x 183 mm (W) x 26 mm (D)
	Control Box Size	13 mm x 56 mm x 36 mm
	Cable Length	1.5 m
Weight	Head Display Unit	Approx. 170 g (including cable and control box)
Video Input	Input Type	HDMI with HDCP support
	Supported Resolution ^{*1}	1280x720 (720p) / 60 Hz, 59.94 Hz

Model Name		WD-350B
Display Properties	Resolution	1280 x 720 pixels
	Colour Reproduction	24-bit (16.7 million colours)
	Adjustable Focal Length	Approx. 30 cm - Infinity
	Field of View	25.6°
	Virtual Screen Size	Approx. 19 in. at 1 m distance
Operating Environment	Temperature	0°C - 40°C (operation)
	Humidity	20-80%
Dust and Water Resistance		IP54 (Head display unit only)
Functions		Adjustable brightness (5 levels) / Screen rotation ^{*2} / Key lock / Reduction mode ^{*3}
Wearing Style		Headband style with flexible arm
Power Options		USB micro-B port ^{*4}
Battery Life		-
Power Consumption		Approx. 2.5 W
External Power Input		DC 5 V 0.5 A
In-Box Components		<ul style="list-style-type: none"> ● Display Unit ● Head Band ● Flexible Arm for right eye ● Flexible Arm for left eye ● Rear Band ● Cable Clip ● Quick Setup Guide ● Product Safety Guide

- *1 Full HD (1920 x 1080) input is not currently supported. Please ensure that your video source can output a supported resolution.
- *2 The screen is automatically rotated by acceleration sensor.
- *3 This function reduces the screen size by a fixed percentage. The user cannot change or specify the percentage of reduction.
- *4 You may connect a third-party USB charger or mobile power bank via micro-USB to supply power to the AiRScouter.

Requesting repairs

Before requesting repairs make sure you have performed the tasks listed in the *Troubleshooting* section.

If that does not solve the problem, note the following information and contact your Brother dealer:

- Your AiRScouter's serial number
- Problem symptoms
- Problem context (for example, what you did and what you expected to happen)
- Problem occurrence frequency (for example, always or intermittently)

Part retention period:

The minimum part retention time of functional parts for repair of this product is five years from the end of manufacturing (two years for printed materials).

For FAQs, troubleshooting and more, visit the Brother Solutions Center at support.brother.com



brother